INVESTIGACIÓN DE LA CORRELACIÓN ENTRE LA COMPRENSIÓN Y LA PRODUCCIÓN DEL DISCURSO (HABLADO Y ESCRITO) EN ESTUDIANTES CON DISLEXIA Y SU ADAPTACIÓN DENTRO DEL AULA (ACTITUDES Y METODOLOGÍA DE LOS DOCENTES EN MACEDONIA, GRECIA)

RESEARCH OF THE CORRELATION BETWEEN UNDERSTANDING AND PRODUCTION OF SPEECH (SPOKEN AND WRITTEN) IN STUDENTS WITH DYSLEXIA AND THEIR ADAPTATION WITHIN THE CLASSROOM (ATTITUDES AND METHODOLOGY OF TEACHERS IN MACEDONIA, GREECE)

Doctoranda: Christina Pantazidou

Directoras: Profa. Vega Gea, Esther Maria y Profa. Sampedro Requena, Begoña Esther

Programa de Doctorado en Ciencias Sociales y Jurídicas

Depósito: Marzo, 2022

TITULO: *Investigation of the correlation between understanding and production of speech (spoken and written) in students with dyslexia and their adaptation within the classroom (attitudes and methodology of teachers in Macedonia, Greece)*

AUTOR: *Christina Pantazidou*

UNIVERSIDAD Ð CÓRDOBA

DOCTORAL PROGRAM IN SOCIAL AND LEGAL SCIENCES

Investigación de la correlación entre la comprensión y la producción del discurso (hablado y escrito) en estudiantes con dislexia y su adaptación dentro del aula (actitudes y metodología de los docentes en Macedonia, Grecia)

Investigation of the correlation between understanding and production of speech (spoken and written) in students with dyslexia and their adaptation within the classroom (attitudes and methodology of teachers in Macedonia, Greece)

DOCTORAL THESIS

Christina Pantazidou

DIRECTORAS

Prof. Vega Gea, Esther Maria

Prof. Sampedro Requena, Begoña Esther

Cordoba, Marzo de 2022

TÍTULO DE LA TESIS: INVESTIGACIÓN DE LA CORRELACIÓN ENTRE LA COMPRENSIÓN Y LA PRODUCCIÓN DEL DISCURSO (HABLADO Y ESCRITO) EN ESTUDIANTES CON DISLEXIA Y SU ADAPTACIÓN DENTRO DEL AULA (ACTITUDES Y METODOLOGÍA DE LOS DOCENTES EN MACEDONIA, GRECIA)

Research of the correlation between understanding and production of the speech (speaking and writing) in students with dyslexia and their adaptation in the classroom (attitudes and methodology of teachers in central Macedonia in Greece).

DOCTORANDO/A: Christina Pantazidou

INFORME RAZONADO DEL/DE LOS DIRECTOR/ES DE LA TESIS
(se hará mención a la evolución y desarrollo de la tesis, así como a trabajos y publicaciones derivados de la misma).

El trabajo realizado por la doctoranda a juicio de estas directoras, reúne todos los requisitos para ser presentada y sometida a valoración.

La ejecución de la misma se ha efectuado en menos de cinco años, necesitando solicitar dos prórroga, debida fundamentalmente a dos factores, por un lado las consecuencias derivadas de la pandemia sanitaria internacional (COVID-19), y por otro, la espera de la decisión de la editorial de la revista en la que se envió una publicación de la misma. No obstante, al tratarse de una tesis basada en educación, más concretamente en las dificultades de aprendizaje, el espacio temporal utilizado no mengua la validez y transferencia de conocimiento en estos temas.

De manera más detallada, respecto al desarrollo del trabajo, comentar que la dificultad mayor con la que se ha encontrado la doctoranda ha sido filtrar la ingente cantidad de información que existe a nivel internacional sobre el tema de la dislexia, dado que al tratarse de una dificultad del aprendizaje, disminuye el progreso adecuado en la educación de los adolescentes de los niveles educativos, siendo un tema abordado por los sistemas educativos de todos los países.

Esta fundamentación teórica, aunque inicialmente expone el entorno de conceptualización de las dificultades de aprendizaje y, más concretamente de la dislexia, manifiesta un especial interés en la figura de los docentes de secundaria, tanto los profesores de las distintas especiales como en los profesionales de la educación especial, ahondando en las normativas, directrices y programas que se están llevando a cabo de manera específica en la región de Macedonia en Grecia.

En referencia a la metodología y el proceso de diseño, la misma ha considerado las normas y preceptos que rigen cualquier tipo de investigación del campo de las ciencias sociales, de manera más detallada en el campo educativo. De esta forma, este apartado ha recogido las evidencias científicas propias de un estudio de esta tipología, siguiendo fielmente los pasos adecuados para dotar a la misma del rigor científico necesario que conlleva una investigación cuantitativa.

Más concretamente, al tratarse de una investigación dirigida a los docentes de secundaria en ejercicio, de educación general y especial, en Grecia, se han utilizado distintos instrumentos ya validados que aporten datos sobre las percepciones y metodologías didácticas que emplean estos profesionales en su labor docente, comparando a ambos profesores, para poder dar respuesta de manera satisfactoria a los interrogantes previos de investigación.

Los resultados han sido numerosos, debido a la variabilidad de instrumentos empleados para intentar proporcionar un entorno considerable para visualizar de manera adecuada las percepciones de los docentes de la etapa de secundaria en las dificultades de aprendizaje.

Durante su realización se ha remitido una publicación con título Relation Between Teachers' Perception of Language Skills and Social Behaviors of Students with Dyslexia in Central Macedonia (Greece), en la revista SJR de 3º cuartil Educational Sciences: Theory & Practice, cuyo DOI es http://dx.doi.org/10.12738/jestp.2021.1.001

Por todo ello, se autoriza la presentación de la tesis doctoral.

Córdoba, 21 de enero de 2022

Firma de las directoras

VEGA GEA
ESTHER
MARIA -
44372778M

Firmado digitalmente por VEGA GEA ESTHER MARIA - 44372778M
Nombre de reconocimiento (DN): c=ES, serialNumber=IDCES-44372778M, givenName=ESTHER MARIA, sn=VEGA GEA, cn=VEGA GEA ESTHER MARIA - 44372778M
Fecha: 2022.03.07 13:40:17 +01'00'

SAMPEDRO
REQUENA
BEGOÑA
ESTHER -
30949012M

Firmado digitalmente por SAMPEDRO REQUENA BEGOÑA ESTHER - 30949012M
Fecha: 2022.03.08 08:16:54 +01'00'

Fdo.: Esther Mª Vega Gea   Fdo.: Begoña E. Sampedro Requena

DEDICATED

To my father Vasilis who was the light house of my life!

ΑΦΙΕΡΩΜΕΝΟ

Στον πατέρα μου Βασίλη που ήταν ο φάρος της ζωής μου!

ACKNOWLEDGEMENTS

For the difficult but also beautiful journey of knowledge and life!

To my directors, Prof. Sampedro Requena, Begoña Esther and

 Prof.Vega Gea, Esther Maria for their precious guidance, help and support!

To my teachers who inspired me!

To the colleagues who generously offered their help!

To my students who are the reason that lead me to become better every single day!

To my dearest family ! To my father Vasilis and my mother Eleni,

who were the beginning of everything!

Especially to my sisters Sophia and Ioanna ,

who they are my source of power and strength!

To my beloved nephews Konstantinos, Giorgos, Prodromos and Vasilis,

who make me happy and proud!

To my dear friends and especially to Apostolos ,who always are there for me!

Thank you all!

ΕΥΧΑΡΙΣΤΙΕΣ

Για το δύσκολο αλλά και όμορφο ταξίδι γνώσης και ζωής!

Στις καθηγήτριες μου Prof. Sampedro Requena, Begoña Esther

 and Prof.Vega Gea, Esther Maria για την πολύτιμη καθοδήγηση ,

βοήθεια και συμπαράσταση!

Στους δασκάλους μου που με ενέπνευσαν!

Στους συναδέλφους που πρόσφεραν απλόχερα τη βοήθεια τους!

Στους μαθητές μου που είναι ο λόγος που με κάνει να θέλω

 να γίνομαι καλύτερη κάθε μέρα!

Στην αγαπημένη μου οικογένεια ! Στον πατέρα μου Βασίλη

και στη μητέρα μου Ελένη που αποτέλεσαν την αρχή για όλα!

Ειδικά στις αδερφές μου Σοφία και Ιωάννα

που είναι πηγή δύναμης και κουράγιου για μένα!

Στους αγαπημένους μου ανιψιούς Κωνσταντίνο, Γιώργο, Πρόδρομο, Βασίλη

που με κάνουν χαρούμενη και περήφανη!

Στους αγαπημένους φίλους μου και ειδικά στον Απόστολο,

που είναι πάντα εκεί!

Σας ευχαριστώ όλους !

RESUMEN ABREVIADO EN ESPAÑOL

INVESTIGACIÓN DE LA CORRELACIÓN ENTRE LA COMPRENSIÓN Y LA PRODUCCIÓN DEL DISCURSO (HABLADO Y ESCRITO) EN ESTUDIANTES CON DISLEXIA Y SU ADAPTACIÓN DENTRO DEL AULA (ACTITUDES Y METODOLOGÍA DE LOS DOCENTES EN MACEDONIA, GRECIA)

1. INTRODUCCIÓN O MOTIVACIÓN DE LA TESIS

La dislexia es el trastorno de aprendizaje más común, incluida como una de las Dificultades de Aprendizaje Específicas, conocida como aquellas situaciones que interfieren en la capacidad de un niño con inteligencia normal para adquirir algunas habilidades fonológicas (habilidades de lectura, ortografía) u otras habilidades cognitivas. En Grecia, es notable que el número de estudiantes que experimentan dificultades de aprendizaje aumenta constantemente. Según la literatura, las dificultades de aprendizaje constituyen la categoría más grande de necesidades educativas especiales, ya que el 56% de los estudiantes tienen dificultades de aprendizaje, lo que afecta negativamente su rendimiento y comportamiento escolar (Feskemenlidou, 2016).

Las diferentes formas de comportamiento de los niños en la escuela y la correlación con su capacidad de aprendizaje, adaptación y rendimiento escolar se han explorado internacionalmente. La dificultad para adaptarse al contexto escolar implica dificultades de aprendizaje, problemas de comportamiento interpersonal e intrapersonal. Existen características de aprendizaje, necesidades y logros diferenciados. Esa heterogeneidad aumenta la necesidad de diferentes estrategias de enseñanza-aprendizaje. El currículum de las escuelas secundarias griegas propone numerosas técnicas que los maestros podrían seguir para ayudar a los estudiantes en la producción de su habla (oral y escrita). Percepciones para entender y producir el discurso oral y escrito en estudiantes con dislexia

El rendimiento inadecuado del habla, a menudo, se observa en estudiantes con dificultades especiales de aprendizaje, y se asocia con insuficiencia en la conciencia fonológica, con conciencia inadecuada de la morfología y de la semántica del lenguaje hablado, así como con el uso limitado de vocabulario.

La motivación y actitudes hacia la lectura son factores clave que influyen en el rendimiento lector.

En estudios en los que se comparó a niños con dislexia o problemas del habla y el lenguaje, con niños con desarrollo normal, aunque con un nivel de lectura no correspondiente a su

edad, se encontró que los niños con dislexia podían recordar menos palabras de manera precisa, que los niños de su misma edad sin dislexia.

Padersen et al. (2016), examinaron la lectura oral y la relación con la comprensión lectora entre estudiantes de 16 años, con o sin dislexia. Midieron la velocidad de lectura, los errores de lectura y las autocorrecciones mientras leían. Los estudiantes con dislexia se focalizaron más en decodificar o entender. Los hallazgos de Layes et al. (2015), en un estudio con niños árabes de entre 8 y 10 años, revelaron que los estudiantes con dislexia leían más lento que los estudiantes sin alteraciones del lenguaje, y también que no eran tan precisos como los niños que leían con fluidez.

Se examinaron los estudiantes con perfil de lectura mixta, y se encontró que estaban divididos en cuatro subgrupos cognitivos diferentes, caracterizados por un solo trastorno fonológico, un solo trastorno de alteración visual, un doble defecto o ninguno de estos trastornos. Los hallazgos generales excluyen el subtipo basado en los perfiles de lectura como un método de clasificación para identificar subgrupos cognitivos homogéneos de niños con dislexia (Zoubrinetzky et al., 2014).

1.1. METODOLOGÍAS DE ENSEÑANZA Y APRENDIZAJE Y HERRAMIENTAS EDUCATIVAS UTILIZADAS CON ESTUDIANTES CON DISLEXIA

Los niños con dificultades de aprendizaje necesitan de una intervención y tratamiento adecuado. Se requiere motivación de los profesores. Algunas de las técnicas más populares son: *La técnica de andamiaje*, *La estrategia de predicción*, *Aclaración de palabras desconocidas*, *La herramienta de resumen* (Hargreaves y Crabb, 2016), *Pensamiento en alto*, *La técnica de lecturas repetidas* (Elhoweris, 2017), así como *El uso de computadoras como herramienta de tutoría* (Hargreaves y Crabb, 2016).

Una de las innovaciones del nuevo currículum griego para niños con dificultades de aprendizaje es el énfasis en la lengua nativa y la propuesta de actividades de comprensión y producción del habla oral. En el marco del proyecto *"Diseño y desarrollo de material educativo y de supervisión accesible para estudiantes con necesidades de educación especial"* (Programas comunitarios ESPA 2007-2013), se han publicado los siguientes materiales educativos: *EPITELO*, Libros escolares interactivos, *Fotodentro*, Plataforma de aprendizaje digital para alumnos y profesores *e-me*.

Se proponen técnicas efectivas, tales como la lectura guiada. También, preguntas de opción múltiple, activación del conocimiento previo de los estudiantes, formulación de hipótesis, suposiciones orales y diagramas de estructura o cualquier tipo de representación gráfica. Asimismo, se presenta una lista de actividades generales sobre comprensión a través del habla.

Hamid et al. (2015) proponen el uso de una tabla con tres columnas, técnica KWL, en la primera "lo que sé" (what I already know); en la segunda "lo que quiero saber" (what I want to know) y, finalmente en la tercera "lo que aprendí de esta lección" (what I learned). Según la Asociación Internacional de Dislexia (2017), algunas técnicas son en general, para aclarar y simplificar las instrucciones escritas: uso de encabezados en cada párrafo, repetición de instrucciones, diferentes colores marcadores, tamaño grande y espacio entre letras y filas, instrucciones paso a paso, comandos mnemotécnicos, y herramientas de mapeo organizacional. Todas estas técnicas y herramientas.

1.2. ADAPTACIÓN INTRAPERSONAL E INTERPERSONAL DE ESTUDIANTES CON DISLEXIA EN UN AULA DE INCLUSIÓN

La adaptación intrapersonal para estudiantes con dislexia se refiere a cómo se sienten y piensan sobre sí mismos, y la adaptación interpersonal se relaciona con las relaciones que mantienen con sus compañeros y maestros. Los estudiantes con dislexia tienen dificultades interpersonales para hacer y mantener amistades con sus compañeros. Son menos aceptados, y corren el riesgo de ser aislados. Su autopercepción es errónea, se creen inferiores a los demás (Novita, 2016).

Los estudiantes con dislexia presentan niveles significativamente más bajos en el ajuste psicosocial, la competencia social y la autopercepción, y muestran más problemas de comportamiento. Accariya y Khalil (2016) estudiaron la adaptación de estudiantes con dificultades de aprendizaje en diferentes niveles educativos. Los hallazgos de su studio revelaron que estos estudiantes se sentían estresados, solos, desesperados y no aceptados por el resto de compañeros. Los niños con dislexia generalmente desarrollan un carácter introvertido (Cavioni et al., 2017).

El éxito en la adaptación del alumno al entorno escolar está relacionado con las habilidades académicas, sociales, emocionales, de comportamiento y cognitivas. El estatus del niño como estudiante va a depender de las capacidades de los maestros para crear interacciones con sus compañeros y para fomentar el desarrollo de su autonomía.

1.3. ADAPTACIÓN INTRAPERSONAL E INTERPERSONAL EN UN AULA DE INCLUSIÓN

Las intervenciones relacionadas con el apoyo de asesoría deben desarrollar incentivos y mejorar la percepción del alumno, eliminar la culpa y reducir la ansiedad y los temores.

El desarrollo de actitudes positivas conduce a un mejor clima social en el aula. Se recomiendan actividades kinestésicas, visuales y prácticas (Mortimore y Zsolnai, 2016). Un aula en la que hay alumnado con dislexia debe aplicar la ética inclusiva a través de actividades alternativas (Mortimorey Zsolnai, 2016)).

Según Habib y Naz (2015), los educadores deben reconocer fácilmente la frustración de los niños y tratar de motivarlos, alentando continuamente sus esfuerzos y fortaleciendo su autoestima. Hacer amistades puede ayudar a evitar la estigmatización y el aislamiento social. Trabajar en parejas o en pequeños grupos puede ayudarlos a descubrir conocimientos y desarrollar habilidades sociales. Además, el juego de roles les permite trabajar a través de procesos psicológicos a nivel simbólico (Efthymiou y Kington, 2017).

1.4. NECESIDAD Y OBJETIVO DE LA INVESTIGACIÓN

Para esta tesis doctoral se realizó una encuesta a un grupo de filólogos de enseñanza secundaria de Tesalónica. El objetivo de la investigación es, a través de una serie de preguntas, conocer las actitudes y comportamientos de los profesores ante sus alumnos con dislexia, el perfil social de estos alumnos y los métodos elegidos para tratarlos. La investigación se basó en la hipótesis de que existe una correlación entre el nivel lingüístico de los alumnos y su comportamiento en el aula. Se consideró que la incapacidad de los alumnos para comprender y producir tanto el discurso oral como el escrito está relacionada con el ambiente del aula y con el comportamiento de sus compañeros.

Estas hipótesis se basan en investigaciones realizadas en otros países que correlacionan los problemas de adaptación en el entorno escolar con problemas de salud mental durante la infancia, la adolescencia o la edad adulta (Cowen et al., 1973, Roff et al., 1972); otras han investigado la relación entre la incapacidad de adaptación al entorno escolar con el bajo rendimiento escolar (Kohn, 1977; Lambert y Nicoll, 1977; Soli y Devine, 1976).

2. CONTENIDO DE LA INVESTIGACIÓN

Una vez determinado el objetivo de la investigación, se realizó un análisis cuantitativo mediante un cuestionario compuesto por cinco partes de preguntas cerradas. En la primera, se

estudiaron las características demográficas de los profesores –mencionadas detalladamente en el siguiente párrafo– mientras que los otros cuatro grupos se refieren al objeto principal de la investigación: la descripción de los alumnos con dislexia en las escuelas *Educación Secundaria* de Tesalónica. En cada uno de estos cuatro grupos las respuestas siguen la escala Likert de cinco puntos: desde «Totalmente en desacuerdo» (1) hasta «Totalmente de acuerdo» (5).

Para cada sección del cuestionario se aplicó un análisis factorial con el fin de agrupar las preguntas en grupos más pequeños con un contenido común. Después, a través del cálculo del índice estadístico «alfa de Cronbach», se realizó un análisis de fiabilidad para determinar si los encuestados respondían de la misma manera a todas las preguntas de cada subgrupo (a> .7).

Aquellas oraciones referidas a la comprensión y producción del discurso oral y escrito de los alumnos con dislexia (segunda parte del cuestionario) se dividieron en tres categorías «Eficacia en los requisitos orales y escritos compuestos» (a = .943), «Eficacia en los requisitos orales y escritos simples» (a = .924) y «Habilidad crítica» (a = .743). La tercera parte del cuestionario incluía los métodos e instrumentos utilizados por los profesores para ayudar a los alumnos a comprender y crear el discurso oral y escrito. En este caso había de nuevo tres 3 subgrupos: «Orientación y fomento del trabajo personal» (a = 0,982), «Uso de medios electrónicos y fomento de la expresión» (a = 0,917) y «Enseñanza agradable e interactiva» (a = 0,897). La cuarta parte del cuestionario propone la incapacidad de los alumnos para adaptarse a nivel interpersonal e intrapersonal en el aula como objeto de estudio. Las propuestas se dividieron en dos subgrupos, a saber: «Introversión y comportamientos violentos» (a = .976) e «Ignorancia e indiferencia» (a = .879). Por último, la quinta parte del cuestionario analiza los métodos con los que los profesores tratan de ayudar a los alumnos con dislexia a mejorar la comprensión y producción del discurso oral y escrito. El análisis factorial volvió a indicar la existencia de dos subgrupos: «Estímulo directo» (a = .951) y «Estímulo indirecto» (a = .872).

La muestra de la investigación consta de 375 filólogos, de los cuales 254 imparten clases en educación ordinaria y el resto en escuelas de integración. Esta separación se ha mantenido en todas las pruebas realizadas ya que la tesis estudia por separado las escuelas en las que conviven alumnos con dislexia y alumnos sin dificultades de lenguaje y las escuelas de integración. En concreto, las pruebas realizadas en cada uno de los dos grupos de profesores se refieren a las opiniones en las que los profesores difieran significativamente en función de su género, la edad, el nivel educativo, su experiencia previa en aulas ordinarias y su experiencia previa en aulas especiales. Cabe destacar que, en cada uno de los dos grupos de profesores, la mayoría son mujeres (más del 70%) y añadir que más del 70% de los docentes tiene más de 40 años. Entre los profesores de educación ordinaria, casi 7 de cada 10 tienen un título de máster además del

título de graduado. La proporción de profesores de educación especial que se han formado específicamente es casi la misma. Además, casi la mitad de los profesores de educación ordinaria cuentan con, al menos, 15 años de experiencia en escuelas ordinarias. El total de ellos ha trabajado un máximo de 2 años en educación especial. Por el contrario, los profesores de educación especial cuentan con un máximo de 14 años de experiencia en educación formal, y casi todos ellos tienen entre 3 y 14 años de experiencia en escuelas formales.

Las pruebas de diferencia utilizadas en esta investigación (prueba *t* de muestras independientes, ANOVA, Mann-Whitney y Kruskal-Wallis) examinan la posible existencia de una diferencia significativa en las opiniones de los profesores que enseñan en clases formales y los que lo hacen en clases de integración. Así, se utilizaron las mismas pruebas en cada uno de los dos grupos de profesores para determinar si los subgrupos, que se forman teniendo en cuenta cada una de las características demográficas por separado, difieren en sus criterios sobre los menores con dislexia.

3.   CONCLUSIÓN

Tras examinar las respuestas dadas por cada uno de los dos grupos de profesores y teniendo en cuenta los resultados de las pruebas de diferencia en cada grupo en función de sus características demográficas, surgieron distintos resultados. Más adelante, se compararon estos resultados en relación con los de otras investigaciones y, finalmente, se procedió a desarrollar las conclusiones de la investigación.

Inicialmente, de los dos grupos de profesores (educación ordinaria y educación especial), los profesores de educación formal son los que parecen estar de acuerdo en la capacidad que tienen los alumnos con dislexia de implicarse en conversaciones sobre sus intereses, de resolver cuestiones relacionadas con la escuela y con su relación con los demás y de comprender normas que se aplican a toda la comunidad escolar. También son capaces de resolver pruebas escritas sencillas. No obstante, encuentran dificultades para organizar la información y resumir textos narrativos o descriptivos, lo que concuerda con investigaciones anteriores (Peterson et al., 2013; Cunningham y Carroll, 2015). Por el contrario, los profesores de educación especial coinciden en que los alumnos con dislexia solo son capaces de entablar diálogos sencillos sobre temas que les interesan. Dan respuestas neutras o negativas a casi todas las demás cuestiones relativas a la producción y comprensión del discurso oral y escrito.

Ambos grupos de profesores afirman que no utilizan programas de aprendizaje digital. Los profesores de educación formal son negativos en lo referente a ejercicios para promover la

dramatización y los juegos de rol, pero sí favorecen la repetición de instrucciones de forma sistemática y comprensible y dan más tiempo a los alumnos con dislexia para completar las tareas que se les asignan. Por otro lado, los profesores de educación especial parecen ser positivos en lo referido a cualquier método de enseñanza distinto a los medios digitales.

Los profesores de educación formal concuerdan, casi de manera unánime, en que los estudiantes con dislexia causan problemas en el aula, que son negativos al acercarse a otras personas y que tienen mala actitud con los profesores (Cavioni et al., 2017). Por el contrario, los profesores que trabajan en educación especial declaran que los alumnos con dislexia están marginados, que son incapaces de defenderse, rinden poco en clase y participan poco en el aula (Jiménez-Fernández et al., 2015; Farquharson, et al., 2014; Ainscow et al., 2016). Sin embargo, opinan que, lejos de ser introvertidos, muestran ganas de socializar. Cabe destacar que ambos grupos de profesores afirman que la contribución de un profesor con formación especial sería necesaria para un funcionamiento correcto del proceso educativo (Feskemenlidou, 2016).

Los métodos para animar a los alumnos con dislexia a nivel interpersonal e intrapersonal, no parecen preocupar especialmente a los profesores de educación formal. Las únicas áreas en las que los profesores ayudan a sus alumnos son en lo relativo a mejorar la confianza en sí mismos, y a lidiar con aquello que no pueden cambiar. En cambio, se observa un claro apoyo de los profesores de educación especial a sus alumnos (Feskemenlidou, 2016).

Entre los profesores de educación formal, las mujeres parecen indicar una mayor capacidad de los alumnos para responder a los procesos de producción o comprensión del discurso oral y escrito. Asimismo, los profesores de entre 31 y 40 años, así como los que tienen entre 3 y 8 años de experiencia en educación formal son los que tienen una opinión más positiva de los alumnos (Thompson, 2013), mientras que los profesores de más de 50 años y los que han cumplido más de 20 años en la educación formal son quienes dan las respuestas más negativas. El nivel de estudios no parece afectar significativamente a las opiniones relativas a la capacidad de los alumnos para comprender y producir requisitos orales y escritos; las únicas excepciones son algunos casos referentes a la capacidad crítica en los que los profesores más cualificados tienden a dar respuestas más positivas. Además, los profesores más jóvenes y con menos años de experiencia en educación formal, parecen estar significativamente más receptivos a la aplicación de los métodos y herramientas de enseñanza mencionados en el cuestionario. El nivel educativo no afecta significativamente a las respuestas de los profesores. En cambio, los hombres destacan en mayor medida, la dificultad de los alumnos para adaptarse a las normas del aula. Los profesores de más de cincuenta años de edad y, aquellos que tienen, al menos veinte 20 años de experiencia en educación formal tienen la misma opinión (Martimianaki, 2015). Sin

embargo, las mujeres, los profesores de entre 31 y 40 años y aquellos que tienen entre 3 y 8 años de experiencia en educación formal hacen más hincapié en mejorar la autoestima de los alumnos y en enseñarlos a que no reaccionen mal ante la existencia de situaciones que no se pueden cambiar (Papailiou, 2018). Por otro lado, los profesores mayores de 50 años y los que han trabajado durante más de 20 años en educación formal son los más negativos en el uso de métodos para animar a los estudiantes (Feskemenlidou, 2016). Lo contrario ocurre con los de postgrado con especialización en educación especial (Zikou, 2017).

En la educación especial parece que tanto hombres como mujeres reconocen la gran incapacidad de los alumnos con dislexia para producir y comprender discursos orales y escritos. En función de la edad, parece que los profesores más jóvenes reconocen las habilidades de sus alumnos más que los de mayor edad. Lo mismo opinan los estudiantes de postgrado con especialización adicional en educación especial (Zika, 2017). Sin embargo, los profesores con menos años de experiencia en educación formal parecen enfatizar más las dificultades a las que se enfrentan sus estudiantes en las clases especiales. Por el contrario, los que tienen entre 3 y 8 años de experiencia en educación especial dan las respuestas más positivas (Basu et al., 2014).

Las mujeres y los profesores más jóvenes son los que dan más importancia al uso de herramientas y métodos educativos. El nivel educativo y los años de experiencia en educación formal o especial no parecen ofrecer diferencias significativas en cuanto al uso de estos métodos y herramientas educativas (Thompson, 2013). Por otro lado, tanto los hombres como las mujeres parecen tener más o menos las mismas opiniones sobre el comportamiento de los alumnos en el aula y sobre los métodos que utilizan para animarlos a nivel inter e intrapersonal. Lo mismo se observa según la edad de los profesores, el nivel educativo y los años de experiencia en educación formal. Por el contrario, los profesores con menos años de experiencia en educación especial detectan, en mayor medida, las conductas negativas de los alumnos con dislexia (Papaeliou, 2018), pero ponen en práctica, más o menos en la misma medida, y al igual que el resto de compañeros, métodos para animar a los alumnos a nivel interpersonal e intrapersonal (Feskemenlidou, 2016).

4.   BIBLIOGRAFÍA

Ainscow, M., Dyson, A., Hopwood, L. & Thomson, S. (2016). *Primary Schools Responding to Diversity: barriers and possibilities*. Cambridge Primary Review Trust.

Basu, S., Beniwal, P. & Beniwal, A. (2014). A Study to Find the Challenges Faced By Teachers in the Class of Child with Dyslexia. *Educationia Confab, 3*(5), 1-8.

Cavioni, V., Grazzani, I. & Ornaghi, V. (2017). Social and emotional learning for children with Learning Disability: Implications for inclusion. *International Journal of Emotional Education, 9*(2), 100 – 109.

Cowen, E. L., Pederson, A., Babigian, H., Isso, L. D. & Trost, M. A. (1973). Long-term follow-up of early detected vulnerable children. *Journal of Consulting and Clinical Psychology, 41*(3), 438–446. https://doi.org/10.1037/h0035373

Cunningham, A. J. & Carroll, J. M. (2015). Early predictors of phonological and morphological awareness and the link with reading: Evidence from children with different patterns of early deficit. *Applied Psycholinguistics, 36*(3), 509–531. https://doi.org/10.1017/S0142716413000295

Farquharson, K., Centanni, T. M., Franzluebbers, C. E. & Hogan, T. P. (2014). Phonological and lexical influences on phonological awareness in children with specific language impairment and dyslexia. *Frontiers in Psychology*, *5*, 1-10. https:/doi.org/10.1016/j.ridd.2014.11.002

Feskemenlidou, A. (2016). *The perceptions of general and special education teachers on phonological awareness of students with dyslexia and ways of managing them.* [Unpublished bachelor's dissertation]. University of Western Macedonia.

Jimenez-Fernandez, G., Gutierrez-Palma, N. & Defior, S. (2015). Impaired stress awareness in Spanish children with developmental dyslexia. *Research in Developmental Disabilities, 37*, 152-161. https:/doi.org/10.1016/j.ridd.2014.11.002

Kohn, M. L. (1977). (2ⁿᵈ ed.). *Class and Conformity: A Study in Values*. Dorsey

Lambert, N. M. & Nicoll, R. C. (1977). Conceptual model for nonintellectual behavior and its relationship to early reading achievement. *Journal of Educational Psychology, 69*(5), 481-490.

Martimianaki, C. (2015). *Psychosocial adaptation and self-esteem of students with and without learning difficulties*. [Unpublished bachelor's dissertation]. University of Patra

Papailiou, C. (2018). *Knowledge and views of primary and secondary school teachers regarding the support of the student with dyslexia in the classroom.* [Unpublished bachelor's dissertation]. National and Kapodistrian University of Athens.

Peterson, R. L., Pennington, B. F. & Olson, R. K. (2013). Subtypes of developmental dyslexia: Testing the predictions of the dual-route and connectionist frameworks. *Cognition*, *126*(1), 20–38. http://doi.org/10.1016/j.cognition.2012.08.007

Roff, M., Sells, B. & Golden, M. M. (1972). *Social adjustment and personality development in children.* University of Minnesota Press.

Soli, S. & Devine, V. T. (1976). Behavioral correlates of achievements: A look at high and low achievers. *Journal of Educational Psychology, 68*(3), 335–341. https://doi.org/10.1037/0022-0663.68.3.335

Thompson, L. S. (2013). *Dyslexia: An Investigation of Teacher Awareness in Mainstream High Schools.* University of South Africa. http://hdl.handle.net/10500/13373

Zika, E. (2017). *Teachers' attitudes and perceptions about students with learning difficulties.* [Unpublished Bachelor's dissertation]. National and Kapodistrian University of Athens. *pergamos.lib.uoa.gr*

INDEX

RESEARCH OF THE CORRELATION BETWEEN UNDERSTANDING AND PRODUCTION OF SPEECH (SPOKEN AND WRITTEN) IN STUDENTS WITH DYSLEXIA AND THEIR ADAPTATION WITHIN THE CLASSROOM (ATTITUDES AND METHODOLOGY OF TEACHERS IN MACEDONIA, GREECE)

1

PART I. JUSTIFICATION

1. INTRODUCTION

1.1. Formulation of the problem

The issue to be explored is whether children with dyslexia have problems with their adaptation in a classroom. The sample will be consisted of Gymnasium[1] teachers in Central Macedonia, Greece. The survey was conducted from December. 2018 to March. 2019. Questionnaires will be provided and there will be a research about teachers' attitude towards the language skills of students with dyslexia, their social behavior and the methodology used so as to deal with dyslexia. It is expected that students' inability to understand and produce speech is related to the classroom's environment and students' behavior. The objective of this study was to determine the effect of Gymnasium teachers' profile to their responses concerning speaking and writing in students with dyslexia and their interpersonal and intrapersonal adaptation in the classroom and also the methodology teachers use in the teaching procedure about the above. This research aims to add information to existing knowledge provided by previous research. Also it is aimed to be concluded innovative findings that has not been studied again.

Case: According to the results occurring from previous theories, we have a hypothesis that there will be a correlation between teachers' responses on oral and written speech of students with dyslexia and their responses on students' interpersonal and intrapersonal adaptation. To the above we hypothesize that there is a correlation to teachers' profile through their demographics and personal information.

1.2. Finding queries

The objective of the research is to study the correlation between understanding and production of the speech (speaking and writing) in students with dyslexia and their adaptation in the classroom (attitudes and methodology) of teachers in central Macedonia in Greece through teachers' profile and their responses.

---

[1] Gymnasium designates the educational stage of secondary education; Likewise, it mentions the educational centers for this stage.

Specific objectives:

I. To study the profile of teachers specializing in typical and special education who work in special and typical classrooms in relation to the variables of the sociodemographic questionnaire (Age, sex, level of studies, years of teaching etc...).

II. To determine the perception between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and the in relation to sociodemographic variables.

III. To analyze the perception between the Teaching and Learning Methodologies and Educational Tools used for student's with dyslexia in Gymnasium to better understand and produce oral and written speech and the relation to sociodemographic variables.

IV. To know the relationship between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and the Teaching and Learning Methodologies and Educational Tools used for student's with dyslexia in Gymnasium to better understand and produce oral and written speech.

The above drives us to the following hypothesis:

– 1st hypothesis: The profile of the teachers affects their perceptions of the language skills of students with dyslexia and their adaptation to class.

– 2nd hypothesis: The profile of the teachers is related to the pedagogical and didactic methodology which they use in the context of an inclusion class for childrens with dyslexia.

– 3rd hypothesis: The teachers' perceptions are related to the methodology they use.

1.3. Necessity to study

Different forms of behavior of children in school and their correlation with learning ability, adaptation and school performance of children have been extensively explored internationally. Difficulty in adapting to the school context involves learning difficulties, problems of interpersonal behavior with peers, and problems of intrapersonal behavior. Problems of adaptation to school and specific forms of problem classroom behavior have been associated

with mental disorders in childhood, adolescence, adulthood (Cowen et al., 1973, Roff and al., 1972) and problems with school performance (Kohn, 1977, Lambert & Nicoll, 1977, Soli & Devine, 1976). In order to assess children's behavior, questionnaires are often used, supplemented by teachers and/or parents.

A broader definition regarding children with emotional disorders in school (Bower, 1969) states that these children have, for a long time and to a large extent, one or more of the following characteristics: (a) reduced ability to learn that cannot be attributed to mental or sensory factors or to health reasons, (b) limited ability to establish or maintain satisfactory interpersonal relations with peers and teachers, (c) inappropriate forms of behavior or feelings in normal conditions, (d) pervasive mood of melancholy or depression and (e) tendency to display physical symptoms or fears associated with personal or school problems.

The frequency of problematic behaviors in childhood and adolescence varies across countries and depends on the definition and diagnostic criteria used, as well as factors such as age, gender, socio-economic status of the family, interactions between the child and members of the family background etc.

Children with Learning Difficulties are most likely to experience emotional problems due to the daily negative criticism they experience not only in the school context but also in the family. International research and experience highlights the need for a holistic approach in order to take into account the many needs of children, including emotional ones at the same time. Polichronis, Hatzichristou and Bibou (2006) suggest that the intervention should include the child, the family, the child's wider environment and aim at (Polychronopoulou, 2012):

– Fully and objectively informing the family environment for the exact learning difficulties faced by the child.
– Preparing the student to deal with potential failures.
– Developing incentives and improve student self-perceptions about their skills in other areas than school.
– Reducing anxiety in improving the student's interpersonal relationships;
– Improving parent-child-teacher relations and to promote school-family cooperation.

Surveys find that low self-esteem is typical among children with learning difficulties. In the school and family environment, the formation of the feelings of self-perception is related not only to the level of academic performance but also to how the students compare themselves with all their classmates. When, peer-to-peer pupils get into tests, then the learner with learning difficulties encounters difficulties, loses self-esteem, and does not trust his or her abilities (Padeliadu et al, 2014).

Students watch isolated without their peers accepting, while they often report loneliness and dissatisfaction, as the results of sociometric surveys in groups of elementary school pupils with learning difficulties who are in regular classes have proven (Padeliadu et al, 2014).

In conclusion, the above are the common reactions of children with learning difficulties in the two environments in which they are usually moving, in school and the family. The noticeable difference lies in the stimuli they receive from each environment respectively, which lead them to these behaviors and adaptation difficulties.

In our country there is a lack of research on the correlation between the occurrence of dyslexia and children's adaptation in classroom. This research intends to fill this gap by examining how children with dyslexia adapt in the classroom.

PART II. THEORETICAL AND CONCEPTUAL FOUNDATION

CHAPTER I. DYSLEXIA: DEFINITION, LAWS AND HISTORICAL REVIEW

Etymologically, the term "dyslexia" is compounded by the prefix "*δυσ*", which implies difficulty, and the word "*λόγος*", which in ancient Greek means "the word" "*η λέξη*", hence the term simply refers to "difficulty with words" (Cruickshank, 1986). Some translators also state that the term "*λέξη*" means "speech", although the corresponding use of the term is not often found in the modern scientific references.

The definition given by British Society of Dyslexia (1989) concerning dyslexia refers to a very specific and distinctive inadequacy in the process of learning the language. It has organic origins and it refers to several procedures, like spelling, reading, writing as well as calculating which means difficulty in managing numbers. In particular, it is related with the skill to use as well as to process the written language, which may be musical, arithmetical or alphabetical. Additionally, it sometimes affects the spoken word as well but often only to a certain point.

Dyslexia has been registered as a disorder which is affecting the neurological system of a person and it obstructs the accurate understanding and usage of the language in its best possible form. Dyslexia is usually hereditary and differs in every person. A person with dyslexia has numerous and varied difficulties in perceiving and finally expressing himself mainly in the field of writing, reading, processing phonological skills and calculating numbers. A person with dyslexia cannot be characterized as a "lazy" person with no motivation and "good mood", but a person with a disorder in perceiving the language and expressing himself. Sometimes when there is inadequate education or sensory dysfunctions or maybe there are not enough environmental opportunities, that person who also has dyslexia, cannot be helped to the point that a person with a good training would be. That reality entails the fact that although dyslexia is a characteristic that follows a person throughout his life, there is a chance for those people to respond with success to these difficulties and to fully deal with them if there is a proper intervention (British Dyslexia Association, 2017).

At first, there was given a definition by the World Federation of Neurology (1968, cited in British Dyslexia Association, 2017), which emphasized to the strengths an individual has. More specifically the Federation claimed that dyslexia was a disorder that despite the efforts through special education, balanced intelligence and all those socio-economic conditions that benefit a

person, his situation cannot be corrected and can never be improved regarding to language skills. Any improvement is only relevant to the extent of the dysfunction of the basic cognitive disorders, a fact that is related to the person's temperament.

More specifically, "dyslexia" as a word meaning "difficulty in using the words" predisposes public opinion for problems related to writing and speaking. Thus, the situation intrigues quite a large group of scientists as well as a lot of researchers, who got involved and revealed the percentage of the population with dyslexia, as well as the multifaceted etiology. Thereafter, added to the definition of dyslexia, any information connects to the neurological nature of the condition and the environmental causes as well as the size of the assistance that can be given to a person with dyslexia when there is immediate prognosis and intervention (International Dyslexia Association, 2017). The American Diagnostic and Statistical Manual of Mental Disorders (DSM-5) has not included dyslexia since 2013. The Association claimed that *"the learning disorder changed into a specific learning disorder and the previous types of learning disabilities (dyslexia, dyscalculia, and disorder of written expression) are no longer suggested. The type of learning disorder will be determined by the diagnosis".* Therefore, DSM - 5 lists the definition of dyslexia as follows, dyslexia is an alternative term referring to a specific pattern of learning difficulties characterized by problems regarding precise flow and word recognition, poor decoding, and poor spelling abilities. If dyslexia is used to characterize this pattern of difficulties, it is also important to identify any additional difficulty that may coexist, such as difficulty in understanding text and in the mathematical sequence (American Psychiatric Association, 2013).

Dyslexia is one of the most serious learning difficulties. However, to date, a common definition of dyslexia has not been given, but many definitions have been formulated according to the scientific direction of each scientist. Indeed, dyslexia has been dealt with by scientists from the fields of Medicine, Pedagogy, and Psychology. A recent definition is Reid's (2016, p. 5) which defines dyslexia as a difference in processing that "*is often characterized by difficulties in acquiring literacy*". At the same time, Reid reports that dyslexia is also associated with other difficulties in cognitive processes such as motor planning and organization that the person may have.

Also, according to Lyon, Shaywitz and Shaywitz (2003), "*Dyslexia is a special learning disorder of neurobiological nature. It is characterized by difficulties in word recognition and by poor spelling and decoding capabilities. Also, it is characterized by other cognitive abilities and the provision of effective teaching at school. Secondary consequences may include problems in reading comprehension and reduced reading experience that may hinder the development of vocabulary and background knowledge*". It is a theory which is well documented and provides a cognitive explanation for dyslexia (Elliot & Grigorenko, 2014).

The British Dyslexia Association (B.D.A., 2017) also gave a definition: "*Dyslexia is a hidden disability [...]It is the most common of the Specific Learning Difficulties (SpLDs). Dyslexia is usually hereditary. A student with dyslexia may mix up letters within words and words within sentences while reading. They may also have difficulty in spelling words correctly while writing; letter reversals are common. However, Dyslexia is not only about literacy, although weaknesses in literacy are often the most visible sign. Dyslexia affects the way information is processed, stored and retrieved, with problems of memory, speed of processing, time perception, organization and sequencing. Some may also have difficulty navigating a route, left and right and compass directions*".

After the most relevant definitions, we come to the conclusion that conflicting theories about the causes and strategies of dealing with dyslexia by different sciences, medicine, psychology, and pedagogy have been developed. Consequently, we may conclude that there could not be a single definition of dyslexia. Different definitions of dyslexia may be valid for different circumstances and purposes.

1.1.A brief introduction to Dyslexia

Dyslexia is the most common learning disorder, known as one of the Specific Learning Difficulties (S.L.D.) - those situations that interfere with the ability of a child with normal intelligence to acquire some phonological skills (reading skills, spelling skills) or other cognitive skills. A child with dyslexia may have difficulties in both comprehension and encoding/ decoding of the written word (reading and writing). Dyslexia is a syndrome that involves dysfunction or a lack of

cognitive skills - therefore, it has learning effects - and presents complex pathology, acuity, and nature of symptoms. In addition, it persists in the adult life of an individual with dyslexia, and while appropriate treatment can alleviate the symptoms, it does not cure the syndrome. Also, according to van Viersen et al. (2015), dyslexia is associated with difficulties which may be covered by "strengths in working memory, grammar or vocabulary, especially in gifted children".

According to Pradhan et al. (2017), dyslexia which is a heterogeneous syndrome, "*is the most recognized Developmental Reading Disorder (DRD) with 5-17% prevalence and poses as a significant disability*". According to the authors, the most important deficits of dyslexia are "*phonological deficits, poor visual attention span, selective deficits in complex serial visual search tasks, sustained visual attention problems, visuospatial functioning and difficult image reproduction from memory*".

The initial findings of Tsampalas et al. (2018), define a number of differentiated learning characteristics, needs, and achievements of students with dyslexia. That heterogeneity of dyslectics makes the need for different learning styles and consequent learning strategies as we will encounter in our next chapters.

These terms, Specific Learning Difficulties and Specific Developmental Dyslexia (S.L.D.- S.D.D.), are used to show that the difficulties experienced by children are organic and not the result of any subsequent damage to the brain or the senses or that they have not been caused by lack of educational opportunities. Today, the word "dyslexia" is used instead of the more extensive term "Specific Developmental Dyslexia" and the disorder is defined either through a description process with emphasis on the strengths of the child, or through the exclusion process, or through the use of the definition that separates the description of the situation from its explanations (American Psychiatric Association, 2013).

Snowling & Hulme (2012) concluded that there are two kinds of reading disorders. Dyslexia which also refers in the difficulty in decoding words leads to the conclusion that the child has trouble in associating the way the word is pronounced based on its spelling. This is the reason why in most of the cases when children with dyslexia read out loud a text they read it slowly and that is when the problems they have with spelling make their appearance.

Because of the weakness and lack of phonological abilities, the child with dyslexia has a malfunction in oral speech, but it can be improved by proper oral teaching, especially if it is combined with systematic phonological exercises. There is also difficulty for a child with dyslexia in terms of the perception of pronunciation and its rules. That is the reason those children can read ostensibly easily and accurately but in fact they did not understand the content of what they just read. In order to achieve reading comprehension, a child should not have any oral skill weaknesses as it is the lack of grammar skills, weak vocabulary knowledge that may lead to a lack of understanding of the spoken language.

The authors proposed that D.S.M.-5 classify failure of reading comprehension as an important impairment which needs to be addressed. Both dyslexia and comprehension difficulties show strong follow-up with other language disorders. They argue that recognition of the consequences of reading and language disorders has significant effects on assessment and treatment, and we find high levels of comorbidity between reading disorders and other seemingly dissimilar disorders (including ADHD[2] and motor disorders) (Snowling & Hulme, 2012).

Regarding the cause of developmental dyslexia, Huettig et al (2017) draw attention to the fact that many of these lesions also occur with people who are illiterate and who have never or in a low manner receive any reading instruction. The above writers suggest that this may not be coincidental. They believe in the changes of the performance of people who have received any or very little reading instruction and people who are diagnosed with dyslexia since they have been compared with people who have been literate. They believe that they both show effects in reading experience which may be reduced or irrelevant. Research on the main causes of reading problems will be progressive if the consequences of quantitative and qualitative differences in reading experience are better taken into account and not mixed with the causes of reading disturbances (Huettig et al, 2017). American Psychiatric Association (2013) claims that dyslexia cannot be attributed to poor educational opportunities.

---

[2] Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common neurobiological disorders and is characterized by three main types of symptoms as defined by the Diagnostic Tool DSM-IV: those relating to difficulty in concentrating and prolonging attention, those related to increased motor activity and those related to the deficient spontaneous responsiveness (Burns et al., 2001). In DSM-IV (2013) these three areas are referred to as: carelessness, hyperactivity and impulsivity.

Daniels & Share (2017) list 10 dimensions of complexity in current theories of dyslexia or reading difficulties: linguistic distance, nonlinearity, visual complexity, historical change, spelling stability rather than morphological rotation, omission of phonological elements, holography, dual-use letters, link and stock size. Then, they consider that these 10 dimensions affect change in reading ability and dyslexia (Daniels & Share, 2017).

1.2. The etiology and prevalence of dyslexia

The group of disorders investigated most of all is that of children with dyslexia. This is due to the increased incidence of the disorder but also to its centralized dimension, as it is primary or secondary, with symptoms of hyperactivity, problems of perceptual dysfunction and evolutionary deficiency.

If we want to identify the position of dyslexia within learning difficulties, we find that there is a high level of agreement on the organic basis of the disorder. At the same time, however, there are serious disagreements about how functional impairment is manifested and what the functional processes, which are affecting people's reading and writing abilities, are. Also, the functional definition of learning considers learning as "*a function mapping behavioral experience*" (Houwer et al., 2013).

According to the university professor, psychologist and pedagogue D. Porpodas (1997), it is possible to classify theoretical positions for the etiology of dyslexia in four categories, claiming that dyslexia is the result of a) neurological subfunction, b) lack of hemispheric sovereignty, c) genetic anomalies, and d) functional abnormalities, at a perceptual and cognitive level.

Many researchers report that people with dyslexia have phonological difficulties, but as a whole they report a "key" deficit. They state that dyslectics are processing visual information in a poor way when they receive rapid sequential stimuli (Schaadt, Männel, van der Meer, Pannekamp, & Friederici, 2016; Wang et al., 2014); have a cerebellar-related deficit in reading (Stoodley & Stein, 2013); record a magnocellular deficiency which is responsible for visual deficits (in a low level) in sensory temporal processing (Fisher, Chekaluk, & Irwin, 2015; Gori et al., 2015); have poor working memory that may cause a difficulty in retaining information (Garcia, Mammarella,

Tripodi, & Cornoldi, 2014; Zhao, Yang, Song, & Bi, 2015); can hardly process auditory temporal information (Fostick, Bar-El, & Ram-Tsur, 2012a, 2012b).

The reasons for dyslexia are based on many researchers at linguistic, auditory, or visual timing deficits. Due to the above-mentioned controversy among researchers Lawton (2016, 397) attempted to seek answers through the results of three surveys with children in second grade. The two of them were *"targeting the temporal dynamics (timing) of either the auditory or visual pathways"* and the third reading intervention *(control group) "targeting linguistic word building".* In his study he tried to support the hypothesis that a serious cause of dyslexia is faulty timing in the synchronization of the activities between magnocellular and parvocellular visual pathways. His study argues against the claim that any reading deficiency in individuals with dyslexia has as main cause the phonological or language deficits.

The meaning of the prevalence on a phenomenon such is dyslexia means the incidence of the specific phenomenon in the general population which could measure the percentage (or proportion) of the population who live in a condition at time (Le & Boen, 1995). However, there is no clear data in Greece based on accurate information from pan-Hellenic studies.

Data from the Pedagogical Institute[3] (PI) (2010) in Greece, present that of the total number of students attending special primary schools and integration classes (20,884), 15,200 were identified as students with learning difficulties (82.93%). This percentage includes all students with learning difficulties, including students of language minorities. In secondary education, from the same data, a total of 7,519 students who were referred for evaluation, 3,618 (48,11%) were diagnosed with dyslexia (PI, 2010).

Additionally, according to the European Agency for Special Needs and Inclusive Education for Greece and after recording the statistics about the education of students with Special Educational Needs and Difficulties, it is reported that during the school year 2011-2012 in primary and secondary education, 3.4% of the students faced learning difficulties. In the same school year, the number of students with Special Educational Needs and Difficulties is recorded according to a context for special education at primary and secondary education. More specifically, 14.4% of

---

[3] More information for the PI we will find in next chapters that are referring to Greece

students in special school, 80% of students in integration and 5.6% of students in parallel support classes (PS[4]) were students with Special Educational Needs and Difficulties. In the case of secondary education in Greece, the statistics concerning the school year 2011-2012 were respectively 45.1% (special school), 51.7% (integration classes) and 3.2% (parallel support classes).

In secondary education due to the regulations of the law referring to written exams, the majority applies for a diagnosis of dyslexia from the Center for Differentiating, Diagnosing and Supporting Specific Educational Needs (KEDDY) in Greece[5] and not from surveys with specific definition criteria. All the above data that are mentioned occurring from both international and Greek data reinforce the ambiguity of the concept of dyslexia - learning difficulties and eventually may influence the subjective knowledge and opinions of teachers (Tzouriadou, 2015).

1.3. Physiology of dyslexia

The phenomenon of dyslexia clearly belongs to those forms of human consciousness and behavior which have their basis, not only in education and psychology - by the broader sense of the terms - but also are additionally characterized by neuropsychological and neurological elements. It is not a coincidence that several distinguished scientists have correlated dyslexia with central nervous system dysfunctions.

Regarding to the issue of hemispheric sovereignty and its relationship to the appearance of dyslexia, many researchers found that serious signs of instability in people with dyslexia are caused from their left brain hemisphere. In their view, dyslectics are having a particular difficulty in the skills which are correlated with reading (Starowicz et al., 2017).

Results coming from Waldie et al. (2013), revealed the expected hypo-activation in the left posterior areas in people with dyslexia as well as areas of overactivation in the right hemisphere. In the beginning of reading, right hemisphere involvement is commonplace to happen (Waldie, 2000). Also, Vlachos et al. (2013), examined the link between brain hemisphericity and dyslexia.

---

[4] Parallel Support (PS) is program which is based in co-teaching and is designed as to deliver education services in inclusive settings in Greece (Mavropalias & Anastasiou, 2016)

[5] KEDDY will be analyzed in the chapter which refers to Greek context

The results reveal that in people with dyslexia there is a display in preference for a right hemisphere thinking style.

Moreover, there are three recent studies based on various sets of neuroanatomical measures. Those studies apply multivariate learning techniques to classify students with dyslexia vs. control subjects: 5 white matter indices (Cui et al., 2016), grey matter volume (Tamboer et al., 2016) and 5 cortical indices: volume, surface area, thickness, curvature and folding (Płoński et al., 2017).

Hemispherical asymmetries are a fundamental principle in the functional organization of the human brain. A neurologically normal brain displays the primacy of the right hemisphere mainly in the visual-spatial abilities, and the specialization of the left hemisphere in language and motor skills. Deviations from this physiological asymmetry indicate pathological changes within the two hemispheres and the interaction between them. The transmission and integration of information between brain hemispheres is thought to be primarily mediated by the corpus callosum, and the processes involved in reading and attention depend on the integrity of this interaction (Waldie & Hausmannb, 2010). These two factors, the non-formal asymmetry of the hemispheres and the lesions in the corpus callosum, have been associated with many studies about developmental dyslexia. The planum temporale is a triangular area of the cortex (SanchezBloom, et al., 2013).

Recent studies in the brain of children with developmental dyslexia showed leftward asymmetry of the planum temporale, as the corresponding area of the right hemisphere seemed to be larger. This has led researchers to conclude that this asymmetry of the planum temporale, which is perceived in the brains of children with dyslexia, may lead to the specific deficit (SanchezBloom, et al., 2013).

Apart from the association of anatomical cerebral asymmetry with dyslexia, further investigations have also focused on the functional asymmetry of hemispheres. These investigations revealed a reduced activation in the left temporal field in children and adults with developmental dyslexia during word recognition and phonological decoding exercises. This dysfunction of activation in this area is accompanied with a reversed left-right asymmetry. In addition, it has been found that children with dyslexia with phonological processing problems are more likely to have cerebral functional asymmetry, for example, in the temporal field. The result, therefore, was to compare the non-typical size of the right temporal field to the brains of

individuals with dyslexia with their reduced phonological and verbal abilities. (Hernandez, et al., 2013).

Apart from the asymmetry of the planum temporale and the damage of the parts of the cerebral cortex responsible for the phonological deficits mentioned above, research has revealed another area of the brain that may be responsible for the emergence of learning difficulties. Traditionally, cerebral function has been associated with controlling and co-ordinating movements, but also in attention, memory, learning, executive control, language and visual-spatial functions.

Neuroimaging studies highlighted a possible correlation of cerebellum with dyslexia. Indeed, in many studies of individuals with dyslexia, a cerebellar symmetry and a high concentration of gray matter were observed, indicating cerebellar damage. The cerebellar symmetry was linked, from other studies, to the degree of severity of phonological difficulties, and this was the reason for Nicolson and his colleagues (2001) to develop the cerebellar deficit hypothesis. According to this, automated learned skills such as articulation, reading, spelling and phonological abilities are disturbed by a cerebellar dysfunction (Stoodley & Stein, 2013).

Due to Vidyasagar & Pammer (2013), an important cause for all those reading problems dyslectics have to deal with may be the difficulty they face in auditory and visual sequencing. This means that dyslectics have difficulty in auditory sequencing of the sounds that comes out of a word and also in visual sequencing of its letters. That etiology may explain all those mechanisms that underline sequencing deficiencies. Therefore, temporal processing includes the "accurate timing of auditory and visual sensory inputs" (Stein, 2018;3). As for accurate timing we refer to the formation of memory representation in the order of sounds and word letters. The individual's brain has to work with the help of its transient systems. Those systems are responsible for the processing which is transient includes networks of "magnocellular" neurons (Vidyasagar (2013).

Magnocellular system is referred as an impaired system for dyslectics. When children are dyslectic, their recognition of individual letters is slower when compared to a good reader (Ozernov- Palchik et al., 2016). They also do not put those letters in the correct sequence.

The magnocellular dorsal attention stream known as M-D system, contributes in two areas. On the one hand, it recognizes rapidly the letters and rapidly focuses on the ventral stream attention

on the letter that needs to be identified (Vidyasagar & Pammer, 2010) and on the other hand, it forms them in the correct sequence. The sequence means that it classifies and records the range and order of the shift of attention as well as the eye movement when reading each word. Due to Stein (2018), the M-D system works significantly in controlling attention to reading. Dyslectic readers have the development of the magnocellular's system impaired.

Giraldo-Chica et al. (2015), attempted to test the magnocellular theory directly by measuring the lateral geniculate nucleus (LGN). It is the location in the brain where streams of magnocellular can be found isolated. They use high-resolution MRI[6] scans and measure the anatomical boundaries of the LGN. Their survey sample consisted of 26 subjects, all 22–26-year old, half of them with dyslexia and the other half were controls. They found significant smaller left LGN in volume in subjects that had dyslexia. Also, left LGN was different in shape, while they found that there were no differences in the right LGN. The compatibility of this with the magnocellular hypothesis is obvious. Also, they found compatibility with theories of dyslexia that show differences in the early visual system.

Given the reduced response of the visual system to many persons with dyslexia, it gives the result of the incorrect arrangement of the letters within the word. However, this may be the reason for the impaired magnocellular. Stein (2018), records that 3 may be the main reasons for this deficit. Those are genetic, immunological and nutritional factors. Dyslexic children's brains present a series of characteristic abnormalities: the anatomy of the temporal lobe is disrupted, its connectivity varies and many areas are poorly activated during reading.

---

[6] Functional Magnetic Resonance Imaging (LMR, fMRI) depicts the hemodynamic response associated with neuronal activity in the brain and spinal cord. It is a relatively recent neuroimaging method. As a technique measures the brain activity. Is a safe and non-invasive tool (The University of Edinburgh, 2018).

1.4. Categories and types of dyslexia

1.4.1. Categories of Dyslexia

The first to use the term "dyslexia" to refer to the loss of some patients' ability to read and write was a doctor named Dr. Berlin in Germany in 1887. Dr. Berlin used the term "dyslexia" to describe an acquired condition (Pumfrey & Reason, 1991).

Acquired dyslexia (AD), occurs in people who do not show dyslexia since they were born but it is a result of a possible stroke, cranial lesions from an injury, convulsions and other similar incidents (Coslett & Turkeltaub, 2016).

Developmental dyslexia (DD), occurs in people as a genetic susceptibility or a gene influence and is a condition that a person is born with. Developmental Dyslexia according to the American Psychiatric Association (2013), "*is a complex heritable neurodevelopmental disorder characterized by impaired reading acquisition, in spite of adequate neurological and sensorial functioning, educational opportunities, and average intelligence*".

Neurological lesions occurring mainly in adults are the main reason for the occurrence of acquired dyslexia, whereas in the case of developmental dyslexia, it occurs in people in early age, refering to the deficiency or inadequacy in the development of writing and reading skills due to genetic influences (Coslett & Turkeltaub, 2016).

1.4.2 Types of Dyslexia

In the diagnosis of dyslexia, the individual experiences special learning difficulties arising from different brain dysfunctions or even from different cognitive disorders and affects the way a person reads (Lallier, Thierry & Tainturier, 2013). Therefore, a classification system to reduce that heterogeneity should be established. By recognizing all different reading profiles we could distinguish subtypes of developmental dyslexia. Reading is the central diagnostic phenotype. Also, at the cognitive level, people with dyslexia seem to share a deficit in the phonological domain (Saksida et al., 2016).

References offer the type of visual and phonological (auditory) dyslexia. In visual dyslexia, there is a confusion of letters with visual similarity, difficulty in the complete examination of words,

vocal errors in spelling and inability to hold the visual image in memory. In Sigurdardottir et al. (2017) study we see that readers with dyslexia in an average manner indicate some problems with visual statistical learning. These differences are not accounted for by differences in intelligence or in their ability to remember individual shapes, but are associated with other difficulties considering the attention mechanism. Therefore, Siegelman & Frost (2015) revealed that any performance on a visual statistical learning task in dyslectics was neither correlated with auditory verbal nor auditory non-verbal statistical learning.

Children with phonological (auditory) dyslexia have difficulties in the representation, composition and memorization of sounds. Still, they cannot distinguish the subtle differences between sounds. Also, difficulties are encountered in keeping the acoustic sequence. Auditory dyslexia can be distinguished when children are asked to write a dictated text. Then, the indication of acoustic dyslexia is the many mistakes in their written text (Conner, 2017). In auditory dyslexia "sounds are perceived as jumbled or not heard correctly". As the functional anomaly of these children is supposed to be mainly in the graphical-phonemic translation system, they are unable to learn to read through first-reading speech methods.

1.5. Characteristics of specific learning difficulties and dyslexia

"Specific learning disorder" is a category in learning disorders due to a specification of which the ability to read is partially or totally compromised (APA, 2012). The diagnostic criteria used for specific learning disorders are the following (Tannock, 2016):

a) symptoms remain for at least 6 months, while there are no specific interventions done and there is absence of intellectual difficulty

b) the impairment of a single or more abilities, which may have negative effect on school achievement

c) the onset at school-age (it can probably manifest later and refers to any linguistic inefficiency in the language used in school)

d) the appearance of other explanations about the difficulties that the student is experiencing (such as psychosocial conditions or intellectual difficulty).

Diagnostic criteria are referring "*to the absence of sensory problems as high enough to justify the learning difficulties*" (Tannock, 2016).

Based on modern research trends, dyslexia occurs to be a learning and education disorder in which perceptual performance features are identified at three levels:

a) The level of reading errors (learning to read) (Kuster et al., 2017).
b) The level of spelling difficulties (learning spelling - spelling) (Re   & Cornoldi, 2015),
c) The level of behavioral characteristics (Dahle & Knivsberg, 2014).

Some early distinguished characteristics of dyslexia condition may include a delay in speech that is not in accordance with the child's age. Therefore, the child's growth is consistent with that of a younger child. The child usually gets confused and mixes the words. It is a common phenomenon for a dyslectic child to be incorrect in pronouncing vowels. Most of the times it is obvious that the child has difficulty in finding the proper words in a sentence that reflect the correct meaning. It is quite difficult for the child to rhyme as well as to recall words. The child with dyslexia is characterized by frequent distraction and there are often daydream intervals. A tendency to avoid writing, reading and using mathematics is a quite frequent reality (Peterson et al., 2013).

A dyslectic child is usually characterized by poor acoustic memory mostly referred to music, as well as inability to fully memorize a musical consequence. The child also has a hard time remembering letters that are connected to sounds. Generally speaking, most of the times a dyslectic child is unable to name the letters, the colors and the numbers. So, there comes the difficulty in decoding simple words, or being unable to correlate them with the meaning originating from those words (Goswami et al., 2016).

Additionally, one of the most distinguished characteristics of dyslexia is that the child has a difficulty in following dual commands. It is quite difficult for the child to follow the most complex instructions of a game, unless it is a game that the child has played many times. That is a major obstacle for socialization that reflects directly on the child's inner world. So, a cycle of psychology and practical everyday life is created causing the problem to grow even further (Long et al., 2016).

1.6. Diagnosis of Dyslexia

There are differences between Specific Learning Difficulty (S.L.D.) studies' data due to the way the child with dyslexia processes auditory stimuli compared to control children. Mismatch negativity (MMN) is an electrophysiological potential. It is used in the study of auditory processing in children. It evaluates the brain's ability to distinguish sounds. It is also a very user-friendly measure. The reason for using it is to detect the capability of passive acoustic change. The results are referring to children with dyslexia as well as to the children who tend to develop dyslexia. Controversial results are presented due to the diversity of the used method, the stimuli or the age of the subjects. Volkmer & Schulte-Körne (2017), tried to summarize and evaluate Mismatch negativity research for children at risk. They analyze whether Mismatch negativity (MMN) is associated with lower speed in reading and spelling. The results obtained from the research showed differences. Especially in very young children (risk group), the MMN speech measurement studies were often found attenuated. In a research where non-speech stimuli were involved it has occurred that the results have been characterized as heterogeneous. There is a positive correlation between MMN, reading and spelling. Authors' review shows that MMN can measure the recognition of early dyslexia and can give several information for supporting the intervention for early dyslexia (Volkmer& Schulte-Körne, 2017).

According to Tamboer & Vorst, (2015), there are questionnaires that could be used for the indication of dyslexia in children. Linguistic studies about the development of the language have been made due to the vocabulary and the way it develops, semantics, the correct use of language's morphology and the compilation. The development of the language is depended from all above (Cunningham & Carroll, 2015). The prerequisite for the development of specific developmental dyslexia is the disturbed function of the skills associated with difficulties in reading and writing (Farris et al, 2016; Nielsen et al, 2016). Reading and writing abilities, in particular, include phonological awareness, rapid naming, short-term and working memory, morphological awareness, spelling, visual and kinetic skills of the individual (Tigka & Tsolaki, 2016). The dysfunction of the above areas refers to developmental dyslexia. These areas have been extensively studied throughout the international references. At the same time, they have been included in the Learning Difficulties Diagnostic Criteria and have been taken into serious

account by the authors as diagnostic and detection tools for Special Developmental Dyslexia internationally (Skeide et al., 2015).

The Diagnosis of Special Developmental Dyslexia in Greece is carried out in accordance with the two international textbooks related to disturbances. The Manual of International Statistical Classification of Diseases and Related Health Problems (ICD-10) (WHO, 1997) and the Diagnostic and Statistical Manual of Mental Disorders (D.S.M.-IV) (APA, 2000).

I.C.D.-10 contains codes for various diseases and symptoms of disturbances from a Class Medical Classification List by World Health Organization (W.H.O.). It is used by researchers to confirm the existence of a disorder (W.H.O., 1997). The categorization of disorders also contributes to appropriate planning of therapeutic intervention. Therefore, ICD-10 is a coding of diseases which is particularly useful for grouping and analyzing possible diagnoses mainly for epidemiological purposes. ICD-10 is likely to lead to a diagnosis. The D.S.M.-IV makes a unique classification of the disorders in descriptive language so it can be understandable to all. Since May 2013, its 5th edition is available. It is designed to match the codes that are used in the I.C.D.-10 (from its 9th edition onwards). These diagnostic manuals are used by health professionals to describe the characteristics of a disorder and also confirm or differentiate it from other similar disorders. Their use is either for clinical or research purposes. The main goal of their design is to improve clinical care.

Tests and questionnaires assessed in areas which are directly associated with developmental dyslexia, such as phonological information (Saygin et al., 2013), reading (Farris et al., 2016; Koponen et al., 2016; Pan et al., 2015), syntax and morphology (Furnes & Samuelsson, 2011), working memory (Hachmann et al., 2014), are many and useful.

The collection of Greek and foreign reference diagnostic tools for the creation of a mini database of diagnostic tools for special learning difficulties is the object of this subchapter. According to our research on the collection of diagnostic tools, we came to the conclusion that diagnostic tools are aids in the hands of specialists. Over the years, diagnostic tools have become more and more robust and reliable. However, it is often a matter of properly trained assessors to reduce under controlled conditions the chances of error measuring and to limit down the inappropriate use of diagnostic tools.

Diagnostic assessment is the mapping of the student's needs and difficulties. The procedure followed for establishing an intervention program in the learning and psychosocial field, includes the diagnostic evaluation, the design and implementation of the intervention program, the final evaluation and the feedback of the whole process.

Before the assessment, it is necessary to obtain the family history and the medical examinations. The main evaluation can be done with the standard tests and the informal assessment procedures. Standardized tests which are statistically weighted ranges that compare the average of an individual with the average of the general population to a particular learning or psychosocial field can be used so that competencies and skills can be recorded. Psycho-pedagogical diagnostic assessment is the most important phase in the process of identifying, diagnosing. Correct, detailed and timely diagnosis of learning difficulties is considered necessary because it will lead us to the preparation of a therapeutic program.

CHAPTER II: SPEECH, UNDERSTANDING AND PRODUCTION

During the oral evaluation, we need to identify whether the child's weaknesses are due to difficulty in understanding the language or in the production of the language.

a) Understanding

Practically, speech is called the verbal kind of communication between people. Speech is directly related to the syntactic combination of the grammatical elements that each language uses. Each word is created by a specific combination of some letters that are also translated into acoustic sounds or otherwise "phonemes". There are thousands of combinations between the grammatical elements from which the words emerge. Likewise is the way someone can pronounce the words and create sounds that correspond to words with actual meaning. Thus, many different and unique human dialects are created. So, a language can be created from the scratch and then it must be written down so as to be registered in the dictionaries with the purpose to be taught to the next generations of the society (Kennison, 2013).

Assessing the Recognition and Understanding of the Language: We ask the child to repeat words or phrases we say, to explain in his own words the meaning of some words we use daily, to present sentences with words that have more than one meaning and sentences with a complex structure, etc., providing instructions to the child and assessing whether the child can perform them without having to repeat or explain the instructions.

Understanding the process of speaking requires the ability on behalf of the child to perceive and to use in the right way the elements of the spoken word. This ability requires not only the functions of understanding of the communicative language, but also the ability to become familiar with the language structure.

b) Production

The vocal skills that allow people to produce their speech also allow them to sing (Kennison, 2013). There is also another form of human communication for people with hearing problems, which has the form of sign language. In some cases, speaking in certain cultures has become the basis of the written language. In addition to using speech in the field of communication between

people, some psychologists, for example Lev Vygotsky, believe that speech is also used internally for the evolving processes of the mankind and for the enhancement and organization of knowledge, usually having the form of an internal monologue (Kennison, 2013).

Speech is being studied as a phenomenon, especially in terms of speaking ability in combination with the perception of speech concerning the sounds used in the vocal language. In other research topics, several questions are being analyzed, such as speech repetition, the ability to connect the words through the process of hearing and matching with their true meaning, something that plays an important role in vocabulary extension and speech mistakes as it is connected to children. Several academic sectors study speech as an action. Those sectors might be all related to psychology, logotherapy, communication studies, otorynolaryngology, computer science etc. Another area of research focuses on the way the human brain works in its various regions, such as the Broca area and the Wernicke region, which are responsible for the production of speech (Kennison, 2013).

The controversial subject of how unique the human speech is, has been studied for ages. Animals also communicate with a form of voice commands. The process of evolution of this species is unknown and perhaps it is a subject of discussion and speculations. The most popular approach about speech is that it is the only human kind of attitude that is acquired due to the genetic predisposition and is meant for the understanding and production of words and phrases (Kennison, 2013).

Assessment of verbal production: Ask the child to describe his experience or to tell a story (or film) he liked (pronunciation, use of vocabulary, use of grammatical rules, create a monologue, ability of a student to adapt the speech to the level of the listener and the ability to correct his/her mistakes)

2.1.Dyslexia as a problem of language development

"Phonological awareness" is actually the advanced developmental phonological skill which is required by the child in order to accurately perceive individual phonemes that are related to a vocal word. The term includes teaching practices and activities. An example is the oral

recognition of the individual characteristics of words such as the recognition of the initial or final phoneme of a word etc. (Stasinos, 2015).

It is also possible to include activities such as choosing the note of a word or a group of words that share a common element, which might be having the same vocal sound. Activities that are familiar to the child are linked to its skill which is handling effectively those words that are not familiar to the child but are phonologically regular. For example, the teacher could ask the child to put together a series of phonemes she/he has heard before so as to form a word (Stasinos, 2015).

In order to acquire phonological awareness, some functions of the speech need to be practiced. These functions are: the actual sound percept, i.e. the existence of the person's ability to recognize a particular pronunciation of a word; the vocalization distinction referring to the distinction between two different phonemes; the syllable level, referring to the individual's ability to analyze a word in the syllables and sounds of which it consists; the acoustic composition, which gives the individual the ability to synthesize syllables or sounds to produce a word; the acoustic combination, which gives the individual the ability to combine analysis and synthesis into one word in order to find out which word will be created if one or two syllables are removed or added; the short time memory that allows the person to hold for a short time in his memory and to reproduce a certain number of phonemes, words or numbers given orally; the acoustic classification, i.e. the ability to understand a certain number of words orally given to the individual, in their proper sequence; the acoustic recognition of words, which offers the possibility to the individual to recognize a word, even when it is verbally given; the alliteration, meaning the ability of the individual to recall words with the same original phoneme and finally to identify tension and tone. That allows the individual to decide where a sentence should be emphasized according to the emphasis we want to give (Power et al., 2016). In children with dyslexia there is difficulty in creating links between the written and spoken representation of a word and in the realization that the sentences consist of words and words consist of syllables and phonemes.

Phonological awareness is characterized by several levels, which are identified by the different nature of the structural elements of the speech, e.g. words, syllables or phonemes. It is also

determined by the different cognitive functions presupposed by the awareness or realization of each structural element. Thus, it is easier for someone to understand the grammatical structure than phonemes. Therefore, phonological awareness should be considered as the ability of acquisition in different levels (Stasinos, 2015).

Children with dyslexia and language disorder were studied by Farquharson, Centanni, Franzluebbers and Hogan (2014) for phonological awareness and the phonological and grammatical influences on it. More specifically, the researchers considered that these children had a clear shortfall in phonological processing and that's why they had a greater risk of showing deficits in the reading process. They examined the influence of phonological and grammatical features on the level considering the words in phonological awareness. The study included 64 children aged 6 to 9 years old and divided into three groups. In the first group there were children who had typical development, in the second group were children who had dyslexia and in the third and last group there were children with a special language disorder.

The results of the research indicated that children with dyslexia have false phonological performance. In particular, those children experienced difficulty in repeating the phoneme as well as pronouncing the phoneme in relation to their peers who had a special language disorder as well as the typically developing children. Additionally, children with dyslexia seemed to belong to a more immature and divergent type of phonological output. On the contrary, children with special language disorder had inferior performance than typical development children, but recorded a similar type of performance in phonological and grammatical area.

Another research recently carried out by Jimenez-Fernandez, Gutierrez-Palma and Defior (2015), has dealt with the awareness of Spanish language in children with dyslexia. The role of segmental phonology was studied, something which has not been analysed extensively in the international references in the field of developmental dyslexia. In this case, the awareness of the tone was studied especially in children with dyslexia as well as the degree of phonological awareness related to the capabilities of the use of phonology.

The sample of the survey was 62 children from Spain divided into 2 groups. One group was composed of children with dyslexia and the other one of children without dyslexia. All children had normal IQ, coming from medium socioeconomic stratum and from 12 different schools.

Reading tests were given to the children so as to check accuracy and flexibility, as well as phonological awareness and accent in words and pseudo-words.

Children with developmental dyslexia had lower performance in all tests and used the same cognitive strategy either in words or in pseudo-words. It was also found that when phonological awareness was tested, children with dyslexia improved their performance in words, but not in pseudo-words. According to the researchers, this weakness has been confirmed in other languages too such as English and German.

Also, Kovelman and colleagues (2012), attempted to study the relationship between phonological awareness and reading difficulties in dyslexia. They considered that weakness in phonological awareness is a major cause of dyslexia. The researchers studied areas of the brain coming from a sample of various children who had dyslexia or not, using functional magnetic resonance imaging so as to recognize the neural interdependence of phonological awareness. They submitted children who were normal readers or had dyslexia, to an acoustic test characterized by rhyming words. The children were aged between 7 and 13 and a group of children from 5 to 6 years old participated too.

The results showed that children with normal development and nursery children used their left prefrontal cortex when they had to act phonological, while children with dyslexia did not use this area at all. Kovelman and her colleagues concluded that the left posterior lateral anterior frontal cortex may play an important role in the development of phonological awareness about speaking, which is essential for the reading and the cause of dyslexia.

Therefore, normal development of this part of the brain can enable children to use orally the language's elements in a way that facilitates reading capability, while its abnormal growth or reduced use may make the capability of reading difficult for children who later qualify as children with dyslexia.

In Feskemenlidou's study (2016), general education teachers consider, to a greater extent than special education teachers, that dyslexia affects the ability to speak and write. According to the Greek and international literature, the main difficulties that students with dyslexia have are mainly related to the handling of both oral and written speech (Pavlidis & Giannouli, 2003, as

cited in Feskemenlidou, 2016). It has also been found that teachers of both educational categories do not have the necessary knowledge, have great uncertainty about dyslexia, and often feel inadequate to work with students with language learning difficulties (Wadlington & Wadlington, 2005, as cited in Feskemenlidou, 2016).

2.2. Dyslexia and difficulties in oral and written speech

According to phonological theory, language is a system that includes a finite number of elements that can be combined. In phonology, these elements tend to be represented in the flow of speech. In each language, the syllables are relatively discrete units and within each syllable the point of maximum acoustic energy coincides with the "obligatory" vowel.

The oral comprehension and the output of speaking is a key element of language communication. Inadequate speech performance is usually characteristic in students with special learning difficulties and is associated with inadequacy in phonological awareness, with inadequate awareness of the morphology and semantics of spoken language, as well as with the limited use of the vocabulary. For this reason it is necessary to constantly test and evaluate the child with dyslexia in the performance of the oral speech, especially during the first years of his or her life, so that the child is ready to study with an already developed oral speech. At the same time, the development of spoken and written language can lead to the social and mental balance of the child. Thus, in the context of the study of children with special learning difficulties, language deficits are detected, which in turn create barriers to the production of spoken word (Morrow et al., 2015). Initially, there are two hypotheses regarding the causal relationship between language deficits and dyslexia, i.e. the hypothesis of the phonological deficit and the hypothesis of the double deficit. Phonological processing deficits hypothesis is considered as an explanation to dyslexia in many languages. Navas et al. (2014), after a systematic review in scientific databases within publications through the decade 2004 to 2014 have reached this conclusion. The double-deficit hypothesis of dyslexia shows that rapid naming and also phonological deficits could in combination provide reading difficulties in individuals. Functional MRI has been used so as to prove the evaluation of the double- deficit hypothesis from Norton et al. (2014). As a result, MRI (Magnetic Resonance Imaging) found that dyslectic children showed lower activation than the

typically reading children in reading network. Also, cerebellar activation was revealed was lower in double-deficit group than in children who had a rapid naming deficit only. Also, the same results were found in comparison to the children that could easily read. This was the first neuroanatomical study in that has ever happened. Nelson (2015) also investigated that hypothesis in 149 adolescents and dyslectic children. This neuroimaging study is considered as the first study which tried to find correlation in the way brain is processing phonological and rapid naming. As a result Nelson suggests that children who have double deficit, show differences in brain activation in regions for skills relevant to rapid naming and phonological awareness, even when there is a comparison with children who have single deficits.

Nitrrouer et al. (2018) study speech-in-noise problems of dyslectics and the relation to their reading problems. As a hypothesis, the authors call the differentiated signals reception due to their correlation to phonological awareness. This sensitivity concluded to reading difficulties and audio recognition in the presence of a noise. As an alternative hypothesis authors call that dyslectics have linguistic deficits in a more general context. Authors study 97 dyslectic and no dyslectic children in reading words and in recognizing them in noise. The results indicated that dyslectic children show deficits on all variables as were the phonological awareness, the grammatical knowledge and the vocabulary that was used. Also authors show that dyslectic children showed mild correlation in speech in noise recognition and their reading ability and that also dyslectic's skills show a relation to several abilities. Finally, there is no significant evidence about the way of thinking that deficits in reading and speech recognition in noise problems arise as a processing disorder in those children but those deficits in noise are independent of each other.

When learning a language, there is a correlation of perception mainly with the sound signals received by the individual. The stored structures of these audio sequences are the so-called "phonological representations" of words. During the acquisition of the language, thousands of phonological representations must be stored in such a way as to allow them to be identified when speaking in different acoustic environments, accurate production and later the development of their ability to use the written symbols when learning reading and writing (Serniclaes & Seck, 2018).

Another study examined the importance of anxiety in reading English words. Specifically, authors explore the possibility that patients with superficial dyslexia attribute stress when dealing with predetermined words. From the results it has been shown that all patients frequently regularized the strong-weak prefixed words by pronouncing them with second syllable stress. Those errors in regularization gave researchers strong evidence for the special role of prefixes in stress assignment while a person reads (Ktori et al, 2016).

Several studies have sought the difficulties in oral and written speech in children with dyslexia. Goswami et al. (2016), used two filtered speech tests to investigate children's slow processing (<4 Hz) versus faster (~ 33 Hz) speech time configurations. Groups of children with either developmental dyslexia or speech and language problems were compared in groups of typically developing (TD) children. Their data suggests that reduced time of the speech signal is indicated at different rates of differentiation from children with different types of developmental language disorder. The implications occurred by these findings were examined within a specified time for the understanding of developmental language disorders (Goswami et al, 2016).

Padersen et al (2016), examine oral reading and the relationship with reading comprehension. In this study the participant group was consisted of 16 students with dyslexia and the comparison group was 16 students without dyslexia. Authors tried to measure reading speed, reading errors in quality and number and also self-corrections of students while reading. They use text retellings. It is shown that students with dyslexia focus more on decoding or understanding because their current process enforces them. Due to this, Layes et al. (2015), study about reading speed and phonological awareness deficits. The authors measure reading speed and accuracy in children 9-10 to 9-8 years old, who spoke Arabic. As a result, they showed that children with dyslexia were reading slower than controls and also that they were not as accurate as the children that were reading fluently.

It is argued that speech processing deficits affect the learning of reading. This explains why children with dyslexia with poor phonological representations have deficits in activities where they have to classify sounds into categories of phonemes, or they have to decide whether similar auditory sounds belong to the same category.

The difficulties experienced by people with dyslexia in analyzing, memory, and processing the structure of the sounds have been reported earlier. The association between speech perception deficits in children with dyslexia and the way children with dyslexia with persistent speech delay differed from typically-developing peers was the purpose of the study of Cabbage et al. (2016). The authors through 36 students (half of them with dyslexia) tried to find if there were differences in difficulties on their reading and speech skills. They used novel speech stimuli which they presented to the children aurally. They found difficulties in children with persistent speech delay in recognizing words that may have limited acoustics.

Carroll et al. (2014) examined the nature of the connection between family risk of dyslexia (FRD), speech and phonological skills. Also, authors examined whether deficits in these areas are fully responsible for the increased risk of dyslexia in children with family risk of dyslexia. Four groups were compared: good and poor readers with and without family risk of dyslexia. In most cases, good readers were better than poor readers regardless of family history, but there was an effect of family history on naming and pseudo-word repetition irrespective of the education results, suggesting "a role for speech production skills as an endophenotype of dyslexia". Phonological processing provided spelling, while the sample provided accurate reading and comprehension of the text. The family risk of dyslexia was an important extra predictor of reading and spelling after controlling speech production, language and phonological processing, indicating that children with family risk of dyslexia present additional difficulties in education, something which could not be fully explained in terms of language and phonological skills (Carroll et al, 2014).

Zoubrinetzky et al. (2014), examined whether reading-based rankings are important for identifying cognitive homogeneous subgroups of children with dyslexia. Each of the 71 participants with dyslexia was selected to have a mixed reading profile, i.e. poor wrong word and pseudo-word reading performance (accuracy and speed). Despite their homogeneous reading profile, the participants were found to be divided into four different cognitive subgroups, characterized by a single phonological disorder, a single visual disturbance disorder, a double defect or none of these disorders. The two subgroups which were characterized by different cognitive disorders were found to display a very similar pattern of reading while there was a contrast in spelling. General findings excluded the subtype based on the reading profiles as a classification method for identifying cognitive homogeneous subgroups of children with dyslexia.

They presented an opaque relationship between the cognitive bases of developmental dyslexia and their way in reading and spelling (Zoubrinetzky et al, 2014).

Also, Feskemenlidou's research (2016), initially correlates teacher gender with all possible factors that may be responsible for the onset of dyslexia. The comparison of the means (t-test) showed that there are statistically significant differences between the sexes, regarding a number of statements regarding the causes of dyslexia. Women educators believe more than the fact that a child's characteristics are related to the cause of dyslexia, that school-related factors exacerbate a student's problem with dyslexia, that deficits in phonological awareness are a cause of onset. dyslexia and how the lack of services in schools affects a student with dyslexia. Finally, there was no statistically significant difference between men's and women's perceptions of the extent to which teaching methods, excessive demands, and poor classroom management can affect. Teachers think to a greater extent than teachers that dyslexia affects the ability to speak and write. In addition, no statistically significant difference was found in the views of both sexes that students with dyslexia can understand what they are reading without pronouncing the words correctly, are usually "bad" spelling and have difficulty analyzing a word in its individual phonemes.

Regarding the correlation of teachers' personal reactions with their specialty (general - special education), the comparison of the answers showed that there are statistically significant differences between general and special education teachers, regarding a series of statements regarding their reactions to dyslexia such as that special education teachers believe to a greater extent than general education teachers that they would use all the means at their disposal if they had a student with dyslexia in the classroom. However, no statistically significant difference was found in the views of teachers who have teaching experience and those who do not have whether they would use all the means at their disposal to help the student with dyslexia.

A statistically significant difference between the two categories of teachers was presented as follows: Special education teachers believe to a greater extent than general teachers that the help they provide to their colleagues is often available, that the quality of support they provide is sufficient. It is good that the help offered by psychologists is often available and that the quality of support provided by psychologists is quite good. The above finding is inconsistent with that of

Vlachou, Didaskalou and Beliou (2004, as cited in Feskemenlidou, 2016), where 24% of special educators stated that there was no substantial collaboration with the general teacher and 62% reported some forms of collaboration mainly with small class teachers. However, various studies have shown that cooperation between the two specialties is very important, as it not only facilitates the learning process, but also gives general education teachers a stronger sense of efficiency and greater professional satisfaction (Janney, Snell, Beers & Raynes, 1995, as cited in Feskemenlidou, 2016).

Also, it has been shown that there are statistically significant differences between men and women, regarding a number of statements regarding the effectiveness of improving dyslexia and phonological deficit with female teachers believing more than men that wages and salaries Positive motivations are effective in improving a student's phonological deficit and dyslexia in general and that the child's voluntary involvement in classroom activities is effective in improving a student's phonological deficit and dyslexia in general. of both sexes for the effectiveness suggestions related to the child's involvement in classroom activities and assignment to him the same tasks as for the other children as well as for the effectiveness that the individualization of teaching may have, the integration of vocal activities visual awareness and visual support for letters. In addition, no statistically significant difference was observed between the sexes on the basis of the effectiveness of the self-assessment techniques and the multisensory techniques.

In a study by Papailiou (2018), which was prepared in the context of obtaining a master's degree in Special Education, the knowledge and opinions of primary and secondary school teachers regarding the support of students with dyslexia were recorded. In the context of this study, correlations were presented regarding gender, the level of education where they work as well as their previous teaching experience with students with dyslexia. Regarding the gender of teachers, women provide more correct answers about the nature of dyslexia and the problems that students face in writing and when they try to match letters with sounds or to remember the "picture of each word". With regard to the methodology they follow, more female teachers tend to use repetitions in teaching. Female teachers also record greater agreement in applying different learning styles when teaching to a class that also includes students with dyslexia.

In the context of the level of education where teachers work, there were no discrepancies in the views related to the difficulties of students with dyslexia in writing and reading (correlation of letter and sound symbols).

Finally, the percentage of teachers who had previous teaching experience outweighs the answers about the nature and difficulties faced by a student with dyslexia, compared to the corresponding percentage of those who did not have previous experience. Teachers with more educational experience are also recorded using methodology in teaching children with dyslexia.

2.3.Statistics

2.3.1. Dyslexia and global statistics

Due to last statistics from the "Foundation for people with learning difficulties" there is statistical evidence about learning difficulties and the evidence shows approximately 1.5 million people in the United Kingdom have such issues. From those who show dyslexia, approximately 190,000 are children of school age. Those who suffer from symptoms of dyslexia are approximately 10% of Earth's population to some extent. Also, statistics show that about 375,000 pupils with dyslexia are living in the United Kingdom. In addition, the Foundation has statistical evidence that the real problem of 60% of dyslectics is in phonological difficulties and in struggling to distinguish words sounds. Also, "MenCap" is an information site that people can see statistics about learning difficulties in the United Kingdom. Regarding children, those statistics show that approximately 347,013 children until the age of 17 have learning difficulties. General statistical reviews about special educational needs in the United Kingdom give "RS Assessment from Hodder Education"[7] too, which reports that in the United Kingdom there are 16.6% of pupils with Special Educational Needs (RS Assessment, 2018).

In Mysore which is a town in India, the prevalence of dyslexia was estimated among school children (Rao et al., 2017). The conducted cross- sectional study had duration of 2 months in 2013. Fifty school children were the sample size. Searchers found that the percentage of dyslexia

---

[7] RS: Rising Stars (leading provider of assessments for primary schools) and Hodder Education (provider of rigorous tests to secondary schools for over 40 years)

was 13,67% and was more among males as many others studies have found in the past (Moll et al., 2014). Most of the dyslectic children were left handed. Searcher's comparison with previous studies found ranges from 3 to 17.50% (Heerashree et al., 2015; Sridevi et al., 2015). Those variations are found due to the difference of cut-off points between severe and mild dyslexia. Due to Habib et al. (2013) the prevalence of dyslexia of school aged children in India in 2013 was estimated between 5% and 17%. A previous study in Bikaner India on students with dyslexia that attended 3rd to 5th class shows that 10.2% of the sample size were labeled as dyslexics (Choudhary et al., 2012).

Regarding New Zealand, the statistics about individuals with specific learning difficulties suggest approximately that the 20% of New Zealand's population have one and that one of ten individuals there show dyslexia (Kjersten, 2017). Thanks to the Ministry of Training in Canada and after a survey in Colleges and Universities, there is a report where students from colleges with learning difficulties have rose from approximately 8000 to 11000 in 7 years time. Also, the survey refers to university students with learning difficulties where they rose from approximately 5000 to 7000 in 7 years time too. The above reports show on one hand that more students with LDs are attending colleges and universities in Canada. On the other hand there is a big concern about that amount of students who have to be served by the appropriate offices in those universities and colleges (Ldao, 2018).

"Dyslexia International" (2018) is a non-profit organization and they offer to teachers science based training programs about dyslexia. The results from their annual report for the year 2017 with the help of Scientific and Open Education Advisory Panel show that about 5±2% of the population may be at risk of showing factors for 'developmental dyslexia'. Generally in Europe, the percentage of pupils with special educational needs who go in the European Schools has increased from 2011 (2,72%) to 2014 (3,23%).

A theoretical study in Germany about the comorbidity of dyslexia and dysgraphia has been made and findings show that approximately 17% of German school children suffer from writing and reading difficulties (Döhla et al., 2015).

An article from Fumiko Hoeft et al. (2015) shows the differences in writing systems influence the development of dyslexia. After a two decades research in Japanese speakers shows that

appearance rate was lower than 10%. There was again a difference between Japanese readers due to the writing system they used. The appearance of developmental dyslexia was approximately 2 to 3% among readers that used the syllabic Kana writing system but the appearance was higher (5-6%) when the readers used the logographic system, Kanji (Wydell, 2012). Nevertheless, Sun et al., (2013) found that the appearance of developmental dyslexia in Chinese speakers was approximately 3.9 %. As an example, the Board of Governors of the European Schools (2013) have found that the Anglophone, Czech, Finnish, Hungarian and Swedish schools have more pupils that suffer from the symptoms of dyslexia. Classes that have lower amount of pupils with special educational needs are Lithuanian and Polish classes. Close to the average were Dutch, Portuguese, Danish and German classes.

In Italy, Barbiero et al. (2012) recorded the presence of dyslexia in Italian school students (1774 children aged 8–10 years) in Friuli Venezia Giulia, a region of North Eastern Italy, showing that dyslexia is present on average at 3.1% of the research population.

In Spain, 6,086 university students were the sample size of a study for finding the presence of developmental dyslexia in Spanish university students. The results showed that between 1.6% and 6.4% of those students could be at risk of suffering dyslexia (López-Escribano et al., 2018). Also, due to "Literacy" which is an European project and is funded by the European Commission in the area of Information and Communication Technology (ICT) under the FP7 Program, all over the country the ratio of individuals that suffer from dyslexia is approximately 8-10% (Literacy, 2018). "Literacy" also refers to other countries and the estimated population of individuals with dyslexia. As an example, Israel considers approximately 10% among the population and in Hungary it seems that children who suffer from dyslexia are estimated about 5-7% of the country's children population.

In Greece, it is remarkable that in recent years in the field of education, there are more and more students experiencing learning difficulties. According to the references, learning difficulties constitute the largest category of special educational needs, as 56% of students have special learning difficulties, which negatively affects their school performance and behavior. Indeed, a significant percentage, about 80% of those students, show reading difficulties (Feskemenlidou, 2016).

As we can see pupils with special educational needs and their amount number (presentence) varies from country to country and its population. As for the diagnosis of the special education need, the most common are those who may be introduced as psychomotor impairment. Due to Europe's Pedagogical Development Unit dyslexia, dysorthography, dyscalculia and dyspraxia consist 50% of most frequent diagnoses with dyslexia arising every 4 diagnosis (Board of Governors of he European Schools, 2013).

2.3.2. Research of Special Education Schools

The special education school units of Pre-school/Primary and Secondary Education are the following:

- Special Kindergartens
- Early Educational and Healing Intervention Program - Specialized Early Childhood Education Unit of E.L.E.P.A.P. (Elliniki Eteria Prostasias & Apokatastaseos Anapiron Prosopon)
- Special Primary Schools
- Special Lower Secondary Education Schools
- Special Lower & Secondary Vocational Education Schools
- Special Vocational Education and Training Workshops
- Special Upper Secondary Education School
- Special Vocational Upper Secondary Education School

This survey is conducted, on a yearly basis, aiming at collecting data on the number of pupils enrolled, the school units and the number of teaching staff. It is conducted due to Regulations 452/2008 and 912/2013 of the European Parliament and of the Council concerning statistics on education and lifelong learning, All Special Education and Training Schools are the reference units. The survey has Greece's total coverage, it is official and it is conducted by E.L.S.T.A.T. (ELliniki STatistiki Archi- Greek statistical authority). The collection of the data is done through questionnaires, which are

supplemented by the school units and then checked and sent by the competent Primary and Secondary Education Departments to E.L.S.T.A.T.

On 31/10/2018, the Hellenic Statistical Authority (E.L.S.T.A.T.) announced for the first time the data concerning the statistics of Special Education Schools. This research covers school units of education under the authority of the Ministry of Education and the Early Intervention Programs of E.L.E.P.A.P. (Hellenic Society for the Protection and Rehabilitation of Children with special educational needs). According to the survey data, the following were observed:

a. Secondary Schools during the school year 2015/2016 were 140 compared to 138 in the school year 2014/2015.

b. The teaching staff increased by 13.0% in Secondary Education in the school year 2015/2016, compared to the school year 2014/2015

c. The predominant special educational issue of the enrolled pupils was the mental retardation of 37.1% for the school year 2015/2016, 37.9% for the 2014/2015 school year, 28.9% for autism (2015/2016), and 26 , 9% (2014/2015) respectively.

d. The ratio of teaching staff to pupils for the school year 2015/2016 was 1 teacher for 2.83 students, while the corresponding ratio for the school year 2014/2015 was 1 to 3.04

e. During the school year 2015/2016, Attica region gathered 35.1% of the school population of the Schools of Special Education and Training of the Country, while in the school year 2014/2015 the corresponding percentage was 34.8%. This was followed by the region of Central Macedonia, which accounted for 17.3% of the school population of the School of Special Needs Education and Training in the school year 2015/2016, while in the school year 2014/2015 the corresponding rate was 17.4%.

f.

In terms of secondary education, the following elements are included:

Table 1.

Number of school units by level of education, type of school unit and region, school years 2014/2015 and 2015/2016.

Secondary Education by Type of School Unit in Integration Classes		
Type of School Unit	**Number of School Units**	
	2014/2015	**2015/2016**
Special Lower Secondary Education School	9	9
Special Vocational Lower Secondary Education School	29	30
Special Vocational Education and Training Workshop	82	83
Special Upper Secondary Education School	5	5
Special Vocational Upper Secondary Education School	13	13
Total for Secondary Education	**138**	**140**

Table 2.

Pupils enrolled and teaching staff by level of education, type of school unit and region, school years 2014/2015 and 2015/2016.

Secondary Education and Type of School Unit in Integration Classes						
Type of School Unit	**Pupils enrolled**			**Teaching Staff**		
	2014/15	**2015/16**	**Change (%)**	**2014/15**	**2015/16**	**Change (%)**
Special Lower Secondary Education School	304	305	0,3	115	144	25,2
Special Vocational Lower Secondary Education School	1.420	1.573	10,8	488	570	16,8
Special Vocational Education and Training Workshop	3.110	3.065	-1,4	1.057	1.194	13,0

Special Upper Secondary Education School	123	112	-8,9	35	24	-31,4
Special Vocational Upper Secondary Education School	531	518	-2,4	71	63	-11,3
Total for Secondary Education	**5.488**	**5.573**	**1,5**	**1.766**	**1.995**	**13,0**

Table 3.

Registered pupils by category of special educational need and gender, in school years 2014/2015 and 2015/2016.

Type of special educational need	Pupils enrolled in Integration Classes					
	2014/2015			2015/2016		
	Total	**Males**	**Females**	**Total**	**Males**	**Females**
Learning difficulties	530	345	185	492	322	170
Blindness or amblyopia	128	68	60	103	59	44
Deafness or limited hearing	321	194	127	320	204	116
Intellectual difficulty	3749	2326	1423	3727	2311	1416
Autism	2657	2040	617	2900	2258	642
Mobility difficulties	497	286	211	415	222	193
Emotional, social and psychological difficulties	554	370	184	569	365	204
Attention Deficit Hyperactivity Disorder (ADHD)	94	78	16	95	83	12
Multiple Difficulties	1352	778	574	1416	807	609
TOTAL	9882	6485	3397	10037	6631	3406

Concerning Secondary Education in Greece, there is a separation in Special Lower Secondary Education School and Special Upper Secondary Education School. So, below are tables that specifically concern the Special Lower and the Special Upper Secondary Education Schools of Greece

Special Lower Secondary Education School: Including Special Lower Secondary Education Schools, Special Vocational Lower Secondary Education Schools and Special Vocational Education and Training Workshops.

Table 4.

Registered pupils and Teaching staff by Region of School Years 2014/2015 and 2015/2016

Region	Registered pupils			Teaching staff		
	2014/2015	2015/16	Change (%)	2014/15	2015/16	Change (%)
Eastern Macedonia, Thrace	277	294	6.1	95	104	9.5
Central Macedonia	851	863	1.4	364	407	11.8
Western Macedonia	113	122	8.0	43	51	18.6
Thessaly	289	299	3.5	152	162	6.6
Epirus	98	103	5.1	42	54	28.6
Ionian Islands	125	128	2.4	38	37	-2.6
Western Greece	267	265	-0.5	123	155	26.0
Central Greece	240	240	0.0	89	104	16.9
Peloponnesus	279	284	1.8	67	81	20.9
Attica	1612	1691	4.9	421	521	23.8
Northern Aegean	92	91	-1.1	34	43	26.5
Southern Aegean	126	131	4.0	55	53	-3.6
Crete	365	332	-9.0	137	136	-0.7
Total	4834	4943	2.3	1660	1908	14.9

Special Upper Secondary Education Schools: Including Special Upper Secondary Education Schools and Special Vocational Upper Secondary Education Schools.

Table 5.

Pupils enrolled and teaching staff by region, school years 2014/2015 and 2015/2016.

Region	Pupils enrolled			Teaching staff		
	2014/2015	2015/16	Change (%)	2014/15	2015/16	Change (%)
Eastern Macedonia, Thrace	26	9	-65,4	0	0	0,0
Central Macedonia	191	169	-11,5	25	27	8,0
Western Macedonia	0	0	0,0	0	0	0,0

Thessaly	90	89	-1,1	0	0	0,0
Epirus	7	19	171,4	0	0	0,0
Ionian Islands	0	0	0,0	0	0	0,0
Western Greece	47	51	8,5	0	0	0,0
Central Greece	36	44	22,2	15	10	-33,3
Peloponnesus	0	0	0,0	0	0	0,0
Attica	171	167	-2,3	47	31	-34,0
Northern Aegean	0	0	0.0	0	0	0.0
Southern Aegean	0	0	0.0	0	0	0.0
Crete	86	82	-4.7	19	19	0.0
Total	**654**	**630**	**-3.7**	**106**	**87**	**-17.9**

Presentation of the annual report (PART B) on the education of 2017-18 of Center for the Development of Educational Policy (K.A.N.E.P.-Kentro Anaptixis Ekpedeftikis Politikis) of General Confederation of Greek Workers (G.S.E.E.- Geniki Sinomospondia Ergaton Ellados). The main issue is the cooperation of GSEE and E.S.A.meA. (Ethniki Sinomospondia Atomon me Anapiria) about special education in Greece.[8]

The basic amount of pupils' population of Special Education & Education in Greece: As years go by, the support for Special Education students (E.A.E. - Eidikis Agogis kai Ekpaideysis) in General Education decreases! The percentage of special education students in Greece is one of the lowest in the E.U. and in the period 2007-2016 ranges from 1.8 to 2.9% compared to the general student population.

From the findings of the distribution of students in SE, we find that "classical" categories of special needs show stability of representation. Instead, the percentage of children registered in the autism spectrum is steadily rising over the last decade, and since 2015 we have statistically recorded students with A.D.H.D. (attention deficit hyperactivity disorder).

---

[8] The following information are from https://www.kanep-gsee.gr/nea-anakoinoseis/-/deltio-typou-parousiasi-etisias-ekthesis-meros-v-gia-tin-ekpaidefsi-2017-18-tou-kanep-gsee-se-synergasia-me-tin-e-s-a-mea-me-thema-tin-eidiki-agogi-kai-ekpaidefsi-stin-ellada-makrys-o-dromos-gia-e/
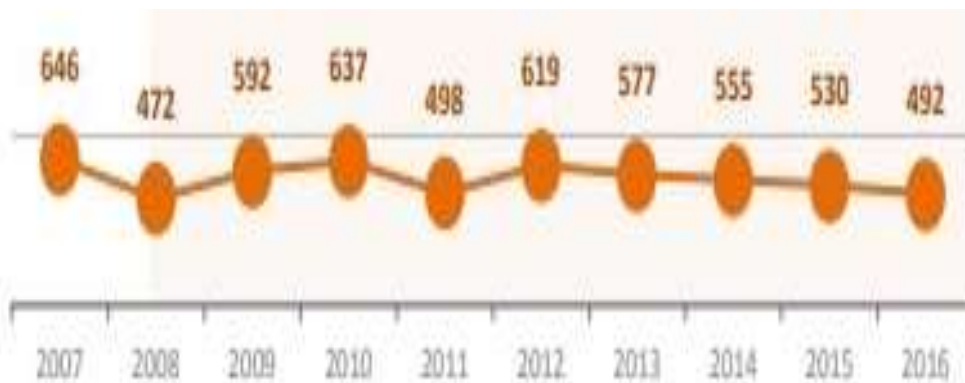
Figure 1. Children with learning difficulties in Greece
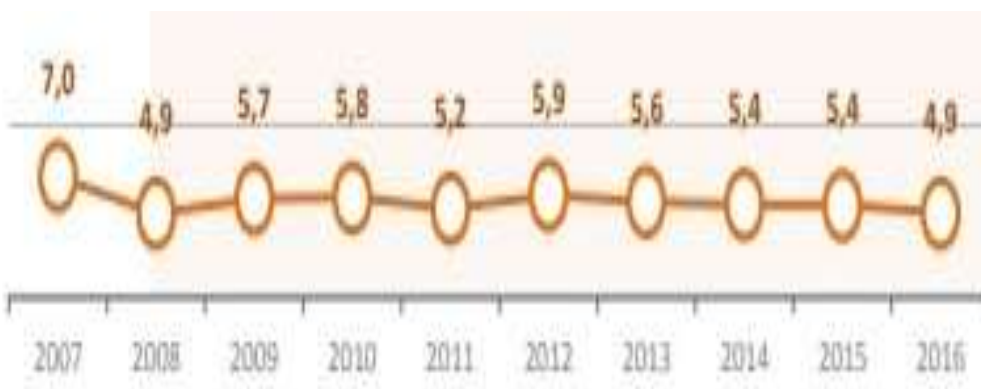
Figure 2. The percentage of children recorded with learning difficulties

In integration classrooms, the percentage of pupils in the total Special Education population, has been reduced from 45% (primary school) to 1.2% in the General and Professional High School.
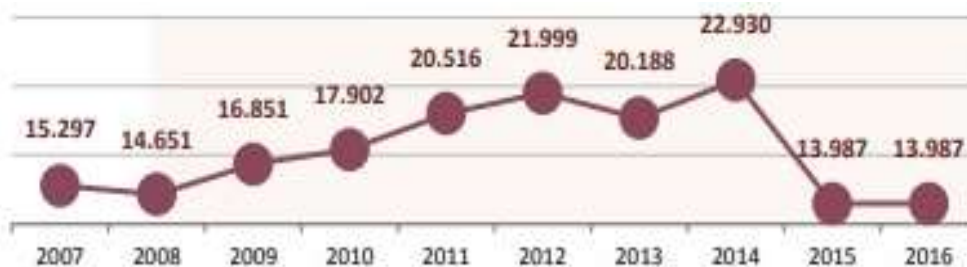
Figure 3. Pupil's population of Primary Special Education supported in integration classes

44
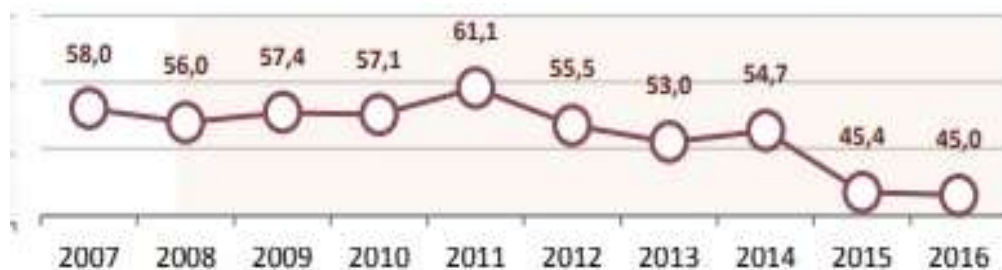
Figure 4. The percentage of pupils of Primary Special Education supported in integration classes
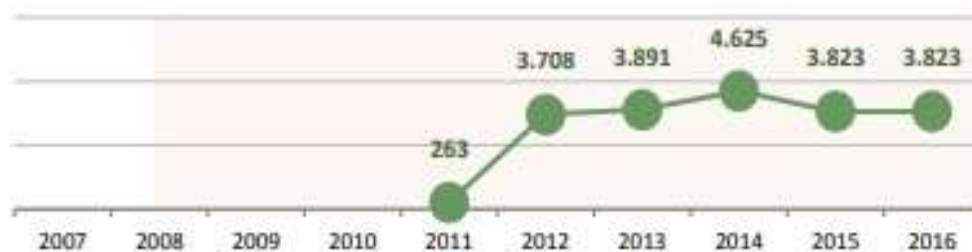
Figure 5. Pupil's population of Secondary Special Education supported in integration classes
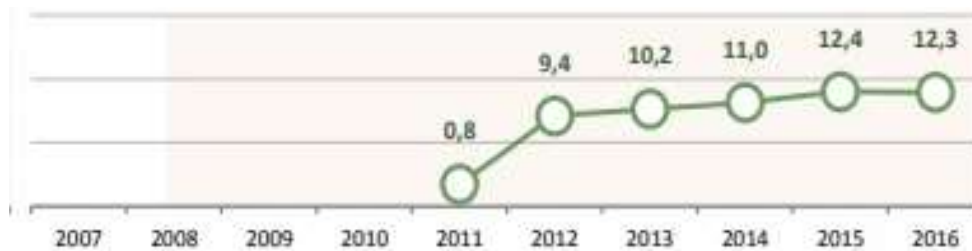
Figure 6. The percentage of pupils of Secondary Special Education supported in integration classes

Special Education students supported in integration classes is null:

- in general education nursery schools in about 9 out of 54 regional units of the country (16.7%),

- in Secondary Schools in about 11 out of 54 regional sections of the country (20.4%),

- in General High Schools (General Lyceum) in about 45 of the 54 regional sections of the country (83,3%),

- in Vocational High Schools (Vocational Lyceum) in about 46 of the 54 regional sections of the country (up to 85,2%).

Ray of light are teachers and educators of Special Education School Units; they have the highest qualifications in the full potential of the education system, although more than 50% are working as substitute teachers. Almost at all educational levels, the proportion of teachers with additional qualifications exceeds 60%, making them the most "qualified" in the education system as a whole.

In Greece, Special Education has not succeeded in following a complementary, equitable and autonomous strategic planning for its development. The fact that the country has experienced a strong economic and social crisis over the last ten years makes it impossible to plan strategic education, since the state is unable to support it economically. The greatest attention of Greece is in the dominant structure of education. We should, however, note that since 2017, there has been a significant increase in the number of schools and staff serving in the Special Education School Units, and in particular in Special Education pupils who are supported in integration school units or in parallel educational support classes in general education. Also, encouraging is the announcement for the appointment of permanent Special Education Staff.

In 2016, in the country's Special Education & Training, there are 31,072 pupils. Of those, 20,915 pupils (67,3%) attend Primary SE and 10,157 pupils (32,7%) attend the Secondary S.E..[9]

---

[9] National Reference Framework (2007-2016). Basic education sizes 2017-2018. Greek Primary and Secondary Special Education & Training. Available online at https://www.kanep-gsee.gr/wp-content/uploads/2018/11/ETEK_2017-2018_B.pdf

During the reference period (2007-2016), a 17.9% (or 4,709 pupils) increase in the pupil population of special education and training was recorded from 26,362 pupils in 2007 to 31,073 pupils in 2016. It should be noted that the minimum value of the indicator during the reference period was recorded in 2008 (26,182 students), while the maximum value of the indicator was recorded in 2014 (41,931 pupils). From the annual change in the student population of Special Education and Training during the reference period 2007-2016, it is worth noting that the highest annual growth rate of the indicator was recorded in 2012 (18.0% over the previous year), while the higher annual rate reduction was recorded in 2015 (-26.6% over the previous year).

Focusing on the school period 2007-2016, students attending Special Education and Training schools, made a slight increase in the rate in Primary S.E. (by 426 pupils / 2,1%) and a significant increase in Secondary S.E. (by 7,212 pupils or by 244,9%).

In 2016, in the Primary & Secondary S.E. units of the country a total of 31,072 pupils attended. Of these, 21,035 S.E. students (67,7%), of whom 19,262 S.E. students (62,0%) were attending integration classes and 1,773 S.E. students (5,7%) were attending parallel education support. In the same year, 10,037 S.E. students (32,3%) attended Special School Units of Primary and Secondary S.E..

During the reference period (2007-2016), a strong increase of 18.7% (or 3.217 pupils) of S.E. pupils attended Primary and Secondary Schools from 17.175 students in 2007 to 21.035 students in 2016. In this period (2007-2016) there was a strong increase of 21.6% (or 3.424 pupils) of S.E. students attending integration classes in Primary and Secondary Primary Schools, from 15,838 students in 2007 to 19,262 students 2016. It should be noted that the minimum value of the indicator during the reporting period, was recorded in 2008 (15,243 students), while the maximum value of the indicator was recorded in 2014 (29,110 students). From the year-on-year change in the index of S.E. students attending integration classes in Primary and Secondary Primary Schools during the 2007-2016 reference period, it is worth noting that the highest annual growth rate of the indicator was recorded in 2012 (22.4% over the previous year), while the highest annual rate of decline was recorded in 2015 (-34.2% over the previous year).

In the same period (2007-2016), there was a significant increase of 32.5% (or 435 pupils) of S.E. students attending primary education at secondary schools, from 1,337 pupils in 2007 to 1,773 students 2016. It should be noted that the minimum rate value was recorded in 2008 (1,301 students), while the maximum rate value was recorded in 2014 (2,555 students). From the year-on-year change in the rate of pupils that attend parallel education support in primary and secondary schools during the reference period 2007-2016, it is worth noting that the highest annual growth rate of the indicator was recorded in 2011 (19.8% over the previous year), while the highest annual rate of decline was recorded in 2015 (-31.9% over the previous year).

Finally, during the period 2007-2016, there was a significant increase of 60.4% (or 3.779 pupils) of pupils attending Primary and Secondary S.E. units from 6,258 pupils in 2007, which was also the minimum index value during the reference period to 10,037 pupils in 2016, which was the maximum value of the index over the same period. As a result of the annual change in the index of S.E. pupils attending Special Educational Units for Primary and Secondary S.E. during the reference period 2007-2016, it is worth noting that the highest annual growth rate of the index was registered in 2012 (16.7% compared to the previous year), while the highest annual rate of decline was recorded in 2011 (-5.0% over the previous year).

CHAPTER III. INTRAPERSONAL AND INTERPERSONAL ADAPTATION OF STUDENTS WITH DYSLEXIA IN AN INCLUSION CLASSROOM

3.1. Adaptation of children in classroom

In general, based on international sources, adaptation of children means the social interaction that children have with social groups and their social environment. It seems that students' adaptation have different expressions due to various reasons. For example, children develop friendships. In order to do that, children have to understand all personal competences through school performance and learning. Students could participate in school activities or socialize with other students. Also, adaptation in school includes their development in their personal motivation, self-esteem etc (Tarasova et al., 2017).

A commonly accepted definition of the concept of self is "the way in which a person understands himself". It is, however, commonly accepted that the concept of self contains two components: self-perception or self-image and self-esteem, which are basic terms that emphasize the development of children in school age (Mehrad, 2016).

3.1.1 Social and emotional adaptation

In recent decades, researchers have been very interested in social and emotional adaptation of children as these skills are fundamental and contribute to an effective learning process and good mental health. In addition, emphasis has been placed on developing the social and emotional skills of children that contribute to positive adaptation, mental resilience and mental wellbeing of their own and their environment.

Within the school community, the child is assessed compared to other children, and this comparison seems to be an important source of self-perception. According to the theory of social comparison, we are making a great effort to compare ourselves, our attitude, our views and our abilities with those of other people as a form of social validation. Based on this idea, it could be considered that the importance of school performance for shaping students' self-perception is not directly related to the actual level of performance but to how children perceive performance by comparing themselves with other classmates (Haft et al., 2016).

Self-esteem is linked to learning and directly affects the students' behavior and the way they approach a learning problem. Self-perception influences the students' expectations and self-efficacy in the learning process. Students with positive self-esteem have confidence in their abilities and consider themselves worthy of solving any learning problems faced. The opposite is the case with low self-esteemed students who have low expectations and do not believe they can successfully complete their schoolwork (Novita, 2016).

3.1.2 Child's interpersonal and intrapersonal adaptation

When a situation has an unpleasant effect on student's life, when it interferes with its functionality, by that we mean its interpersonal adaptation to the school environment, it is considered that the student has difficulty in adapting. Intrapersonal adaptation refers to how students feel and what they think, and is related to their relationships with others, their classmates and their teachers. It is important to mention that labeling a student as problematic or negatively characterizing the student, we record the attitude of the environment towards the student. Self-esteem is the main base for learning, is one of the most important bases of intrapersonal and therefore interpersonal intelligence, and, as a consequence, a main foundation for learning in general and for cooperative learning in particular (Gerasymova et al., 2016).

Referring to the international references, the concepts of adaptation and social behavior are linked. More specifically, according to Accariya & Khalil (2016), the functionality of a child in school, which occurs as the first social context in which the child enters, creates an increased sense of responsibility, a set of expectations for success and opportunities for success. Social function of children is an indicator of good psychosocial adaptation. Respectively, success in adjusting the student to the school environment refers to factors such as academic, social, emotional, behavioral and cognitive abilities. The child's status as a student presents a series of requirements e.g. from teachers, creating interactions with his/her conversations and general development of their autonomy.

3.2.Interpersonal and intrapersonal adaptation of students with dyslexia

3.2.1 Social development of children with dyslexia

The characteristics of students with learning difficulties vary according to the difficulties they present. However, the common characteristics of most children regardless of their learning difficulty are the significant difficulties in their school performance and education as well as psycho-emotional difficulties such as anxiety, poor motivation, low self-esteem, isolation, depression, behavioral problems as well as social acceptance problems as a consequence of the feeling of a learning difficulty they may experience. Therefore, there is a need for a new understanding of how schools can be supported in developing their capacity to respond to pupil diversity (e.g. Ainscow et al 2016).

Children with learning difficulties often experience problems regarding their skills and as a result they also find difficulties in their social relationships. The precondition for someone to create social relationships is to have social skills. The systemic model emphasizes on the fact that when a person interacts with the environment, then the skills that are developed activate the adaptability feature and so the person can cope with any situation occurring (Cavioni et al., 2017).

Children with dyslexia are not very cooperative and it is not easy for them to gain social contacts with their peers. The reason is the difficulty they have in interpreting the stimuli they receive from their interaction with the environment in order to choose and apply the behaviour that will help them so as to avoid unpleasant situations. In a few words, the phenomenon of discarding children with dyslexia from the school social environment is very common. The result is that children with dyslexia often stay alone and have no friends. Through the aforementioned, it turns out that children show behaviour that is not socially acceptable, such as aggression, although this situation has arisen through the inability to socialize. Children with dyslexia usually develop an introverted character and show apathy (Cavioni et al., 2017).

In the case of socialization, children with dyslexia often choose to start friendship with children who have corresponding difficulties as themselves. Children's social life is a very important part of their personality development. The school environment is one of the predominant parts of children's lives, where they live and grow. Acceptance and participation of peer-to-peer

friendship cannot be replaced in a qualitative value perspective with other social situations. Children spend a long part of their life in the school where they get aware with concepts, such as work, co-operation, competition, noble concession etc. For all the above reasons, the social development of the child is affected by the situation prevailing within the school and the extent of its socialization within that area (Schiff & Joshi, 2016).

Increased requirements for improved learning outcomes for all pupils and the inclusion of an increasing number of students with learning difficulties in general education classes require major changes in schools. Education is one of the fundamental prerequisites for human well-being. Educational systems must provide equal educational opportunities for all pupils to reach the level of well-being based on the "perception of good life, life that one has reason to appreciate" (Slee, 2013).

Students with dyslexia can benefit cognitively and emotionally when supported by their peers, developing strong friendships. Research has shown that there are social benefits for the inclusion of students with learning difficulties in a formal classroom when students have understanding and acceptance by teachers and their peers. According to some researchers, the social status of pupils with dyslexia among their peers improved through their self-esteem, friendly relations with peers, self-confidence, social skills and social participation. However, research argues that the participation of pupils with learning difficulties does not automatically lead to the creation of friendly relationships between students with dyslexia and their peers. However, the social participation of pupils in primary and secondary education is expressed and evaluated by the presence of positive social contacts and interactions between their peers, the acceptance by their peers, the social relationships between their peers and the perception of the students that they are accepted by their classmates. (Pesli, 2018).

Creating and maintaining friendship with children with dyslexia is an area that has several difficulties. Surveys show high levels of loneliness in children with dyslexia compared to typical developmental children. Therefore, Pesli (2018) suggests that the inclusion of pupils with special educational needs who did not have similar learning levels with their classmates in the formal class is referred to both groups of children academically and emotionally. Some studies that indicate that students' inclusion with learning needs in formal classes is ensured by creating and

implementing curricula and is established by developing their self-esteem, fostering friendly relationships they develop with their peers and development of their social skills (e.g. Winters & O'Raw, 2010, as cited in Pesli, 2018).

The need for social participation of pupils with learning difficulties is important for developing the dynamics of relationships between all students in the classroom where they are attending. In addition, failed socialization among pupils with learning difficulties, teachers and their classmates may lead to social rejection and low expectations (Cooper & Jacobs, 2011 as cited in Pesli, 2018). The above studies illustrate both the negative and the positive aspects of inclusion in the academic identity of students with learning difficulties in formal classes. They also underline the impact that have for students with dyslexia due to the way in which those organizational practices are structured.

The impact of inclusion of students with learning difficulties such as dyslexia in formal education can be characterized only as positive. Studies have shown the positive outcomes of inclusion between formal learners and students with dyslexia when they share common interests, concerns and can all together keep up with the pace of the classroom. Students with dyslexia can benefit developing emotionally as well from their peers by developing strong friendships. Also, there are other social benefits, such as the possible elimination of stigma and social isolation, when all students receive understanding and acceptance from their teachers and classmates.

Social skills and the social interaction of children with special learning difficulties are very important for their psychological adaptation. Generally, the development of social skills refers to the ability of children's interaction in a effective way with the rest of their school environment so as to achieve their social goals. The emotional balance of a child largely depends on its participation in the community and the sense of belonging in a group. Through their involvement in complex interpersonal relationships, children with specific educational needs also develop emotional skills and cultivate that corresponding field by creating friendly relationships with their social environment, learning the concepts of acceptance, sympathy, enthusiasm, failure, etc. elements that play an important role in their personal development. Students with specific learning difficulties "study" social behaviour and later as adults when they will be in a workplace,

they will succeed in choosing appropriate behaviour towards others, depending on any case. It is a necessary process which will help them in the rest of their life (Cortiella & Horowitz, 2014).

Through the research of Glick and Rose (2011, as cited in Pickens-Cantrell, 2016), the creation of friendship contributes to the development of social adaptation. In particular, through friendship, important skills can be developed to help the student in later stages of life.

According to Avcıoğlu (2013), social skills in general play an important role in creating interpersonal relationships in a way that the individual can understand and cope with any positive or negative emotions he receives or produces. The observation emphasizes that the social skills of others offer the individual the ability to develop his/her own. Observing the behavior of classmates of children with learning difficulties may not be so easy.

The social adaptation of children with dyslexia is also increasing with inclusive education (Ogelman & Secer, 2012). Interaction with other pupils in the classroom can even promote their desire for further knowledge.

Research on social relations between children with learning difficulties and children with formal development continues as with Hughes, et al. (2013) who support that the importance of teachers' education training is enormous in that field. Also, Knell, Wilbert & Henneman (2014, as cited in Pickens-Cantrell, 2016) note that children with learning difficulties are presented through their research results less socially successful than their peers. In particular, they welcome the inclusion because it promotes social interactions within the classroom. They report the development of friendship, communication, adaptability and social competence (McCurdy & Cole, 2013).

3.2.2 Emotional development of children with dyslexia

It is a very common phenomenon for children with special learning difficulties to have low self-esteem, low self-confidence, low self-perception and anxiety to a large extent. Self-esteem can be understood as this factor that includes the feelings and thoughts individuals have about their abilities and value. It is these elements that make people go beyond challenges, learn from success and failure and treat themselves and others with respect (Leontopoulou, 2013). Self-esteem guides and encourages the actions and their results that in turn affect self-esteem so that

there is a constant, dynamic, reciprocal process. All these elements are important factors and are responsible for children's emotional development. Not in a few cases, children with dyslexia have a misconception about their appearance and their image to their classmates. Thus, they do not consider in many cases that they are accepted by other children and they do not make efforts to become members of the various groups that are created in school at times.

Their perception considering themselves is wrong and they believe that they are inferior to other children. This phenomenon is usual to appear until they are diagnosed with specific learning difficulties. The reason is that they do not realize how their brain works and they do not understand why they have all those difficulties and why they are different. They only understand the hard time they face and they cannot answer to the big question of 'why this happens to them'. That situation directly affects their emotion and inner world (Novita, 2016).

The information which they will receive later by specialists and the discussion that will follow by social workers and child psychologists is the way that will lead them so as to understand the situation they face, but it will also help them to recover the "lost" image of their selves by themselves. That is the way that they will use so as to "reconstruct" their emotions and also to learn to believe in themselves. That action is to "repair" the emotional part of their soul which will help them to understand and believe in themselves. Later, with the appropriate guidance, they will be able to understand the way the "outside" world works and they will make different efforts to integrate into their social environment.

With timely diagnosis and the appropriate guidance, a positive impact is created on children with special learning difficulties. The main obstacle to their personal and social well-being, which is anxiety, tends to disappear. Children who did not previously dare to engage social activities which are negative for their afterwards psychology, now with the help and appropriate intervention they learn how to trust themselves and try to repair their feelings towards a more positive direction. They will no longer see school as a punishment, but as a more enjoyable experience in which they can also participate. The entire emotional state of children changes positively after diagnosis and appropriate guidance (Tamboer, 2015).

Low self-confidence often appears in children with learning difficulties, where early failures lead to the perception of their reduced capacity. This reduced capacity could in turn make those

children have lower expectations for future success as well as reduced success efforts and greater school failure. According to the review of international references, it appears that many researchers agree that students with learning difficulties have negative academic self-understanding. Some, in fact, argue that they usually have a more negative sense of self in terms of reading ability, ability in spelling and mathematics. Finally, in terms of self-esteem, many researchers converge on the view that children with learning difficulties or dyslexia have low self-esteem as they face shortages in academic fields (Zheng et al., 2014). The mediating role of hope in students with learning difficulties was the main theme of the Idan & Margalit study (2014). The results showed that the role of hope in academic self-efficacy and in achieving the effort to knowledge by these students is very important.

Dynamic models of development in the science of school psychology present a different approach to mental health and prevention, in which the concept of mental resilience, namely the positive adaptation and the ability of a person to maintain or regain his mental health within a context of challenges or adverse conditions (Masten, 2014). This study attempted to highlight the importance of promoting mental resilience in the school context for students with regular performance and for students with learning difficulties.

Schools have a vital role to play in promoting mental resilience, given the fact that they deal with pupils' problems in terms of their school performance and mental health (Theron & Donald, 2013). At the same time, they are able to target a fairly wide range of young people who find it difficult to concentrate in order to prevent and interfere with their mental health.

Due to the fact that participation in creative activities and educational success can be very useful for students with dyslexia (Papakonstantinopoulou, 2018), it has been emphasized that schools have the potential to play a critical and formative role in the areas of cognitive, linguistic, emotional, social and moral development of the child by enhancing their students through practical interventions (Bower, Carroll & Ashman, 2012).

The above have a particular interest to pupils experiencing learning difficulties, including psychosocial adaptation difficulties. Also, the need to strengthen their mental resilience due to the particular difficulties they face is considered important (Papakonstantinopoulou, 2018). The emotional, school and social adequacy of pupils with learning difficulties plays an important role

in facilitating their educational activity. Self-efficacy expectations appeared to be important to support these students in managing the learning environment, overcoming difficulties and challenges, managing anxiety, and demonstrating perseverance in pursuit of academic goals. For this reason, it is considered necessary for the school environment to contribute to the development of pupils' self-efficacy (Zimmerman, 2000, as mentioned in Papakonstantinopoulou, 2018) and especially students with learning difficulties. In practice, this could be done by integrating activities into the teaching process that would primarily aim at enhancing the self-efficacy of these pupils.

It is therefore widely accepted that students with learning difficulties usually have to cope with a wide range of problems, apart from their low school performance. Those difficulties could also be related to psychosocial adaptation issues. As reported by Accariya et al., (2016), children with learning difficulties are not only confronted with their personal sense of failure, but also the negative attitude of classmates, teachers and often their parents. Learning difficulties to a great extent cause frustration and anger among children who have to cope with their own lack of confidence in their abilities but also the awareness that their low progress, in addition to causing the same shame and guilt, is often a subject of commentary and negative criticism by others.

In Duncan's (2018) qualitative study, a large proportion of students with dyslexia experienced frustration with their teachers because they felt they were lazy and failed. This caused them anger, discomfort, low emotional development, disappointment and negative reactions. Studies have been conducted based on the reports of the children with learning difficulties, their understanding and experience of their difficulties, what they see as auxiliary manipulations by their teachers, their school and their family, as well as the auxiliary strategies that children develop themselves. Some of the points emphasized by children in their self-reports are as follows: They feel frustration, shame, complacency, embarrassment. They are able to reasonably explain what they are experiencing - provided that one has previously explained them - and this possibility gives them reasons to continue the effort.. They realize that other children watch their difficulties and refrain from giving explanations to their classmates because they fear that they will fool them and tease them.

The presentation of research data that are consistent with the above view follows. In the study of Accariya et al. (2016), the social and emotional adaptation of students experiencing learning difficulties was examined due to their transition to different educational levels. Researchers choose to examine the subjective interpretation of 12 adolescent students that had been diagnosed having learning difficulties. They used thorough interviews and every student participated individually. The students recorded high rates of loneliness and social isolation, boredom, despair, frustration, and generally negative emotions. The stress that was recorded through the questionnaire they responded was intense, in regard to their transition to the next educational grade. This argument is based on the fact that with this transition, students with the learning difficulties "are forced" to leave the way they used to work as far as their education was concerned. At the same time, students' responses were recorded in regard with the fact they felt negative acceptance from typical development children in their new school.

Although there is a great deal of research on the cognitive background of learning difficulties, characteristics and assumptions about their etiology, and extensive studies on intervention at the psycho pedagogical level, the review of the references on the psychosocial adaptation of students with dyslexia provides limited data. And while the relationship of learning difficulties with the psychosocial field has been recognized, there is nevertheless a very limited number of surveys on the specific dimension of learning difficulties. Concerning emotional-type difficulties, empirical evidence suggests that low reading performance contributes to generalized low psycho-social adaptation of school-age children. In their long-term research, Morgan, Farkas & Wu (2012) have come up with findings showing that poor readers in third class are twice as likely to feel anger, sadness, loneliness, and distraction and low popularity than in the fifth class compared to their peers who do not have reading difficulties.

The aim of Martimianaki's study (2015), is to compare pupils with and without learning difficulties who participated in research on psychosocial adaptation and its components (social, school, emotional adequacy, behavioral problems and self-understanding) as well as self-esteem. In addition, this study aims at exploring the relationship between psychosocial adaptation and self-esteem as well as at describing the factors that shape the profile of pupils with and without learning difficulties.

The main case of Marimianaki's study is that students with learning difficulties will show statistically significantly lower psychosocial adaptation and self-esteem than those without learning difficulties. It was also expected those children to show statistically significantly lower social, school, emotional adequacy and self-esteem, but higher behavioral problems compared to children without learning difficulties. In addition, it was expected that the results would show a statistically significant relationship between psychosocial adaptation and its parameters (social, school, emotional adequacy, behavioral problems and self-understanding) and the self-esteem of children with and without learning difficulties.

From the general view of the results of the research, it was revealed that the pupils with learning difficulties were statistically significantly lower at both the psychosocial adjustment and in the general self-esteem as compared to pupils without learning difficulties. Therefore, it is understood that that pupils with learning difficulties had statistically significantly lower scores on psychosocial adaptation and self-esteem. Morgan, Farkas & Wu (2012), in their long-term research, concluded that low reading performance contributes to a generalized low psycho-social adaptation of school-age children. Also, Marimianaki's study have shown that pupils with learning difficulties were lower in both the sub-scale of self-perception and the general self-esteem scale than those who did not have learning difficulties. In addition, statistical results have shown that students with learning difficulties have lower social competence but higher performance in behavioral problems - which is indicative of the lower psychosocial adaptation of these children. At the end, Marimianaki's results have shown a positive correlation between overall psychosocial adaptation and self-esteem.

Methodology of adaptation refers to the modification of the tools and ways of teaching and the ways in which the performance of the student is assessed. The new knowledge given to the student is the same as that of the rest of the pupils in the general class. There is no change in the content and level of difficulty of the program. Both the teacher and the student are invited to play an important role in achieving them. Accommodations can be grouped into four major categories (N.C.L.D., 2014):

- Time and schedule accommodation. Such an accommodation is to extend the time for the student to complete a work or to answer tests, to give the pupil two days instead of the

one given to the other students. Accommodating is also the provision of any kind of mechanical or electronic equipment and software and assistive technology to compensate for the difficulties of the students. Especially supportive technology, in recent years, improves the accessibility of general classes students with learning difficulties or other major difficulties. In assistive technology, hardware is included such as keypads, trackball mouse or joysticks.

– Differentiating the presentation of the material, such as repeating the instructions, reading the questions by the teacher, aesthetic and functional differentiation of the worksheets and other teaching material using larger fonts, and graphic organizers.

– Differentiation in space, as in the case that a student room is available to a quiet room to complete his work.

– Differentiating how to respond to the exams, such as giving the opportunity of an oral answer to the written question (GG[10] B/276/16-3-2010, Ministerial Decision 28722/C2 "Examination of Daily and Evening High School pupils with difficulties and special educational needs").

In Feskemenlidou study (2016), findings show the fact that special education teachers have more specialized knowledge and therefore can modify their teaching and resort to more detailed design and implementation of intervention methods and strategies in order to effectively teach students with dyslexia. On the other hand, general education teachers, as mentioned in the above study, do not have the necessary knowledge and even claim that their undergraduate studies do not offer them the necessary skills for the teaching modifications and methodological adaptations required for the most effective treatment of children with special needs, learning difficulties (Agaliotis, 2008, as cited in Feskemenlidou, 2016).

---

[10] Government Gazette- in Greek is Filo Efimeridas Kiverniseos (FEK)

CHAPTER IV: METHODOLOGY USED FOR STUDENTS WITH DYSLEXIA AND THEIR INTRAPERSONAL AND INTERPERSONAL ADAPTATION IN AN INCLUSION CLASSROOM

4.1.Research in methodology

The teacher who is trained to issues of learning difficulties and dyslexia has the potential to significantly help his students in the classroom. Teachers understand that children's right emotional-educational approach can change decisively their attitude towards school, family and society. They may provide them with the optimism and the power they need to plan their future, achieve their goals and become responsible, independent and productive members of society.

According to the findings of Tziolas (2013) through international surveys, the most important of the "key points" for the social and emotional adaptation of secondary education students with dyslexia are listed below:

a) Peer-to-peer solidarity

Teachers are asked to explain to the rest of their students the situation faced by their classmate with dyslexia. They need to highlight their skills in other areas than reading and writing. At the same time, they may ask them to participate with those students when they are copying information from the board, keeping notes in the classroom or making revision of the lesson.

b) Opportunities to compensate for the difficulties

The teacher needs to give opportunities to the student with dyslexia to participate and even to be distinguished in some other activities (e.g. sports, music, art) with constant encouragement of his efforts, not forgetting that any positive remark he automatically exalts in the eyes of their classmates. This observation in the context of the student's social and emotional adaptation to the classroom will help to compensate with their learning difficulties, improve their opinion that others have for them (as they believe that they see them) and will certainly increase their self-esteem.

c) Continuous encouragement

Encouraging students with dyslexia in all their efforts, even if the results are poor compared to peers with no dyslexia, is important and allows students with dyslexia to receive support for their social adaptation to the classroom. Students with dyslexia need more time and effort for every "school job" that requires reading and writing. So if teachers use the same criteria for all students, students with dyslexia will always feel overwhelmed. Self-confidence and self-esteem of students is a driving force for their further endeavors and their successful lesson in the learning process. However, it has been observed that children with dyslexia are afraid of failure, have more anxiety and less belief in their abilities. This is also a reason why they have difficulty in acquiring learning skills. Teachers, above all, should feel confident about their own abilities and skills.

One issue that Tziolas (2013) strongly refers to in his research is that it is very difficult to bring students with dyslexia back into the learning process if they feel rejected by their teacher, school or even their family environment. On the other hand, in every correct answer of the student or even in any proper process, which does not necessarily lead to the right answer, teachers should reward and encourage them for every effort. Systematic reinforcement of the student plays a key role in shaping the appropriate emotional climate of the learning process. In addition, it is beneficial for teachers to develop a relationship through communication with their students and to encourage them, addressing the difficulties they encounter through the lesson. The author also highlights that it is common for children with dyslexia to be "stuck" and ashamed to express themselves freely because they are afraid of being exposed to their teacher's eyes. So they may believe that they have lack of intelligence and eventually show fear. For this reason, teacher and students must come closer, cultivating their relationship beyond the lesson, talking about other things, such as a trip or a school activity. Thus, such communicative relationship will help the teaching process.

The post-hoc analysis using the Bonferroni method in Zika's doctoral study (2017) in 205 Primary and Secondary Education teachers in Greece, showed that teachers with postgraduate studies in the field of Special Education show greater self-efficacy in teaching strategies in relation to teachers that had no special training. Also, teachers with postgraduate studies in the

field of Special Education show greater self-efficacy in classroom management in relation to teachers who have not received any special training as well as in relation to teachers who have attended conferences or seminars in this field. Teachers who have high levels of self-efficacy in student engagement, teaching strategies, and classroom management also have a positive attitude toward integrating children with learning difficulties and special educational needs into general education classes. In contrast, teachers with low levels of self-efficacy in student engagement, teaching strategies, and classroom management have a negative attitude toward integrating children with learning disabilities and special educational needs into general education classes.

When a situation has an unpleasant effect on student's life, when it interferes with its functionality (interpersonal adaptation to the school environment), students have difficulty in adapting. Intrapersonal adaptation refers to how students feel and what they think about themselves. Interpersonal adaptation relates to their relationships with other people such as peers and teacher. It is important to mention that by labeling a student as problematic or negatively characterizing the student, we record the attitude of the environment towards the student. Self-esteem is the main base for learning, it is one of the most important bases of intrapersonal and therefore interpersonal intelligence, and, as a consequence, a main foundation for learning in general and for cooperative learning in particular (Gerasymova et al., 2016).

Referring to the international references, the concepts of adaptation and social behavior are linked. More specifically, according to Accariya et al., (2016), the functionality of a child in school, which occurs as the first social space in which the child enters, creates an increased sense of responsibility, is a set of expectations for success and opportunities for success. Social function of children is an indicator of good psychosocial adaptation. Respectively, success in adjusting the student to the school environment refers to factors such as academic, social, emotional, behavioral and cognitive abilities. The child's status as a student presents a series of requirements e.g. from teachers, creating interactions throughout conversations and general development of students with dyslexia autonomy.

Alexander- Passe (2016), notes the main perspective that concern dyslexia is the emotional and psychological effect which is an influence from the different learning style that their friends,

family and peers have. The school-emotional coping for children with dyslexia is a difficult issue because they usually feel excluded or even bullied by their peers.

Zumeta et al. (2014), discuss about the low self-esteem in students with dyslexia. They argue that it may be caused due to teachers' or peers' lack of understanding of their feeling of exclusion. Those facts lead students with dyslexia to have low self-esteem and that is a fact that teachers need to consider when teaching students with dyslexia. However, there is also low self-efficacy and other emotional difficulties that pupils with dyslexia are dealing with (Morgan et al., 2012, as mentioned in Martimianaki, 2015). Teaching a student with dyslexia is a fact of great importance. Students with dyslexia face a rejection in a greater level. This will intensify his low concentration resulting in symptoms of anxiety and overall increase in learning difficulties. Also, a teacher's rejection may enhance their social problems in classroom as well as outside the class (Habib & Naz, 2015).

According to the review of international references, it appears that many researchers agree that students with learning difficulties have negative academic self-esteem (Martimianaki, 2015). Some, in fact, argue that they usually have a more negative sense of self in terms of reading ability, ability in spelling and arithmetic. Finally, in terms of self-esteem, many researchers converge on the view that children with learning difficulties or dyslexia have low self-esteem as they face shortages in the academic fields (Basetas, 2000, Apostolou, 2011, as mentioned in Martimianaki, 2015).

Children with dyslexia are likely to experience rejection by teachers in previous classes, resulting in a particular psychological discomfort. The result is to enhance their social problems in the classroom but also outside the classroom (Kathleen, 2013). According to Habib & Naz (2015), children's frustration needs to be readily recognizable by educators to be treated with encouragement, motivation, continuously encouraging their efforts and strengthening their self-esteem.

According to Rose (2009, as mentioned in Ntouka, 2017), for the development of students' self-confidence, praise is proposed for the effort, the positive reinforcement of each student's assets as well as the grouping of pupils according to their interests and not on the basis of their language skills.

Students with dyslexia also find difficulties in fitting into school norms. That leads to the fact that teachers have a crucial role in finding potential friendship pairs that may help students with dyslexia and their peers create new friendship. In previous studies, relationships and friendships developed between children with difficulties and children of formal development were explored. Benefits of such interaction, often made by teacher's help and motivation as some children with difficulties may need their support to create and maintain their social contacts, are many (Tsakni, 2017).

However, encouraging children in general should ensure that is done without coercion and are generic by providing opportunities for fellowship and not focused on establishing a friendly relationship with a particular person. Difficulties such as continuous educational failure experienced by children with learning difficulties inevitably affect their psychological condition as the continuous failure they experience. That leads to the loss of motivation for additional effort and they often require psychological and counseling support. Especially children with dyslexia have difficulty in translating speech into thinking and thinking into speech. Consequently, these children face problems in the field of communication and thus in the development of friendly relations, therefore maintaining friendly relations is a challenge and are more often socially isolated than children without special learning difficulties (Papadopoulou, 2017).

In terms of interpersonal adaptation, Cooper and Farran (1988, In Martimianaki, 2017) define interpersonal skills as competencies that include behaviors such as positive interactions with peers, cooperative play, sharing, and the respect for other children. According to surveys that refer to the relationships of children with dyslexia with their peers and their friendships, children with dyslexia are more likely to have more problems than their other peers and that children with dyslexia are less acceptable and have low social standing (Maegalit & Ben-Dov, 1995. Vaughn & Hogan, 1990, In Martimianaki, 2015).

At the same time, it should be noticed that friendships with peers in the classroom benefit children with dyslexia academically as well as emotionally. Through the creation of friendships, understanding and acceptance by both classmates and teachers, stigmatization, social isolation could be avoided and students may increase even their levels of academic ability. So, teachers have the crucial role in finding potential friendship pairs. That may happen through the creation

of situations that require cooperation. Teachers should carefully select a group so that the student with dyslexia may face it as a friendly environment and also guide students about how to help their team members (Tziolas, 2013).

Working in pairs or small groups is a tool that helps learners with learning difficulties to discover knowledge and develop social skills. Students build cooperative and social skills when they share, negotiate roles, act as leaders and assign activities or responsibilities. Learning is the result of the synthesis of knowledge in a group. Also, collaborative learning has positive effects on interpersonal relationships, academic success and social development. The class is divided into learning groups, students working together for a common purpose and teacher giving rewards after every good effort. In cooperative learning, students with dyslexia assume more responsibility for themselves and their learning as they are asked to participate actively in activities that require cooperation. Encouraging students and, in our case, a student with dyslexia can promote their mobilization. Every student's success, whether small or big, needs to be followed by some kind of reward from the teacher. A great kind of rewards is the encouragement for the next job assignment. The process also acts as a game that may involve levels of difficulty (Cowley, 2013 in Loizou, 2016).

A qualitative research by Ahmad et al. (2018), attempted to explore personal experience of teachers, and significant results were recorded for teachers' views on managing the feelings, behavior and motivations of students with dyslexia. While teachers believe that the above are important parameters for the interpersonal and intrapersonal adaptation of students, they have encountered difficulty in dealing with the low self-esteem of students with dyslexia. Effective ways of managing students with dyslexia is a fact that is deficient in the teachers of this research.

Social and psychological research shows how important social relations and social support is to promote psychological well-being (Raja, McGee & Stanton, 1992, as mentioned in Tsikni, 2017). Supportive relationships with peers, family and important others are even more important for the social and emotional development of children with dyslexia. More generally, learning difficulties can create severe constraints, but supportive relationships play an important role in tackling the difficulties. This support can be offered by the teacher within the class so students with dyslexia could improve their ability to cope with characteristics that they cannot change.

Students with dyslexia have difficulties with rapid naming, phonological processing, working memory etc. The above could lead to low self-esteem. They may also feel inferior when they compare themselves to peers. Their beliefs about their academic capability could play essential role in their school motivation. Although, their self-efficacy may face obstacles and lead to low self-efficacy and self-doubt, their confidence should be raised through the belief that they are successful (Usher & Pajares, 2008, as mentioned in Stagg et al., 2018). In addition, self-efficacy is an effective factor for pupils motivation.

North Tyneside Council in collaboration with the North Tyneside Dyslexia Team have proposed the North Tyneside Policy for Literacy Difficulties and Dyslexia (2017) where the following diagram with different stages of intervention is mentioned. In stage 2 as we can see there is suggested that the offered support from the teacher should be given through one to one counseling by targeting to address pupils' adaptation. T.A. means teaching assistant. Also, from early interventions that mentioned by Scammacca et al. (2007, as mentioned in North Tyneside, 2017), we can see that an effective intervention is 1:1 or small group tuition.
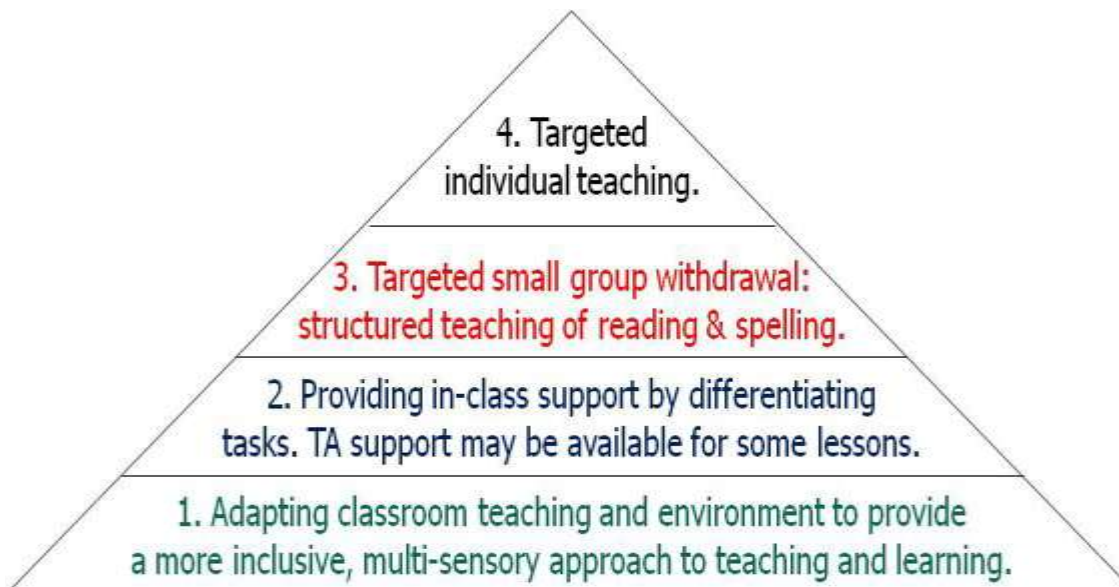
Figure 7. North Tyneside Policy for Literacy Difficulties and Dyslexia, Educational Psychology Service

Autonomy is an acquired sense that follows self-awareness and self-advocacy. That means that when puplis engage in self-advocacy they can be empowered (Andrus, 2010, as cited in Kelly,

2015). In Kelly's research, students with dyslexia, on their transition to secondary school, answered that conversations with their teachers about different subjects were important, especially about the areas students needed to be supported. Students said that helpful conversations enabled them to express how they felt and that helped them develop their intrapersonal adaptation with their teacher and their autonomy.

Cultural effects act decisively in pupils' development of positive reinforcement in their school life. Schools, as the second most important context after family in influencing pupils social competence, have to use cooperative forms of learning and positive acceptance of children through abundance of interpersonal relationships (Tunstall, 1994, as mentioned in Mortimore et al., 2015). Teachers, as the most important participants of the social structure in school, have to interact with students as to develop their social behavior because their reactions to children's have an important impact on them and their positive reinforcement (Zsolnai, 2013, as quoted in Mortimore et al., 2015). For this reason, the creation of positive attitude from teachers may lead to a social climate in classroom when even students with dyslexia could have a strong effect on their social competence.

Although, multi-modal and multi-sensory approaches are recommended for students with dyslexia as kinesthetic, visual and practical activities make engagement of them in groups (Mortimore, 2008; Kelly & Philips, 2011, as quoted in Mortimore et al., 2015). As for classroom guidance that may be applied in a dyslexia friendly classroom, it can embrace inclusive ethos through alternative activities which an inclusive school must use (Mortimore, 2015). Teamwork is a perfect motivation, but at the same time teachers have to assert the dynamics of the teams, so that everyone gets a positive experience. It is very easy for one or more children to be mere spectators and think they have stayed out of the team. Even in groups, it can be a good idea to make couples of children who are doing well with each other. Teamwork should be closely monitored.

Teachers' job is not to diagnose dyslexia. However, they may have the capability to understand those difficulties that students with dyslexia may have in behavior so they could intervene appropriately into improving performance and also their intrapersonal and interpersonal adaptation in classroom. The efficient support that teachers may provide to students with

dyslexia could promote their interpersonal adaptation in moment-to-moment interaction with them. Teacher-student relationships have been reported in many researches on the effectiveness of learning as well as on the offered motives for students. The interaction of those in the classroom (classmates - educators) are defined as building blocks of their relationships. In school everyday life there is an interaction between the teacher and the student. Effective communication of them is important and can be promoted within moment to moment teacher – student interaction (Knight, 2018).

It has been observed that the majority of students with learning difficulties have problems in their interpersonal relationships and in their social integration and emotional development. Maurice Elias, a professor of psychology at Rutgers University in the USA and Vice President of the Council for Academic, Social and Emotional Learning and Development, believes that there are three key areas in the emotional-social learning and integration of children with learning difficulties (Elias 2004 , as quoted in Chatziara, 2014):

i. Being able to recognize, in relation to themselves and those around them, their feelings, either positively or negatively.
ii. Being able to recognize their potentials.
iii. Being able to identify areas where they need help and guidance.

Chatziara (2014), also emphasizes that children with learning difficulties perceive the tendency of not being accepted by their peers. The inability to integrate into the group of peers is not only a result of the negative attitude or the clear rejection of the group, it is also a result from the lack of students with dyslexia of social maturity and ability to manage interpersonal relationships that are necessary for their integration into the social sphere. The relationship between socio-emotional learning and learning difficulties has been investigated from time to time. The aggressiveness of students often occurs. Thus, overall coordination should be promoted from teachers when they notice aggressive behavior in children with dyslexia.

Teachers' and school leadership also plays an important role in managing conflicts that may arise from the individual differences of members of a school community and in reducing the negative effects of these differences by developing positive relationships and accepting diversity. The teacher in an inclusive class needs to take care of the social adaptation of students with dyslexia,

making all the members of the school community feel both valuable for their unique talents and on the other hand that they belong to a group in which they are all important. Thus, the effectiveness of teacher and school leadership is determined by doing things with people rather than for people (Hollander, 2012).

A number of dramatic art educators and academics have explored various ways in which drama can be used as an effective approach to enhance various aspects of individual development. Role playing enables the person to work through psychological processes at a symbolic level. In addition to this, the person can reflect on his or her concerns while experiencing real life situations through interaction instead of participating in a formal conversation in the room of a therapist. The ability to be part through art into difficult social situations helps the participant to explore different ways of responding (Dix, 2012).

In summary, role playing allows participants to reflect on their attitudes and feelings. These observations are encouraging and the relevance of using role playing as an intervention to people with dyslexia is highlighted. It is of course even more important to look at the basic symptoms of these difficulties and the resulting negative issues regarding their socio-emotional well-being and academic successes. Therefore, it is necessary to present this practice as an intervention technique and discuss its implications for managing and/or alleviating the symptoms (Christodoulou, 2015).

Various exercises can be used within the classroom to help students with dyslexia develop their communication skills. Role playing and simulations are considered as a kind of exercise. When students have a role to play, they are part of a particular social situation. They act through hypothetical situations as to promote their communication and behavioral skills. Through "role playing", the role is played in the classroom, where any dangers that may accompany a real communicational event do not exist. Subconsciously, they create their own reality, experimenting with their knowledge from the real world and developing interpersonal communication with their classmates (Ampatuan & San Jose, 2016).

Classroom management includes (Kokkinidou et al., 2018):

- Establishing rules and procedures, organizing groups and tackling inappropriate behavior

- Developing interpersonal relationships with students, promoting student ethics, making decisions about timing and other aspects of educational planning, successfully providing learners with learning incentives, and encouraging parents to participate (LePage, Darling-Hammond, & Akar, 2005, aw quoted in Kokkinidou et al., 2018).

Kokkinidou et al. (2018), suggest 20 classroom management practices, which are classified into five broad categories: (a) maximizing classroom structure, (b) shaping, teaching and observing students' expectations, (c) maintaining active participation of students, (d) using a range of strategies for responding to the desired behaviors, and (e) using a range of strategies to confront unacceptable behaviors.

Research focusing on the management of general education classes, including students with difficulties, proposes the same management strategies: prevention strategies (e.g. establishing routines, establishing rules, constant monitoring and feedback) and strategies to tackle behavioral problems (Scott, Park, Swain-Bradway & Landers, 2007. Soodak, 2003, as quoted in Kokkinidou et al., 2018).

In a Pickens-Cantrel (2016) research on peer support in social interaction, the researcher wanted to record whether support provided by classmates with dyslexia increases positive social interaction for pupils with special needs. The results of the survey showed that positive social interaction was recorded.

In Vassiliou & Haritaki (2018) research, the school adjustment of pupils with Specific Learning Difficulties is recorded and especially those with dyslexia. It is again confirmed that pupils with learning difficulties face problems of adaptation to school, are not satisfied, have low self confidence and additionally poor academic performance. Their anxiety is increasing, they show reduced social skills and face interpersonal problems. The teacher is able to help these students by promoting match of trends among students. This research also indicates that teachers are not properly aware of the importance of students' feelings in the context of academic success. However, the authors emphasize that teachers have the potential to offer help to students with dyslexia through strategies to deal with anxiety and collaboration with other students. They also emphasize the importance of creating a lesson with clear and sensible goals, promoting the smooth adaptation of adolescents to the academic context.

Given the limited time that teachers have at their disposal for teaching, it is particularly important to manage it effectively. The activities and tasks entrusted should be varied and new to meet the different interests of the students, to such an extent that they are substantial learning experiences rather than unnecessary duplications, and easy enough to allow students to achieve high success rates when are engaged for a reasonable period of time and present the appropriate effort. This increases the academic efficiency of students and their participation in the lesson (Brophy, 2004, as quoted in Kokkinidou, 2018).

Intrapersonal and interpersonal adaptation of students with dyslexia in school is a very important issue that all the school context has to deal with so as to help those student to join in with other students and their teachers. In Duncan's quality study (2018), the subject of adapting the students with dyslexia before and after the valid diagnosis of dyslexia is presented. The support that students received and felt offered positive feelings about dyslexia and the problems they had previously encountered with difficulty in reading or writing. The author notes that prior to the diagnosis, most of the students felt negative feelings, lower self-esteem, and their adaptation to the class was lower, either in terms of their interpersonal or intrapersonal adaptation. Appropriate support for these students was particularly promoted after diagnosis, and so the students of this study understood dyslexia and were able to adapt better to their classroom environment.

Finally, regarding the factors related to the effectiveness of improving dyslexia and phonological deficit, it was found that female teachers believe more than men that salaries and positive motivations, as well as voluntary participation of student with dyslexia in classroom activities, work effectively in tackling phonological deficit and dyslexia in general. This finding is probably due to the nature of women, who are not as strict as men and by giving positive reinforcement and freedom to the student's desires, they consider that in this way they contribute to the better treatment of the problem. Women, according to Gwernan-Jones and Burden (2010, as cited in Feskemenlidou, 2016), have a significantly more positive attitude towards dyslexia than men and feel more capable and empowered to cope with any difficulties these students experience.

Apart from teachers who experience dyslexia in their classroom and difficulties in their interpersonal and intrapersonal adaptation to the class, there are others who can help, such as

school psychologists. The school psychologist can take the assessment of pupils' behavior, learning, developmental and emotional problems, as well as to help in the development of programs aimed at meeting the needs of these pupils. School psychologists have the knowledge of the characteristics of students with dyslexia, the whole school system and educational policy, and it allows them to offer support to students with dyslexia.

In Greece, mainly the context of the centers of "K.E.D.D.Y." and "S.D.E.Y.-E.D.E.A.Y.", which is referred to the primary assessment, diagnosis and intervention of students, with the "K.E.D.D.Y." operating in a secondary role. The goal of "E.D.E.A.Y." is for students to stay in the school unit. "K.E.D.D.Y." can redirect the student to a more appropriate school unit. For this to happen, evaluation is made in each educational level. The psychologist's work focuses on identifying and meeting the needs of each student. It may include an assessment of its social adaptation as well as its interpersonal relationships. The results of the evaluations are used in the design of specific educational and behavioral interventions for the student, as well as in the setting of realistic, achievable goals. Psychological assessment, along with information from numerous sources and other professionals, helps to further understand the student and then provide greater support from the overall school context (Vlachopoulos, 2015).

Due to the high frequency of dyslexia, in England, as in other countries, legislation and school structures have been created as for applying principles and educational policies that may promote and reinforce students with Dyslexia. Those school structures are the so-called "Dyslexia Friendly School". With the implementation of these programs it was found that practices that are beneficial to students with dyslexia have positive results for all students independently.

 Many of the methods applied abroad have been adopted in greek schools. However, their implementation is not always easy due to basic deficiencies such as infrastructure, appropriate training and receptiveness of the new one.

Dyslexia-friendly school or school for all includes:

- All students have the right to attend their "neighborhood" school. For this reason, and based on the principles of inclusion, changing the curriculum and textbooks and the daily

school curriculum creates a more friendly and more familiar learning environment to the needs of not only students with dyslexia, but all of them. Therefore, students remain in their class as long as the nature and size of their special educational need to.

- Friendly school implements the social learning model. It does not focus on pupils' weaknesses, but focuses on the attitude of society, which perceives dyslexia as "inadequate". In the school, teaching methods that are beneficial for all, not only for pupils with special educational needs, particularly students with dyslexia, but for all, are applied. The student with dyslexia should be treated as a child with talent rather than as a "problem" as it seems to have the ability to achieve a high level of cognitive function when dealing with a particular learning object. For this reason, teachers take care of the interpersonal and intrapersonal adaptation of the student through actions such as providing emotionally support to students to improve their ability in coping with characteristics that they cannot change

- A very important factor is the continuous training on dyslexia of permanent and temporary educators. The cooperation of the class teacher and the special teacher and the presence of both in the classroom, where it is needed, of the school counselor, the school psychologist, of course the head of the school unit, is of major importance to meet the special educational needs of the student with dyslexia. Therefore, the cooperation of teachers with school psychologists and all the above offers the possibility of providing more assistance to the student with dyslexia and better and quicker adaptation.

- The friendly climate of the school towards children with dyslexia is related to the psychological support and guidance of the child by specialists, the teacher and, of course, his/her parents. The aim of all these is to cultivate a positive image for himself/herself, while ensuring the effectiveness of teaching and also to increase self-esteem, which is also achieved by stopping hostile and dominant behavior of students. Therefore, to reduce hostile treatment of students towards the student with dyslexia is a goal too.

- Personalized teaching is an optimal and authoritative way of helping students with dyslexia. It is important to evaluate his/her knowledge as a whole. At the same time, the good performance in small groups of children with similar difficulties or the combination of the two techniques can bring positive results in the cases of dyslexia (Salvaras, 2013).

The teacher of the "friendly school in dyslexia" or by extension of the modern School of Inclusion applies a variety of teaching strategies and methods, uses all kinds of tools, determines the time and the way to conduct the lesson, addresses not only the total deficits of the child with or without special educational needs, but in all its areas of development as to have a direct and positive impact on the classroom. Let's not forget that the pupil with learning difficulties is part of the whole class, in which the teacher is called to teach collectivity, co-responsibility and co-recognition. Knowledge-learning, class, teacher, schoolmates are the ones that create the conditions for a real and meaningful school for "All".

According to Niapa (2018), development plans for creating other schools that are positive to dyslexia are going to involve parents, teachers and students. They will also include clear goals for supporting students through an integrated lesson program forming strategies by the teacher. The whole process is referred to as an endless cycle aimed at the development of students with regard to their interpersonal and intrapersonal adaptation to the school context. The main purpose of these strategies that are or should be applied by teachers is to overcome potential barriers and to strengthen teamwork among students. With the knowledge of the cognitive, interpersonal and intrapersonal difficulties that a student has with dyslexia, the teacher can increase the student's self-esteem.

As we have seen from the above, we understand that teachers are the key to enhancing learning in order to achieve the "dyslexic-friendly schools" movement. Initially the effort must be coordinated and specialized. The role of the educator today must be multidimensional and be continuously trained as over the years things have changed. Their knowledge must therefore be through flexible curricula to promote the integration of the pupil with learning difficulties into his neighborhood school.

4.2. Teachers, perceptions and tools

The difficulty of word recognition and comprehension has become the main research content of dyslexia. The development of motivations in children with developmental dyslexia has turned out to be a very interesting issue for the researchers throughout the worldwide references. Lack of

motivation can create stagnation in children with developmental dyslexia as well as the poor motivation that gives children a sense of avoiding reading relatively to their typical peers. According to Soriano-Ferrer et al. (2017), reading motivation and reading attitude are key factors influencing reading performance. The writers conducted a survey involving 68 Spanish school students aged 9 to 14 and those students were divided into two groups. One class consisted only of students who were diagnosed with dyslexia and the other consisted only of normal readers. Students with developmental dyslexia attended special education classes three hours a week in their schools due to regulations in Spain for students with learning difficulties. The research also, attempted to capture the views of teachers concerning the children's motivation. They found that there is an association of self-determination and reading scores. Those findings are compatible with self-determination theory.

A four-year research project was conducted in Ireland (Casserly, 2013), to record the functioning of children with dyslexia attending regular schools. In order to capture the socio-emotional effects of dyslexia, it was observed that children in their majority experienced negative socio-emotional feelings resulting by the factor of dyslexia, before entering classes. Also a particular difficulty was recorded by most parents who responded to a questionnaire of the inability of children with dyslexia to keep up with their classmates. A series of children's negative emotions such as stress, avoidance of school attendance, lack of mobilization to these children, and even psychosomatic symptoms were reported by most parents. A series of techniques have been discussed by researchers and parents as well as ideas which could possibly contribute positively to socio-emotional life of children with dyslexia.

So, as the result of the research was recorded, a project was used and it was successful because teachers encouraged their students by offering emotional fulfillment. Also, the classmates of the children who were normal readers functioned in the same way towards the students with dyslexia and that really helped. The above, according to parents and teachers, will positively enhance the self-esteem of children with dyslexia. According to teachers' views, children expect their failure due to their dyslexia and it has been proposed to promote a climate of respect that highlights the value of each child by encouraging positive attitudes towards school and society.

After 2 to 3 years of placement of children with dyslexia in reading classes, their parents and teachers recorded an increase in student's self-esteem levels for most of the children who participated in the survey. At this point, it is necessary to refer to the procedures followed by teachers for this recording of increasing self-esteem. Initially, students with dyslexia follow the educational program at the correct way and ability level. Teachers, knowing the reading level of each student with dyslexia, urge them to train harder while encouraging them in order to create a sense of success. At the same time, there were factors that assisted the procedure such as the right use of the suitable phonological tests and the usage of the proper corresponding reading book for each child. The creation of clear targets for children by teachers at reading schools also brought significant results. Clear targets were mentioned both at academic level and at behavioral level. The results indicated to the teachers that there was success and thus followed by positive reinforcements, awards, and other trophies. Creating socio-emotional stability for children with dyslexia has also helped by involving parents in collaboration with teachers. For example, in the child's successful attempt to achieve a reading target, teachers sent a congratulatory note to their parents about their success. The result was that students with dyslexia could talk to their parents about their achievements and accept extra rewards from their family environment.

With all the above, reading classes have encouraged students with dyslexia to set personal goals, work more to achieve these goals, and also reduce the anxiety they initially had before and increased their happiness rates. With the students' return to their main classes, their socio-emotional levels were examined. Interviews and questionnaires were used to capture students' views on friendships, school stress, and other points related to their socio-emotional experiences. The results showed that most children were happy with their relations with their peers since most felt popular between them and respectively their anxiety levels decreased in most children because they were no longer worried about their performance and mistakes made earlier. At the same time, it lowered the resistance of children with dyslexia in overcoming their "difficulties". In order to understand the results, the children were questioned about their success. Nearly the majority of respondents reported that hard work, better concentration, increased practice, and working with teachers in their reading classes helped them with the tasks so as to succeed (Casserly, 2013).

Afterwards, students with dyslexia returned to their regular classes with increased self-confidence provided in reading classes. Reading classes helped to increase their concentration, particularly after participating in the project. The "comfort zone" in which students with dyslexia in reading classes participated helped them so as to respond more easily to the needs of their main class. After participating in reading classes, students presented themselves with a sense of independence, self-confidence and social, emotional and intellectual development. They have gained confidence in themselves and this is confirmed by their teachers as well as by the children themselves as they have improved the quality of their work.

Every school, whether typical or special, needs to devote time and work to the socio-emotional development of students through it. As presented in the references, confidence and self-esteem are key elements of students with dyslexia and should arise into the school context so that students may feel more confident about their academic level and educational abilities.

Reading is an activity that children have to make effort to do it and often they choose not to. This requires motivation from teachers. Autonomy and competency are both two elements that compose "motivation" as an act. Due to Jang et al. (2012), when a student feels his/her teacher's support in their autonomy, they have more success academically than others that do not believe in that support. To assess reading motivation there are many tools that Conradi, Jang and McKenna (2013) indicate such engagement, reading self-concept and attitude.

According to Reid (2015), the suitability of the form of learning is the initial element with which the teacher needs to work to provide each student with the right conditions for the student to evolve. It is first necessary to evaluate the environment in which the student is located and working. Sometimes pupils work better in absolute peace and others want music to surround them. From an emotional point of view, it is recorded that students with dyslexia have difficulty in organizing the time to achieve their work. From the sociological perspective, there are students who prefer to read when being alone while others want to work in groups, as is the case with students with dyslexia. Students with dyslexia also need to deal with small pieces of study while other students want to take short breaks and others do not. Finally, in terms of psychology each student has a different way of thinking and temperament. From the above we conclude that the multi-sensory teaching method is recommended for students with dyslexia.

According to Feskemenlidou findings (2016), regarding the correlation of the sentences for the more effective treatment of students with dyslexia and their phonological deficit with the specialty of teachers, the comparison of the means (t-test analysis) showed that there are statistically significant differences between general teachers and special education, with special education teachers believing more than general teachers that personalizing teaching is effective in improving a student's phonological deficit and dyslexia in general.

Regarding the correlation of the suggestions for the most effective treatment of students with dyslexia and their phonological deficit with teachers who have or do not have teaching experience with students with special learning difficulties in the language, the comparison of the means (t-test analysis) showed, that there are statistically significant differences between teachers who have or do not have teaching experience in dyslexia, regarding a number of statements regarding the effectiveness of improving dyslexia and phonological deficit. More specifically, a statistically significant difference between these two categories was presented in terms of acceptance and confidence, multisensory techniques and the negative reinforcement presented by teachers with greater teaching experience in students with dyslexia. However, no statistically significant difference was observed in the averages between teachers who have teaching experience and those who do not have for those proposals related to the child's involvement in classroom activities and assigning tasks similar to other children. In addition, there was no statistically significant difference between teachers who have teaching experience and those who do not have the effectiveness that the individualization of teaching may have. Furthermore, no statistically significant difference was found in the perceptions of the two categories on the effectiveness proposals regarding self-assessment techniques and fees or positive incentives.

In addition, general education teachers consider, to a greater extent than special education teachers, that factors related to the school context, ie the lack of services in schools, exacerbate the problem of a student with dyslexia. This finding can be attributed to the fact that general education teachers feel that they are not sufficiently informed about special education issues and do not know how to manage students with dyslexia (Regan & Woods, 2000, as cited in Feskemenlidou, 2016). Thus, the existence of services in schools can help both the students themselves and the teachers in the way of dealing with these students.

4.3.Teaching methods to achieve reading comprehension

In the case of children with learning difficulties there is a great need for intervention and proper treatment and when it is not timely and valid, the problem perpetuates for the rest of their lives. The concept of the method is a central concept of Pedagogy and Teaching and is absolutely necessary for the design and organization of each teaching. Many principles and approaches can be used to help students with dyslexia to improve their reading skills. Molnar Smith (2013) was interested in studying this issue and found several findings through databases (ERIC - Education Resources Information Center and LLBA -Linguistics and Language Behavior Abstracts) which contain pedagogical and linguistic articles. The writer found articles about children between 6-15 years old. After the end of her research, she found that teaching should be multisensory structured because that form of teaching keeps the students activated, they do not lose focus and do not fall to repetition during the lesson. Students with reading difficulties have comprehension problems because they read superficially. They often invest all their energy in decoding. This results in easy tiredness. That is why the intervention must involve alternations of techniques and strategies.

But what are the prerequisites for the proper functioning of the class? They are the implementation of cooperative learning methods, the choice of teaching methods based on strategy, the use of diversified teaching methods, enhancing self-determination, the use of clear and explicit guidance, the collection of data on the curriculum, the use of methods that promote generalization, the creation of friendship between students. Teaching methods that lead us in this direction are:

- direct teaching (clear, methodical procedures and goals, feedback, systematic and partial withdrawal of the teacher's contribution);
- precise teaching
- teaching methods with emphasis on decoding (alternative teaching methods, phonics analysis, word separation, etc.),
- self-regulation (behavioral control, learning and evaluation assigned to the student),
- self-management (realistic goals, tackling difficulties with students' initiative);

- cooperative learning (educative peer to peer communication initiatives, coaching by peers or children of different ages, guidance with reversed roles, etc.) (Georgovrettakou & Vintou, 2015).

The primary ways in which teachers can help students with dyslexia to integrate into the classroom environment can be achieved by:

- providing discrete and personalized assistance (placement of the learner in a position that can be controlled and guided),
- providing flexible deadlines for completing writing tasks with emphasis on content and not presentation,
- providing correction on the writing tasks in bold colors and only for important mistakes,
- providing a variety of activities that the pupils are able to complete
- providing emphasis on the main plot of the writing task and not on the details
- providing legible texts with clear meanings
- providing evaluation of the effort and continuous encouragement,
- providing non-stressful working methods, without overloading with homework but with presentations in class,
- providing understanding of the students' lack of organization, behavior and appearance (Georgovrettakou & Vintou, 2015).

a) Multisensory based intervention

The multisensory-based intervention has been examined by Soliman & Al Madani (2017), by the combination of techniques that focus on a brain-compatible environment to achieve the reading fluency and comprehension of Arabic 4th grade students with dyslexia. Thirty eight participants, who were dyslectic students, were divided into a group of students who received intervention and a group of students that did not. Researchers found out that it is important for teachers to introduce the appropriate tests and the training programs as soon as possible so as children with dyslexia could be able to more easily improve their skills. The strategies that may affect positively to the treatment have to be able to improve reading fluency, reading comprehension and help those students to improve their reading skills. Except of the multisensory based

instruction, researchers found that brain-based learning (BBL), is a popular method in education. Brain-based learning contains absence of stress, fear and tension, a lot of breaks, positive feelings and music into the class, feedback and conditions that are important for the student to produce new synapses which may lead to the beginning of new neural networks. So, brain-based learning strategies may help teachers create the learning environment that may be optimal and helpful for students with dyslexia. Soliman & Al Madani's research tried to present the positive results of the combination of the use of multisensory teaching strategy and the brain-compatible environment. The link they used between the above two groups is at first multisensory-based instruction in about 70 sessions that was used in kinesthetic reading, the senses of smell and taste, visual, tactile and auditory senses. In the beginning of the multisensory intervention, students with dyslexia selected one text from a group of previously determined texts. That happened as a motivation for them. Next, there was the clarification from the teacher between phonemes and graphemes as a teaching approach because the direct teaching of them enhances decoding abilities among students with dyslexia due to their phonological deficits. To use students' visual and auditory senses the researcher loudly modeled the selected text and after that students repeated the selected word 5 times. To use tactile, kinesthetic, auditory and visual blend, the researcher used magnetic letters and formed each selected word. Students had to touch those letters and repeat the sounds of them 5 times. To use students' smell and taste senses, every letter was perfumed with a natural scent so that students could choose a letter with the scent that they liked and form words in the magnetic board. After that, students had to pronounce those words loudly when they put their fingers on those letters. Also, students had to write their word using their index finger in a sand tray and in the air while they were pronouncing those words. This practice ended with the researcher asking those students to read words from a short text. They used their index to read and answer comprehension questions from the researcher. Students had to say those words they read slowly at first and then fast. In the end, the researcher read the passage aloud, provided the meaning of all individual words and asked students to create any sentence that they may think that included the meaning of those words. For the BBL strategy, researcher enriched the environment by choosing the short passage based on students' interests, created an environment that was free of stress, provided brain gym activities for those students, provided breaks every 10 minutes, relaxing music, feedback, natural scents and bottled water so as students can get free of anxiety. As a result of the intervention, the researcher reports

that significant and positive results have been recorded in terms of improving the way of reading of the participants following the combined application of the two approaches.

Another example of multisensory structure indicated by Smith is the above: a new letter is known from the student, the teacher uses this letter in 7 different words where the sound of it is always the same. The student repeats the 7 words aloud to hear the sound of this letter that is the same everywhere. Then the student may see this letter written on the whiteboard and can copy it on a paper by him/herself. Smith also found that kinesthetic learning is based on multisensory structured learning. Kinesthetic learning means that the student has to use his/her hands and it is all about touching objects that may give him/her much more information. Kinesthetic learning could also include cards that may have words or letters and student could make a sentence with them. Also, other exercises could be role playing or writing a letter in the air.

There are many approaches and methods that follow and can be used to achieve reading and other learning sectors in students with dyslexia.

b) Multi-sensory Montessori method

The Montessori Method involves repeating the sound of each letter (phonological analysis of the word) and its writing effort. The teaching of phonological awareness was based on the direct connection of the letter with a phoneme. That kind of teaching framework includes exercises ordered in steps to reach the goal gradually. This is a quite joyful way with theatrical play activities in order to avoid discouraging the child when handling the written speech due to his involvement in technical activities (Dogru et al., 2015). As an example of the use of the method, a teacher gives the student mobile letters to match, to copy, to familiarize with their shape, while teacher pronounces it for the student to perceive its sound. Then the teacher shows to the student the way s/he could write it and at the same time the teacher pronounces it, so that by repeating it there will become a connection of visual, acoustic and kinesthetic perception more accurately. After that, the teacher asks the student to feel the form of the letter with closed eyes to better isolate the impression in his/her mind. Then the teacher checks whether the student has the right perception of the letter, asking him/her to give a letter to the teacher. If the student fails, he/she repeats the previous step. Finally, the teacher pauses the process for a few minutes and then points to the student each letter by saying its name. Once the student learns to

pronounce letters, the teacher shows the formation of the syllable, and when the student forms several syllables, the teacher urges the student to form words.

c) Borel- Maisonny Method

The Suzanne Borel-Maisonny method, developed in France first in 1946 and perfected in 1960, is a method of introducing into reading and learning that is also used in children with dyslexia. In children aged 5 years or older who cannot read fluently and have difficulties in speech, this method uses some exercises to learn different directions in the field, rigorous exercises based on a rhythmic and simple song and physical exercises. In the case of reading, each phoneme is also a verbal sound. So each gesture represents the image of a letter and its sound. At the same time, letters are combined with the other previous exercises. As a multi- sensory method, it tries to connect memories which belong to the Auditory-Visual association, to the articulation and to the movement of the students.

d) Orton – Gillingham Method

The approach of this method focuses on the teaching of decoding (reading) and coding (writing). Students with dyslexia have difficulties in differentiating between letters that seem similar. By Orton – Gillingham's method, students with dyslexia may be helped by enhancing visual and auditory correlations with kinesthetic-tactile correlations.

The program of this method is done in three parts (Lim & Oei, 2015). In the first part, the student who already knows the letters of the alphabet is capable of correctly matching the letters and phonemes. The teacher displays graphical cards to the students and encourages them to read them. Then, the students watch the card and pronounce the corresponding phoneme. If the students respond incorrectly, they have the opportunity to try again in order to pronounce the phoneme correctly. Then the teacher says the phoneme and the students select and give the corresponding letter. Finally, the teacher can present new letters. The aim is to convey to the student the confidence that he/she is able to answer correctly and with certainty, without giving him the margin of assumptions. Finally, a key feature is that the teacher knows the weak and strong points of the learners' language awareness.

In the second part, the student comes in contact with less frequent letters. However, the learning process here starts from the most well-known endings and prefixes. The following activities are followed: Distinction and composition of phonemes, presentation of new letters and reading of words.

It is reiterated that the student must be able to separate the tones and syllables, analyze and compose a word. Each new phoneme appears printed on a card, accompanied by a keyword. The student writes the letter on the paper, "draws" it several times with his finger and reads it. Then, having memorized the letter, he rewrites it and reads it several times. The words used for reading usually belong to the well-known vocabulary of the students, except of some unknown words.

In the third part, the words, phrases and sentences taught are dictated by the letter that was recently presented. Before the students begin to write the words, phrases or sentences, they pronounce them. After they have put together enough new letters, they are encouraged to create sentences, paragraphs or even small stories. At the end of most lessons, it is suggested to read texts from books or magazines prepared by the teacher, depending of course on the level of each student. Otherwise, students can silently read one or two paragraphs, and then the teacher provides comprehension questions about what they read. It is important to mention that this program, like any program, must be appropriate to the age and learning level of each student.

e) Fernald Method

The Fernald method was developed at the University of California in the 1920s. It works like the Gillingham method, indicating that the student with dyslexia needs to create and assimilate correlations between printed, spoken and written forms of words. In 1943, the method was rectified. It is based on the Montessori method and in the fact that students who fail to acquire the written word, cannot recognize and analyze words and also the fact that to improve that, students need to be motivated. The teacher is an active component of the application of the method and uses kinesthetic, visual, auditory and tactile methods. Texts are used that relate to the learners' mental level rather than their reading ability to mobilize students' interest. The ultimate goal of the method is for the student to be trained in the proper writing and recognition of any word through the use of the above senses. The method also includes 3 steps where a

student tracks and utters the syllables of one word and writes it without looking at it. The teacher writes down those words taught every day that the student has learned and repeats them the next day. The teacher creates a vocabulary lesson. The student benefits from learning his alphabet vocabulary by both learning the alphabet itself while also learning how to use it. Then, the second step of the method follows. At this stage the student follows the same procedure as the previous step only now s/he does not need to point out the word while it is enough to see the word and to pronounce it. Also, the student should try to write it without seeing the word. The above procedure requires practice and a gradual increase in the number of words that the student could learn. Also, students need to read what they have written. At the last stage of the method, the student simply looks at the printed word, pronounces it, and then writes it. It is important to emphasize that writing corrects the original form in the memory of the child. According to this, the method includes instruction in the tactile sense of shapes and letters from various materials. Moreover, the playful form of exercises makes the method particularly dear to children by cultivating positive feelings towards school (Fernald, 1943, as cited in Georgovrettakou et al., 2015).

f) Elkonin Method

Elkonin Method (1973), focuses on sensing the phonological structure of words. The teacher demonstrates a card that includes an object that is accompanied by successive squares as well as its phonemes. The student announces the phonemes and puts a checker in each square. Elkonin squares "build" phonological awareness skills by analyzing words in individual sounds or phonemes. In some cases, different colored checkers can be used to make distinctions between consonants and vowels, or to distinguish each phoneme of the word. This method is used in teaching programs for students who have difficulties in understanding phonemes and show insertion, abstraction, confusion and substitutions in decoding and spelling. Also, students are taught how to measure the number of phonemes of a word (sometimes the number of letters) and better understand how to spell a word.

g) RTI method (Response to Intervention)

Problems associated with the diagnosis of learning difficulties and their treatment have led to the efficacy and adequacy of the divergence criterion as a tool of diagnosing learning difficulties. The

redefinition of learning difficulties and the development of an integrated intervention system has been brought to the fore not only as a research demand by the scientific community but also by parents and educators as a need for a more efficient model.

Respond to intervention method is an early detection and diagnosis system as well as prevention and support for students with learning difficulties, which emphasizes in tackling school failure. It seeks to bridge the diagnostic-intervention gap by disengaging learning difficulties from traditional psychometric methods of diagnosis.

The Respond to Intervention method is based on the following:

- The educational system can teach ALL children effectively.
- Early intervention is a critical parameter for the confrontation of learning difficulties before they are established and cannot be overcome. It is necessary to implement a multi-level support system.
- A problem/crisis management model that can be used as the basis for decision-making on interventions at each level of support.
- Interventions based on research findings can be applied to educational reality.
- Keeping track of students' school progress.
- Progress data guides educational decisions

The implementation of The Respond to Intervention method is combined with the continual search for more efficient implementation procedures. Although its basic elements are commonly accepted by its supporters, its individual processes are under development. This is also reflected in the legislation (of the countries being implemented, mainly in the USA), which, while encouraging its use, does not precisely define how it is implemented. Thus, there are differences in the role, responsibility and skills of professionals who design, implement and evaluate individual teaching and intervention procedures. This has resulted in different approaches to exploiting the possibilities offered by multilevel teaching and intervention. The Problem Solving Approach to RtI (RtI-PS) and the Standard Protocol Approach to RtI (RtI-SP) are the main modeling methods used to design and develop the interventions proposed by the RtI.

The standard (standardized) model (RtI-SP) shows that the intervention programs are followed by research documentation and are helpful for every student that may experience difficulties in specific skill areas. Intervention is predetermined and with specific implementation steps designed for specific objectives. This model aims to develop skills related to specific reading problems (e.g. inadequacies in reading decoding, reading comprehension, spelling, writing, etc.) or mathematics numbers, fractions, decimal numbers, geometry, etc.). They include structured activities and direct teaching, usually supported by computer and special software.

In the Problem Solving Model (RtI-PS), the quality of an intervention design depends on whether it focuses on the individual needs of the student. Research has highlighted the positive results of the problem-solving model and has been used for several years in some US states (Iowa, Minneapolis, Minnesota, etc.) with satisfactory results. Its drawback is the fact that its quality of implementation is not ensured, since the procedures and decision-making criteria are not clearly defined. This model has elements that are encountered in the type of specialized group or personalized program of integration classes in Greece that concern students with greater difficulties and is more oriented towards the students' particular needs and differentiated from the common curriculum.

Each approach has advantages and disadvantages. The key advantages of the RtI-SP model are the clarity of its implementation procedures. The immediate consequence of this is the ability to reliably control its implementation and its effectiveness.

Practical RtI guide for language lessons.

In 2008, the Pedagogical Institute of the US Department of Education published a Guide to Responding to Learning Difficulties in Language for Primary Education Based on Response to Intervention (RtI) (Gersten et al., 2008). This guide includes five proposals in order to help primary schools implement a detection and intervention framework so that all students in small classes develop satisfactory reading skills. These suggestions were:

i.   Level 1:

1. Monitor all students at the beginning and mid-year of the school year in order to identify those who will face future reading problems. At the same time, control the progress of students who are at risk of developing reading difficulties regularly.

2. Use of diversified teaching activities for all students with exercises that meet the specific reading level of each student.

ii.   Level 2:

3. Create small groups with the students who have a score below the limit in the detection test for 3 to 5 times a week (for 20 to 40 minutes). This level requires thorough and systematic teaching in more than three basic reading skills.

4. Check the progress of students (level 2) at least once a month. Making enough progress should make the groups created throughout the school move to the 3rd level of intervention.

iii.   Level 3:

5. For pupils who have made little (or no) progress in level 2 intervention, we provide systematic daily teaching that promotes the development and cultivation of all those elements that contribute to adequate reading skills.

For the implementation of this process, there is emphasis given on the co-operation of everyone in the school context such as class teachers, special pedagogues, psychologists, assistants, directors, etc. This guide gives guidance on how to implement RtI, but it does not provide information on what kind of services each school staff member should provide. It gives guidance about using protocols and tools, training teachers to gain a basic level of knowledge and implementation of the content and the educational processes and also provides specific suggestions so that the detection results can be used effectively.

One of the most important elements for which RtI has been criticized is the concept of successful response to intervention, i.e. when the students' response is considered to be successful. These elements are not only unclear but they are also significantly influenced by the pupils' image

recorded in the light of the subjectivity of the teacher. Furthermore, the implementation of the model so far and the accompanying research do not provide consistent results for students' success rates, nor does it adequately explain the failure of students who did not benefit from it. The pupils' response to intervention is an important element in the diagnostic process of learning difficulties. The attempt by RtI supporters to develop a model of functional coping with learning difficulties seems to remove them from their formal definition. The criticism of RtI certainly affects issues and problems that have not been sufficiently resolved or clarified. At the same time, however, it is linked to the criticism and questioning of new ideas.

Teaching of reading comprehension differs from traditional teaching in three key points. Firstly, teachers who apply explicit teaching do not simply tell students what the strategy is. Instead, they model or provide a direct explanation of what, how, why and when a comprehension strategy should be used. Secondly, students do not simply practice the strategy. Instead, teachers guide the students when practicing the application and gradually move away, until the students can implement the strategies on their own. In this form of teaching, teachers do not simply assess whether students can implement a strategy but also ask students to apply their strategies to new and different reading situations. This is a process of gradual transfer of responsibility from the teacher to the pupil himself (Ko et al., 2015).

This type of teaching consists of the following steps:

a) Modeling: This step highlights the strategy and how it should be applied to a selected text. Teachers initially model how to implement the strategy, using "think aloud". With the explicit presentation, the teacher makes clear to the poor readers-students how to apply a strategy, what they were doing wrong before or what they did not apply at all.

b) Guided practice: Teachers with students work together to check how they have gone through the strategy. In this step, they will have to discuss together why they chose to skip a text and focus on some others, as well as what were difficult and was not. Teachers also provide feedback and encouragement to students and intervene when students have difficulty expressing their views. Finally, they assume responsibility for completing the project.

c) Implementation of the strategy: In this step, the teacher helps students to see what the strategy is and how to implement it. They can also ask students to explain why they need to implement the strategy and when (in what kinds of texts).

d) Independent practice: Students complete a worksheet or a page of their book by working on their own and deciding themselves on what the right strategy is and how to implement it. After a lot of independent practice, especially for students who have difficulty in understanding, it is useful to discuss both the right and wrong choices and the reasons for choosing them.

e) Implementation: In this step, which is crucial, teachers ask students to implement the strategy, moving from the exercise book page to original texts. Students look for paragraphs that may include the central idea of the text, where views are expressed or cases of clear/obscure sequence of events. In this step, teachers emphasize when and why the strategy is used. The application is the step in which students understand the importance of strategies.

4.4.Strategies and teaching techniques

By "strategies" we mean an action plan suitable for achieving a specific goal or solving a specific problem. Strategic teaching aims to help students become independent and able to use strategies with appropriate choices when faced with a problematic situation (for example, difficulty in understanding a text).

By "technique" we mean a pedagogical tool that we use to teach a strategy that is related to teaching. Using the teaching techniques, we enable students to think, discuss, write and comment, as individuals or in a group level. As follows we can see some of the most popular techniques (Quach et al. 2015), that can be used for students with dyslexia.

– **The technique of Scaffolding**

By the term "scaffolding" we mean providing support to the learner by the teacher, a parent, a peer, a text or software, in order to reduce the gap between what those students can achieve by themselves or when guided by someone else. It is a dynamic learning process that depends on the

particularities of the situation, the type of work, the students' response and the socio-cultural context in which the process is taking place. We could set the following as basic characteristics: adapting the trainer to the students' needs, which requires diagnostic strategies, fading scaffolding and the transfer of responsibility by the teacher to the student (transfer of responsibility) (McLoughlin & Leather, 2013).

- **Reading strategies**

Students experiencing difficulties in understanding can benefit from a variety of teaching approaches that aim to improve reading skills. Especially in secondary education, most teachers are assumed that students who can read fluently can understand. Direct teaching, modeling, discussion and support in small groups are some of the approaches that teachers use to help students make them more effective readers. On the other hand, reading comprehension is a continuous and complex process that should create satisfaction for students so they can be productive. It should also be mentioned that such kind of teaching does not benefit only younger pupils but also secondary school pupils (Scammacca et al., 2007).

- **The prediction strategy**

The prediction strategy is applied before, during and after reading and helps to improve students' reading comprehension. Before reading, the student begins by looking at text features and text structure (preview). Through this quick but important process, he/she can get a general picture of the subject of the text. The teacher asks students before reading to look at the text and remember if they have seen something similar before. At this stage the student should be aware of the images, titles and subtitles, punctuation marks, bold letters, charts, diagrams, colors, symbols and the general text. Based on this information, the student needs to think about what he/she already knows about it and what topic the text is referring to. Preview activities help students to activate what they already know about the topic, focus their attention on the most important points, and increase their reading motivation. The activation of pre-existing knowledge and the connection with the "new" promotes children's reading comprehension not only for children with learning difficulties but for all in general. When teaching the prediction strategy it is suggested that the teacher should select texts with as many textual characteristics as

possible so that students can understand the functioning and implementation of the strategy (Hargreaves & Crabb, 2016).

- **The Clarification of Unknown Words strategy**

Clarification of unknown words can be applied during reading, and it could be said that it focuses on the word, as part of a more general strategy of clarification, including both individual words and phrases, sentences, or even whole ideas of a text. This focus on the level of the word is more suitable for primary school students, who have not yet fully acquired the decoding ability nor have a particularly rich vocabulary. The clarification strategy for unknown words can be applied to different types of texts and various causes of incomplete understanding should be taken into account, such as inadequate pre-existing knowledge, poor decoding skills, poor vocabulary, or difficulties in express verbally. According to the references, unknown words in a text can be clarified either by using a dictionary or based on the context and the analysis of the words themselves. The second case has been found to have better results as students are not dependent on the dictionary and can implement the strategy independently without help (McLoughlin & Leather, 2013).

- **The Strategy of the Summary**

One of the most important strategies that contribute to reading comprehension is the summary. The importance of finding the central idea plays a key role in the strategy of the summary. Before students begin to read a text, they should pay special attention to the title, the subtitle, the images, the glossaries, etc. on charts because, as already mentioned, these elements activate their pre-existing knowledge and they guide them to find the central idea. The activation of pre-existing knowledge promotes deeper understanding and belongs to the processing strategies, while finding important information (but also the summary in general) is an organizational strategy that helps to keep the memory of much information. Students should read the text in depth to distinguish the main ideas from the secondary ones. Very often, the central idea is distinct at the beginning of the paragraph or text, or it may be located anywhere in the text. It is not directly related to events and people involved in the text. The central idea is what has to be remembered as important. Many times it is not stated explicitly and clearly, and in this case the student has to understand it from the general content of the text, which particularly hampers

students with reading difficulties. Identifying the central idea of a paragraph is very important because it shows that the reader can distinguish what he needs to know and remember, and at the same time proves his ability to construct a summary of larger texts (Hargreaves & Crabb, 2016).

– **The technique of "loud thinking" in reading**

"Loud thinking" is a technique that can be used both in modeling the reading strategies by the teacher and in guided and independent practice by the students. This technique explicitly and loudly describes the individual's (learner's or student's) thinking as they process the text they are reading, thus promoting self-monitoring and self-regulation, and the reader's own self-control is controlled by the individual (Hargreaves & Crabb, 2016).

The use of "loud thinking" by the teacher is done in modeling the reading comprehension strategies so as students apply those strategies, but also when and how they will use them. This technique also helps students control their thinking as they read and instructs them to use appropriate strategies when they have difficulty in understanding the text they are reading. The above may include annotations or questions about the text, bring out their pre-existing knowledge, draw conclusions, or make predictions. In addition, with the "loud thinking" technique, the teacher can assess students through their needs and organize the teaching method through strategies appropriately (Alhawamdeh, 2016).

– **The technique of repeated readings**

This technique is widespread and is defined as a technique that can be applied in the practice phase and involves repeating reading a text in order to improve reader's readability and therefore reading comprehension (Elhoweris, 2017).

4.5. Information, Communication Technology and Dyslexia

Students with dyslexia could use computers to attend lessons. Students with diagnosed dyslexia are greatly facilitated by visual and acoustic stimuli, the technological appearance of the text and the various activities provided by a digital environment. Specifically, tools such as text processing

software are useful for students with dyslexia which may help them express themselves in writing much more easily and with greater self-confidence. Educational use of multimedia, due to dynamic applications and audiovisual aid, also helps significantly in the understanding of concepts and in the development of the students' thinking, especially the student with dyslexia, whose knowledge in relation to his classmates is more limited (Koch, 2017).

The ICT program (Information and Communication Technology Program) in schools creates a learning environment that refers to multi-sensory, is pluralistic and open to all. Particularly for students with special needs due to a disability or learning difficulty, information technology and wider supportive technological tools can be a valuable educational tool-aid in the learning process. The use of ICT in a classroom is undoubtedly a great asset for all those involved in the learning process, students, teachers and parents. Therefore, ICT is not a "magic" tool and is not a guarantee for achieving the learning objectives. Its contribution depends on how it is used and how teachers will use its key pedagogical features. ICT can be used in the language lesson as a tool for practicing students as a supervisor tool, as a cognitive tool for the development of higher cognitive skills (e.g. metacognitive writing skills), as tutorial tool (e.g. understanding and interpreting a text), as a communication tool (for example, for sending or receiving messages). The knowledge of the basic pedagogical characteristics of ICT by the teacher demonstrates the frequency with which s/he can use them and the cases in which s/he is necessary to achieve teaching / learning objectives.

The use of ICT's in schools could help students as follows:

- present information in multiple ways by combining images, sound and text (and thus making school learning more interesting and fun, making information more accessible and editable),
- play more effective role and support the student to build a skill,
- effectively contribute to the diversification and personalization of teaching.
- provide feedback when students' active role during the learning process needs to be emphasized,
- help the educator to encourage students,

– help the teacher to associate the teaching process to everyday life events. ICTs' offer is mostly associated with teachers' way and frequency of using them.

Nowadays, students are the generation of the so-called digital age. Society is experiencing changes as a result of the development of technology that affects it at all levels, economic, social, cultural. Of course, the school community that is the miniature of the wider social community cannot be unaffected. Indeed, it can be said that school needs to follow developments and prepare pupils to use new technologies for their benefit. The introduction of new technologies into education radically and constructively changes the educational landscape, i.e. the way of teaching, studying, learning, evaluating, participating, while at the same time preparing users for how to manage them successfully and beyond school boundaries. Interaction that is made through the usage of a computer between the teacher and the student is immediate and improves the learning process (Hargreaves & Crabb, 2016).

Recognizing the above perspective European countries have introduced I.T. (Information Technology) teaching as a lesson mentioned in mainstream and special education curriculum. Several difficulties arise in terms of the proper use of technology and the degree of benefit for the pupils, and therefore the need for a comprehensive and systematic policy and research is urgently needed in order for pupils in special education to benefit from the use of new technologies (McLoughlin & Leather, 2013).

When we use the term New Technologies in Special Education, we refer to supportive devices and special educational software that helps the learner develop basic learning skills despite any weaknesses he/she may have. Computers and generally the new technology in the context of the school environment positively affect the learning motivation because students have the opportunity to apply experimentation in the educational process, exercising their skills in a fun way. Research has shown the positive benefits of using technology in class with students who have dyslexia. Franceschini et al. (2013), report that the use of smartphones and tablets is particularly helpful in learning reading in children with dyslexia. Their research has shown that 12 hours of action video games that do not offer direct phonological or spelling education to children with dyslexia are improving in a high degree their ability to read. Researchers followed a double investigation procedure in children with dyslexia before and after engaging in action or

non-action games. They recorded the results of the process regarding the reading, phonology and attention skills of these children by doing 9 sessions of 80 minutes each day. The results showed that after the use of video games the pupils' reading speed improved and in some cases more than they would have been improved by a traditional reading therapy. The ability of students' attention is positively improved.

Another research by Gómez, García and Cordón (2015) concludes that students are motivated to participate in the classroom when they are advised to use educational applications and electronic devices. The introduction of technology into the school environment can promote various educational applications based on dynamic activities and experience (Deker & Lawley, 2013). Students' participation in the educational process increases. At the same time, students are trying to combine experiences and past knowledge with the knowledge acquired playing with a computer game (Hanus and Fox, 2015). Communication strategies are used to address the needs of video games and at the same time learners can acquire new ways to express themselves, new grammar structures and new words (Gabay and Holt, 2015).

Accordingly, Leon et al. (2017), recorded the positive elements that can be added to the development of literacy of children with dyslexia through the use of 15 Spanish applications. Researchers relied on the results of Rello (2014) who attempted to record the accessibility of the text for people with dyslexia by presenting a positive sign in the application of methods using technology. An experimental procedure was conducted involving two groups of individuals from 23 children where one was the control group and the other included only children with dyslexia. The comparison was made based on the practice of texts where shorter or longer words and more or less common synonyms were replaced. The use of shorter words led students with dyslexia to read faster and by using smaller words led them to better understand what they read. As a result, researchers found that interactive tools can perform word simplification for students with dyslexia. Leon et al. (2017) noted that the use of I.C.T. functions positively in multi-sensory learning as it improves reading fluency.

Tariq et al. (2016), developed an application for the needs of children with dyslexia focused on helping their handwriting skills. They used the application only for a short time but their preliminary results showed the promising help that may be given to students with dyslexia. The

application improved learning performance of students with dyslexia, gave them the motivation to better deal with the learning process and also worked positively to reduce the need for children to be helped with writing.

The modern way of student-centered teaching combined with the use of digital media helps teachers provide students with new knowledge. Multimedia have the potential to transform the student from a passive receiver into an active participant in an educational act. They also offer the possibility of personalized learning, thus developing a relationship of trust between the student and the teacher. Particularly for people with reading problems, the deficits that they present across the whole range of metacognition do not allow them to go from comprehension to concluding. Regarding the skill of reading decoding, the methods used to reinforce it are repetition, multi-sensory methods, reading success, exemplary loud reading, and so on. For people with writing problems, support teaching focuses on enhancing basic and mechanistic skills with methods such as grammar comprehension skills, spelling, written expression, designing, and so on.

The term "educational technology" refers to a variety of technologies used to support learning and assessment of teaching. The term has also been used for both electronic devices and I.C.T. that can be used to develop new cognitive skills in all fields of education including special education. Learning by electronic tools now also refers to learning with mobile electronics. Educational technology that refers to computer learning therefore includes, in addition to the computer itself, the special software and computer networks, and the one relating to mobile electronics includes all the smartphones, tablets that can be used to communicate via a wireless network. According to Liu et al. (2013), the implementation of educational technology in special education aims in three directions:

‒ Assessing the effectiveness of the use of educational technology in special education.
‒ The design of educational activities using educational technology.
‒ The emotional response of students and special education teachers to educational technology.

The assumption that reading comprehension and reading speed of people with dyslexia would be greater with the use of SLTR than reading from printed material is the issue of Schneps' et al. (2013) research. Therefore, the two conditions (paper, iPod) were used and a comparison of the

results was made to the population consisting of four random groups (I, ..., IV). Overall results among a group of students with dyslexia compared to the control group were not particularly significant. This means that many children with dyslexia read better through paper text and others through the iPod text. By analyzing the results, researchers commented that the observed interaction is such that those with reduced reading speed, speech decoding difficulty or poor reading skills have shown greater speed by reading from the electronic device. This means that the use of the portable iPod device for understanding and reading speed by high school students with dyslexia offers improvement to the above features.

In a study by Berninger et al. (2015), researchers refer to the use of classroom software for students with dyslexia by verifying the effective use of technology tools which allows readers with dyslexia to develop their reading skills. The reading literacy of these children is improving. Also, researchers state that technology allows improvement in the understanding of the text as well when it is used by children with dyslexia. They designed a system in which the teaching is divided into three parts: the first includes the writing, the second the spelling and the third is about the construction of sentences and is carried out using appropriate computer programs. What is required after the end of each module is to develop the ability for pupils to move easily from one level to another and to use the writing system.

Teaching activities of each unit were accompanied by teaching through headphones, text reading on the screen, handwriting work, using tools used in the iPad's interface, and producing words when asked. Thus, the script is taught in the context of the conceptual model mentioned above, which integrates all four systems (audio, vision, verbal and writing).

In computer-based spelling teaching, a methodology similar to that used for writing (writing with a special pen or touch-sensitive fingers and instructions through headphones) is followed. These activities include the measurement of the sounds of each word at the level of syllable and vocal (phonological awareness), the recognition of letters in designated positions of written words (spelling), the observation of the transformation of written speech by adding text proposals and prefixes (morphological awareness) and the integration of phonological, spelling and morphological features of words to create complete knowledge about the writing of words.

The above activities activate the students' kinesthetic systems: hearing (teaching by using headphones), reading (seeing), naming (speech) and writing, while integrating phonological and spelling codes both in the direction of spelling and reading. Types of exercises that are usually implemented in electronic form in a game format and are related to students with dyslexia are: adding a letter to a word, removing a letter from a word, choosing the appropriate word, the correct layout of letters or syllables. Physical language and analysis of the most common mistakes are used to create the exercises (Rello, Bayarri & Góriz, 2013).

4.6. Dealing with dyslexia Greece

4.6.1. Provision for inclusive education in Greece

<u>Law 3699/2008</u> introduced the provision of compulsory education for students with learning difficulties and/or special educational needs as a key element of public education that is free to all. In order to ensure equal education for all pupils and to provide high quality, pupils experiencing learning difficulties are trained in mainstream schools where they can receive support and only if the difficulties they face are serious, they are trained in special schools.

According to the Law 4074/2012 the Greek Government is committed to inclusive education for students that have learning difficulties and provide them with the right to participate in typical schools. Greece ratified the United Nations Convention on the Rights of Persons with Disabilities (U.N.C.R.P.D.)

Law 4368/21.02.2016 (article 82) promotes inclusive education. Particular mention is made about the participation of students with learning difficulties in typical classes that will be trained with students who do not face similar difficulties, the co-operation that needs to be maintained between the general education teachers and inclusive class teachers, the instructions to be followed in the mainstream class, as well as the creation of co-education programs. At the same year, the Presidential Decree no. 72877/D3/17.10.2016 brought many proposals for co-operation between schools from mainstream and special education (European Agency of Special Needs Education-Greece, 2018).

According to Government Gazette 4452/2017 on special educational needs and in particular following the Article 11, all the legislative additions concerning the regulation of special education and training issues in Greek Education are recorded. Greek legislation, after recent corrective interventions, sets the number of children with dyslexia that can be within a class to up to 4 children. Primarily, children with dyslexia need to be diagnosed about their condition by the competent authorities such as K.E.D.D.Y., public hospitals and paediatric hospitals.

According to Article 2 of Law 2817/2000, the Centres for Differential Diagnosis, Diagnosis and Support (K.E.D.D.Y.) of People with Special Educational Needs are decentralized public services and are directly subordinated to the Greek Ministry of Education through the Regional Directorates of the Department and Secondary Education. Their purpose is to provide services for the diagnosis, assessment and support for pupils and students, especially those with special educational needs, as well as support, information and awareness for teachers, parents and society. In order to achieve their objectives, K.E.D.D.Y. operate under a pre-established procedure to ensure their homogeneous operation across the country. The team usually consists of a Special Educator, a Psychologist and a Social Worker while in the Health Services of Paediatrician, Child Psychologist and Social Worker

In case that students have already been divided into classes and within the same class in which it appears to be more than 4 students with special educational needs such as dyslexia and there is no integration class, then the number of students in the class may be reduced to three (3) students as the maximum number of students per unit determined by the applicable propositions.

4.6.2. Differentiated curriculum for students with learning difficulties

After the Salamanca proclamation (1994) and the "opening" of the school to include all students, gradually and mainly from Britain, the intervention programs began to be diversified, especially for students with learning difficulties. These students represent the largest proportion of pupils with special needs, a population in need of special education services within the framework of general education. Also, education policy has as its main objective the integration with the "opening" of the general education school to include all children, especially those with mild difficulties such as pupils with learning difficulties (inclusive education).

Also, since 1995, changes in general education curriculum have been introduced at all levels of compulsory education, with an emphasis on content and process through a cross-thematic approach that facilitates inclusive education. The curriculum includes the fundamental concepts of a cross-thematic approach, as mentioned in the D.E.P.P.S.[11]. (Government Gazette 303 / 13-3-03, published by the Greek Ministry of Education Research and Religious Affairs, 2002: 61-63). Cross-thematic approach is related to the modules being taught or to a thematic field that students have discussed before. It may be the result of one or more texts directly or indirectly linked to it, which come from the student's book, teacher's book, other lesson books, or from other sources. Some examples are, in collaboration with the I.T. professor, gathering audiovisual material from corresponding web pages for problems that are currently affecting young people and society, and then students classify the results into separate thematic classes, or initiating a discussion in the classroom with students being divided into groups and arguing about the phenomena of violence in sports venues. They may have already discussed similar issues with the Physical Education teacher at their school.

Finally, more experiential and cooperative methods are introduced which facilitate pupils' integration especially with learning difficulties (project, group collaboration, etc.). The aim of all general education programs is students with learning difficulties to access school's curriculum while being given the right to be able to deal with their individual differences appropriately. Several students with learning difficulties can of course respond to many of the requirements of the common curriculum, but in most cases adaptations of their content are required so that learners with learning difficulties can also attend. Their treatment is changing form and instead of the specific education of the pupil himself, there is a shift in adapting and modifying the curriculum framework. According to this approach, the objectives should be similar to those of other pupils, regardless of their degree of difficulty and approach methodology, and differences

---

[11] In the Cross-Thematic Framework of Curriculum Programs of D.E.P.P.S. (Government Gazette: 1366, "18-10-2001 / 1373," B ", 18-10-2001 / 1374," B ", 18-10-2001 / 1375, 18-10-2001 / 1376, "B", 18-10-2001), the distinctive lessons are maintained, but at the same time it is sought the proper organization of the curriculum of each subject, in order to ensure the processing of topics from multiple angles (horizontal interconnection). This broader cross-thematic approach, in which discrete lessons are retained, is referred to as an Interdisciplinary Approach. D.E.P.P.S. in Greek is the acronym of the words "Diathematiko Enieo Plesio Programmaton Spoudon".

between students should be bridged with appropriate teaching interventions. If students have difficulty, the teacher must be able to appropriately support and apply several activities, or use methods such as group co-operation etc. to help those students. Group learning experiences such as the use of strategies in team surveys, interdisciplinary, etc. offer opportunities to all students with different skills and talents to participate in the collective production of knowledge. The curriculum can be adapted to different levels to create an educational environment that is suitable for different children.

4.6.3. Tools for learning difficulties in Greek classrooms

Within the framework of the project "Design and Development of Accessible Educational and Supervisory Material for students with special educational needs" (ESPA[12] 2007-2013), the well-known and widely recognized educational website "prosvasimo"[13] includes the "Investigation and recording of the existing educational material and Special Education Software "(Subproject 1.2.1.). The educational material and software that is posted and available for free on this website aims to strengthen and support general and special education teachers in their difficult work. It is a basic tool for the diversification of teaching and the education of students with learning difficulties and/or special educational needs. Classification of material by type of learning difficulty is mainly for practical reasons, but this does not mean that any discrete educational software or material addresses only a target group of students and is not a criterion for one-dimensional use of the material.

On the contrary, it is proposed to use it flexibly for all students in the light of the specific characteristics of each student, the pedagogical assessment and the short and long term teaching objectives that each teacher assigns to his/her pupils. For example, customized educational material based on the Easy to Read method may of course be primarily associated with the education of mentally disabled students but can be used equally useful and effective for students with learning difficulties, autism etc. The "Dolphin" educational software, although it concerns autistic students, can also be used in students with mental disabilities, learning difficulties, and so

---

[12] ESPA is the Greek acronym for Corporate Pact for Growth Framework.

[13] Available at http://prosvasimo.iep.edu.gr/el/

on. So, all material can be used in a different way for all students. Finally, with the aim of improving software and providing better support services, Institute of Educational Policy[14] is available to all to contact with them, informing everyone of any problems and malfunctions they encounter when using the software. Contact information to send suggestions for using or improving the material, comments, teaching scenarios, etc. are also available (Institute of Educational Policy, n.d.).

Also, in the same site we could find another tool called 'EPITELO"[15] which in Greek means "I am doing". It is a software designed to help students train and exercise their attention and concentration. These functions, which are called executive due to their central role in the organization, coordination and execution of cognitive work, are often deficient in children with attention and concentration problems.

In the site of ebooks.edu.gr, students may find non-enriched electronic links of their school books, enriched html of interactive student books, books in PDF form, description and objectives of each lesson.[16] Through this page you can access the four (4) main online education classes of the "Greek Ministry of Education, Research and Religious Affairs" for the Digital Educational Content of Primary and Secondary Education and find more than 18,000 Digital Open Educational Resources covering a wide range of Primary and Secondary, Gymnasium and High School.

The Internet Services for Digital Educational Content of Primary and Secondary Education in Greece include:

a) Interactive School Books, which students with learning difficulties and not only them, have the ability to read through a digital device. These are books in open digital form (html) which have been enriched with digital interactive learning material such as simulations, experiments, exercises, educational games, dynamic representations, videos,

---

[14] Available online at http://iep.edu.gr/el/epikoinonia

[15] Available online at http://prosvasimo.iep.edu.gr/el/epitelw

[16] The homepage for the Digital Educational Content of Primary and Secondary Education is at http://dschool.edu.gr.

audio files, concept maps, 3D visualizations etc. Inside the pages of the books there are incorporated "active" icons or hyperlinks that refer directly to them. There are 116 Interactive School Books available covering a wide range of lessons from primary to secondary education, while new books are added and the existing ones are updated.

b) "Fotodentro"17 is a Digital Educational Repository for Resources. Digital depositories are systems that can be used for organizing, storing, managing and distributing digital content. They accept digital resources along with appropriate information about them ("broadcasts") to facilitate navigation, search, tracking and exploitation

c) Digital Learning Platform for students and teachers "e-me". The Digital Learning Platform "e-me" is a modern, social and growing digital platform, developed to be the personal work environment of every student and teacher. It is an integrated digital environment that supports the learning, communication, collaboration and networking of members of the school community. It aims at all students and teachers and provides a secure yet open space for collaboration, communication, file sharing and content. The e-me Digital Learning Platform was developed to be:

− the personal work environment of each student and teacher

− a secure online space for collaboration, communication, file and content exchange

− an online space for social networking of students and teachers

− a framework for receiving external tools and applications (apps)

− an online space for publishing and making known pupils', teachers' and schools' work.

Any kind of printed or digital material in the social field can be material for language teaching and learning. Anything used by the teacher can be used so to design and process the teaching and learning process. Educational material can be verbal and in writing, or even exclusively visual, texts of the social field used to create a creative learning environment: Images, photographs, movies, CD-Rom, articles, online presentations, digital books, dialogues, interviews, newspapers, advertisements, speeches, catalogs, invitations, slogans, educational lectures etc. It is the material that needs to be reformulated to fit the specific objectives of the learning process. Material does

---

17 Fotodentro is available at http://photodentro.edu.gr/aggregator/

not stands alone as a tool: it depends on how it is adapted to the educational process and how it is used by the teacher and the students.

With the contribution of the Greek Ministry of Education, Research and Religious Affairs and the Institute of Educational Policy (I.E.P.)[18] in Greece, there are some adjustments of the Differentiated Curriculum for language in secondary schools. The general objectives of the teaching of the language lesson in high school students, and the fundamental concepts of a cross-thematic approach, are mentioned. There are several indicative teaching objectives, which correspond to the contents, but are not binding. The content of the lesson can be taught in any order it seems appropriate for students by the teacher. Even teachers may insist on whatever they find necessary according to the needs of pupils, or even return to some of them in the same or another class if s/he finds that some students have not fully comprehended it. In each class, the predicted grammar and syntactic phenomena can be taught in any order chosen by the teacher. Students have to be involved in producing verbal speech and then writing and on the basis of listening, understanding, speaking and writing. Several activities have been added, which are addressed to students with learning difficulties. In Greek schools, experiential learning is helpful for all students and even more for students with learning difficulties.

The effectiveness of each teaching effort is linked to the observance of basic principles of Pedagogy and Didactics (general and special). Some of them have a common application in the teaching of all pupils, with or without special educational needs, while others are specific for pupils with learning difficulties. It appears that children and young people with moderate and severe learning difficulties need more systematic pedagogical support during the learning process, ranging from short-term interventions or short-term personalized support to continuous guidance and consistent feedback. In the latter case, the known methods including the concepts of "exploration", "discovery", "self-action", etc. do not seem to be sufficient for these students. The approach that has been found to be most relevant is direct instruction lesson, also referred to as the «process of teaching», in which the teacher presents the new teaching subject

---

[18] Institute of Educational Policy is a scientific agency that provides support to the Minister of Education, Research and Religious Affairs on issues regarding primary and secondary education, post-secondary education, transition from secondary to higher education, teacher training, student dropout and early school leaving. For further information go to http://www.iep.edu.gr/en/.

in a direct and straightforward way, and then provides opportunities for systematic practice and feedback for pupils. Direct instruction programs usually combine features such as formulating clear and specific teaching objectives that are communicated to students, separating teaching tools in small steps organized in a logical sequence, presentation and demonstration of classroom activities initially by the teacher, guided practice for students (group and individual), continuous feedback for students in an environment of acceptance and encouragement. In direct teaching, all forms of teaching are used, namely as the tutorial monologue, demonstration and guided practice. In direct teaching, teachers clearly present, explain and shape language skills (Kilpatrick, 2015).

More generally, depending on the intensity of the required support and the individual abilities of the students, and also on the learning objective, the didactic methodology can vary from the behavioral model and the project analysis to the collaborative approach. Therefore, a combination of methods and teaching approaches, depending on the particular educational needs and the intended teaching/learning objectives, is a prerequisite for the effectiveness of a teaching.

In Greece there are basic principles, on which teaching should be based on for people with learning difficulties. These, according to the Learning Difficulties Learner Program, are as follows:

− The principle of supervision and the multisensory approach

− The proximity to life refers to cultivation of students' skills to cope with the challenges and needs of the society where they will live.

− Collaborative teaching

− Personalized Learning

− Teaching objectives and project analysis

One of the innovations of the new Greek Curriculum for children with learning difficulties is the emphasis on spoken language and the proposal for organized activities of understanding and producing verbal speech. Finally, when children with dyslexia take tests regarding a second

foreign language, the rating are not been taking into account in his/her grading certificate or graduation certificate.

Another tool is the concept mapping. Concept maps are visual and graphic representations of information and they are used to present information and the relationships created between them. This tool also connects, organizes as well as synthesizes information. Their usage usually is to teach the structure of the text, to reinforce understanding and to help students understand the vocabulary. Information and Communication Technology (ICT) includes software of concept mapping providing a new dynamic to this specific technique by adding extra advantages (Papadopoulou et al., 2013).

Concept maps present concepts which are in either frames or circles and the person has to indicate the relationships which exist between those concepts by linking the words or drawing connecting lines. Concept maps are not only a learning tool but also an evaluation tool, through the encouragement for students to use meaningful-mode learning patterns. Asubel (1963) claimed that learning is a meaningful process when a student has the opportunity to comprehend the relationship between other knowledge and the new data that he has just been taught. That is the way of a successful learning.

The reason explaining the superiority of the method of concept maps is the benefit of its nature, which means the visual presentation that is based on removing unnecessary information or unrelated topics. This method also applies to different learning forms which can be used to every student who may have learning difficulties. This leads to the fact that same concepts might be drawn in a different way for the students. It can also be used so as to create and complete the evaluation. Concept map is a method which focuses on a student-centred model, while encouraging the interaction between a student and a teacher, since they have the chance to create a concept map together throughout discussion. A concept map may indicate the alternative relationships that might coexist within a system (Papadopoulou et al., 2013).

This technique helps students understand the whole linking among concepts with knowledge than just trying to recall separately those concepts. Students have the ability to classify the subjects they are learning. That means that their confidence may be increased. It is also being developed from a social point of view since it is providing to them the possibility to define the

meaning of concepts, making the learning process an easier task. Concept maps is one of the best ways to prepare for examinations while being suitable for different grade levels, topics etc. Generally it can be used both in learning and teaching (Kilic & Cakmak, 2013).

4.6.4. Teacher training

Another main issue in teaching students with dyslexia is the cooperation of teachers of general and special education. A classic question that also arises in Greece is that "Can/Should teachers of special educator cooperate with teachers of general education in a classroom?" Such a crucial adaptation requires careful planning especially when there is no specific educational material for children with learning difficulties. In addition, general education teachers must have adequate training to design flexible teaching plans that meet the needs of both students with learning difficulties and the rest of the pupils. This process is called Universal Design for Learning. In this design the supportive principles for students with learning difficulties are incorporated and are not added to the curriculum. So the program is flexible and can serve the needs of all children together as well as individually.

In Greece, according to training of teachers of typical education who work in special education units or teachers that work in parallel support and do not have former training in special education are trained by the State. The Institute of Educational Policy co-ordinates in-service training. For their questions or to get advice on inclusive education issues, teachers can communicate with special education school advisors in the region or from the K.E.D.D.Y. (European Agency for Special Needs and Inclusive Education, 2018).

4.6.5. Strategies and activities for text comprehension and the development of study skills

The importance of self-regulatory learning teaches students how to take control over their learning. The strategies, skills and attitudes of self-regulated learning make the individual capable of planning, guiding, checking and evaluating both the process and the result of the

information processing he has at his disposal each time (Matric, 2018). The development of metacognition is particularly facilitated by the development of spoken language at first and then written, which in turn facilitates the development of concepts and the ability of self-organization of pupils in different contexts. In pupils with learning difficulties, priority is given to speaking or writing according to the peculiarities of each pupil. More generally, however, the production of verbal speech is considered easier than its comprehension. On the other hand, the development of oral linguistic skills is necessary both for the needs of daily communication and for the internal organization of the thinking of the particular pupils. The enrichment of verbal speech with new vocabulary, the logical and understandable organization of speech, the expression of everyday personal and emotional needs and desires, active listening, participation in dialogue and the development of students verbal expressiveness should be everyday teaching objectives within the language lesson. The development of speech production and comprehension needs to be encouraged by the teacher, ensuring appropriate and equitable conditions within and outside the classroom. In terms of reading, the most common and effective way for developing understanding and study skills is directed text reading, which is preferable to be firstly done by the teacher him/herself.

a) Guided reading is usually achieved by the teacher asking questions before, during and after reading texts.

b) Questions in the initial stages of teaching may be more often submitted by the teacher to the pupils, but pupils should be given feedback as well. In terms of content, the questions should be clear and comprehensible in order to favor the participation of pupils, and to require short answers.

c) Multiple choice or correct-wrong type questions are not excluded. In any case, the teacher should provide students with sufficient time to respond.

d) Activation of students' prior knowledge can be done in addition to using questions in the following ways: presentation of structure diagrams, watching a film, simulation through computer, use of images, watching a TV program, hypothesis strategy.

e) The formulation of hypotheses and the formation of a horizon of expectations is a simple and effective way to activate the students' previous knowledge, mobilize them and improve the comprehension of texts, used in any kind of text, on an individual or group

basis. It consists of the following parts: activation of the previous knowledge, formulation of hypotheses by the students about the content of the text to be processed, study of the material, confirmation of the cases or not.

f) A hypothesis can be made orally or even in writing, so that they can be easily answered through reading. Students need to investigate whether the content of the text confirms the hypothesis made or not. After reading a paragraph or the entire text, students discuss and decide which of the hypotheses are confirmed. The answers of the students are documented by reference to specific areas of the text in order to clarify the criteria by which the confirmation of the cases is checked. The visual imagery strategy, which is used mainly in teaching references and in the language lesson, is also parallelized when the text favors it. In the beginning, students study the topic of the text and report its relationship with the text, or in a part of the text underline the keywords with the teacher's help and then try to create images in their minds and also present them on the basis of the text. Then they discuss how to "complete" them. At this point, they make assumptions about the content of the rest of the text. Finally, they finish reading the text and check if this confirms the images they imagined.

g) Structure diagrams or any kind of graphical representation tool that represents the basic information of a text and the logical relationships with which it connects, facilitate comprehension as well as composition of texts. They can be used with any type of text before, during, or after reading. It is recommended in the early stages of teaching to be presented ready for the pupils (with the use of a chart, photocopies, slides etc.) and to guide pupils to better understand texts. Students can then be provided with incomplete charts with "gaps", which they will fill them in. For both completion and complete construction of a text it is preferable to work in pairs. The form and content of these graphical representations is mainly determined by the type and content of the text.

h) In order to facilitate understanding of non-narrative texts, students should be made aware of the different types of those texts and the particular way of organizing the information in each case. This awareness is achieved by instructing students to locate words or phrases. The encoding of this knowledge is favored by the presentation of a list which may depict the basic types of non-narrative texts and the most common words or phrases. A useful technique for understanding the information of an informative text is the use of a table

with three columns. In the first column, learners record what they already know about the subject that is discussed in the text. In the second, they quote "what they want to know" about the subject and in the third "what they learned" after processing (this is the KWL technique, which is an acronym from the titles of the three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED") (Maryam Hamid et al., 2015). The first and second columns are filled in before the reading of the text and are intended firstly to activate previous knowledge and secondly to begin the search for specific information within the text. The third is completed after reading the text, in fact it is a summary of it and encourages students' evaluation. The content of the third column can also be used to synthesize the text summary, in order to properly organize their material. This technique is sometimes enriched with a fourth column, which refers to students' thoughts and feelings, or to the way they think of using the text information (generalization-transfer of knowledge).

i) One of the most common techniques is to fill with information two columns of a table. In the first one there are the basic information of the text and in the second the main details of it. It is usually necessary in the initial stages of teaching that the teacher himself should show how to keep notes on a short, difficult text, by applying the basic rules in a summary. The presentation and explanation of the basic rules in a summary by the teacher and the subsequent practice of the students in it, is considered to be the most effective process. It is necessary to tolerate the reproduction of the basic information of the original text in the initial stages of teaching. Then the teacher can give to students incomplete text, inviting them to fill in the "gaps". A strategy that learners with learning difficulties can use to systematize their study and understand the texts is:

− Step 1: Overview: The learner gets an overview of the text by reading the topic, any subtitle and watching slides (if any are available). In addition, the learner observes the images, concept maps or charts that are related to the text.

− Step 2 - Questions: Based on the general impression that students have acquired, they use key questions (who, where, when, what, why, how) so as to answer those questions; students must careful read the text. The title and other parts of the text can be used for questioning.

- Step 3 - Reading: The student studies carefully and separately each paragraph of the text in order to answer the questions he has asked. At the same time it is used to make recesses for each paragraph of the text.

- Step 4 - Recall/summary: The student attempts to list the basic information of each part of the text or of the whole text, either by using verbal speech or written speech, firstly through watching a presentation and then by memory.

- Step 5: Students attempt to estimate the importance of the basic information in the text, perhaps by utilizing the notes they held at the previous stage.

The curriculum of the secondary education in Greek schools presents a list of general activities for the evolution of students' with learning difficulties speech through understanding of the text. In particular, it presents the expected skills that these students will develop with the end of high school education. Below is a list of skills and tools that can be used as so as the activities that can be used to develop the above abilities:

- Daily conversations, telephone conversations, social talks, storytelling, descriptions can be used to understand a conversation about topics related to their interests. Provided opportunities for discussions, dialogues on topics of interest to students, students are asked to express their opinion, to comment, to interpret, etc.

- To enable students with dyslexia to understand oral public announcements addressed to the general public, students can watch theater plays, TV shows and listening to radio broadcasts.

- To be able to understand and analyze the meaning of non-linguistic elements in oral communication they can watch plays, presentations, discussions, TV presentations to analyze the movement of actors, listen to journalists on radio and watch actors on television, comment on cartoons and images, etc.

- To be able to distinguish in a dialogue the factors involved in it (transmitter, receiver, purpose, place, time, message), audio recorded dialogues can be used and then students can try to identify all above factors.

- To distinguish the differences between spoken and written speech, an activity could be to listen to audio recorded dialogues and try to convert them into a written text.

4.6.6. Strategies and activities for speech production

Presentation of indicative speech production: It is placed in a communication context, e.g. the type of text to be written by students, the receiver of the text and the purpose for which the text is written. It is appropriate to specify the extent of the text, which must be consistent with the communication circumstance which is outlined in the text. There is a correlation with the lesson being taught or with a thematic field that the students have discussed. It may be the result of one or more texts directly or indirectly linked to it, from the pupil's book, teacher's book, other lesson books, or from other sources. Speech production, in addition to the texts written at the specified hours in the classroom and some of the work given for the home, works in a communication framework. Writing activities or oral exercises in the classroom can also be used to teach pupils to practice certain types of speech, such as any activity involving composition (role plays, narration of a personal experience).

- Writing activities is the part of the language lesson that presents the most difficulties for people with learning difficulties. They seem not to devote the time required for writing. Initially, students with dyslexia need to be more involved in the composition of texts. A second step towards improving students in writing is to create a positive attitude with the mobilization and positive reinforcement of the pupils if they are likely to have experienced difficulties or even frustrations from primary school. Encouragement can also be supported by information technology, since the related software easily converts the spoken word into writing. Using acronyms may help students to better perform in writing activities and teachers have to make clear from the beginning what students are expected to do at each stage of writing, what knowledge they will use, and what specific actions and techniques they will use. That is why the writing strategies must be quite specific. For example, specific instructions can be given to students about how they will gather and develop their ideas in a paragraph with a formal structure (thematic proposal, details, conclusion)[19] or how to develop a text of arguments.[20]

---

[19] This strategy is indicated with the acronym PLEASE: *"Pick your topic an write format, List the information and ideas to be used in writing, Evaluate -is the list correct ?, Activate paragraph with a sentence, Supply and support sentence, End with a concluding sentence; evaluate your writing"* (Sabornie & deBettencourt 1997: 217).

- The curriculum of the secondary education in Greek schools presents also a list of activities for the production of students' speech with learning difficulties. As before, we could see the relevant list:

- Discussion, dialogues on topics of interest to students, questions in order to express their point of view, to comment, to interpret, etc. can help them develop speech production in a conversation on a daily oral basis.

- Roll playing involving relevant people such as a dialogue with the school headmaster or a salesman etc. will offer them the ability to produce speech in a variety of situations.

- To be able to distinguish the elements of verbal speech of a text produced by themselves, including pauses, body and eye movements etc., pantomime, role-playing games, converting written to oral speech, theatrical performances, etc.

4.7. Information and differentiated curriculum in education systems for other countries

Curricula are not mere lists of lessons to be taught. They are a determining factor in the quality of teaching and learning. They make a substantial contribution to improving knowledge, encourage continued education and training and thus promote lifelong learning. Differentiated curricula based on learning outcomes increase learner autonomy by enabling them to shape their own path and their own choices.

Developments in countries such as Lithuania, Malta, the Netherlands and Finland show that these programs encourage learners to continue learning (e.g. by encouraging them to continue their studies at the next level, and thus rates of early school leaving are lower). In Finland, evidence shows that trainee's better estimate expectations, show greater commitment to their goals, and are more involved in the process of learning and assessment. In Slovenia, these curricula are considered to be more useful as they more closely relate theoretical to practical learning. This

---

[20] This is the strategy DEFENDS: "*Decide on your exact position, Examine your reasons for your position, Form and list reasons that explain each reason, Expose your position in the first sentence, Note every reason and supporting points, Drive home position in the last sentence, Search for errors and correct*" (Sabornie & deBettencourt 1997: 217).

utility is also fostered by the close cooperation of educational institutions with the industrial and commercial sector. The above are nowadays actively involved in the design of curricula and in the assessment of learners.

Differences from country to country and from institution to institution are also observed and in methods used in integrating learning outcomes which is presented into their curricula. In Europe, Germany, France and the United Kingdom which are the wealthiest countries - have gradually influenced the typologies developed in other countries.

Applying curricula based on learning outcomes has made it necessary to re-examine the traditional evaluation tools in many European countries. In Slovenia and Spain, for example, special tools have been developed to evaluate some learning difficulties. In Finland, self-evaluation of learners was established, resulting in a positive attitude for both teachers and learners. In most European countries the formative assessment is used to provide learners and trainers with substantial and regular information on the progress made and to highlight any changes that need to be made to the learning process. In order for teachers to apply the new teaching and assessment methods correctly, they need to systematically upgrade their respective skills, and close cooperation between teachers in schools is also needed. New pedagogical methods aim at developing critical thinking. In Greece, for example, a transformational way of teaching is used, which uses arts, culture and nature (Cedefop, 2011).

The Spanish education system consists of a legislative framework which comprises basic organic acts: "the Organic Act on University Reform of 1983 (LRU); the Organic Act on the Right to Education (LODE) of 1985, the Organic Act on General organization of the Educational System (LOGSE) of 1990 and the Organic Law on Participation and Administration of Educational Establishments (LOPEG) of 1995"[21]. This framework develops all principles that the Spanish Constitution is based on to recognise the free education for every student. Nowadays, LOMCE modifies LOE for the adaptation of the new context.

The above are helping students with learning difficulties to find support. According to LOMCE (2013) there is an incorporation of special education into the mainstream system. Special

---

[21] For further information please consult at https://education.stateuniversity.com/pages/1419/Spain.html

educational needs (SEN) are highlighted and students with special educational needs have the opportunity to be educated in typical or special education schools but students' needs are recorded when students attend special education classes.

Adaptations to the Spanish educational curriculum can be grouped into significant and non-significant adaptations. They include modifications or predictions related *to new resources, the acquisition of new teaching tools, communication systems* and *"modifications in objectives, contents, methodology, activities and assessment criteria and procedures, which are carried out within the classroom planning"*. (European Agency of Special Needs Education-Greece, 2018).

4.8.Accommodations of Students with Dyslexia in school Settings

According to the newsletter issued by the International Dyslexia Association (IDA, 2017), accommodations for students with dyslexia are reported. In particular, this newsletter offers teachers various materials that can be used, refers to interactive teaching and the ultimate goal of it is to increase the efficiency of students with dyslexia, whether they are in general or special education classes. Students with dyslexia in school can be helped by teachers with the use of tools and methods. Modifications that teachers can make in the way they teach are to encourage students with dyslexia to better integrate into the classroom and succeed. An example is the extra time for students who have dyslexia so that they can complete all their tasks without stress. Teachers can use various tools to meet the needs of children with dyslexia, such as the use of movies or listening to the text of books from a tape, text reading or finally use of special programs on computers.

Teachers are constantly looking for tools and methods that will encourage learning while helping them to manage every difficulty that may occur. It is important to identify in time the tools and methods that will enhance the learning process in children with dyslexia, which need to be able to cover all cases and can be implemented within the classroom. However, most teaching materials do not offer enough teaching possibilities. In each case it is necessary to apply different methods to each child. According to I.D.A. (2017), some general examples are:

- It is necessary to clarify and generally simplify written activities when they are transmitted orally. The reason is that quite often the instructions that teachers need to give to children are all written together in a paragraph, with a lot of information. Verbal instructions make it difficult to be followed by students with dyslexia. However, if the teacher highlights the important points of instructions then the child could focus on those and follow them. In some cases, it is helpful to rewrite the most important sentences. The teacher can remove pages that are not essential to the class. With this method, students do not face a book full of pages that includes extensive, and sometimes tricky to them, texts, so they are not discouraged by the size of the study and the final work.

- Teachers are important to exclude external visual stimuli, as students with dyslexia are often easily distracted. At the same time, line markers can be used in the reading process as well as educational material by the teacher. The educational material is suggested to include summary, large font size and increased spacing between lines and words. The teacher should s/he only use the most important items from the material s/he prepares for children and highlight that information which contains keywords with a color pen.

- Teachers can provide children with dyslexia with educational material that contains some additional practical activities related to the subject topic. Tools that may be included in this material could be practical exercises, special educational games based on teaching activities, etc. Teachers may offer headlines of the paragraphs. This list content may be of help for students by the use of keywords etc. But besides indicating the keywords given as headings in each paragraph, a more general corresponding system can be developed for each page or chapter.

- An audio recorder can be used as well, where instructions, special lessons and stories can be recorded. In this way, students could repeat the information they hear and thus be able to clarify the text they previously heard, have better understanding and have more time for the instructions. There is technology that can be used as an aid, e.g. software suitable for tablets, computers, speaking devices etc., which can convert text into sound, as well as audio books that can be very useful as tools. In Greece the term T.P.E.[22] is used.

---

[22] T.P.E. in Greek is an acronym for «Technologies Pliroforias kai Epikinonias" (Information Technologies and Communication)

– Interactive education always helps children with dyslexia. The teacher firstly has to gain the attention of the students so they could be engaged in an interactive way and the students would try to use all the material that is suggested by education providers for each age. Thus, the interactions that take place during the teaching process will be successful learning experiences for all students.

– Teachers can use teaching tools although several tools do not help teachers to do so. For this reason, each teacher needs to prepare and adapt the teaching material, including these procedures (*i.e., provide guided practice, offer corrective feedback, set up independent practice, monitor practice, and review*) (IDA, 2017:8).

– The teacher has to encourage children to express themselves.

– It is important for teachers to repeat the instructions in a constant and orderly manner. They may also ask students with dyslexia to repeat the instructions they have to follow in their own words, to confirm that everything has become understood. If the instructions consist of several steps, they can be categorized into subsets.

– Teachers can simplify the directions in general, through the electronic presentation of only one part of the instructions at a time. As a tool, different colors of chalks or markers for each line could be used if there is plenty of written information on the board, or emphasis could be put by teachers with different colors every second line. The same can be done if the lesson material or some instructions are given in printed material.

– Writing needs to be clear, large in size and spacing between letters and rows. It is also recommended for teachers to hold the written text on the board for a lot of time so as to make sure the child has written it and has not been in a hurry.

– When teachers use written instructions, it is useful to confirm that students with dyslexia have fully understood the words and generally the meaning of the sentences.

– Children with dyslexia work better within an environment where there is a daily routine. This environment makes them feel secure and those who face learning problems need a structured daily routine with specific rules. In a number of cases, providing students with a graphic design will incorporate the educational material in the form of a sketch, an organizational chart or an image and it could be greatly beneficial. Tools as charts, organizational charts, concept maps, etc. are of much help. Thus, children can listen and understand the basic

information more easily, as well as compare the information and look for the relationships between the concepts of information.

− Instructions need to be done step by step. When there is new or difficult information, then the child with learning difficulties can work through the same point, lose the order and not be able to follow the whole sequence.

− The teacher in order to help children with learning difficulties even more, he/she can provide them with verbal information written on paper or on the whiteboard. Particularly when the teacher writes the key words in the whiteboard, the child with dyslexia can focus even better and organize his/her thoughts and understand. The same can happen with the introduction of new words in the form of a small dictionary so as basic concepts that are new can be understood before the new lesson. Presentations in contrast with interactive learning need to be in balance.

− The use of mnemonic strategies is useful. Additionally, it is good to use mnemonic tools that will greatly help students to remember the most important information or even the steps thus creating a good learning strategy.

− Underlining the daily review by teachers is useful so that children with learning difficulties can connect previous lessons with new ones and thereby increase their knowledge. Some of the students with dyslexia have particular difficulty in oral presentation or they sometimes find it hard to participate in oral discussions. So, the teacher can write the key words on the whiteboard or draw some symbols and drawings so as to help the children arrange their thoughts and perform better. In some other cases, a student with dyslexia may have difficulty in taking a test, preparing a school project or just examining in the day-to-day lesson. In those cases the teacher may choose other ways to evaluate the student for example, orally, or by creating multiple-choice exercises, matching sentences etc.

− Charts help students with dyslexia to get fluent in speech, because they have a well-organized educational material and as a result they simply connect events to each other. Also, indicating the date and keeping sort of diaries is also an other usage.

− The use of "hierarchical worksheets" by teachers is very helpful for children, since they believe that if it is easy in the beginning they will succeed in general even in case there are more difficulties later. In this way, students work harder and more methodically. Computer

use is quite helpful in children with dyslexia, since large fonts and distances between letters and words can be used so as to help children understand easier the educational material.

− A child with learning difficulties sometimes takes a little longer to understand the educational material and be able to use it. The completion times of the educational project need to be flexible. In this way, children can even complete written assignments in a right way.

− Teachers need to provide additional educational tools and also let the children practice in some cases so that by trying different techniques they will be able to acquire these skills at the level of convenience. Especially in the field of examinations, teachers need to be able to include any new methods that will help children with learning difficulties to respond better.

− One-on-one assistance to children with dyslexia is important. In this way they can gradually find their own pace and move on to the educational process. Practice is also helpful as well as corrective feedback when it is immediate.

− The daily routine that the teacher performs in the classroom is extremely useful and necessary due to the fact that it also enhances the self-confidence of the child who assumes his responsibilities with independence.

− As mentioned above, phonological awareness is the ability to separate words into syllables. Each letter is a sound called phoneme. It is the smallest audio unit in the spoken language that characterizes a language and distinguishes it from other sounds that characterize each letter in the language.

− At this point, the teacher can help the child with dyslexia that has difficulty in understanding and speaking the phoneme, by using a structured program including the reading of phoneme and its spelling, which must involve repetition, especially in cases where new words are suggested, but it is very important to take action slowly in this process, so that the child can develop self-esteem and confidence at the time of reading.

− If the teacher asks a child with learning difficulties to read a book that is on a higher level than his/her current and already-communication skills, this may weaken the child immediately. Motivation is important and when the demands are not high, the child's effort is better appreciated. Children with dyslexia should spend more time working on every syllable or word they read because otherwise they may not understand the general meaning of the text.

- A child with dyslexia has difficulty in reading out loud in the classroom and for this reason the teacher needs to let the child read at a moment when he/she is next to the student. On the other hand, another solution is to provide children with time, so as they can prepare properly even if it is from the previous day. So, in that way the student with dyslexia can read loudly in the classroom like the rest of the kids. Finally, another exercise the teacher can use is to read together or sequentially with the student parts of the text, which is quite helpful and fun at the same time.

- Teachers must always keep track of the sound and the symbol both in the ear and in the field of vision. They need to create specific exercises through which children with learning difficulties can practice and develop techniques which can help them to overcome the difficulties they face. In this way, students will be able to perceive the mixing of the letters with the sounds and finally with the corresponding words. Thus, the children perceive the meaning of the symbols and connect them to the sounds in a deeper linguistic field and cognitive level.

- The teacher can use spelling rules, through which students with dyslexia can learn how to spell and eventually spell even the more difficult and big words. Knowing how a word is divided, the students' cognitive level increases and the child can actually read the words in a more accurate way.

- In cases of children with dyslexia, they cannot easily correct their writing activities in a simple way while writing, but if enough practice is done in the field of spelling, those children can improve as it is related to their mistakes in writing skills.

- It is important for teachers to be able to make early recognition so that practice can be given to children with learning difficulties, so as to help them achieve their goals at school and later in their own lives.

4.9.Teachers' conception on dyslexia in classroom

The study carried out by Tajuddin and Shah (2015) has shown that a significant number of teachers seem to lack the necessary knowledge or skills to provide effective phonological and

phoneme instruction. The authors concluded that teachers are unable to choose the appropriate material or activities for assignment and lack the ability to analyze written words and phonemes.

Thompsons' study (2013) aimed at exploring the views of teachers from 16 typical high schools in the Western Cape about their ability to educate students with dyslexia, their awareness of dyslexia and the education they received before and during their educational career. The researcher used the Likert type scale questionnaire. The results showed that those teachers had the notion that they were fully aware of the dyslexia phenomenon. They also felt confident that they could easily understand the characteristics of dyslexia in their students. Based on that, they believed they were able to suggest to a student that s/he should opt for a diagnostic test for dyslexia. Based on their opinion, teachers believed that dyslexia may occur in their classroom. Younger teachers had higher median scores than the older ones due to the knowledge of dyslexia. That finding may be explained by the possibility that they received pre-service training in a more adequate way and/or continued in-service training than the category of the older teachers. Although, there is no significant differences in the findings even if teachers had a three-year teacher's diploma, a bachelor's degree or an honors' degree. Their perception is that it was not useful for them to be trained in dealing with dyslexia before starting to work, which contradicts what has been reported in previous studies such as Chong's et al. (2017), who said that training for dyslexia leads teachers to a better academic success for children with dyslexia. The results of the current teacher training on dyslexia were also negative. Only 4% of all teachers received good quality education. From this small percentage of teachers, most felt they were being trained because they chose so, not because they were obliged or needed to be trained. More generally, the researcher showed that almost all teachers over-estimated their abilities to manage dyslexia in the classroom. Teachers need to get trained in special education (pre-service and in-service) about dyslexia. Also, Thompson (2013) assumed that teachers who were trained in special needs would be more knowledgeable about dyslexia and the use of the tools but the results did not support this assumption. For future research, Thompson suggests that the reasons for the adequate knowledge of dyslexia should be researched.

Common results from Chong's et al. (2017) and Cash et al. (2015) point that teachers' writing skills can predict their ability to teach to children with dyslexia. In addition, they indicate that teachers' language skills positively advance student progress in vocabulary skills.

The challenges faced by teachers in the class having a child with dyslexia was the main research point of the survey study which Basu et al (2014) conducted. The sample comprised of 37 teachers who were teaching in schools which had children with dyslexia. Researchers conducted a semi-structured questionnaire as their research tool. The findings from the research indicated that the higher percentage of the teachers faced challenges due to academic and behavioral skills when they taught to students with dyslexia. Fewer teachers have reported difficulties in teaching to children with dyslexia. This marks the low levels of awareness of dyslexia by teachers.

4.10.   Teachers' views on the use of tools to deal with dyslexia

Teachers' views on the use of tools to deal with dyslexia differ in many researches that have been made in recent years. For example, Kafyulilo & Keengwe (2014) conducted a study where they tried to capture the views of teachers in schools in Tasmania where technology is not widely used in the school context. For this reason and based on the results, it was shown that they were not skilled with the use of technology. Similarly, Keane & Keane (2016) in their research reported that although the professors who participated in the survey were aware of how to use technology in the educational process, they did not have the necessary materials at their school, and so they could not have very positive results. The teachers' relationship with the use of technology is particularly important in the implementation of new training models as Erstad et al. (2015) argues. The participants in the Sisler research (2014), when presented by teachers who have been in education for many years and are unfamiliar with technology, have a negative relationship with the application of technology in the educational process.

In high school, due to the educational challenges faced by students with dyslexia, Granzen (2018) produced a study in the context of his dissertation at Concordia University-Portland. He studied the descriptive qualitative case study to acquire knowledge and views about teaching of digital technology using the experiences of 8 high school teachers who teach students with dyslexia in western North Carolina. So, she has put two research questions into her study. One concerned their view of how they perceive the use of digital technology in the learning process. The second topic of the dissertation was to record the experiences of those teachers about the use of digital technology and teaching in students with dyslexia. After analyzing the results of the interviews

and all the tools used in this research, it was shown that high school teachers who teach students with dyslexia and use digital technology consider this educational tool to be particularly useful.

The transformation of the educational process was a fact for almost all professors with the use of technology as this use helped to change the teaching and learning experiences of students with dyslexia. All teachers used technology as part of the educational process and were registered with different levels of comfort and experience by the teachers. There were professors who, with technology, were able not only to guide students with dyslexia but also to successfully implement their learning goals. It is important that teachers' answers showed their acceptance of the benefits of technology to students with dyslexia and presented themselves as individuals who benefited from the opportunities of teaching and learning with technology. There were teachers who used day-to-day technology in the classroom and some who used an educational program, Canvas, with which they developed interaction with students with dyslexia. The use of the technology in their class helped teachers to understand older sentences they had in teaching so they now focus on changing many of their strategies they use during teaching. Technology is an integral tool for the educational process of children with dyslexia. Teachers have a lot of possibilities to use computers. The general view of teachers is that they prefer to use technology in the educational process in children with dyslexia as students with dyslexia through the use of technology interact in a more personalized manner. Finally, it is stressed that teachers have strongly expressed the need to develop their knowledge in the context of developing their technological skills and that they would like to learn new methods for using the technology they already have access to, as well as that they need to know how to adapt technological use with their students who show learning difficulties. The guidelines that could be followed, the guidelines on the use of technology in classrooms including students with difficulty considered by the teachers would promote greater learning performance. Inclusive strategies needed to be implemented to promote e-learning to their students with dyslexia is a basic view of teachers in this research. Also, based on the results of the interviews, the researcher concludes that teachers are not sufficiently aware of the characteristics presented by students with dyslexia and that this is expressed by the need for additional education so that the educational strategies that follow will fully meet these needs.

According to Handler (2016), technology tools have been particularly integrated into the educational process. The main issue is their implementation in classes involving students with learning difficulties, fact that Nasen (2017) strongly agrees with. The transfer of students from secondary education to higher according to a survey of Sullivan & Sahasrabudhe (2017), requires the use of technology especially for children with dyslexia since the next step for these children is to become college and universities members and use new technologies quite regularly. The authors report that students with dyslexia learn more successfully as they become familiar with technology in understanding the written texts.

Also, Magou (2014), in her research study tried to highlight the perspectives of secondary and primary school teachers regarding students with dyslexia and learning difficulties. The question that is used for this research considers the ways teachers deal with students with dyslexia in the classroom. The question was answered by 50% of the teachers who corresponded that they have different ways to deal with a student with dyslexia in contrast to the ways they deal with students who do not show dyslexia. In particular, 50% of the teachers claim that they apply a teaching program in which they use specific methodologies, such as auxiliary files which have separate colored words, phonological interventions, as well as they use multisensory media. In addition, teachers said that they have different demands from children with dyslexia. For example, they do not provide so much educational material as homework and they do not push them to study more, as well as in the case of a written test they follow different procedures. Most of the teachers that show differences in their educational qualifications have agreed that they treat students with dyslexia equally when they are in a general educational class. They highlighted the fact that they "embrace" students with dyslexia as in the case of students who do not have dyslexia and they avoiding creating awkward situations, while respecting diversity. Finally, teachers claim that they are supportive and inventive, using several teaching strategies for children with learning difficulties according to their specific needs.

A dissertation was submitted by Williamson-Henriques (2013) at the Greensboro University of North Carolina to examine the views of secondary school teachers on the use of technology in classes involving students with learning difficulties. 110 general education teachers from 4 different schools participated in the study. More specifically, the research tried to understand teachers' views on the use of assistive technology and the obstacles created in this relationship.

At the same time, qualitative research was carried out by interviewing 12 general education teachers, 4 special education teachers and 4 school headmasters.

The use of certain digital devices caused problems for many teachers because they did not know how they could be used in inclusive environments. Most general education teachers reported low rates of use of Assistive Technology (AT) devices. Their lack of information and training was particularly highlighted. The way in which general education teachers use assistive technology in the classroom with children with dyslexia was examined. Through the notions of teachers, various answers were presented that included the ways of using these technologies. There are teachers who believe that assistive technology is important to be used in general education so that students with difficulty could access easier the curriculum, develop their work with the help of technology, and support the educational process as a whole. At the same time, there is the idea that, in all forms of school, it is important to be provided the use of assistive technology. Generally speaking, the use of assistive technology is receiving positive feedback from teachers from all schools as they show enthusiasm in using it in their classroom. The researcher also wanted to highlight the relationship between the years that they teach in an inclusion class and their notions for using assistant technology for students with dyslexia but no significant difference was found. General education teachers were also asked about the knowledge they think they should have in order to use assistive technology in classes with children with dyslexia. Their responses showed that there is a high agreement that they need to be in communication and collaboration with special education teachers who have specialized training. Approximately half of the participants reported that they have been trained to use relevant technologies, but almost all of them agreed that they need to be more informed and acquire better knowledge and skills for their use. Respectively, their knowledge is increased by working with special education teachers, from attending seminars or training in special education etc. Subsequently, referring to the constraints presented in the use of assistive technology to general education teachers, it is reported that they are not given the necessary training and also that it is important that training is done by a specialist regarding the use of these technologies. Also, the lack of infrastructure in order to avoid the obstacles is huge. Indeed, a major obstacle reported by most general education teachers is that they are not given sufficient time and materials in order to provide accommodations such as assistive technology. Technology integration needs professional

development which may offer those opportunities to general education teacher for reflective learning in their classes.

A survey of secondary school teachers' ideas on the usefulness of a concept map as an effective way that may allow students to visually depict a system of relationships was also prepared by Mutodi & Chigonga (2015). More specifically, the authors studied the views of teachers on the use of concept map in secondary school in mathematics. All teachers were from the mathematics education field in middle schools in the city of Polokwane in South Africa. According to the results of this survey, teachers' agreement was reached on the positive use of concept maps because this tool offers teachers the ability to retain learning concepts in the memory of students. According to the concept map based on previous knowledge, the teacher has the ability to bring back, using this tool, knowledge to the memory of the students. Teachers also believe that the concept map can be used as learning, teaching and evaluating tool by them during the teaching process. The informative and reflective feedback that a concept map could provide to them about the student's personal abilities is a factor that makes the concept mapping a very interesting educational tool due to the fact that teachers could implement strategies that fit students' needs. Contrary to any positive mood presented by teachers about this tool, they also show dissatisfaction with replacing the traditional student test with this tool. Finally, it is presented by the researchers that the views of the participating teachers are related to the fact that concept map is a valuable tool as an assessment for learning.

Papadopoulou et al (2015) wanted to use the concept map through two teaching interventions for pupils with learning difficulties. The use of concept maps was the tool used in these interventions. Through the interventions they wanted to increase students' reading comprehension and improve their narrative ability in an experiential way. Based on the results of the two interventions, positive impressions were created both on the integration and the typical classroom from the use of the concept mapping proposed by the authors.

PART III: METHODOLOGY DESIGN OF THE RESEARCH

1.1.Formulation of the problem

The issue to be explored is whether children with dyslexia have problems with their adaptation in a classroom. The sample will be consisted of Gymnasium level teachers in Central Macedonia, Greece. The survey was conducted from December. 2018 to March . 2019. Questionnaires will be provided and there will be a research about teachers' attitudes toward students' with dyslexia language skills, their social behaviors and the methodology used so as to deal with dyslexia. It is expected that student's inability to understand and produce speech is related to the classroom's environment and students' behavior.

Case: According to the results occurring from previous theories, we have a hypothesis that there will be a correlation between teachers' responses on oral and written speech of students with dyslexia and their responses on students' interpersonal and intrapersonal adaptation. To the above we hypothesize that there is a correlation to teachers' profile through their demographics and personal information.

1.2. Necessity to study

Different forms of behavior of children in school and their correlation with learning ability, adaptation and school performance of children have been explored internationally. Difficulty in adapting to the school context involves learning difficulties, problems of interpersonal behavior with peers, and problems of intrapersonal behavior. Problems of adaptation to school and specific forms of problem classroom behavior have been associated with mental disorders in childhood, adolescent and adulthood (Cowen et al., 1973, Roff and al., 1972) and problems with school performance (Kohn, 1977, Lambert & Nicoll, 1977, Soli & Devine, 1976). In order to assess children's behavior, questionnaires are often used, supplemented by teachers and / or parents.

In our country there is a lack of research on the correlation between the occurrence of dyslexia and children's adaptation in classroom. This research intends to fill this gap by examining how children with dyslexia adapt in the classroom.

1.3. Objectives and queries of the research

Based on the previous comments, some of the research objectives were created with regard to the teachers teaching in special and typical classrooms and the characteristics of students with dyslexia. These research goals are the following:

1.   To study the profile of teachers specializing in physical education who work in special and typical classrooms in relation to the variables of the sociodemographic questionnaire (Age, sex, level of studies, years of teaching...) (through descriptive measures as frequencies, percents, minimum and maximum values, mean and standard deviation)

2.   To determine the effect of Gymnasium teachers' sociodemographic variables on their perceptions on understanding and producing oral and written speech in students with dyslexia (through T-Student and Anovas)

3.   To find any statistically significant effect of Gymnasium teachers' sociodemographic variables on their choice of Teaching and Learning Methodologies and Educational Tools used for student's with dyslexia in Gymnasium to better understand and produce oral and written speech (through T-Student and Anova tests)

4.   To determine the effect of Gymnasium teachers' sociodemographic variables on teachers' perceptions of student's with dyslexia in Gymnasium about their intrapersonal and interpersonal adaptation in an inclusion classroom (through T-Student and Anova tests)

5.   To know the effect of Gymnasium teachers' sociodemographic variables on their choices of methodology used about students with dyslexia and their intrapersonal and interpersonal adaptation in an inclusion classroom (through T-Student and Anovas)

6.   To find any statistically significant correlation between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with

dyslexia and the Teaching and Learning Methodologies and Educational Tools used for student's with dyslexia in Gymnasium to better understand and produce oral and written speech.

7.   To discover if Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia are significantly correlated with teachers' perceptions of student's with dyslexia in Gymnasium about their intrapersonal and interpersonal adaptation in an inclusion classroom.

8.   To find if there is any significant correlation between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and the methodology used about students with dyslexia and their intrapersonal and interpersonal adaptation in an inclusion classroom.

The aforementioned objectives led to the formulation of the questions of this research. The questions that are answered in the next paragraphs are described below:

1.   What problems of Understanding and Production of Oral and Written Speech do secondary school teachers think \(opinions) that dyslexic students face in high school? (Objective 1)

2.   What Adaptation Problems Do Teachers consider (opinions) Dyslexic students face in high school? (Objective 1)

3.   Which Didactic Tools and Methodology are used by Secondary Language Teachers to help dyslexic students with the production and understanding of written and oral speech? (Objective 1)

4.   Which methodology do secondary school teachers use to adapt dyslexic students to inclusive classes? (Objective 1)

5.   Do the Gymnasium teachers' sociodemographic variables (years of educational experience, age, educational training and educational structure - general or special

education) significantly affect their general knowledge on the characteristics of the dyslexia presented by the pupils and their teaching methods? (Objectives 2-5)

6.   Is there a correlation between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and each one of the other 3 parts of the research (Teaching and Learning Methodologies and Educational Tools used for student's with dyslexia in Gymnasium to better understand and produce oral and written speech, Teachers' perceptions of student's with dyslexia in Gymnasium about their intrapersonal and interpersonal adaptation in an inclusion classroom and methodology used about students with dyslexia and their intrapersonal and interpersonal adaptation in an inclusion classroom) (Objectives 6-8)

1.4. Tool of the research

1.4.1 Description of the questionnaire

This section describes the research tool. In order to answer the research questions, a questionnaire (APPENDIX) used by the author of this thesis was used.

The questionnaire is divided into five parts. The first part (Part A) includes the demographic characteristics of the teachers and personal information (gender, age, educational level, years of teaching experience in a typical education classroom, years of teaching experience in a special education classroom, type of educational setting where teachers work – typical or special education).

The next four sections include sentences related on the topic of the students with dyslexia. All questions are closed-ended and follow the same five-point Likert scale: Strongly disagree (1), Disagree (2), Neither agree nor disagree (3), Agree (4), Strongly Agree (5).

The second section consists of 25 sentences that discuss ways in which teachers judge students' ability to understand and produce oral and written speech. Speech understanding is shown in sentences 1, 12, 13, 21, 23 where teachers respond to students' ease or difficulty in recognizing spoken words, understanding a dialogue on issues related to their interests, and understanding oral public announcements addressed to the school community. Teachers are also asked to

respond if they observe low performance and difficulty in monitoring the course of the lesson and the necessity for more time for the students to understand the lesson through the teacher's oral speech.

The production of oral speech is examined through sentences 2, 14 and 25. Teachers are called to answer about students' ability to spell common names, communicate in a daily conversation and to discuss an oral topic with their interests. Finally, teachers are asked to respond to their students' ability to cope with discussions about their mobility and relationship with their classmates and the school environment.

In the same group, the sentences 3, 4, 7, 8, 9, 10, 11, 15, 16 relate to the understanding of the written speech by dyslexic students. Specifically, teachers are asked to indicate whether these children find it difficult to discover the meaning of an unknown word and to associate words with similar meaning. Next, the understanding of the written word is examined through the reading of the whole texts. Specifically, the sentences of the questionnaire intend to clarify whether children with dyslexia can answer questions about the content of narrative paragraphs (plagiarism, details, conclusion), predict the development of a story, draw critical conclusions from the texts they read, and organize the information contained in the texts. It is also explored their ability to produce extensive narrative or descriptive texts in summary. Finally, teachers' view of their students' ability to quickly understand everyday texts and texts that they may encounter in special occasions of their daily life is examined.

The final goal of this section is to control the ability to produce written speech by students with dyslexia. Suggestions 5, 6, 17, 18, 19, 20, 22 and 24 refer to the ability of children to write sentences and texts. The first sentence refers to ability of pupils with dyslexia to put words in the right order and to produce a sentence with the right conceptual content. It also checks the possibility of correctly match sentences in order to produce a paragraph with clear meaning. Students' ability to produce descriptive and experiential texts as well as to produce texts for everyday use is also tested. In addition, the sentences of this group seek to identify the potential difficulties in identifying the requirements for a school work and the difficulties in selecting and implementing strategies when a project is assigned. Finally, the difficulty in assessing their

cognitive performance and limited expression in the design, production, and control of writing phases as a process are checked.

The third part includes the tools and methods that teachers use to help students with dyslexia in an inclusion class in understanding and producing oral and written speech. Concerning the tools used, teachers were asked about the use of worksheets and evaluation criteria (sentence 1). They were also asked to answer whether they use differentiated material, supervisory material, computers, software and various media (suggestions 2, 4, 5, 6, 26). In addition, suggestions refer to the use of early flow charts to organize information and images (suggestions 7, 9, 10, 18). Finally, the cognitive mapping of concepts for teaching, learning and development of the educational process (question 11) and the use of different colors on the blackboard or colored chalk lines are examined.

The same section examines the teaching methods used in typical or special education. In particular, it is investigated whether teachers use step-by-step analysis of their teaching (sentence 13) and specific learning strategies for versatile knowledge (sentences 8, 12, 15, 16, 17). It also examines the teaching of the lesson by 'thinking aloud' (sentence 14) and the promotion of students in experiential learning, active learning and cooperation (sentences 26, 28, 29, 31). The use of dialogue (sentences 24, 27) and the use of prior knowledge (sentence 25) to effectively assist students are two other issues to be considered. In addition, teachers were asked to answer if they guide their students (sentences 19, 20, 21) and give them more time to complete their assignments (sentence 35). Two other methods being studied are reading the text by the teacher before reading by the student (sentence 22) and asking questions before, during and after reading the text (sentence 23). Finally, it is examined the use of roles and dramatics (sentence 30), the use of different teaching methods such as project and didactic scenarios (sentences 32,33) and the application of proportional assessment of students according to their descriptive skills assessment and the student's personal file (sentences 34, 36, 37, 38).

The fourth part of the questionnaire examines the reactions of students with dyslexia attending inclusion class both introspectively and in their interpersonal relationships with their teachers and classmates. There are questions with positive or negative meaning. In particular, compliance with school rules (sentence 1), impact on classroom performance (sentence 13), and the need for

support from a teacher with special education (sentence 29) are examined. Also, there were examined relationship with peers, attachment to them (sentence 2), and potential conflicts with classmates (sentences 12,22,24,26,27,28) or friendship (sentences 18,25). Also, relationships with teachers are controlled (sentences 3,11,17). Finally, it is examined how students react in different cases (suggestions 4,7,8,9,15,16,18) and how they feel (5,6,10,14,19,20,21,23).

In the fifth and final part, teachers were asked to report on the methods they use for intrapersonal (sentences 1, 2, 4, 6, 13, 15, 16) and interpersonal adaptation (sentences 3, 5, 7, 8, 9, 10 , 11, 12, 14, 17) of students attending inclusion classes. As regard to intrapersonal adjustment of pupils, it is examined teachers' encouragement with the aim of students' confidence and ability to express their personal and emotional needs, promote discussion and support, cultivate motivation and reward. Interpersonal adaptation concerns the development of student extroversion, the development of healthy co-existence in the classroom with the classmates and the organization of the lesson in such a way as to promote student cooperation.

While forming the questionnaire the following were taken into account:

1.   Valitated Tests for children which we use now in Greece:

A. ΛΑΤΩ for Speech:

MINISTRY OF NATIONAL EDUCATION AND RELIGIOUS AFFAIRS OPERATIONAL PROGRAM OF EDUCATION AND ORGANIZATIONAL TRAINING (EPEAEK) MEASURE 1.1-ACTION 1.1.3-CATEGORY OF OPERATIONS 1.1.3a WORK: Psychometric-differential assessment children and adolescents with learning difficulties
ARISTOTLE UNIVERSITY OF THESSALONIKI, DEPARTMENT OF PRACTICAL EDUCATION SCIENCES AND EDUCATION - DEPARTMENT OF PSYCHOLOGY SCIENTIFIC RESPONSIBILITY OF THE PROJECT, Professor Maria Tzouriadou Subproject 4, Psychometric language criterion capacity-sufficiency for children and adolescents
The project is co-funded From the European Fund and the YPEPTH 2008

B. Criterion of school-social competence

MINISTRY OF NATIONAL EDUCATION AND RELIGIOUS AFFAIRS OPERATIONAL PROGRAM OF EDUCATION AND ORGANIZATIONAL TRAINING (EPEAEK) MEASURE 1.1-ENERGY 1.1.3-CATEGORY OF OPERATIONS 1.1.3.a WORK: Psychometric-differential assessment children and adolescents with learning difficulties

ARISTOTLE UNIVERSITY OF THESSALONIKI DEPARTMENT OF PRACTICAL EDUCATION SCIENCES AND EDUCATION - DEPARTMENT OF PSYCHOLOGY SCIENTIFIC RESPONSIBILITY OF THE PROJECT

Subproject 6, Psychometric criterion of school-social competence for children and adolescents, 2008.

More specifically, I used validated tests for the Speech of students with learning difficulties in part B - Unit 2 and adaptation of pupils in part B - Unit 4. I have adapted them to the Teachers and I ask them their aspects about children.

2. In part B – Unit 3, I used Differentiated Curriculum for students with learning difficulties which we use in Greece.

3. Part B – Unit 5 is according to the theoretical part.

4. All parts and units have been connected and adapted to the theoretical part of my thesis, recent investigations and articles.

1.4.2 Factor Analysis

Since the questionnaire is a combination of many other questionnaires, it was considered necessary to apply factor analysis to each of the four key groups of sentences. In this way the sentences are categorized into larger groups based on a common feature. The method used is called the "principal components method" and in particular the Varimax method with Kaiser Normalization method (Field, 2209, pp.650-672) was used. Each factor analysis reports the percentage of variation interpreted by this categorization as well as the suitability of the data for applying factor analysis through the Bartlett test and the Kaiser-Meyer-Olkin (CMO) value. KMO values above 0.7 indicate that the data show significant relationships for the application of factor analysis. The same is indicated according to the Bartlett's test when its value is statistically significant (p <.05).

The first factor analysis concerns the sentences concerning the ways teachers perceive students with dyslexia's ability to produce and understand oral and written speech. Initially, the factor analysis showed the existence of four factors, but the latter factor included only 2 questions, which was not considered satisfactory. Therefore, 3 factors were requested to be extracted. The Kaiser-Meyer-Olkin value shows that the correlations between the sentences of this section are strong enough to apply factor analysis to the data (KMO = .910). The same is indicated by the Bartlett test (x^2 (276) = 9576.481, p <.001). The 3 new factors verify 70.02% of the variability of the answers given by the teachers. As Table 1.1 shows, groups can be characterized as: Effectiveness in Composite Oral and Written Requirements (A), Effectiveness in Simple Oral and Written Requirements (B), Critical Ability (C).

Table 1.1.

Loadings of the sentences of the second part of the questionnaire

SENTENCES	A	B	Γ
Q1. They can find words from oral description.		.821	
Q2. They can orally describe common words.		.811	
Q3. They find it difficult to find the meaning of an unknown word.	-.858		
Q4. They do have the ability to associate words that express concepts relevant to each other.		.816	
Q5. They can place the words they read in the right order so as to produce a proper conceptual sentence.	.456	.765	
Q6. When sentences are given to then, they reproduce a paragraph that makes sense.	.490	.707	
Q7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs.	.607	.556	
Q8. They can foresee the continuing of a story.	.686		
Q9. They can produce critical conclusions of the texts.	.467		.519
Q10. They use strategies so as to organize information in a narrative text.	.419	.421	.516
Q11. They are able to summarize in writing extensive narrative or descriptive texts.		.415	.547
Q12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests.		.499	
Q13. They are able to understand oral public announcements addressed to the wide school audience.	.547	.511	.533
Q14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.		.536	

Q15. They able to understand short texts of everyday use.	.482	.604	
Q16. They are able to understand texts they might encounter in special occasions of their everyday life.	.608	.531	
Q17. They are able to produce descriptive and experiential texts.	.605	.535	
Q18. They are able to compose short texts of everyday use.	.511	.652	
Q19. They have difficulty in recognizing the requirements arising from a school project.	-.801		
Q20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	-.782		
Q21. They have difficulty in focusing in a project and have low performance.			-.742
Q22. They have difficulty in assessing their own cognitive performance.	-.799		
Q23. More time is needed so as to comprehend teachers' oral speech during the class.	-.879		
Q24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.			-.646
Q25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.		.669	.499

Subsequently, factor analysis was performed on the tools and methods used by teachers to help students with dyslexia understand and produce oral and written speech. Both the Kaiser-Meyer-Olkin index (KMO = 0.966) and the Bartlett's statistical test ($x^2(703) = 17708.199$, p <.001) showed strong correlations between the questions, indicating their suitability for the application of factor analysis. Furthermore, the model presented below (Table 1.2) explains 75.64% of the data variance. It turns out that these sentences are grouped into three factors: Guidance and encouragement for personal work (A,) Use of electronic media and promotion of expression (B), Pleasant - Interactive teaching (C).

It is worth noting that factor analysis excluded the sentences 5, 6, 21 which seems reasonable since they do not appear to have a common meaning with any of the other sentences. Specifically, they refer to specific teaching platforms, the use of technology that converts text to sound, and the repetition of instruction in a systematic way.

Table 1.2.

Loadings of the sentences of the third part of the questionnaire

SENTENCES	A	B	Γ
Q1. Use of supervisory tools and means		.699	
Q2. Use of diversified teaching reclaiming Information and Communication Technologies	.677	.526	
Q3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial		.599	.602
Q4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	.533	.549	.442
Q5. Use of the Digital Learning Platform for students and teachers "e-me".			
Q6. Use of technology which can convert text into sound, like audio books			
Q7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords	.579		.585
Q8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	.459	.603	
Q9. Use of information flow charts that is relevant with the following lesson	.431	.505	.623
Q10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED")	.615		.552
Q11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process	.627		.569
Q12. Teach learning strategies	.645	.478	
Q13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	.695	.525	
Q14. Promote the "thinking aloud" by acting as a template for teaching strategies	.641	.543	
Q15. Encouraging the reader to use self-control strategies for understanding the texts	.721		.453
Q16. Using contextual understanding as strategy for unknown words in texts		.613	
Q17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	.588	.461	
Q18. Use of text flowcharts to teach the summary strategy	.724		
Q19. Providing personalized learning support and student guidance for producing texts	.809	.402	
Q20. Oral clarification and general simplification of written instructions by highlighting keywords		.871	
Q21. Repetition of the instructions in a consistent and systematic way			
Q22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves		.485	.483
Q23. Use questions before, during, and after reading texts	.669		
Q24. Encourage their active participation in the process of teaching by conducting dialogues	.701	.487	

Q25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	.654	.424	
Q26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material	.578	.617	
Q27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	.417	.732	
Q28. Emphasis on practicing students by dedicating significant time and active participation in the lesson	.753	.404	
Q29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms	.729		
Q30. Promote dramatization and role rotation	.652	.445	.455
Q31. Promote collaborative method and collaboration by student pairs	.493		.566
Q32. Use the project method with the assignment of group research papers			.810
Q33. Use teaching scenarios in the context of cross-thematic method			.746
Q34. Assign tasks where students are capable to complete	.856		
Q35. Provide extra time to complete their work	.541		
Q36. Provide direct feedback to students about their responses	.873		
Q37. Assessment of student progress guides teaching	.727	.444	
Q38. Use of student's descriptive assessment and individual portfolio	.688	.502	

In addition, factor analysis was implemented on the sentences for intrapersonal and interpersonal adjustment of high school students with dyslexia attending inclusion class. In the first factor analysis, some questions that had the same meaning as others, or were considered as such by the teachers participated in the research, were removed. The reason for their exclusion is that the correlation coefficient set to zero in the table makes it impossible to apply factor analysis (since the table must be positively defined in order to perform factor analysis). Specifically sentences 4, 26 (have the same meaning as 27), 20 (have the same meaning as 21), 22, 24 (have the same meaning as 23) and 10 (have the same meaning as on 12). Initially, factor analysis indicated the existence of three factors but it was deemed necessary to reduce them to two as the latter factor contained only 2 sentences. For this reason, factor analysis was re-applied with the requirement that only 2 factors be extracted.

Both the Kaiser-Meyer-Olkin's statistic measure (KMO = 0.938) and Bartlett's test value ($x^2(253) = 8272.092$, $p < .001$) show that the data are relevant enough for the application of factor

analysis. The two factors considered account for 61.65% of the variation in the data. The factors that were formed are the following: Introversion and violent behaviors (A), Ignorance and indifference (B). It is noteworthy that in addition to the sentences removed from the analysis due to identical meanings with others, factor analysis excluded from clustering the sentences 17, 19, 21, 28, 29 as they are content-differing with each other as with the other sentences. Specifically, they refer to rude behavior towards the teacher, lack of motivation for children with dyslexia, low self-esteem and self-esteem, psychological and / or physical violence from classmates, and teacher support from someone with special education in order to "handle" these students.

Table 1.3.

Loadings of the sentences of the fourth part of the questionnaire

SENTENCES	A	B
Q1. Follow the school rules	-.894	
Q2. Show adhesion and dependence on another classmate	.876	
Q3. React to the approach and guidance from the teacher	.914	
Q5. Are uninterested in others feelings	.913	
Q6. Seem happy when joining the school	-.881	
Q7. Turn away their gaze when someone speaks to them		.891
Q8. Deny anything that is being proposed to them		.909
Q9. Claim their rights	-.904	
Q11. Discuss with the teacher about anything they are concerned	-.869	
Q12. Fight with other children	.863	
Q13. Complicate the function of the classroom		.541
Q14. Indicate anxiety (complain about physical disturbances)	.861	
Q15. Do not answer when someone speaks to them		.927
Q16. Have violent reactions	.875	
Q17. Speak back and behave badly to their teacher		
Q18. Have the acceptance of their peers	-.872	
Q19. The lack of incentives can be distinguished		

Q21. It shows a lack of self-confidence and self-esteem	
Q23. Usually develop an introverted character and distinguished apathy	.-783
Q25. They get encouragement and support from peers	-.869
Q27. Their classmates exclude them from class activities	.824
Q28. Their classmates bully them	
Q29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	

Finally, factorial analysis was performed on the sentences of the fifth group of the questionnaire, which refer to the methods applied by teachers to help students' progression in both intrapersonal and interpersonal level. The value of the Kaiser-Meyer-Olkin statistic (KMO = .931) and the value of the Bartlett's statistic ($x^2(136) = 5905.853$, p <.001) indicate significant correlations between the sentences, which makes them suitable for the application of factor analysis. Factor analysis resulted in two sets of questions that explain 66.98% of the data variability in total. The two groups are the following: Direct Encouragement (A), Indirect Encouragement (B). It is worth noting that direct encouragement is achieved through teacher discussions with students and their integration into groups, while indirect encouragement is mainly aimed at enhancing the self-esteem and extroversion of students with dyslexia.

Table 1.4.

Loadings of the sentences of the fifth part of the questionnaire

SENTENCES	A	B
Q1. Enriching the expression of everyday personal and emotional needs and desires		.904
Q2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge		.894
Q3. Promoting one-on-one counseling	.788	.436
Q4. Promoting conversations so as to update students' general development of their autonomy	.676	.603
Q5. Promoting the development of genuine and honest interpersonal relationships among students		.742
Q6. Creating positive attitude coming from their motivation and participation in school life	.569	.491
Q7. Classroom guidance and experiential exercises for group engagement	.892	

Q8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	.854	
Q9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	.834	
Q10. Promoting matching of trends among students	.664	
Q11. Careful planning of the lesson in order to ensure conditions for cooperation among students		.574
Q12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	.848	.415
Q13. Continuously encouraging their efforts and strengthening their self-esteem		.426
Q14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	.611	.497
Q15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	.550	
Q16. Reward after every good effort		.780
Q17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	.629	.565

The following table summarizes the questionnaire sentences belonging to each category as they were emerged from the application of factor analysis. Some of these will then be reversed to perform the reliability analysis. This is necessary as the meaning of some sentences is completely opposite to the others in the same group, resulting in a very low reliability if these suggestions are not reversed.

Table 1.5.

Grouping of the questionnaire sentences

SECTION	GROUPS	SENTENCES
SECOND	Effectiveness in Composite Oral and Written Requirements	3*, 7, 8, 13, 16, 17, 19*, 20*, 22*, 23*
	Effectiveness in Simple Oral and Written Requirements	1, 2, 4, 5, 6, 12, 14, 15, 18, 25
	Critical Ability	9, 10, 11, 21*, 24*
THIRD	Guidance and encouragement for personal work	2, 10, 11, 12, 13, 14, 15, 17, 18, 19, 23, 24, 25, 28, 29, 30, 34, 35, 36, 37, 38
	Use of electronic media and promotion of expression	1, 4, 8, 16, 20, 22, 26, 27
	Pleasant - Interactive teaching	3, 7, 9, 31, 32, 33
FOURTH	Introversion and violent behaviors	1*, 2, 3, 5, 6*, 9*, 11*, 12, 14, 16, 18*, 23*, 25*, 27
	Ignorance and indifference	7, 8, 13, 15

| FIFTH | Direct Encouragement | 3, 4, 6, 7, 8, 9, 10, 12, 14, 15, 17 |
| | Indirect Encouragement | 1, 2, 5, 11, 13, 16 |

*These questions are inversed.

1.4.3 Reliability Analysis

In this section, a reliability analysis is performed on each group indicated by the factor analyzes of the previous section. Specifically, the value of the Cronbach's alpha statistic is calculated for each group (Field, 2009, pp. 675-675). This is a statistical measure with values from 0 to 1. According to common acceptance, values greater than 0.7 indicate high reliability in the sense of internal consistency, that is, the existence of meaningful content between questions in the same group. However, there are some more stringent researchers who consider the acceptable level of reliability as 0.8.

The following table shows the values of the index for each question group in each of the four sections of the questionnaire. Each group is verified to appear high reliability as the value of this statistical measure exceeds 0.8 in all cases except one ('Critical Ability') where again the index value indicates high reliability (> = greater than .7)

Table 1.5.

Calculation of Cronbach's alpha for the questionnaire groups of sentences

SECTION	GROUPS	Alpha
SECOND	Effectiveness in Composite Oral and Written Requirements (N=10)	.943
	Effectiveness in Simple Oral and Written Requirements (N=10)	.924
	Critical Ability (N=5)	.743
THIRD	Guidance and encouragement for personal work (N=21)	.982
	Use of electronic media and promotion of expression (N=8)	.917
	Pleasant - Interactive teaching (N=6)	.897
FOURTH	Introversion and violent behaviors (N=14)	.976
	Ignorance and indifference (N=4)	.879
FIFTH	Direct Encouragement (N=13)	.951

Indirect Encouragement (N=6)	.872

As the questions will be analyzed separately for teachers who teach in typical and special education, Cronbach's alpha was calculated for each group separately. As it is shown in Table 1.6, almost all cases satisfy the reliability criterion. However, there were some groups with low values. In the case of critical competence for teachers working in typical education (alpha = 0.625) it may be considered that they may not perceive all the sentences in this group in the same way, although the index value is slightly below the level of 0.7. In addition, regarding the teachers teaching in special education, their responses to the introversion and violent behaviors of dyslexic children (alpha = .261), as well rudeness and indifference displayed by these children were very low (alpha = 0.478). The same fact is observed about indirect encouragement that teachers offer children in interpersonal and interpersonal level (alpha = .002). In these cases, either the number of participants is insufficiently proportional to the number of suggestions in each group or the teachers respond in a significantly different way because they teach students with different needs emerged from their severity of dyslexia. In any case, the overall reliability value calculated earlier indicates the high internal consistency of each set of questions.

Table 1.6.

Calculation of Cronbach's alpha reliability index for the various questionnaire groups for standard classes and integration classes

SECTION	GROUPS	TYPICAL EDUCATION	SPECIAL EDUCATION
SECOND	Effectiveness in Composite Oral and Written Requirements (N=10)	.891	.975
	Effectiveness in Simple Oral and Written Requirements (N=10)	.898	.944
	Critical Ability (N=5)	.625	.839
THIRD	Guidance and encouragement for personal work (N=21)	.937	.822
	Use of electronic media and promotion of expression (N=8)	.785	.732
	Pleasant - Interactive teaching (N=6)	.808	.826
FOURTH	Introversion and violent behaviors (N=14)	.690	.261
	Ignorance and indifference (N=4)	.914	.478

FIFTH	Direct Encouragement (N=13)	.836	.726
	Indirect Encouragement (N=6)	.802	.002

1.5. Population and Sample

This section lists the key features of the sample used in the survey. Initially, it is noted that the purpose of the research is to study the views, perceptions and knowledge of Greek teachers of Modern Greek Language on learning difficulties, the way they can be perceived and the impact on the student's school life. Consequently, the research questionnaire was distributed in Gymnasiums to teachers of typical and special education.

It is worth mentioning that the special education acts as a supportive educational structure for students with disabilities and special educational needs attending school units. Purpose of the special education is the full inclusion of students in the school environment through special educational interventions and programs and their harmonious inclusion in the formal classroom. These students belong to the class dynamics of the school and for their education cooperate and participate on an equal basis with the teachers of the school unit teaching in the classroom and at the special classroom with the aim of diversifying activities and teaching practices as well as adapting the teaching material and environment appropriately. Educational intervention takes place within the classroom environment but also in a special place, in the integration classroom, if the particular educational needs of the students make it necessary. The special education offer qualified teachers who implement specific programs aimed at effective educational intervention.

In addition, students with disabilities or special educational needs are enrolled in the integration department only for a few hours per week and within the school context. The majority are students with learning disabilities, behavioral problems and poor school performance. Integration is done according to the severity of the specific educational needs, the urgency of the need for a specialized curriculum, age and class.

Finally the integration departments offer Modern Greek language teachers who are also specialized in special education, such as a postgraduate or special education seminar.

Teaching in the integration department can take place one by one between the teacher and the child or small groups of students can be formed. Integration education varies according to the educational needs of students. It is based on the informal assessment and training of special education teachers, taking into account the opinion, observation of class teachers as well as on the diagnosis from ΚΕΔΔΥ. Based on the evaluation and recommendation of ΚΕΔΔΥ, a special-content program. Moreover, it is decided how it will be implemented and the objectives of the program are defined. Of course, this demands and involves the collaboration of special education teachers with teachers of the general classroom, in terms of material, goals, understanding and mutual support. The syllabus is selected and adapted after modifications and adjustments to textbooks and materials and is not ordered by class, grade or age but according to the needs of the student.

1.5.1 Sampling method

This section describes the method by which the sample was selected. In order to study teachers with as many different characteristics as possible, the stratified sampling method was used. According to this, the population is divided into strata based on the characteristics of the research participants (gender, age, additional studies, teaching in an integral or formal classroom, past service in formal sections with students in need of special treatment, past service in integration departments). Based on these factors, teachers were selected from different parts of Greece.

1.5.2 Description of the sample

This section gives the basic features of the sample. Because all the tests will be done separately for teachers who teach in formal and integration courses, their demographic characteristics were described separately. Initially, it is reported that 375 teachers participated in the research. Of these, 254 work in typical education (67.7%) while 121 work in special education (32.3%).

As shown in Table 1.7, the percentage of women teaching in typical education and participating in the research is almost three times higher (71.7%) than men in the same category (28.3%). Also, all teachers who teach in typical education are over 30 years old and more than half are in the 41-50 age group (54.3%). Furthermore, the vast majority of this group of teachers consists of

holders of a basic degree with no additional studies (30.7%) and holders of a degree and a masters degree (46.1%). It is worth noting that 74% of teachers who teach in typical education responded that they teach in these departments from 9 to 20 years, with the remainder being split between those with 3-8 years of service and those with more than 20 years of service. Finally, all teachers who teach in typical classrooms stated that they have 0-2 years of experience in integration departments.

The same table (Table 1.7) also gives the demographic characteristics of teachers who teach in special classrooms. It is again observed that the overwhelming majority consists of women (83.5%). Also, 86.8% of teachers working in special education are 31-50 years old, with more than half being in the 41-50 age group (59.5%). It is worth noting that no one holds only a basic qualification but everyone has an additional qualification. The highest percentages occur in the case of teachers with a bachelor's degree, master's degree and specialty education (48.8%) and holders of a master's degree and master's degree (24%). In addition, almost half of the teachers in this group responded that they have completed 0-2 years of typical education (45.5%) while the next largest group consists of teachers with 3-8 years of teaching (37.2%). Finally, there is no teacher in special education with less than 3 years of work experience in this kind of education. In contrast, the majority consists of teachers who have completed 9-14 years of teaching in special education (63.6%) while one in 3 participants in this category teach in inclusion departments of 3-8 years (33.9%).

Table 1.7.

Frequencies and percentages of demographic characteristics of the teachers who participated in the research

Demographic Characteristic	Groups	Teachers in Typical Education		Teachers in Special Education	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	72	28.3%	20	16.5%
	Female	182	71.7%	101	83.5%
Age	21-30 years old	0	0%	2	1.75
	31-40 years old	37	14.6%	33	27.3%
	41-50 years old	138	54.3%	72	59.5%

	>=51 years old	79	31.1%	14	11.6%
Educational level	University degree	78	30.7%	0	0%
	University and master degree	117	46.1%	29	24%
	University degree, master degree and PhD	24	9.4%	11	9.1%
	University degree and training in special education	19	7.5%	15	12.4%
	University degree, master degree and Training in special education	14	5.5%	59	48.8%
	University degree, master degree, PhD and Training in Special education	2	0.8%	7	5.8%
Teaching years in a typical classroom	0-2 years	0	0%	55	45.5%
	3-8 years	33	13%	45	37.2%
	9-14 years	97	38.2%	21	17.4%
	15-20 years	91	35.8%	0	0%
	>=21 years	33	13%	0	0%
Teaching years in a Special Classroom	0-2 years	254	100%	0	0%
	3-8 years	0	0%	41	33.9%
	9-14 years	0	0%	77	63.6%
	15-20 years	0	0%	3	2.5%
	>=21 years	0	0%	0	0%

1.6. Methods of the statistical analysis

This section describes all the tests and descriptive measures used to answer the research questions. The statistical measures and hypothesis tests listed below can be found in SPSS 23 (Statistical Package for Social Services).

a) *Descriptive measures*

Initially, the basic descriptive measures (minimum value, maximum value, mean value and standard deviation) of teachers' answers to the basic research questions are given. The calculations are separately implemented for teachers who teach in typical and special education.

b) Test of data normality

This is a test that indicate if it can be used a parametric (when the data follows the normal distribution) and non-parametric (when the data regularity is violated). The test examines the null hypothesis H_0: the data follows the normal distribution against the alternative hypothesis H_a: the distribution of data deviates significantly from the normal. For this purpose, the Kolmogorov-Smirnov test (Field, 2009, pp. 144-148) is applied at a 5% significance level (error margin). The null hypothesis is rejected when the p-value is less than 0.05. The same level of significance is used in each of the subsequent tests. It is worth noting that in the case of large enough samples (at least 30 individuals) regularity can be considered to be valid through the Central Limit Theorem.

c) Tests for population mean or median differences

One of the tests applied in this research refers to find any statistically significant difference in the mean values of the responses given by the teachers according to their demographic characteristics (e.g. men and women in terms of gender variable).

In the case of 2 independent samples (eg male - female) the mean difference test is performed with the Independent Samples t-test (Field, 2009, pp. 334-342). In this case it is examined the null hypothesis H_0: population mean values are equal against the alternative hypothesis H_a: there is a statistically significant difference in population mean values. A prerequisite is to have a normal distribution in each of the 2 samples. In the event of regularity violation (when it cannot be considered even through the Central Limit Theorem) the corresponding non-parametric Mann-Whitney test (Field, 2009, pp. 548-550) referring to population medians difference is applied.

However, if the Independent Samples t-test is applied, the SPSS statistical package yields 2 results depending on whether the population fluctuations are equal or not. Specifically, the Levene test (Field, 2009, pp. 150-152) tests for the null hypothesis H_0: the populations from which the samples originate have equal variations compared to the alternative hypothesis Ha: population variations vary significantly.

In the case of 3 or more independent samples (e.g. by age) the mean difference is checked by Analysis of Variance - ANOVA (Field, 2009, pp. 375-388). In this case it is tests the null hypothesis H_0: the population mean values are equal against the alternative hypothesis H_a: at least one population mean significantly differs from the others. The prerequisites are that the samples come from equal populations with equal variances. If homoscedasticity (equality of population variances) is violated then the ANOVA test is replaced with the Brown-Forsythe correction. However, if the data regularity is violated then the corresponding non-parametric Kruskal-Wallis test, for the examination of difference between population medians, will be applied (Field, 2009, pp. 562-568).

It is worth noting that the existence of a statistically significant difference in the Analysis of Variance does not make it possible to trace the origin of this difference. Therefore, pairwise checks should be performed between the independent groups to determine which groups are significantly different from the others. The paired tests are performed using the Tukey method when equality of population variances is applied while the Games-Howell controls are applied when homoscedasticity is violated.

d) Correlation tests

Subsequently, correlation tests were performed between the total scores of the propositional groups that resulted from the factor analysis. For this purpose, the Pearson correlation coefficient (Field, 2009, pp. 177-179) was used which takes values from -1 to 1 with 0 indicating no linear relationship. Values close to 1 indicate a highly positive relationship (values of variables increase or decrease simultaneously) while values close to -1 indicate a strongly negative relationship (as values of one variable increase, values of the other decrease). The corresponding hypothesis test examines the null hypothesis H_0: the variables are not linearly related to the alternative hypothesis H_1: the variables perform a significant linear relationship. A prerequisite is the existence of a normal distribution for both variables which can be assumed to be valid through the Central Limit Theorem because the samples are large enough.

PART IV: RESULTS OF THE SURVEY

1.1. Results of the descriptive statistics

This section summarizes the participants' responses to their perceptions of understanding and producing oral and written speech from students with dyslexia, the educational tools and methods they use, their views on the behavior of children with dyslexia, and their methods on improving the interpersonal and interpersonal adaptation of these students to an inclusion class *(Objective 1)*. In each case, the responses of teachers who teach in typical education are compared to those who teach in special education. The answers to all questionnaire sentences follow the same Likert scale: Strongly disagree (1), Disagree (2), Neither agree nor disagree (3), Agree (4), Strongly Agree (5).

Initially, teachers' perceptions of the understanding and production of oral and written speech by students with dyslexia are studied. As shown in Table 2.1, teachers who teach in typical education generally agree that children with dyslexia can understand a daily dialogue related to topics of interest to them (M. = 4.41, SD = 0.77) and can produce a dialogue on their own (M. = 4.10, SD = 0.74). Children with dyslexia also appear to be able to successfully communicate in their daily lives at school in a variety of situations and to resolve issues related to their transportation and relationships with others (M. = 3.95, S.D. = 0.68). Furthermore, teachers strongly agree that children with dyslexia can understand public announcements referring to the whole school unit (M. = 4.07, S.D. = 0.64). In addition, teachers who teach in typical education agree that children with dyslexia find it difficult to attend a project and have poor school performance (M. = 3.78, S.D. = 0.99). They also appear to be sufficiently able to answer questions about the content of narrative paragraphs (M. = 3.68, S.D. = 0.79) and to predict the continuation of a story (M. = 3.67, S.D. = 0.76).

However, they find it difficult to express their thoughts in writing as they are unable to design, produce and control the phases of written speech (M. = 4.39, SD = 0.73) but can quickly understand everyday texts (M. = 3.91, SD = 0.67) and compose such texts (M. = 3.74, SD = 0.53). Also, teachers who teach in typical education agree, on average, that children with dyslexia have difficulty finding the meaning of an unknown word (M. = 2.74, SD = 1.07), to use strategies to organize information into a narrative. text (M. = 2.58, SD = 0.77) or make the summary of extensive narrative or descriptive texts (M. = 2.21, SD = 0.74).

As for teachers in special education, they appear to be more negative than teachers in typical education. Their positive image is about the ability of children with dyslexia to understand a key dialogue related to issues of interest to them (M. = 4.55, SD = 0.63) and to initiate a discussion on their own (M. = 4.26, SD = 0.51). (M. = 4.38, S.D. = 0.71). On the other hand, they strongly agree that these children have limited ability to produce and manage the phases of the writing process (M. = 4.38, S.D. = 0.71). They also agree that children with dyslexia find it difficult to choose and implement a strategy when assigned a simple project (M. = 3.52, S.D. = 1.19)

However, teachers in this category appear to be divided on the ability of children with dyslexia to understand their own cognitive performance (M. = 3.36, SD = 1.26) and to draw critical conclusions from various texts (M. = 3.00, SD = 1.16). Also, teachers generally agree that these children need more time in the classroom to understand the teacher's oral speech (M. = 3.07, SD = 1.60) and find it difficult to quickly understand everyday texts (M. = 3.17 , SD = 1.46). Furthermore, teachers strongly disagree that these children can understand texts that they encounter in special situations in their daily lives (M. = 2.52, S.D. = 1.44). Within the classroom, children appear to have difficulty in putting words in order to make a sentence with reasonable content (M. = 2.63, SD = 1.25) or in using strategies to organize information into a narrative text (M . = 2.01, SD = 1.1.8). The strongest disagreement of teachers teaching in special education concerns the ability of children to write summaries in extended descriptive or narrative texts (M. = 1.88, S.D. = 1.12).

Table 2.1.

Teachers' responses to understanding and producing oral and written speech by students with dyslexia

Group of questions	Kind of classroom	Min	Max	M.	S.D.
2.1. They can find words from oral description.	T.C.	2	5	3.42	0.97
	S.C.	2	5	2.82	090
2.2. They can orally describe common words.	T.C.	2	5	3.49	0.89
	S.C.	2	4	2.88	0.90
2.3 They find it difficult to find the meaning of	T.C.	1	5	2.74	1.07

an unknown word.	S.C.	2	5	3.22	1.26
2.4. They do have the ability to associate words that express concepts relevant to each other	T.C.	1	5	3.37	1.03
	S.C.	1	4	2.52	0.83
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	T.C.	1	5	3.63	0.90
	S.C.	1	5	2.63	1.25
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	T.C.	1	5	3.50	0.95
	S.C.	2	5	2.83	1.13
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	T.C.	2	5	3.68	0.79
	S.C.	2	5	3.00	1.05
2.8. They can foresee the continuing of a story	T.C.	2	5	3.67	0.76
	S.C.	2	5	3.17	1.14
2.9. They can produce critical conclusions of the texts.	T.C.	1	5	3.19	0.94
	S.C.	2	5	3.00	1.16
2.10. They use strategies so as to organize information in a narrative text	T.C.	1	5	2.58	0.77
	S.C.	1	5	2.01	1.18
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	T.C.	1	5	2.21	0.74
	S.C.	1	5	1.88	1.12
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	T.C.	2	5	4.41	0.77
	S.C.	2	5	4.55	0.63
2.13. They are able to understand oral public announcements addressed to the wide school audience.	T.C.	2	5	4.07	0.64
	S.C.	2	5	3.36	1.30
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	T.C.	2	5	4.10	0.74
	S.C.	2	5	4.26	0.51
2.15. They able to understand short texts of everyday use.	T.C.	2	5	3.91	0.67
	S.C.	1	5	3.17	1.46
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	T.C.	1	5	3.37	0.76
	S.C.	1	5	2.52	1.44
2.17. They are able to produce descriptive and	T.C.	2	5	3.46	0.76

experiential texts	S.C.	2	5	2.89	0.95
2.18. They are able to compose short texts of everyday use.	T.C.	2	5	3.74	0.53
	S.C.	2	5	3.00	1.00
2.19. They have difficulty in recognizing the requirements arising from a school project	T.C.	2	5	2.98	1.04
	S.C.	2	5	3.29	1.17
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	T.C.	2	5	3.09	1.06
	S.C.	2	5	3.52	1.19
2.21. They have difficulty in focusing in a project and have low performance	T.C.	1	5	3.78	0.99
	S.C.	2	5	4.09	0.93
2.22. They have difficulty in assessing their own cognitive performance.	T.C.	1	5	2.81	1.05
	S.C.	1	5	3.36	1.26
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	T.C.	1	5	2.48	1.35
	S.C.	1	5	3.07	1.60
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	T.C.	2	5	4.39	0.73
	S.C.	2	5	4.38	0.71
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	T.C.	1	5	3.95	0.68
	S.C.	1	5	2.73	1.29

The third part of the questionnaire includes the tools and teaching methods that teachers use to students with dyslexia. Once again the responses of teachers teaching in typical education are reported separately from the teachers teaching in special education. As shown in Table 2.2, teachers who teach in typical classes largely agree that they repeat the given instructions in a consistent and systematic way (M. = 4.18, SD = 0.75) and provide extra time for these students to complete tasks assigned to them (M. = 4.19, SD = 0.81). However, opinions appear to be divided on the use of supervisory tools and instruments (M. = 3.24, S.D. = 1.20) and the use of different colored chalks and markers or series of different colors (M. = 3.21, S.D. = 1.29). Also, teachers who teach in typical education generally show a neutral attitude towards using questions before, after and during reading (M. = 3.30, SD = 1.11), promoting student participation in discussion using arguments, expressing feelings and telling personal experiences (M. = 3.48, SD = 0.91).

On the contrary, there are perform negative opinion regarding to the use of differentiated teaching through Information and Communication Technologies (M. = 2.21, SD = 0.85) and the use of free educational materials and software by "prosvasimo", "epitelo" and "fotodentro" (M. = 2.06, SD = 1.08). They also disagree about the use of technology that can convert text to sound, such as audio books (M. = 2.05, SD = 0.72) and the use of supportive tools and mnemonic techniques such as acronyms, visualized reminders and keywords (M. = 2.09, SD = 1.30). Equally negative is their opinion about the use of concept mapping as a tool for teaching, learning and progress in the educational process (M. = 2.00, S.D. = 1.02). Furthermore, this category of teachers responded to a large extent that they did not encourage the reader to use self-control strategies to understand texts (M. = 2.07, SD = 1.04) nor did they use flowcharts to teach the abstract technique (M. = 2.04, SD = 0.92). Negative view in promotion of dramatization and role rotation (M. = 2.05, S.D. = 1.04) and use of teaching scenarios in the context of cross-thematic method (M.2.04, S.D. = 0.93) are also presented.

Finally, it seems they generally disagree with the sentence that they assign to students with dyslexia the only tasks they can perform (M. = 2.07, SD = 1.16) and that their instruction is guided by students' progress (M. = 2.07, SD = 1.07).). The greatest teacher disagreement appears in the use of the KWL technique (table with three columns: "What I WANT TO LEARN", "What I LEARNED") (M. = 1.91, SD = 1.11), the provision of personal learning support and guidance for text production (M. = 1.83, SD = 1.14) to their students and the use of student's descriptive assessment and individual portfolio (M. = 1.59, SD = 0.75).

On the contrary, teachers working in special education respond, to a large extent, positively in almost all cases of teaching tools and methods. It is worth noting that all teachers involved in research and teaching in integration departments strongly agree (M. = 5.00, SD = 0.00) that each time they assign a project, they analyze it in steps and teach it one by one with a hierarchy and that promote "thinking aloud". They also apply contextual understanding as a strategy for unknown words in the texts and provide personal support and guidance to their students in producing texts. They also verbally explain and simplify the written instructions by highlighting the keywords and repeating the instructions they give in a consistent and systematic way. Furthermore, unlike teachers who teach in typical education, those who teach in special education always use questions before, after, and while reading texts to promote their students'

active involvement in the educational process through dialogue and using arguments, expressing experiences and feelings. Finally, they always devote considerable time to practicing students and constantly strive to provide accurate information to students about their answers.

In contrast, the use of the digital learning platform "e-me" for students (M. = 2.29, SD = 0.55) and the use of technology that can convert text to sound (M. = 2.25, SD = 0.49) appear to be again quite rare as it is for teachers who teach in typical education.

Table 2.2.

Teachers' answers about their teaching methods and tools

Group of questions	Kind of classroom	Min.	Max.	M.	S.D.
3.1. Use of supervisory tools and means.	T.C.	1	5	3.24	1.20
	S.C.	4	5	4.72	0.45
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	T.C.	1	5	2.21	0.85
	S.C.	4	5	4.59	0.49
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	T.C.	1	5	3.21	1.29
	S.C.	4	5	4.60	0.49
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	T.C.	1	5	2.06	1.08
	S.C.	2	5	4.36	0.66
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	T.C.	1	5	2.24	0.61
	S.C.	2	4	2.29	0.55
3.6. Use of technology which can convert text into sound, like audio books.	T.C.	1	5	2.05	0.72
	S.C.	2	4	2.25	0.49
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	T.C.	1	5	2.09	1.30
	S.C.	4	5	4.65	0.48
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	T.C.	1	5	2.72	1.15
	S.C.	3	5	4.47	0.63
3.9. Use of information flow charts that is relevant with the following lesson.	T.C.	1	5	2.36	1.16
	S.C.	3	5	4.46	0.63

3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	T.C.	1	5	1.91	1.11
	S.C.	1	5	4.47	0.71
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	T.C.	1	5	2.00	1.02
	S.C.	2	5	4.41	0.63
3.12. Teach learning strategies	T.C.	1	5	2.33	0.83
	S.C.	4	5	4.64	0.48
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	T.C.	1	5	2.74	1.01
	S.C.	5	5	5.00	0.00
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	T.C.	1	5	2.51	0.97
	S.C.	5	5	5.00	0.00
3.15. Encouraging the reader to use self-control strategies for understanding the texts.	T.C.	1	5	2.07	1.04
	S.C.	4	5	4.65	0.48
3.16. Using contextual understanding as strategy for unknown words in texts.	T.C.	2	5	3.87	0.88
	S.C.	5	5	5.00	0.00
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	T.C.	1	5	2.37	1.17
	S.C.	2	5	4.23	0.66
3.18. Use of text flowcharts to teach the summary strategy.	T.C.	1	5	2.04	0.92
	S.C.	1	5	4.32	0.80
3.19. Providing personalized learning support and student guidance for producing texts	T.C.	1	5	1.83	1.14
	S.C.	5	5	5.00	0.00
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	T.C.	1	5	3.49	1.33
	S.C.	5	5	5.00	0.00
3.21. Repetition of the instructions in a consistent and systematic way.	T.C.	3	5	4.18	0.75
	S.C.	5	5	5.00	0.00
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	T.C.	1	5	2.93	1.16
	S.C.	4	5	4.60	0.49
3.23. Use questions before, during, and after reading texts	T.C.	1	5	3.30	1.11
	S.C.	5	5	5.00	0.00

3.24. Encourage their active participation in the process of teaching by conducting dialogues.	T.C.	1	5	2.77	1.04
	S.C.	5	5	5.00	0.00
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	T.C.	1	5	2.79	1.06
	S.C.	4	5	4.45	0.50
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	T.C.	1	5	2.33	1.01
	S.C.	3	5	4.45	0.63
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	T.C.	1	5	3.48	0.91
	S.C.	5	5	5.00	0.00
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson	T.C.	1	5	2.37	1.18
	S.C.	5	5	5.00	0.00
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms	T.C.	1	5	2.69	0.97
	S.C.	4	5	4.45	0.50
3.30. Promote dramatization and role rotation.	T.C.	1	5	2.05	1.04
	S.C.	3	5	4.41	0.54
3.31. Promote collaborative method and collaboration by student pairs.	T.C.	1	5	2.72	1.12
	S.C.	4	5	4.49	0.50
3.32. Use the project method with the assignment of group research papers.	T.C.	1	5	2.83	1.08
	S.C.	1	5	3.65	1.29
3.33. Use teaching scenarios in the context of cross-thematic method.	T.C.	1	5	2.04	0.93
	S.C.	1	5	3.53	1.27
3.34. Assign tasks where students are capable to complete.	T.C.	1	5	2.07	1.16
	S.C.	3	5	4.54	0.58
3.35. Provide extra time to complete their work.	T.C.	2	5	4.19	0.81
	S.C.	4	5	4.97	0.18
3.36. Provide direct feedback to students about their responses.	T.C.	1	5	2.44	1.24
	S.C.	5	5	5.00	0.00
3.37. Assessment of student progress guides teaching.	T.C.	1	5	2.07	1.07
	S.C.	3	5	4.46	0.61

| 3.38. Use of student's descriptive assessment and individual portfolio. | T.C. | 1 | 5 | 1.59 | 0.75 |
| | S.C. | 2 | 5 | 3.71 | 0.79 |

The fourth part of the questionnaire describes the behaviors of children both by teachers working in typical education and those who teach in special education. As Table 2.3 shows, both teachers of the two aforementioned categories largely agree that children with dyslexia turn away their gaze when someone addresses them (M. = 4.11, SD = 0.75; M. = 4.58, SD = 0.50), deny anything that is being proposed to them (M. = 4.11, SD = 0.75; M. = 4.45, SD = 0.50) and cause complications in classroom (M. = 4.08, SD = 0.70; M. = 4.27, SD = 0.45). They also tend to avoid answering questions (M. = 4.11, SD = 0.75; M. = 4.26, SD = 0.44) and behave badly at teachers (M. = 4.25, SD = 0.81; M = 4.38, SD = 0.49). Finally, both groups of teachers agree that sometimes their own effort is not sufficient and as a result they need additional support from a specialist teacher (M. = 4.24, S.D. = 0.83; M. = 4.71, S.D. = 0.46).

Also, teachers who teach in typical classes seem to agree that sometimes children with dyslexia are lonely and have no friends (M. = 3.90, SD = 0.86), exhibit introversion and apathy (M. = 3.90, SD = 0.86). and have difficulty socializing because of problems in their skills (M. = 3.90, SD = 0.86). In contrast, teachers who teach in special education strongly disagree with each of the above statements (M. = 1.65, S.D. = 0.48 in each case). It is noteworthy that children with dyslexia in typical classrooms do not appear to show attachment and dependence on their peers (M. = 1.84, SD = 0.79), and do not particularly respond to their teachers' approach and guidance (M. = 1.94, SD). = 0.70), they are not defensive if attacked by one (M. = 2.28, SD = 0.80) and do not care about the feelings of others (M. = 1.84, SD = 0.65). Furthermore, teachers who teach in typical classes appear to be negative in the presence of violent reactions by students with dyslexia (M. = 2.08, S.D. = 0.60). In contrast, teachers in special education report the exact opposite picture for their students (M. = 4.35, SD = 0.53; M. = 4.40, SD = 0.49; M. = 4.29, SD = 0.46; M. = 4.50, SD = 0.50; M. = 4.45, SD = 0.50 respectively).

Table 2.3.

Teachers' responses to students' introversion and violent behaviors

Group of questions	Kind of classroom	Min.	Max.	M.	S.D.
4.1. Follow the school rules	T.C.	2	5	3.87	0.77
	S.C.	1	2	1.56	0.50
4.2. Show adhesion and dependence on another classmate	T.C.	1	4	1.84	0.79
	S.C.	2	5	4.35	0.53
4.3. React to the approach and guidance from the teacher	T.C.	1	4	1.94	0.70
	S.C.	4	5	4.40	0.49
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	T.C.	1	5	2.28	0.80
	S.C.	4	5	4.29	0.46
4.5. Are uninterested in others feelings	T.C.	1	4	1.84	0.65
	S.C.	4	5	4.50	0.50
4.6. Seem happy when joining the school	T.C.	1	5	3.74	0.80
	S.C.	1	2	1.47	0.50
4.7. Turn away their gaze when someone speaks to them	T.C.	2	5	4.11	0.75
	S.C.	4	5	4.58	0.50
4.8. Deny anything that is being proposed to them	T.C.	2	5	4.11	0.75
	S.C.	4	5	4.45	0.50
4.9. Claim their rights	T.C.	2	5	3.65	0.73
	S.C.	1	2	1.10	0.30
4.10. Cannot overcome their anger	T.C.	1	5	2.76	0.68
	S.C.	4	5	4.91	0.29
4.11. Discuss with the teacher about anything they are concerned	T.C.	1	5	3.67	0.90
	S.C.	1	2	1.47	0.50
4.12. Fight with other children	T.C.	1	5	2.76	0.68
	S.C.	4	5	4.91	0.29

4.13. Complicate the function of the classroom	T.C.	2	5	4.08	0.70
	S.C.	4	5	4.27	0.45
4.14. Indicate anxiety (complain about physical disturbances)	T.C.	2	5	2.38	0.73
	S.C.	4	5	4.34	0.48
4.15. Do not answer when someone speaks to them	T.C.	2	5	4.11	0.75
	S.C.	4	5	4.26	0.44
4.16. Have violent reactions	T.C.	1	3	2.08	0.60
	S.C.	4	5	4.45	0.50
4.17. Speak back and behave badly to their teacher	T.C.	1	5	4.25	0.81
	S.C.	4	5	4.38	0.49
4.18. Have the acceptance of their peers	T.C.	1	5	3.68	0.76
	S.C.	1	2	1.52	0.50
4.19. The lack of incentives can be distinguished	T.C.	1	5	4.02	0.67
	S.C.	4	5	4.48	0.50
4.20. It is characterized by low expectations of success	T.C.	2	5	3.96	0.64
	S.C.	4	5	4.40	0.49
4.21. It shows a lack of self-confidence and self-esteem	T.C.	2	5	3.96	0.69
	S.C.	4	5	4.40	0.49
4.22. Often are lonely and have no friends	T.C.	1	5	3.90	0.86
	S.C.	1	2	1.65	0.48
4.23. Usually develop an introverted character and distinguished apathy	T.C.	1	5	3.90	0.86
	S.C.	1	2	1.65	0.48
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	T.C.	1	5	3.90	0.86
	S.C.	1	2	1.65	0.48
4.25. They get encouragement and support from peers	T.C.	1	5	3.74	0.85
	S.C.	1	2	1.52	0.50
4.26. Their classmates ignore them	T.C.	1	5	2.28	0.80
	S.C.	4	5	4.29	0.46

4.27. Their classmates exclude them from class activities	T.C.	1	5	2.28	0.80
	S.C.	4	5	4.29	0.46
4.28. Their classmates bully them	T.C.	1	4	2.60	0.95
	S.C.	1	4	2.38	0.95
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	T.C.	2	5	4.24	0.83
	S.C.	4	5	4.71	0.46

The fifth and final part of the questionnaire describes teachers' methods of trying to encourage students with dyslexia in both intrapersonal and interpersonal adjustment (Table 2.4). As it turns out, teachers who teach in typical classes largely agree that they are constantly encouraging students' efforts and self-confidence (M. = 4.52, S.D. = 0.51). They also provide emotional support for students to improve their ability to cope with characteristics that cannot be changed (M = 4.09, S.D. = 0.67). It is worth noting that in both cases all teachers teaching in special education responded that they completely agreed (M. = 5.00, S.D. = 0.00).

Also, teachers who teach in inclusion classes completely agree (M. = 5.00, S.D. = 0.00) that they daily strive to enrich the expression of the desires and needs among children with dyslexia. They also provide motivation and hope for children with dyslexia regarding to their personal success in the lessons and striving for knowledge and promote one-on-one counseling. They also promote discussions aimed at improving student autonomy, promote healthy and sincere relationships between students, and create a positive attitude through their personal example and participation in school life. Finally, they always try to have control in the classroom when confronted with hostile and dominant behavior by students and make sure they work with ΕΔΕΑΥ and the school psychologist for counseling support. In contrast, teachers who teach in typical education are largely neutral in applying these methods of student support at intrapersonal and interpersonal levels.

Finally, teachers in typical education do not seem to promote classroom guidance and experiential exercises for group engagement (M = 2.03, SD = 0.98). Moreover they do not choose neither intrapersonal adaptation in moment-to-moment teacher-student interaction (M. = 2.17,

SD = 0.96) nor use of simulations of real and hypothetical situations to promote communication and behavioral skills (M. = 1.91, SD = 0.99)

Table 2.4.

Teachers' responses to the encouragement they offer to students with dyslexia both in intrapersonal and interpersonal level

Group of questions	Kind of classroom	Min.	Max.	M.	S.D.
5.1. Enriching the expression of everyday personal and emotional needs and desires	T.C.	1	5	3.48	1.23
	S.C.	5	5	5.00	0.00
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	T.C.	1	5	3.39	1.27
	S.C.	5	5	5.00	0.00
5.3. Promoting one-on-one counseling	T.C.	1	5	2.59	1.09
	S.C.	5	5	5.00	0.00
5.4. Promoting conversations so as to update students' general development of their autonomy	T.C.	1	5	2.41	1.07
	S.C.	5	5	5.00	0.00
5.5. Promoting the development of genuine and honest interpersonal relationships among students	T.C.	1	5	3.71	1.03
	S.C.	5	5	5.00	0.00
5.6. Creating positive attitude coming from their motivation and participation in school life	T.C.	1	5	3.27	1.04
	S.C.	5	5	5.00	0.00
5.7. Classroom guidance and experiential exercises for group engagement	T.C.	1	5	2.03	0.98
	S.C.	4	5	4.56	0.50
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	T.C.	1	5	2.17	0.96
	S.C.	3	5	4.31	0.70
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	T.C.	2	5	3.48	0.93
	S.C.	5	5	5.00	0.00
5.10. Promoting matching of trends among students	T.C.	1	5	3.10	1.06
	S.C.	3	5	4.26	0.68
5.11. Careful planning of the lesson in order to	T.C.	1	5	3.58	1.20

ensure conditions for cooperation among students	S.C.	2	5	4.55	0.88
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	T.C.	1	5	1.91	0.99
	S.C.	3	5	4.29	0.70
5.13. Continuously encouraging their efforts and strengthening their self-esteem	T.C.	3	5	4.52	0.51
	S.C.	5	5	5.00	0.00
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	T.C.	1	5	2.86	1.12
	S.C.	4	5	4.50	0.50
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	T.C.	3	5	4.09	0.67
	S.C.	5	5	5.00	0.00
5.16. Reward after every good effort	T.C.	1	5	3.26	1.22
	S.C.	4	5	4.89	0.31
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	T.C.	1	5	2.96	1.08
	S.C.	5	5	5.00	0.00

The following sections report the results of the inductive tests performed on the teachers' responses according to their demographic characteristics. The results of the correlations between the total scores of the participants in each questionnaire group of sentences as well as the effect of the total scores in dependent variables (multiple regression and logistic regression) are reported.

1.2. Inductive tests according to the kind of education teachers work in

The main control of the work is to investigate the possible statistically significant difference in the responses of teachers who teach in typical education and those who teach in special education *(Objectives 2-5)*. Initially, the answers are studied in terms of producing and understanding oral and written requirements. Because both samples are large enough (at least 30 observations each), the difference of responses between the two groups was tested by the Independent Samples t-test considering that the samples come from normal populations via the Central Limit Theorem.

As shown in Table 2.5, the two groups differ significantly in their opinions about the students' ability to comprehend and produce oral and written speech. In most cases, teachers in typical education show greater agreement than their counterparts in integrative departments. However, there are some exceptions which refer to difficulty in perception. Specifically, teachers who teach in special education respond more positively that students with dyslexia perform difficulty to find the meaning of an unknown word (M. = 3.22, SD = 1.26) compared to those who teach in typical classes (M. = 2.74, SD). = 1.07). Also, students in special education seem to have a greater difficulty identifying the requirements arising from a school project (M. = 3.29, SD = 1.17) and choosing and implementing strategies when assigned to a simple project (M. = 3.2). = 3.52, SD = 1.19) compared to students in a typical classroom (M. = 2.98, SD = 1.04; M. = 3.09, SD = 1.06). Also, according to the teachers' views, students with dyslexia in special education are more difficult to concentrate on a project and have lower performance (M. = 4.09, SD = 0.93) than students in typical education (M . = 3.78, SD = 1.00). In addition, students in special education have difficulty understanding their cognitive ability (M. = 3.36, SD = 1.26) and need more time to perceive teachers' oral speech in the classroom (M. = 3.07, SD = 1.60) compared to the corresponding students in the other case (M. = 2.81, SD = 1.05; M. = 2.48, SD = 1.35). However, it seems that students with dyslexia in special education perform higher ability to develop issues related to their interests in daily oral speech (M. = 4.26, SD = 0.51) than students in typical classes (M. = 4.10, SD = 0.74).

Table 2.5.

Independent Samples t-test for the mean responses to the comprehension and production of oral and written speech by students with dyslexia depending on the kind of education the teachers work

Group of questions	Typical (M±S.D.)	Special (M±S.D.)	p*
2.1. They can find words from oral description.	3.42±0.97	2.82±0.90	**<.001**
2.2. They can orally describe common words.	3.49±0.89	2.88±0.90	**<.001**
2.3 They find it difficult to find the meaning of an unknown word.	2.74±1.07	3.22±1.26	**<.001**
2.4. They do have the ability to associate words that express concepts relevant to each other	3.37±1.03	2.52±0.83	**<.001**

2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	3.63±0.90	2.63±1.25	**<.001**
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	3.50±0.95	2.83±1.13	**<.001**
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	3.68±0.79	3.00±1.05	**<.001**
2.8. They can foresee the continuing of a story	3.67±0.76	3.17±1.14	**<.001**
2.9. They can produce critical conclusions of the texts.	3.19±0.94	3.00±1.16	0.112
2.10. They use strategies so as to organize information in a narrative text	2.58±0.77	2.01±1.18	**<.001**
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	2.21±0.74	1.88±1.12	**.003**
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	4.41±0.77	4.55±0.63	.063
2.13. They are able to understand oral public announcements addressed to the wide school audience.	4.07±0.64	3.36±1.30	**<.001**
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.10±0.74	4.26±0.51	**.027**
2.15. They able to understand short texts of everyday use.	3.91±0.67	3.17±1.46	**<.001**
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	3.37±0.76	2.52±1.44	**<.001**
2.17. They are able to produce descriptive and experiential texts	3.46±0.76	2.89±0.95	**<.001**
2.18. They are able to compose short texts of everyday use.	3.74±0.53	3.00±1.00	**<.001**
2.19. They have difficulty in recognizing the requirements arising from a school project	2.98±1.04	3.29±1.17	**.013**
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.09±1.06	3.52±1.19	**.001**
2.21. They have difficulty in focusing in a project and have low performance	3.78±1.00	4.09±0.93	**.004**
2.22. They have difficulty in assessing their own cognitive performance.	2.81±1.05	3.36±1.26	**<.001**
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	2.48±1.35	3.07±1.60	**.001**
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.39±0.73	4.38±0.71	.904
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	3.95±0.68	2.73±1.29	**<.001**

[*] In cases where $p < .05$, there is a statistically significant difference in the responses between the two teacher groups.

The teachers' responses to the teaching methods and tools they use in the classroom are then studied (Table 2.6). Once again, it seems that teachers teaching in typical education use the various teaching tools and methods mentioned in the questionnaire to a significantly different degree than their counterparts in special education. It is noteworthy that in any case teachers in

special classrooms show greater agreement on use these tools and methods than those working in typical classrooms.

Table 2.6.

Independent Samples t-test for the mean responses on teaching tools and methods used by teachers according to the kind of education they teach in.

Group of questions	Typical (M±S.D.)	Special (M±S.D.)	p*
3.1. Use of supervisory tools and means.	3.24±1.20	4.72±0.45	**<.001**
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	2.21±0.85	4.59±0.49	**<.001**
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	3.21±1.29	4.60±0.49	**<.001**
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	2.06±1.08	4.36±0.66	**<.001**
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	2.24±0.61	2.29±0.55	.454
3.6. Use of technology which can convert text into sound, like audio books.	2.05±0.72	2.25±0.49	**.007**
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	2.09±1.30	4.65±0.48	**<.001**
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	2.72±1.15	4.47±0.63	**<.001**
3.9. Use of information flow charts that is relevant with the following lesson.	2.36±1.16	4.46±0.63	**<.001**
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	1.91±1.11	4.47±0.71	**<.001**
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	2.00±1.02	4.41±0.63	**<.001**
3.12. Teach learning strategies	2.33±0.83	4.64±0.48	**<.001**
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	2.74±1.01	5.00±0.00	**<.001**
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	2.51±0.97	5.00±0.00	**<.001**
3.15. Encouraging the reader to use self-control strategies for understanding the texts.	2.07±1.04	4.65±0.48	**<.001**
3.16. Using contextual understanding as strategy for unknown words in texts.	3.87±0.88	5.00±0.00	**<.001**
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	2.37±1.17	4.23±0.66	**<.001**
3.18. Use of text flowcharts to teach the summary strategy.	2.04±0.92	4.32±0.80	**<.001**
3.19. Providing personalized learning support and student guidance for producing texts	1.83±1.14	5.00±0.00	**<.001**
3.20. Oral clarification and general simplification of written	3.49±1.33	5.00±0.00	**<.001**

instructions by highlighting keywords.			
3.21. Repetition of the instructions in a consistent and systematic way.	4.18±0.75	5.00±0.00	**<.001**
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	2.93±1.16	4.60±0.49	**<.001**
3.23. Use questions before, during, and after reading texts	3.30±1.11	5.00±0.00	**<.001**
3.24. Encourage their active participation in the process of teaching by conducting dialogues.	2.77±1.04	5.00±0.00	**<.001**
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	2.79±1.06	4.45±0.50	**<.001**
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	2.33±1.01	4.45±0.63	**<.001**
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	3.48±0.91	5.00±0.00	**<.001**
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	2.37±1.18	5.00±0.00	**<.001**
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.	2.69±0.97	4.45±0.50	**<.001**
3.30. Promote dramatization and role rotation.	2.05±1.04	4.41±0.54	**<.001**
3.31. Promote collaborative method and collaboration by student pairs.	2.72±1.12	4.49±0.50	**<.001**
3.32. Use the project method with the assignment of group research papers.	2.83±1.08	3.65±1.29	**<.001**
3.33. Use teaching scenarios in the context of cross-thematic method.	2.04±0.93	3.53±1.37	**<.001**
3.34. Assign tasks where students are capable to complete.	2.07±1.16	4.54±0.58	**<.001**
3.35. Provide extra time to complete their work.	4.19±0.81	4.97±0.18	**<.001**
3.36. Provide direct feedback to students about their responses.	2.44±1.24	5.00±0.00	**<.001**
3.37. Assessment of student progress guides teaching.	2.07±1.07	4.46±0.61	**<.001**
3.38. Use of student's descriptive assessment and individual portfolio.	1.59±0.75	3.71±0.79	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the two teacher groups.

Following are the teachers' responses to the behavior of dyslexic students. As shown in Table 2.7, almost all behaviors occur to a significantly different degree in typical and special education. It seems that children in special education generally have lower progress and worse behavior than students with dyslexia in typical classrooms. However, there are some exceptions that are worth noting regarding the nature of the children and the behavior they receive from their peers. Specifically, it appears that children in typical classes show more loneliness and lack of friends

(M. = 3.90, S.D. = 0.86) than students with dyslexia in special classes (M.1.65, S.D. = 0.48). Also, teachers in typical education answer that students with dyslexia show more introversion and apathy (M. = 3.90, S.D. = 0.86) than those in typical education (M. = 1.65, S.D. = 0.48). Also, the phenomenon of socialization problems due to problems in their skills is more common among students in typical classes (M. = 3.90, SD = 0.86) than those in special classes (M. = 1.65, SD = 0.48). Finally, students in typical education appear to be more likely to receive indifference (M. = 2.28, SD = 0.80) and bullying (M. = 2.60, SD = 0.95) than students in special education (M. = 1.52, SD = 0.50; M. = 2.38, SD = 0.95) according to their teachers' opinion.

Table 2.7.

Independent Samples t-test for the mean difference in the behaviors and problems of students with dyslexia depending on the kind of education

Group of questions	Typical (M±S.D.)	Special (M±S.D.)	p*
4.1. Follow the school rules	3.87±0.77	1.56±0.50	**<.001**
4.2. Show adhesion and dependence on another classmate	1.84±0.79	4.35±0.53	**<.001**
4.3. React to the approach and guidance from the teacher	1.94±0.70	4.40±0.49	**<.001**
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	2.28±0.80	4.29±0.46	**<.001**
4.5. Are uninterested in others feelings	1.84±0.65	4.50±0.50	**<.001**
4.6. Seem happy when joining the school	3.74±0.80	1.47±0.50	**<.001**
4.7. Turn away their gaze when someone speaks to them	4.11±0.75	4.45±0.50	**<.001**
4.8. Deny anything that is being proposed to them	4.11±0.75	4.45±0.50	**<.001**
4.9. Claim their rights	3.65±0.73	1.10±0.30	**<.001**
4.10. Cannot overcome their anger	2.76±0.68	4.91±0.29	**<.001**
4.11. Discuss with the teacher about anything they are concerned	3.67±0.90	1.47±0.50	**<.001**
4.12. Fight with other children	2.76±0.68	4.91±0.29	**<.001**
4.13. Complicate the function of the classroom	4.08±0.70	4.27±0.45	**<.001**
4.14. Indicate anxiety (complain about physical disturbances)	2.38±0.73	4.34±0.48	**<.001**
4.15. Do not answer when someone speaks to them	4.11±0.75	4.26±0.44	**.022**

4.16. Have violent reactions	2.08±0.60	4.45±0.50	**<.001**
4.17. Speak back and behave badly to their teacher	4.25±0.81	4.38±0.49	.051
4.18. Have the acceptance of their peers	3.68±0.76	1.52±0.50	**<.001**
4.19. The lack of incentives can be distinguished	4.02±0.67	4.48±0.50	**<.001**
4.20. It is characterized by low expectations of success	3.96±0.69	4.40±0.49	**<.001**
4.21. It shows a lack of self-confidence and self-esteem	3.96±0.69	4.40±0.49	**<.001**
4.22. Often are lonely and have no friends	3.90±0.86	1.65±0.48	**<.001**
4.23. Usually develop an introverted character and distinguished apathy	3.90±0.86	1.65±0.48	**<.001**
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	3.90±0.86	1.65±0.48	**<.001**
4.25. They get encouragement and support from peers	3.74±0.85	1.52±0.50	**<.001**
4.26. Their classmates ignore them	2.28±0.80	1.52±0.50	**<.001**
4.27. Their classmates exclude them from class activities	2.28±0.80	4.29±0.46	**<.001**
4.28. Their classmates bully them	2.60±0.95	2.38±0.95	**.035**
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	4.24±0.83	4.71±0.46	**<.001**

[*] In cases where p <.05, there is a statistically significant difference in the responses between the two teacher groups.

Finally, the results of the Independent Samples t-test in the responses of the two teacher groups on how they encourage students with dyslexia at the interpersonal and interpersonal levels are reported. As Table 2.8 shows, teachers who teach in special education are significantly more positive in applying the different methods to develop their students' self-confidence and extraversion than their colleagues in typical education.

Table 2.8.

Independent Samples t-test for the difference in mean responses about means of encouragement in students with dyslexia depending on the kind of education they belong to

Group of questions	Typical (M±S.D.)	Special (M±S.D.)	p[*]
5.1. Enriching the expression of everyday personal and emotional needs and desires	3.48±1.23	5.00±0.00	**<.001**
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	3.39±1.27	5.00±0.00	**<.001**
5.3. Promoting one-on-one counseling	2.59±1.09	5.00±0.00	**<.001**
5.4. Promoting conversations so as to update students' general development of their autonomy	2.41±1.07	5.00±0.00	**<.001**
5.5. Promoting the development of genuine and honest interpersonal relationships among students	3.71±1.03	5.00±0.00	**<.001**
5.6. Creating positive attitude coming from their motivation and participation in school life	3.27±1.04	5.00±0.00	**<.001**
5.7. Classroom guidance and experiential exercises for group engagement	2.03±0.98	4.56±0.50	**<.001**
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	2.17±0.96	4.31±0.70	**<.001**
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	3.48±0.93	5.00±0.00	**<.001**
5.10. Promoting matching of trends among students	3.10±1.06	4.26±0.68	**<.001**
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students	3.58±1.20	4.55±0.88	**<.001**
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	1.91±0.99	4.29±0.70	**<.001**
5.13. Continuously encouraging their efforts and strengthening their self-esteem	4.52±0.51	5.00±0.00	**<.001**
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	2.86±1.12	4.50±0.50	**<.001**
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	4.09±0.67	5.00±0.00	**<.001**
5.16. Reward after every good effort	3.26±1.22	4.89±0.31	**<.001**
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	2.96±1.08	5.00±0.00	**<.001**

[*] In cases where p <.05, there is a statistically significant difference in the responses between the two teacher groups.

1.3.Inductive tests according to teachers' gender

The first inductive tests are related to the effect of gender on teachers' responses *(Objectives 2-5)*. The tests are carried out separately for teachers who teach in typical education and those who teach in special education.

1.3.1 Tests for teachers in typical education

Initially, the responses of the teachers in typical education are checked. Both the samples of men and women are large enough (more than 30 individuals) to assume a normal distribution of data through the Central Limit Theorem. Therefore, tests of statistically significant differences in the responses of male and female teachers were conducted with the Independent Samples t-test.

The first tests refer to items that demonstrate students' ability to comprehend and produce oral and written speech. As shown in Table 2.9, male and female teachers in typical education significantly disagree about students' ability to find words from oral description (t(252) = - 3.573, p <.001), orally describe common words (t(252) = - 3.552, p <.001) and correlate words that express common meanings with others (t(252) = - 2.553, p = .011). There is also significant disagreement about students' ability to put words in the right order to make logically meaningful sentences (t(252) = - 2.283, p = .023) and the ability to link sentences to make a paragraph (t(252) = - 2.413, p = .017). In addition, male and female teachers significantly disagree on children's ability to predict a story's continuity (t(108.977) = - 2.513, p = .013) and to use strategies to organize information into a narrative text (t(252) = - 3.668, p <.001). Also, the two groups of teachers perform statistically significant difference on their opinion about the ability of children to write abstracts in extended narrative or descriptive texts (t(176.076) = - 2.441, p = .016), and perceive spoken public announcements regarding the whole school audience (t(252) = - 2.396, p = .017). Last but not least, the ability to compose short texts for everyday use (t (92.524) = - 2.391, p = 019) is an important point of contention. In each of these cases, women are significantly more content than their male counterparts. The last point of significant disagreement is the inability of students to recognize the demands arising from a school project (t (112.754) = 2.090, p = .039) where men are more likely to perceive this fact (M. = 3.21, SD = 1.16) than women (M. = 2.88, SD = 0.98).

Table 2.9.

Impact of gender on teachers' answers to understanding and producing oral and written speech by students with dyslexia (typical education)

Group of questions	Males (M±S.D.)	Females (M±S.D.)	p*
2.1. They can find words from oral description.	3.08±0.96	3.55±0.94	**<.001**
2.2. They can orally describe common words.	3.18±0.92	3.61±0.85	**<.001**
2.3 They find it difficult to find the meaning of an unknown word.	2.75±1.20	2.73±1.01	.904
2.4. They do have the ability to associate words that express concepts relevant to each other	3.11±1.00	3.47±1.02	**.011**
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	3.43±0.95	3.71±0.87	**.030**
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	3.28±0.98	3.59±0.92	**.017**
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	3.63±0.90	3.70±0.75	.513
2.8. They can foresee the continuing of a story	3.46±0.87	3.75±0.70	**.013**
2.9. They can produce critical conclusions of the texts.	3.04±0.93	3.25±0.94	.107
2.10. They use strategies so as to organize information in a narrative text	2.31±0.69	2.69±0.77	**<.001**
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	2.06±0.58	2.27±0.79	**.016**
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	4.35±0.70	4.43±0.80	.448
2.13. They are able to understand oral public announcements addressed to the wide school audience.	3.92±0.69	4.13±0.60	**.017**
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.00±0.71	4.14±0.75	.174
2.15. They able to understand short texts of everyday use.	3.81±0.74	3.95±0.63	.148
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	3.36±0.88	3.37±0.71	.914
2.17. They are able to produce descriptive and experiential texts	3.44±0.80	3.47±0.75	.792
2.18. They are able to compose short texts of everyday use.	3.58±0.71	3.80±0.43	**.019**
2.19. They have difficulty in recognizing the requirements arising from a school project	3.21±1.16	2.88±0.98	**.039**
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.07±1.16	3.09±1.02	.871
2.21. They have difficulty in focusing in a project and have low performance	3.65±1.12	3.82±0.94	.216
2.22. They have difficulty in assessing their own cognitive performance.	2.71±1.09	2.85±1.03	.346
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	2.44±1.47	2.49±1.30	.813

2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.39±0.88	4.39±0.66	.992
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	3.82±0.89	4.00±0.57	.114

*In cases where p <.05, there is a statistically significant difference in responses between men and women.

Subsequently, the responses about the teaching methods and tools used by male and female teachers in typical education are examined. As shown in Table 2.10, the two groups significantly differ in the use of differentiated teaching with Information and Communication Technologies (t(252) = - 2.019, p = .045), the use of chalk or markers of different colors, and the highlighting of different lines with different color (t(252) = - 9.138, p <.001) and use of supportive tools and mnemonic techniques such as acronyms, visualized reminders, keywords (t(252) = - 2.912, p = .004). Furthermore, there was a significant difference in the use of flow charts containing information related to the next lesson (t(116.373) = - 4.368, p <.001), the use of the KWL technique (t(252) = - 3.608, p <.001) and the use of concept mapping as a teaching, learning, and evaluation tool during the learning process (t(252) = - 2.962, p = .003). Furthermore, men and women significantly differ in verbal explanation and general simplification of written instructions by underlining keywords (t(117.605) = - 3.714, p <.001), the implementation of first reading by teacher and then repetition by student (t(107.925) = - 3.666, p <.001) and promotion of students cooperation (t(252) = - 2.106, p = .036). Finally, the project method with the assignment of group research papers (t(107.980) = - 2.850, p = .005) and the provision of additional time to complete the tasks (t(168.403) = - 1.992, p = .048) are two other points where the teaching of men by women teachers in typical education significantly differs. Specifically, in each of the above cases women appear to be more willing than men.

Teachers' gender also significantly influences responses to the use of the Digital Learning Platform for students and teachers (t(252) = 2.231, p = .027), analyzing the process of a project in steps, and prioritizing them (t(252) = 2.273, p = .024), using contextual understanding as a strategy for unknown words in the texts (t(236.481) = 2.282, p = .023) and providing direct feedback to students about their responses (t(252) = 3.156, p = .002). These teaching methods and tools are more applicable from men than women.

Table 2.10.

Impact of gender on teachers' answers to teaching methods and tools (typical education)

Group of questions	Males (M±S.D.)	Females (M±S.D.)	p*
3.1. Use of supervisory tools and means.	3.06±1.01	3.31±1.27	.097
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	2.04±0.78	2.28±0.88	**.045**
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	2.19±1.22	3.62±1.08	**<.001**
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	1.92±0.92	2.12±1.13	.173
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	2.38±0.54	2.19±0.63	**.027**
3.6. Use of technology which can convert text into sound, like audio books.	1.99±0.72	2.08±0.72	.365
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	1.72±1.09	2.24±1.35	**.004**
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	2.82±1.11	2.69±1.16	.407
3.9. Use of information flow charts that is relevant with the following lesson.	1.82±1.21	2.58±1.06	**<.001**
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	1.51±0.82	2.06±1.18	**<.001**
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	1.71±1.00	2.12±1.00	**.004**
3.12. Teach learning strategies	2.35±0.88	2.32±0.81	.847
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	2.97±1.11	2.65±0.96	**.024**
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	2.46±1.03	2.53±0.94	.608
3.15. Encouraging the reader to use self-control strategies for understanding the texts.	1.99±0.85	2.11±1.11	.340
3.16. Using contextual understanding as strategy for unknown words in texts.	4.03±0.50	3.81±0.99	**.023**
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	2.49±1.14	2.32±1.18	.305
3.18. Use of text flowcharts to teach the summary strategy.	2.19±0.91	1.97±0.91	.082
3.19. Providing personalized learning support and student guidance for producing texts	1.82±1.00	1.84±1.20	.894
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	2.99±1.41	3.69±1.25	**<.001**
3.21. Repetition of the instructions in a consistent and systematic way.	4.18±0.66	4.18±0.78	.994
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	2.47±1.32	3.11±1.05	**<.001**

3.23. Use questions before, during, and after reading texts	3.29±1.03	3.30±1.14	.946
3.24. Encourage their active participation in the process of teaching by conducting dialogues.	2.78±0.92	2.77±1.08	.953
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	2.88±0.98	2.76±1.09	.430
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	2.17±0.90	2.39±1.04	.092
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	3.40±0.97	3.51±0.88	.392
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	2.36±1.18	2.37±1.18	.966
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.	2.65±1.04	2.70±0.95	.740
3.30. Promote dramatization and role rotation.	1.99±1.03	2.08±1.04	.531
3.31. Promote collaborative method and collaboration by student pairs.	2.49±1.20	2.81±1.08	**.036**
3.32. Use the project method with the assignment of group research papers.	2.50±1.25	2.97±0.99	**.005**
3.33. Use teaching scenarios in the context of cross-thematic method.	1.89±0.91	2.10±0.94	.106
3.34. Assign tasks where students are capable to complete.	2.29±1.08	1.98±1.19	.057
3.35. Provide extra time to complete their work.	4.04±0.66	4.24±0.86	**.048**
3.36. Provide direct feedback to students about their responses.	2.82±1.08	2.29±1.26	**.002**
3.37. Assessment of student progress guides teaching.	1.97±1.18	2.11±1.02	.354
3.38. Use of student's descriptive assessment and individual portfolio.	1.60±0.73	1.59±0.77	.971

[*] In cases where p <.05, there is a statistically significant difference in responses between men and women.

Subsequently, the responses to the behavior of children with dyslexia and potential problems in the school environment were studied. As it is shown in the following table (Table 2.11), male and female teachers, in typical education, significantly disagree on students' reaction to dyslexia on teacher approach and guidance (t(252) = 2.530, p = .012) and feelings of indifference of the others (t(252) = 3.112, p = .002). Also, the two groups had significantly different views on the inability of students to overcome their anger (t(155.789) = 2.305, p = .022), peer conflicts (t(155.789) = 2.305, p = .022).), lack of motivation (t(123.570) = 2.725, p = .007) and loneliness and lack of friends (t(252) = 2.850, p = .005). In addition, male and female teachers significantly disagreed on the introversion and apathy (t(252) = 2.850, p = .005) of children with typical dyslexia, the difficulty of socializing as a result of skill difficulties (t(252) = 2.850, p = .005) and

physical or verbal violence received by peers (t(118.551) = 5.089, p <.001). Specifically, men report more strongly each of the above characteristics of students with dyslexia than women.

Furthermore, the two groups of teachers significantly disagreed about the joy these students feel at school (t(101,384) = - 2.604, p = .011), their rights claim (t(105.315) = - 4.358, p <.001) and discussion with teachers about their concerns (t(252) = - 3.283, p = .001). Finally, there is a strong debate about the necessity for support from a special education teacher as the teacher's effort is not always sufficient (t(101.806) = - 4.974, p <.001). In all these cases, women appear to be significantly more in agreement with than their male counterparts.

Table 2.11.

Impact of gender on the responses to the behavior and problems of students with dyslexia (typical education)

Group of questions	Males (M±S.D.)	Females (M±S.D.)	p*
4.1. Follow the school rules	3.74±0.84	3.92±0.74	.082
4.2. Show adhesion and dependence on another classmate	1.75±0.84	1.88±0.77	.241
4.3. React to the approach and guidance from the teacher	2.11±0.83	1.87±0.63	**.012**
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	2.28±0.91	2.29±0.76	.943
4.5. Are uninterested in others feelings	2.04±0.70	1.76±0.62	**.002**
4.6. Seem happy when joining the school	3.50±0.98	3.83±0.70	**.011**
4.7. Turn away their gaze when someone speaks to them	4.01±0.68	4.15±0.78	.159
4.8. Deny anything that is being proposed to them	4.01±0.68	4.15±0.78	.159
4.9. Claim their rights	3.31±0.83	3.78±0.64	**<.001**
4.10. Cannot overcome their anger	2.90±0.59	2.70±0.71	**.022**
4.11. Discuss with the teacher about anything they are concerned	3.38±0.99	3.78±0.85	**.001**
4.12. Fight with other children	2.90±0.59	2.70±0.71	**.022**
4.13. Complicate the function of the classroom	4.04±0.39	4.10±0.79	.442
4.14. Indicate anxiety (complain about physical disturbances)	2.31±0.64	2.41±0.76	.319
4.15. Do not answer when someone speaks to them	4.01±0.68	4.15±0.78	.159

4.16. Have violent reactions	2.04±0.26	2.09±0.70	.390
4.17. Speak back and behave badly to their teacher	4.14±0.76	4.29±0.83	.176
4.18. Have the acceptance of their peers	3.67±0.99	3.68±0.65	.908
4.19. The lack of incentives can be distinguished	4.21±0.69	3.95±0.65	**.007**
4.20. It is characterized by low expectations of success	4.11±0.82	3.91±0.63	.058
4.21. It shows a lack of self-confidence and self-esteem	4.11±0.82	3.91±0.63	.058
4.22. Often are lonely and have no friends	4.14±0.92	3.80±0.82	**.005**
4.23. Usually develop an introverted character and distinguished apathy	4.14±0.92	3.80±0.82	**.005**
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	4.14±0.92	3.80±0.82	**.005**
4.25. They get encouragement and support from peers	3.63±1.00	3.79±0.78	.175
4.26. Their classmates ignore them	2.28±0.91	2.29±0.76	.943
4.27. Their classmates exclude them from class activities	2.28±0.91	2.29±0.76	.943
4.28. Their classmates bully them	3.08±0.98	2.41±0.87	**<.001**
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	3.79±0.96	4.41±0.70	**<.001**

*In cases where p <.05, there is a statistically significant difference in responses between men and women.

Finally, male and female teachers in typical education were asked about their responses to the methods they use to encourage students at interpersonal and interpersonal level (Table 2.12). As it turns out, there are statistically significant differences in the effort to enrich the expression of students' daily personal emotional needs and desires (t(163.281) = - 2.302, p = .023), motivation for academic efficacy, and success in striving for learning (t(252) = - 2.873, p = .004) and promoting one-on-one counseling (t(252) = - 2.901, p = .038). Furthermore, the two groups significantly differ in the careful planning of the lesson in order to ensure the conditions of student cooperation (t(107.485) = - 5.699, p <.001) and to encourage effort and enhance self-esteem (t(130.675)) = - 4.684, p <.001). Finally, male and female teachers apply significantly different conditions to create favorable conditions for cooperation (t(252) = - 2.648, p = .009) as well as emotional support for students with dyslexia so they can successfully deal with characteristics which cannot be changed (t(228.032) = - 4.719, p <.001). In all of the above cases women are more active than their male counterparts. The latter difference lies in promoting

discussions to enhance student autonomy (t(252) = 2.040, p = .042) which men consider more important (M. = 2.63, SD = 0.93) than female teachers (M. = 2.32, SD = 1.11).

Table 2.12.

Impact of gender on teachers' responses to encouragement of students with dyslexia (typical education)

Group of questions	Males (M±S.D.)	Females (M±S.D.)	p*
5.1. Enriching the expression of everyday personal and emotional needs and desires	3.22±1.02	3.58±1.29	**.023**
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	3.03±1.16	3.53±1.28	**.004**
5.3. Promoting one-on-one counseling	2.36±1.09	2.68±1.08	**.038**
5.4. Promoting conversations so as to update students' general development of their autonomy	2.63±0.93	2.32±1.11	**.042**
5.5. Promoting the development of genuine and honest interpersonal relationships among students	3.11±1.12	3.95±0.88	**<.001**
5.6. Creating positive attitude coming from their motivation and participation in school life	3.17±0.90	3.31±1.08	.329
5.7. Classroom guidance and experiential exercises for group engagement	1.97±0.69	2.05±1.07	.468
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	2.25±0.92	2.14±0.98	.401
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	3.42±0.85	3.50±0.96	.519
5.10. Promoting matching of trends among students	2.97±1.20	3.15±1.00	.235
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students	2.72±1.29	3.92±0.98	**<.001**
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	1.86±1.011	1.93±0.98	.625
5.13. Continuously encouraging their efforts and strengthening their self-esteem	4.29±0.49	4.61±0.49	**<.001**
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	2.57±1.03	2.98±1.14	**.009**
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	3.85±0.40	4.19±0.74	**<.001**
5.16. Reward after every good effort	3.07±1.26	3.33±1.20	.127
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	3.03±1.11	2.93±1.07	.511

*In cases where p <.05, there is a statistically significant difference in responses between men and women.

1.3.2 Tests for teachers in special education

In this section are presented the results of the tests for male and female teachers teaching in special education. In this case one of the two samples is quite small (20 persons). Following the Kolmogorov-Smirnov test it was found that the data regularity was violated in each case. Therefore, the mean difference test was replaced by the non-parametric Mann-Whitney median test.

The first table refers to their responses on students' ability to understand and produce oral and written speech (Table 2.13). The views of both men and women teachers do not seem to differ significantly in any way.

Table 2.13.

Impact of gender on teachers' answers to understanding and producing oral and written speech by students with dyslexia (special education)

Group of questions	Males (M±S.D.)	Females (M±S.D.)	p*
2.1. They can find words from oral description.	2.65±0.88	2.85±0.91	.335
2.2. They can orally describe common words.	2.70±0.92	2.91±0.90	.317
2.3 They find it difficult to find the meaning of an unknown word.	3.40±1.31	3.19±1.25	4.74
2.4. They do have the ability to associate words that express concepts relevant to each other	2.60±0.88	2.50±0.82	.782
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	2.50±1.28	2.65±1.24	.589
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	2.75±1.07	2.84±1.15	.765
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	2.85±0.99	3.03±1.06	.494
2.8. They can foresee the continuing of a story	3.00±1.17	3.20±1.14	.468
2.9. They can produce critical conclusions of the texts.	2.75±1.16	3.05±1.16	.283
2.10. They use strategies so as to organize information in a narrative text	1.85±1.35	2.04±1.15	271
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	1.95±1.36	1.86±1.07	.892
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	4.60±0.60	4.53±0.64	.678
2.13. They are able to understand oral public announcements addressed to the wide school audience.	3.10±1.29	3.41±1.30	.339

2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.20±0.41	4.28±0.53	.423
2.15. They able to understand short texts of everyday use.	2.95±1.47	3.22±1.46	.484
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	2.10±1.41	2.60±1.44	.156
2.17. They are able to produce descriptive and experiential texts	2.85±0.99	2.90±0.94	.790
2.18. They are able to compose short texts of everyday use.	2.85±0.99	3.03±1.00	.466
2.19. They have difficulty in recognizing the requirements arising from a school project	3.50±1.05	3.25±1.19	.386
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.75±1.07	3.48±1.21	.403
2.21. They have difficulty in focusing in a project and have low performance	4.25±0.79	4.06±0.96	.511
2.22. They have difficulty in assessing their own cognitive performance.	3.55±1.28	3.32±1.26	.423
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	3.25±1.48	3.03±1.62	.638
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.40±0.68	4.38±0.72	.963
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	2.50±1.28	2.77±1.29	.409

* In cases where p <.05, there is a statistically significant difference in responses between men and women.

Next, it was examined the existence of any statistically significant difference between male and female teachers in special education regarding on their teaching methods and tools. As shown in Table 2.14, the two groups significantly differ in the use of supervisory tools and means (U = 624, p = .001), the use of differentiated teaching with ICT (U = 723.5, p = .019), and the use of markers and chalks of different color or underlining different color lines (u = 471.5, p <.001). In addition, the two teacher groups present a significantly different view on the use of technology that can convert text to audio, such as audio books (U = 799, p = .042) and the use of supporting tools and mnemonic techniques such as acronyms, visualized reminders, keywords (U = 522.5, p <.001). Also, men and women significantly differ in providing information for the purpose of the text at the beginning and repeating the main points at the end of the lesson (U = 441, p <.001), using information flow charts that is relevant with the following lesson (U = 394, p <.001) and the use of the KWL technique (U = 516, p <.001). In addition, the two groups of teachers use significantly different concept mapping as a teaching, learning, and evaluation tool during the learning process (U = 636.5, p = .003) and teach learning strategies at significantly different frequency (U = 714, p = .013).

There is also a significant difference in preview texts from different sources (U = 465, p = <. 001), using text flowcharts to teach the summary strategy (U = 431.5, p <.001), promotion of reading by teacher or classmate, and repetition by students with dyslexia (U = 764, p = .043), and recall of previous knowledge by using brainstorming, questions, flowcharts, movies, computers, images, etc. (U = 530.5, p <.001). Furthermore, the two groups of teachers encourage, in varying degree, interactive learning through computer, audiovisual material, and appropriately diversified educational material (U = 468, p <.001) and give different importance to linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms (U = 702, p = .013). They also significantly hold different attitudes toward dramatization and role rotation (U = 476, p <.001), project method with the assignment of group research papers (U = 240.5, p <.001) and use of teaching scenarios in the context of the cross-thematic method (U = 236.5, p <.001). Finally, the frequency they assign tasks which students are able to complete (U = 392.5, p <.001) and adjust teaching according to student progress (U = 507, p <.001) is significantly different. In all these cases, women are significantly more likely to agree with their male counterparts. In contrast, men use students' descriptive assessment and individual portfolio (U = 530.5, p <.001) more often (M. = 4.30, S.D. = 0.57) than women (M. = 3.59, S.D. = 0.78).

Table 2.14.

Impact of gender on teachers' answers to teaching methods and tools (special education)

Group of questions	Males (M±S.D.)	Females (M±S.D.)	p*
3.1. Use of supervisory tools and means.	4.40±0.50	4.78±0.42	**.001**
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	4.35±0.49	4.63±0.48	**.019**
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	4.15±0.37	4.68±0.47	**<.001**
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	3.95±1.10	4.45±0.50	.096
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	2.25±0.64	2.30±0.54	.406
3.6. Use of technology which can convert text into sound, like audio books.	2.05±0.22	2.29±0.52	**.042**
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	4.25±0.44	4.73±0.45	**<.001**

3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	3.95±0.39	4.57±0.62	**<.001**
3.9. Use of information flow charts that is relevant with the following lesson.	3.85±0.49	4.58±0.59	**<.001**
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	3.85±1.04	4.59±0.55	**<.001**
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	4.05±0.61	4.49±0.61	**.003**
3.12. Teach learning strategies	4.40±0.50	4.69±0.46	**.013**
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	5.00±0.00	5.00±0.00	1.000
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	5.00±0.00	5.00±0.00	1.000
3.15. Encouraging the reader to use self-control strategies for understanding the texts.	4.55±0.51	4.67±0.47	.292
3.16. Using contextual understanding as strategy for unknown words in texts.	5.00±0.00	5.00±0.00	1.000
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	3.60±0.68	4.36±0.58	**<.001**
3.18. Use of text flowcharts to teach the summary strategy.	3.55±0.95	4.48±0.67	**<.001**
3.19. Providing personalized learning support and student guidance for producing texts	5.00±0.00	5.00±0.00	1.000
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	5.00±0.00	5.00±0.00	1.000
3.21. Repetition of the instructions in a consistent and systematic way.	5.00±0.00	5.00±0.00	1.000
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	4.40±0.50	4.64±0.48	**.043**
3.23. Use questions before, during, and after reading texts	5.00±0.00	5.00±0.00	1.000
3.24. Encourage their active participation in the process of teaching by conducting dialogues.	5.00±0.00	5.00±0.00	1.000
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	4.05±0.22	4.52±0.50	**<.001**
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	3.95±0.39	4.54±0.63	**<.001**
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	5.00±0.00	5.00±0.00	1.000
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	5.00±0.00	5.00±0.00	1.000
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.	4.20±0.41	4.50±0.50	**.013**
3.30. Promote dramatization and role rotation.	3.95±0.22	4.50±0.54	**<.001**
3.31. Promote collaborative method and collaboration by student pairs.	4.35±0.49	4.51±0.50	.180
3.32. Use the project method with the assignment of group research papers.	1.95±1.00	3.99±1.05	**<.001**

3.33. Use teaching scenarios in the context of cross-thematic method.	1.75±1.07	3.88±1.13	**<.001**
3.34. Assign tasks where students are capable to complete.	4.00±0.32	4.64±0.56	**<.001**
3.35. Provide extra time to complete their work.	5.00±0.00	4.96±0.196	.367
3.36. Provide direct feedback to students about their responses.	5.00±0.00	5.00±0.00	1.000
3.37. Assessment of student progress guides teaching.	4.05±0.22	4.54±0.63	**<.001**
3.38. Use of student's descriptive assessment and individual portfolio.	4.30±0.57	3.59±0.78	**<.001**

*In cases where p <.05, there is a statistically significant difference in responses between men and women.

The next tests address teachers' responses on behavior and problems that students with dyslexia face in the school environment. As Table 2.15 shows, the only cases where the responses of men and women significantly differ are children's reaction to teacher approach and guidance (U = 643, p = .003) and the complication of normal classroom functioning (U = 643, p = .003). U = 553.5, p <.001). In both cases, men are more likely to agree with negative behaviors of children with dyslexia than their female colleagues.

Table 2.15.

Impact of gender on the responses to the behavior and problems of students with dyslexia (special education)

Group of questions	Males (M±S.D.)	Females (M±S.D.)	p*
4.1. Follow the school rules	1.50±0.51	1.57±0.50	.543
4.2. Show adhesion and dependence on another classmate	4.45±0.51	4.33±0.53	.360
4.3. React to the approach and guidance from the teacher	4.70±0.47	4.34±0.48	**.003**
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	4.30±0.47	4.29±0.46	.908
4.5. Are uninterested in others feelings	4.40±0.50	4.51±0.50	.350
4.6. Seem happy when joining the school	1.45±0.51	1.48±0.50	.837
4.7. Turn away their gaze when someone speaks to them	4.45±0.51	4.60±0.49	.205
4.8. Deny anything that is being proposed to them	4.40±0.50	4.46±0.50	.650
4.9. Claim their rights	1.00±0.00	1.12±0.33	.106
4.10. Cannot overcome their anger	5.00±0.00	4.89±0.31	.123

4.11. Discuss with the teacher about anything they are concerned	1.50±0.51	1.47±0.50	.778
4.12. Fight with other children	5.00±0.00	4.89±0.31	.123
4.13. Complicate the function of the classroom	4.65±0.49	4.20±0.40	**<.001**
4.14. Indicate anxiety (complain about physical disturbances)	4.35±0.49	4.34±0.48	.909
4.15. Do not answer when someone speaks to them	4.25±0.44	4.26±0.40	.945
4.16. Have violent reactions	4.40±0.50	4.46±0.50	.650
4.17. Speak back and behave badly to their teacher	4.30±0.47	4.40±0.49	.421
4.18. Have the acceptance of their peers	1.60±0.50	1.50±0.50	.439
4.19. The lack of incentives can be distinguished	4.40±0.50	4.50±0.50	.439
4.20. It is characterized by low expectations of success	4.45±0.51	4.40±0.49	.655
4.21. It shows a lack of self-confidence and self-esteem	4.45±0.51	4.40±0.49	.655
4.22. Often are lonely and have no friends	1.70±0.47	1.64±0.48	.630
4.23. Usually develop an introverted character and distinguished apathy	1.70±0.47	1.64±0.48	.630
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	1.70±0.47	1.64±0.48	.630
4.25. They get encouragement and support from peers	1.60±0.50	1.50±0.50	.439
4.26. Their classmates ignore them	4.30±0.47	4.29±0.46	.908
4.27. Their classmates exclude them from class activities	4.30±.47	4.29±0.46	.908
4.28. Their classmates bully them	2.60±1.10	2.34±0.92	.409
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	4.70±0.47	4.71±0.46	.908

*In cases where p <.05, there is a statistically significant difference in responses between men and women.

Finally, it is checked whether male and female teachers in special education use different ways of approaching students to encourage them at intrapersonal and interpersonal level (Table 2.16). As it turned out, gender had a significant influence on the frequency of teachers' guidance and experiential group-building work (U = 390.5, p <.001) and the frequency they promote intrapersonal adaptation in moment-to -moment teacher-student interaction (U = 615.5, p = .003). Furthermore, careful planning of the lesson aimed at collaboration between students (U = 677.5, p = .003), role playing and simulation of real and hypothetical situations aimed at promoting communication and developing behavioral skills (U = 712 (p = .023) and contributing

to friendships and cooperation-promoting situations (U = 470.5, p <.001) are methods that are significantly different from men and women teachers in special education. Specifically, in all of the above cases women are significantly more positive than men.

Table 2.16.

Impact of gender on teachers' responses to encouragement of students with dyslexia (special education)

Group of questions	Males (M±S.D.)	Females (M±S.D.)	p*
5.1. Enriching the expression of everyday personal and emotional needs and desires	5.00±0.00	5.00±0.00	1.000
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	5.00±0.00	5.00±0.00	1.000
5.3. Promoting one-on-one counseling	5.00±0.00	5.00±0.00	1.000
5.4. Promoting conversations so as to update students' general development of their autonomy	5.00±0.00	5.00±0.00	1.000
5.5. Promoting the development of genuine and honest interpersonal relationships among students	5.00±0.00	5.00±0.00	1.000
5.6. Creating positive attitude coming from their motivation and participation in school life	5.00±0.00	5.00±0.00	1.000
5.7. Classroom guidance and experiential exercises for group engagement	4.05±0.22	4.66±0.48	**<.001**
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	3.95±0.39	4.39±0.72	**.003**
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	5.00±0.00	5.00±0.00	1.000
5.10. Promoting matching of trends among students	4.15±0.37	4.28±0.72	.242
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students	3.80±1.40	4.69±0.64	**.003**
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	4.05±0.22	4.34±0.75	**.023**
5.13. Continuously encouraging their efforts and strengthening their self-esteem	5.00±0.00	5.00±0.00	1.000
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	4.05±0.22	4.58±0.50	**<.001**
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	5.00±0.00	5.00±0.00	1.000
5.16. Reward after every good effort	4.90±0.31	4.89±0.31	.907
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	5.00±0.00	5.00±0.00	1.000

*In cases where p <.05, there is a statistically significant difference in responses between men and women.

1.4. Inductive tests according to teachers' age

This section examines teachers' responses according to their age *(Objectives 2-5)*. The teachers were divided into 3 groups (31-40 years, 41-50 years, >= 51 years) as in the case of teachers teaching in typical education there were no younger ones, while among those teaching in integration departments there were only 2 people in the age group 21-30 year old and were excluded from the study because of the small size of the group.

1.4.1 Tests for teachers in typical education

Initially, the responses of the teachers in typical education are examined. All three independent age-grouped groups are large enough (more than 30 individuals) to assume a normal distribution of data through the Central Limit Theorem. For this reason, all tests were performed with Analysis of Variance using the Brown-Forsythe correction in any case it was necessary (if population fluctuations were statistically significant). Subsequently there were performed tests to discover the group or groups that perform significant difference from the others using the Tukey method, in cases of equal population variances, or Games-Howell method, in cases where the variances were significantly different.

The first tests concern the characteristics of students with dyslexia from which teachers perceive their ability to produce and understand oral and written speech. As shown in Table 2.17, age group significantly influenced teachers' perceptions in typical education that students with dyslexia could find words from spoken words ($F(2,251) = 3.857$, $p = .022$) and could spell common words ($F(2,251) = 3.794$, $p = .024$). The corresponding paired tests proved that in both first and second case, the significant difference was found between the two extreme age groups ($p = .016$, $p = .017$ respectively). In particular, younger teachers appear to be significantly more positive in their responses than teachers over 50 years of age.

Also, the three groups significantly differ in their views on the ability of children to use strategies to organize information into a narrative text ($F(2,251) = 3.750$, $p = .025$), to understand texts they may encounter in special circumstances of their daily lives ($F(2,251) = 5.088$, $p = .007$) and produce descriptive and experiential texts ($F(2, 184.746) = 10.325$, $p <.001$). The first case showed a statistically significant difference between the first group ($p = .031$) and the third group

(p = .030). Teachers aged 31-40 are significantly more positive than others. In the second case, the difference is found in the age group over 50 years which is significantly different from both the first (p = .011) and the second age group (p = .035) of teachers. Once again, older teachers report a low ability of children with dyslexia to respond to texts they may encounter in their daily lives. Finally, in the third case, there is again a significantly more positive image of 31-40 year-old teachers for children with dyslexia as compared to the middle (p = .005) and the last age group (p = <.001).

Finally, teachers of different age working in typical education perform significantly different opinions on the ability of children to compose short daily texts ($F_{(2,150.985)}$ = 18.110, p <.001), the difficulty to concentrate on a project and the appearance of low performance ($F_{(2,163.131)}$ = 6.956, p = .001), limited ability in designing, producing, and controlling the phases of the writing process ($F_{(2,251)}$ = 6.605, p = .002) and the ability to produce oral speech in a variety of situations in school life to successfully solve issues related to their transfer and their relationships with others ($F_{(2,251)}$ = 4.598, p = .011). In the first case, paired tests showed a statistically significant difference between the last group with each of the first two age groups (p <.001 in each case). In the second case, however, there was a significant difference only between the two extreme groups (p = .001). Finally, in the third and fourth case, teachers over 50 years old again significantly differ from the first group (p = 0.03, p = .019 respectively) and from the middle group (p = .010, p = .043 respectively).). In any case, older teachers appear to be more negative about the ability of children with dyslexia to comprehend and produce oral and written speech than younger teachers.

Table 2.17.

Impact of age on teachers' answers to understanding and producing oral and written speech by students with dyslexia (typical education)

Group of questions	31-40 years old (M±S.D.)	41-50 years old (M±S.D.)	>=51 years old (M±S.D.)	p*
2.1. They can find words from oral description.	3.78±0.95	3.42±1.00	3.25±0.88	**.022**
2.2. They can orally describe common words.	3.81±0.88	3.49±0.91	3.33±0.83	**.024**

2.3 They find it difficult to find the meaning of an unknown word.	3.00±1.20	2.74±1.02	2.61±1.07	.181
2.4. They do have the ability to associate words that express concepts relevant to each other.**	3.86±0.92	3.34±1.04	3.19±1.00	.003
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence.**	4.03±0.65	3.67±0.90	3.38±0.94	<.001
2.6. When sentences are given to then, they reproduce a paragraph that makes sense.**	3.89±0.57	3.52±0.89	3.29±1.12	.003
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs.**	3.84±0.50	3.75±0.69	3.48±1.01	.016
2.8. They can foresee тhe continuing of a story.**	3.54±0.87	3.71±0.68	3.65±0.85	.521
2.9. They can produce critical conclusions of the texts.**	3.43±0.87	3.17±0.99	3.13±0.88	.209
2.10. They use strategies so as to organize information in a narrative text	2.89±0.97	2.54±0.74	2.51±0.68	**.025**
2.11. They are able to summarize in writing extensive narrative or descriptive texts.**	2.24±0.44	2.29±0.84	2.06±0.65	.035
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests.**	4.68±0.63	4.37±0.73	4.34±0.88	.058
2.13. They are able to understand oral public announcements addressed to the wide school audience.	4.16±0.55	4.04±0.60	4.06±0.72	.601
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.**	4.22±0.95	4.12±0.71	4.00±0.68	.358
2.15. They able to understand short texts of everyday use.	3.84±0.50	3.95±0.68	3.87±0.72	.566
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	3.59±0.50	3.43±0.75	3.16±0.82	**.007**
2.17. They are able to produce descriptive and experiential texts**	3.86±0.59	3.49±0.76	3.24±0.77	**<.001**
2.18. They are able to compose short texts of everyday use.**	3.95±0.23	3.83±0.45	3.48±0.66	**<.001**
2.19. They have difficulty in recognizing the requirements arising from a school project	2.68±1.25	3.01±1.01	3.05±0.97	.159
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.16±1.19	3.12±1.08	2.99±0.97	.595
2.21. They have difficulty in focusing in a project and have low performance**	4.19±0.85	3.83±0.90	3.49±1.13	**.001**
2.22. They have difficulty in assessing their own cognitive performance.**	3.05±1.31	2.76±1.00	2.77±0.99	.364
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	2.81±1.56	2.50±1.27	2.28±1.37	.135
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.57±0.50	4.48±0.69	4.15±0.83	**.002**
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	4.14±0.42	4.00±0.63	3.77±0.82	**.011**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.
** In these cases the Brown-Forsythe correction was applied. The corresponding paired tests were performed using the Games-Howell method.

Following are shown the results of the responses to the teaching tools and methods used by teachers working in typical education. As Table 2.18 shows, age has a significant effect on teachers' responses to almost all examples of teaching tools and methods. In fact, younger teachers strongly agree that they use each of these tools and methods in the educational process, while teachers over 50 years of age are often negative. It is worth noting that when it comes to repeating instructions in a consistent and systematic way ($F_{(2,11,034)} = 5.476$, $p = .005$), it is the only case where older teachers are significantly more positive (M. = 4.41, SD = 0.52) compared to younger colleagues (M. = 4.05, SD = 0.82; M. = 4.09, SD = 0.82).

Table 2.18.

Impact of age on teachers' answers to teaching methods and tools (typical education)

Group of questions	31-40 years old (M±S.D.)	41-50 years old (M±S.D.)	>=51 years old (M±S.D.)	p*
3.1. Use of supervisory tools and means**	4.24±0.68	3.51±1.23	2.28±0.51	**<.001**
3.2. Use of diversified teaching reclaiming Information and Communication Technologies**	3.59±1.01	2.07±0.44	1.82±0.68	**<.001**
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed material.	3.43±1.21	3.57±1.20	2.49±1.19	**<.001**
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".**	3.19±1.33	2.13±0.90	1.42±0.69	**<.001**
3.5. Use of the Digital Learning Platform for students and teachers "e-me".**	2.78±0.92	2.22±0.42	2.01±0.57	**<.001**
3.6. Use of technology which can convert text into sound, like audio books.**	2.78±0.92	2.07±0.62	1.68±0.47	**<.001**
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.**	3.57±1.48	2.00±1.22	1.57±0.73	**<.001**
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson**	3.41±1.24	3.01±1.02	1.91±0.84	**<.001**
3.9. Use of information flow charts that is relevant with the following lesson.**	3.32±1.42	2.48±0.98	1.71±0.91	**<.001**
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").**	3.00±1.49	1.80±1.07	1.57±0.52	**<.001**
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.**	3.30±1.41	1.77±0.73	1.81±0.75	**<.001**
3.12. Teach learning strategies**	3.30±1.33	2.15±0.43	2.19±0.75	**<.001**
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one**	3.65±1.09	2.82±0.87	2.19±0.86	**<.001**

3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.**	3.49±1.17	2.59±0.69	1.91±0.85	**<.001**
3.15. Encouraging the reader to use self-control strategies for understanding the texts.**	3.54±1.15	1.80±0.84	1.86±0.69	**<.001**
3.16. Using contextual understanding as strategy for unknown words in texts.**	4.11±0.66	4.10±0.80	3.37±0.91	**<.001**
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text**	3.41±1.17	2.37±1.17	1.87±0.81	**<.001**
3.18. Use of text flowcharts to teach the summary strategy.**	3.30±1.22	1.79±0.57	1.87±0.76	**<.001**
3.19. Providing personalized learning support and student guidance for producing texts**	4.27±0.45	1.41±0.52	1.43±0.59	**<.001**
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	4.22±0.71	4.17±0.90	1.96±0.82	**<.001**
3.21. Repetition of the instructions in a consistent and systematic way.**	4.05±0.82	4.09±0.82	4.41±0.52	**.005**
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	2.97±1.32	2.99±1.16	2.81±1.10	.550
3.23. Use questions before, during, and after reading texts**	4.00±1.00	2.92±1.03	3.63±1.04	**<.001**
3.24. Encourage their active participation in the process of teaching by conducting dialogues.**	4.43±0.50	2.62±0.74	2.27±0.90	**<.001**
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.**	4.38±0.49	2.68±0.89	2.24±0.79	**<.001**
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.**	3.62±1.04	2.43±0.76	1.53±0.57	**<.001**
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences**	4.08±0.86	3.87±0.43	2.52±0.78	**<.001**
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	4.08±1.12	2.20±0.87	1.86±0.94	**<.001**
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.**	4.27±0.51	2.33±0.70	2.57±0.81	**<.001**
3.30. Promote dramatization and role rotation.**	3.54±1.57	1.95±0.58	1.53±0.64	**<.001**
3.31. Promote collaborative method and collaboration by student pairs.**	3.92±1.38	2.51±1.03	2.53±0.75	**<.001**
3.32. Use the project method with the assignment of group research papers.**	3.65±1.38	2.58±1.01	2.90±0.84	**<.001**
3.33. Use teaching scenarios in the context of cross-thematic method.**	2.86±1.26	2.11±0.83	1.53±0.53	**<.001**
3.34. Assign tasks where students are capable to complete.	4.11±1.13	1.61±0.64	1.92±0.84	**<.001**
3.35. Provide extra time to complete their work.**	4.54±0.87	3.94±0.86	4.44±0.50	**<.001**
3.36. Provide direct feedback to students about their responses.**	4.41±0.64	1.94±1.04	2.38±0.77	**<.001**
3.37. Assessment of student progress guides teaching.**	4.14±0.67	1.85±0.59	1.49±0.64	**<.001**

3.38. Use of student's descriptive assessment and individual portfolio.**	2.78±0.92	1.62±0.49	1.00±0.00	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.
** In these cases the Brown-Forsythe correction was applied. The corresponding paired tests were performed using the Games-Howell method.

Subsequently, the results of the tests on the behavior of children with dyslexia in formal classes and the possible disruption of their school life are listed. As shown in Table 2.19, teachers' age had a significant influence on their responses to adherence and dependence on children by a classmate (F (2,251) = 3.240, p = .041) and the reaction to their approach and guidance of teachers (F (2,251) = 5.411, p = .005). In both first and second case, the significant difference was found between the two extreme age groups (p = .036, p = .004 respectively). In particular, younger teachers are more likely to identify the above behaviors than older teachers who seems to be negative at a large degree.

Also, teachers of different ages seem to think in a significant different way that students with dyslexia turn away their gaze when someone speaks to them (F (2,251) = 7.285, p = .001) and that they refuse anything they suggest (F (2,251) = 7.285, p = .001). In both cases, the latter age group differs from the first (p = .004 in each case) and the second (p = .004 in each case). In fact, the older teachers, who teach in typical education, are those who are more likely to detect negative student behavior.

In addition, age has a significant effect on students' responses to teachers' communication with their teachers (F (2,124.714) = 14.299, p <.001), creating complications in the functioning of the classroom (F (2,251) = 11.371, p <.001) and the occurrence of anxiety related to physical malfunctions (F (2.82.140) = 8.190, p = .001). In the first case all groups significantly differ in their responses. In contrast, in the second and third cases both younger teachers (p <.001, p = .002 respectively) and 41-50 years old teachers (p <.001, p = .021 respectively) significantly differ in their views against their older colleagues. In fact, older teachers seem to be more content with the rest that children with dyslexia communicate with teachers about issues that concern them (M. = 3.95, SD = 0.77) but create problems and impede teaching (M. = 4.37, SD = 0.49). In contrast, younger teachers are more likely to detect anxiety in children with dyslexia (M. = 2.78, S.D. = 0.95).

Finally, the three groups of teachers show a statistically significant difference in their responses to students' refusal to answer when speaking (F (2,251) = 7.285, p = .001), violent reactions (F (2,242,376) = 14.627, p <.001), misconduct towards teachers (F (2,251) = 10.670, p <.001) and peer encouragement and support (F92.86.297) = 10.924, p <.001). In the first two cases as well as in the latter case, older teachers significantly differ from the younger ones, while in the case of bad behavior to teachers all the three groups significantly differ in their responses. Specifically, the older teachers are the most content that students with dyslexia refusing to answer a question (M. = 4.37, SD = 0.68), the appearance of violent reaction (M. = 2.32, SD = 0.50), and bad behavior in teachers (M. = 4.53, SD = 0.50). However, this group also supports the fact that children with dyslexia are supported by their peers (M. = 4.06, S.D. = 0.69).

Table 2.19.

Impact of age on the responses to the behavior and problems of students with dyslexia (typical education)

Group of questions	31-40 years old (M±S.D.)	41-50 years old (M±S.D.)	>=51 years old (M±S.D.)	p*
4.1. Follow the school rules**	3.78±0.75	3.84±0.86	3.96±0.61	.373
4.2. Show adhesion and dependence on another classmate	2.14±1.00	1.82±0.76	1.75±0.71	**.041**
4.3. React to the approach and guidance from the teacher	2.22±0.82	1.96±0.71	1.77±0.55	**.005**
4.4. Do not protect themselves and do not defend themselves when someone is attacking them**	2.27±0.96	2.36±0.81	2.15±0.68	.210
4.5. Are uninterested in others feelings**	1.97±0.90	1.83±0.69	1.80±0.40	.459
4.6. Seem happy when joining the school**	3.57±0.99	3.67±0.78	3.92±0.73	.056
4.7. Turn away their gaze when someone speaks to them	3.89±0.57	4.03±0.80	4.37±0.68	**.001**
4.8. Deny anything that is being proposed to them	3.89±0.57	4.03±0.80	4.37±0.68	**.001**
4.9. Claim their rights	3.73±0.73	3.59±0.75	3.71±0.68	.372
4.10. Cannot overcome their anger**	2.70±0.81	2.72±0.75	2.86±0.42	.292
4.11. Discuss with the teacher about anything they are concerned**	3.03±0.93	3.67±0.89	3.95±0.77	**<.001**
4.12. Fight with other children**	2.70±0.81	2.72±0.75	2.86±0.42	.292
4.13. Complicate the function of the classroom	3.81±0.52	3.99±0.79	4.37±0.49	**<.001**

4.14. Indicate anxiety (complain about physical disturbances)**	2.78±0.95	2.39±0.72	2.16±0.52	**.001**
4.15. Do not answer when someone speaks to them	3.89±0.57	4.03±0.80	4.37±0.68	**.001**
4.16. Have violent reactions**	1.89±0.32	1.99±0.68	2.32±0.50	**<.001**
4.17. Speak back and behave badly to their teacher	3.84±0.93	4.20±0.86	4.53±0.50	**<.001**
4.18. Have the acceptance of their peers	3.59±0.80	3.63±0.78	3.80±0.71	.234
4.19. The lack of incentives can be distinguished**	3.97±0.76	4.05±0.72	4.00±0.53	.772
4.20. It is characterized by low expectations of success	3.84±0.69	3.96±0.72	4.03±0.64	.397
4.21. It shows a lack of self-confidence and self-esteem	3.84±0.69	3.96±0.72	4.03±0.64	.397
4.22. Often are lonely and have no friends**	3.70±1.00	3.92±0.93	3.95±0.64	.334
4.23. Usually develop an introverted character and distinguished apathy**	3.70±1.00	3.92±0.93	3.95±0.64	.334
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing**	3.70±1.00	3.92±0.93	3.95±0.64	.334
4.25. They get encouragement and support from peers**	3.24±1.09	3.69±0.79	4.06±0.69	**<.001**
4.26. Their classmates ignore them**	2.27±0.96	2.36±0.81	2.15±0.68	.210
4.27. Their classmates exclude them from class activities**	2.27±0.96	2.36±0.81	2.15±0.68	.210
4.28. Their classmates bully them	2.57±1.07	2.55±0.90	2.71±0.99	.487
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training**	4.03±1.09	4.28±0.69	4.25±0.90	.344

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.
** In these cases the Brown-Forsythe correction was applied. The corresponding paired tests were performed using the Games-Howell method.

Finally, the responses of teachers teaching in typical education on the ways they use to encourage children with dyslexia to gain confidence and extroversion were tested. As shown in Table 2.20, teachers significantly differ in almost all methods of encouraging students. In particular, most methods are used by younger teachers. However, teachers aged 41-50 years old are significantly more likely to provide motivation and hope to children for their academic effectiveness and success in the pursuit of knowledge (M. = 4.05, SD = 0.81) and it is more frequent to carefully planning the course in order to ensure the conditions of cooperation between students (M. = 3.83, SD = 1.17). In addition, teachers over 50 years of age seem to give greater emphasis on younger colleagues than on providing classroom control when confronted by hostile behavior (M.

= 4.03, SD = 0.48) and on the emotional support of students with dyslexia. so that they can cope with features that cannot be changed (M. = 4.33, SD = 0.59).

Table 2.20.

Impact of age on teachers' responses to encouragement of students with dyslexia (typical education)

Group of questions	31-40 years old (M±S.D.)	41-50 years old (M±S.D.)	>=51 years old (M±S.D.)	p*
5.1. Enriching the expression of everyday personal and emotional needs and desires	4.19±0.66	4.15±0.66	1.96±0.76	**<.001**
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	3.81±1.05	4.05±0.81	2.03±0.89	**<.001**
5.3. Promoting one-on-one counseling**	3.78±1.32	2.40±0.93	2.35±0.85	**<.001**
5.4. Promoting conversations so as to update students' general development of their autonomy**	3.46±1.28	2.60±0.87	1.58±0.57	**<.001**
5.5. Promoting the development of genuine and honest interpersonal relationships among students	4.24±0.60	3.96±1.02	3.03±0.83	**<.001**
5.6. Creating positive attitude coming from their motivation and participation in school life**	4.27±0.45	3.20±1.09	2.92±0.84	**<.001**
5.7. Classroom guidance and experiential exercises for group engagement**	3.57±1.24	1.68±0.65	1.92±0.55	**<.001**
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction**	3.35±1.14	1.93±0.71	2.04±0.85	**<.001**
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students**	3.43±1.12	3.17±0.93	4.03±0.48	**<.001**
5.10. Promoting matching of trends among students**	4.30±0.85	2.96±1.02	2.78±0.84	**<.001**
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students**	3.78±1.38	3.83±1.17	3.04±0.99	**<.001**
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills**	3.51±1.26	1.64±0.60	1.62±0.61	**<.001**
5.13. Continuously encouraging their efforts and strengthening their self-esteem	4.59±0.50	4.54±0.52	4.46±0.50	.334
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation**	4.00±1.11	2.80±1.19	2.44±0.50	**<.001**
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	4.24±0.50	3.91±0.71	4.33±0.59	**<.001**
5.16. Reward after every good effort**	4.59±0.50	3.67±0.82	1.91±0.75	**<.001**
5.17. Cooperation with EΔEAY and school psychologist for counseling support**	4.59±0.55	2.87±0.91	2.34±0.73	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.
** In these cases the Brown-Forsythe correction was applied. The corresponding paired tests were performed using the Games-Howell method.

1.4.2 Tests for teachers in special education

Subsequently, it was tested whether age significantly influences the responses of teachers teaching in integration departments. As the teacher group of over 50 years old only included 14 people, the regularity of the data in this group had to be checked. However, as regularity is violated in each case, the mean difference test was replaced by the non-parametric Kruskal-Wallis median test. The disadvantage of the control is that paired tests cannot be applied to determine where a statistically significant difference between the groups is located.

The first tests concern teachers' responses to the ability of children in special education to comprehend and produce oral and written speech (Table 2.21). As it turns out, teachers of different age have significantly different opinions on the ability of students with dyslexia to find words from spoken words ($x^2(2)$ = 10.107, p = .006), the ability to describe spoken words ($x^2(2)$ = 9.854, p = .007) and the difficulty of finding the meaning of an unknown word ($x^2(2)$ = 9.037, p = .011). In particular, younger teachers appeared to be hesitant about the first two sentences (M. = 3.18, S.D. = 1.01; M. = 3.18, S.D. = 0.92 respectively) while the remaining teachers were largely negative. On the contrary, as regards the difficulty of finding the meaning of an unknown word, only teachers 50 years of age and over reported quite agreement (M. = 4.14, S.D. = 1.10).

Age also influences responses to students' ability to predict a story's continuity ($x^2(2)$ = 8.721, p = .013), to use strategies to organize information into a narrative text ($x^2(2)$ = 6.035, p = .049), understand a daily dialogue about issues that concern them ($x^2(2)$ = 6.206, p = .045) and understand oral communications addressed to the entire school community ($x^2(2)$ = 8.203, p = .017). In any case, the most positive responses were given by the younger teachers, with a wide divergence of views between the two extreme age groups.

Furthermore, age significantly influences the responses of teachers who teach in special education on the ability of students with dyslexia to produce verbal speech on topics of interest to them (x2 (2) = 12.932, p = .002), to quickly understand everyday texts (x2 (2) = 14.173, p = .001) and understand texts they may encounter in specific situations of their daily lives (x2 (2) = 8.593, p = .014). Once again, younger teachers appear to be more positive about the abilities of children with dyslexia in understanding and producing verbal and written speech while there is a significant discrepancy between the two extreme groups.

Finally, teachers of different ages have significantly different views on the ability of students with dyslexia to produce descriptive and experiential texts ($x^2(2) = 6.418$, p = .040), the ability to compose short daily texts ($x^2(2)) = 6.803$, p = .033) and difficulty in recognizing their personal cognitive performance ($x^2(2) = 8.674$, p = .013). In the first two cases, younger teachers are largely neutral, while teachers over 50 are negative about the specific abilities of children with dyslexia. On the other hand, in terms of the difficulty in self-assessing cognitive performance, teachers over 50 are the ones who report most of this weakness in children with dyslexia while the other two groups maintain a more moderate attitude.

Table 2.21.

Impact of age on teachers' answers to understanding and producing oral and written speech by students with dyslexia (special education)

Group of questions	31-40 years old (M±S.D.)	41-50 years old (M±S.D.)	>=51 years old (M±S.D.)	p*
2.1. They can find words from oral description.	3.18±1.01	2.71±080	2.36±0.84	**.006**
2.2. They can orally describe common words.	3.18±0.92	2.83±0.89	2.29±0.61	**.007**
2.3 They find it difficult to find the meaning of an unknown word.	2.94±1.12	3.21±1.28	4.14±1.10	**.011**
2.4. They do have the ability to associate words that express concepts relevant to each other	2.70±0.88	2.50±0.81	2.21±0.80	.157
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	2.94±1.46	2.57±1.10	2.07±1.21	.092
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	3.00±1.30	2.79±1.05	2.50±1.02	.389
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	3.27±1.10	2.97±1.01	2.50±1.02	.064
2.8. They can foresee the continuing of a story	3.55±1.23	3.10±1.08	2.50±1.02	**.013**
2.9. They can produce critical conclusions of the texts.	3.30±1.26	2.96±1.12	2.50±1.02	.092
2.10. They use strategies so as to organize information in a narrative text	2.24±1.25	2.01±1.18	1.43±0.94	**.049**
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	1.97±1.16	1.94±1.15	1.29±0.61	.076
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	4.76±0.50	4.44±0.69	4.57±0.51	**.045**
2.13. They are able to understand oral public announcements addressed to the wide school audience.	3.70±1.29	3.33±1.29	2.50±1.02	**.017**
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.52±0.51	4.18±0.51	4.07±0.27	**.002**

2.15. They able to understand short texts of everyday use.	3.73±1.44	3.10±1.38	2.07±1.33	**.001**
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	3.00±1.48	2.43±1.38	1.71±1.33	**.014**
2.17. They are able to produce descriptive and experiential texts	3.09±0.95	2.88±0.93	2.36±0.75	**.040**
2.18. They are able to compose short texts of everyday use.	3.24±0.97	2.97±0.99	2.43±0.85	**.033**
2.19. They have difficulty in recognizing the requirements arising from a school project	3.03±1.13	3.33±1.19	3.86±0.95	.087
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.24±1.17	3.60±1.17	4.00±1.18	.099
2.21. They have difficulty in focusing in a project and have low performance	4.33±0.99	3.97±0.92	4.21±0.80	.052
2.22. They have difficulty in assessing their own cognitive performance.	3.03±1.13	3.38±1.27	4.21±1.12	**.013**
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	2.70±1.43	3.11±1.66	3.93±1.39	.092
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.36±0.60	4.38±0.80	4.50±0.52	.796
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	3.03±1.21	2.64±1.31	2.21±1.05	.126

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

Next, the responses of teachers of different ages regarding the tools and methods they use in teaching were examined. As Table 2.22 shows, age significantly influences the use of the "e-me" Digital Learning Platform ($x^2(2) = 16.413$, p <.001), the use of technology that converts text to audio ($x^2(2) = 14.467$, p = .001) and the use of supportive tools and mnemonic methods such as acronyms, visualized reminders, keywords ($x^2(2) = 6.080$, p = .048). In the first two cases, 41-50 year olds (M. = 2.44, S.D. = 0.63; M. = 2.38, S.D. = 0.54 respectively) have positive responses, although the general picture of the use of these tools is negative. In contrast, teachers over 50 years of age are, overall, negative (M. = 2.00, S.D. = 0.00 in each case). Also, the use of supportive tools and mnemonic methods is more frequently used by younger teachers (M. = 4.82, S.D. = 0.39).

Also, teachers who teach in special education, depending on their age, significantly differ in the use of information flow charts that is relevant to the following lesson ($x^2(2) = 9.893$, p = .007), concept mapping as a teaching , learning, and evaluation tool during the learning process ($x^2(2) = 15.645$, p <.001) and preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text ($x^2(2) = 11.356$, p = .003). All

of the aforementioned methods are more applicable to 31-40 year old teachers (M. = 4.70, S.D. = 0.64; M. = 4.67, S.D. = 0.74; M. = 4.55, S.D. = 0.56).

In addition, age has a significant effect on the frequency with which teachers choose to read the text themselves or a pupil first, and then children with dyslexia repeat it ($x^2(2)$ = 10.586, p = .005) and enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc. ($x^2(2)$ = 15.577, p <.001). Linking school activities to day-to-day activities by highlighting the communication function of writing through a variety of textual forms (x2 (2) = 19.349, p <.001) and promoting dramatization and role rotation ($x^2(2)$ = 23.608 , p <.001) are two more techniques that differ significantly according to the age of the teachers. Once again, younger teachers are more positive about using these teaching methods (M. = 4.73, S.D. = 0.45; M. = 4.79, S.D. = 0.42; M. = 4.76, S.D. = 0.56 respectively).

Moreover, promoting collaboration and creating student pairs ($x^2(2)$ = 25.325, p <.001), assigning teamwork ($x^2(2)$ = 9.723, p = .008) and using teaching scenarios in the context of cross-thematic method ($x^2(2)$ = 9.630, p = .008) are selected with significantly different frequency from teachers of different age. It is noteworthy that younger teachers are again the most positive in using these methods (M. = 4.85, SD = 0.36; M. = 4.06, SD = 1.25; M. = 4.00, SD = 1.44 respectively). They age group 41-50 years old contains those who rarely use these particular teaching methods (M. = 4.32, SD = 0.47; M. = 3.49, SD = 1.25; M. = 3.36, SD = 1.29).

Finally, the assignment of tasks that students can complete ($x^2(2)$ = 12.076, p = .002) and the use of student's descriptive assessment and individual portfolio ($x^2(2)$ = 11.253, p = .004) are two teaching methods that their use is significantly influenced by the age of teachers. Here it is observed that in the first case, the most positive are the younger teachers (M. = 4.79, S.D. = 0.49) while in the second case the most positive answers can be found in the latter category of teachers (M. = 4.14, S.D. = 0.36).

Table 2.22.

Impact of age on teachers' answers to teaching methods and tools (special education)

Group of questions	31-40 years old (M±S.D.)	41-50 years old (M±S.D.)	>=51 years old (M±S.D.)	p*
3.1. Use of supervisory tools and means.	4.79±0.42	4.68±0.47	4.71±0.47	.531
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	4.64±0.49	4.58±0.50	4.43±0.51	.420
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	4.67±0.48	4.56±0.50	4.57±0.51	.559
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	4.48±0.80	4.32±0.62	4.21±0.43	.059
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	2.09±0.38	2.44±0.63	2.00±0.00	**<.001**
3.6. Use of technology which can convert text into sound, like audio books.	2.09±0.38	2.38±0.54	2.00±0.00	**.001**
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	4.82±0.39	4.57±0.50	4.64±0.50	**.048**
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	4.58±0.66	4.46±0.60	4.21±0.70	.158
3.9. Use of information flow charts that is relevant with the following lesson.	4.70±0.64	4.39±0.60	4.21±0.70	**.007**
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	4.48±0.83	4.47±0.69	4.50±0.52	.854
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	4.67±0.74	4.36±0.48	4.00±0.78	**<.001**
3.12. Teach learning strategies	4.70±0.47	4.60±0.49	4.71±0.47	.507
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.15. Encouraging the reader to use self-control strategies for understanding the texts.	4.70±0.47	4.61±0.49	4.86±0.36	.185
3.16. Using contextual understanding as strategy for unknown words in texts.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	4.55±0.56	4.10±0.65	4.21±0.70	**.003**
3.18. Use of text flowcharts to teach the summary strategy.	4.33±1.02	4.38±0.64	4.07±1.00	.417
3.19. Providing personalized learning support and student guidance for producing texts	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	5.00±0.00	5.00±0.00	5.00±0.00	1.000

3.21. Repetition of the instructions in a consistent and systematic way.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	4.85±0.36	4.53±0.50	4.50±0.52	**.005**
3.23. Use questions before, during, and after reading texts	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.24. Encourage their active participation in the process of teaching by conducting dialogues.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	4.73±0.45	4.32±0.47	4.36±0.50	**<.001**
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	4.61±0.56	4.39±0.64	4.29±0.73	.183
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.	4.79±0.42	4.33±0.48	4.36±0.50	**<.001**
3.30. Promote dramatization and role rotation.	4.76±0.56	4.25±0.47	4.36±0.50	**<.001**
3.31. Promote collaborative method and collaboration by student pairs.	4.85±0.36	4.32±0.47	4.43±0.51	**<.001**
3.32. Use the project method with the assignment of group research papers.	4.06±1.25	3.49±1.25	3.79±1.42	**.008**
3.33. Use teaching scenarios in the context of cross-thematic method.	4.00±1.44	3.36±1.29	3.50±1.45	**.008**
3.34. Assign tasks where students are capable to complete.	4.79±0.49	4.47±0.56	4.21±0.70	**.002**
3.35. Provide extra time to complete their work.	5.00±0.00	4.94±0.23	5.00±0.00	.262
3.36. Provide direct feedback to students about their responses.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.37. Assessment of student progress guides teaching.	4.52±0.76	4.44±0.55	4.36±0.50	.347
3.38. Use of student's descriptive assessment and individual portfolio.	3.91±0.84	3.58±0.75	4.14±0.36	**.004**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

In addition, teachers teaching in special education were examined for their age significant influence on their responses to the behaviors that students with or with dyslexia experienced. As Table 2.23 shows, the only cases where age has a significant effect on students 'reaction to teachers' approach and guidance (x^2(2) = 7.143, p = .028), the inability to protect themselves when someone attacks them (x^2(2) = 8.011, p = .018), indifference from their classmates (x^2(2) = 8.011, p = .018) and exclusion from classroom activities (x^2(2) = 8.011, p = .018). Negative behavior of children with dyslexia, as described in the first case, is more strongly reported than

the middle class of teachers (M. = 4.49, SD = 0.50) while the next three cases of negative behavior towards these students are most often identified by teachers aged 51 and over (M. = 4.57, SD = 0.51 in each case).

Table 2.23.

Impact of age on the responses to the behavior and problems of students with dyslexia (special education)

Group of questions	31-40 years old (M±S.D.)	41-50 years old (M±S.D.)	>=51 years old (M±S.D.)	p*
4.1. Follow the school rules	1.42±0.50	1.64±0.48	1.57±0.51	.121
4.2. Show adhesion and dependence on another classmate	4.39±0.66	4.32±0.47	4.43±0.51	.467
4.3. React to the approach and guidance from the teacher	4.21±0.42	4.49±0.50	4.36±0.50	**.028**
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	4.33±0.48	4.21±0.41	4.57±0.51	**.018**
4.5. Are uninterested in others feelings	4.52±0.51	4.47±0.50	4.50±0.52	.916
4.6. Seem happy when joining the school	1.45±0.51	1.46±0.50	1.50±0.52	.955
4.7. Turn away their gaze when someone speaks to them	4.64±0.49	4.57±0.50	4.43±0.51	.423
4.8. Deny anything that is being proposed to them	4.42±0.50	4.47±0.50	4.43±0.51	.883
4.9. Claim their rights	1.12±0.33	1.11±0.32	1.00±0.00	.409
4.10. Cannot overcome their anger	4.94±0.24	4.90±0.30	4.86±0.36	.659
4.11. Discuss with the teacher about anything they are concerned	1.58±0.50	1.47±0.50	1.29±0.47	.190
4.12. Fight with other children	4.94±0.24	4.90±0.30	4.86±0.36	.659
4.13. Complicate the function of the classroom	4.24±0.44	4.25±0.44	4.50±0.52	.142
4.14. Indicate anxiety (complain about physical disturbances)	4.39±0.50	4.31±0.46	4.29±0.47	.631
4.15. Do not answer when someone speaks to them	4.27±0.45	4.28±0.45	4.14±0.36	.567
4.16. Have violent reactions	4.52±0.51	4.39±0.49	4.64±0.50	.156
4.17. Speak back and behave badly to their teacher	4.52±0.51	4.32±0.47	4.36±0.50	.158
4.18. Have the acceptance of their peers	1.67±0.48	1.50±0.50	1.36±0.50	.112
4.19. The lack of incentives can be distinguished	4.52±0.51	4.46±0.50	4.57±0.51	.693
4.20. It is characterized by low expectations of success	4.36±0.49	4.42±0.50	4.50±0.52	.682

4.21. It shows a lack of self-confidence and self-esteem	4.36±0.49	4.42±0.50	4.50±0.52	.682
4.22. Often are lonely and have no friends	1.73±0.45	1.61±0.49	1.64±0.50	.515
4.23. Usually develop an introverted character and distinguished apathy	1.73±0.45	1.61±0.49	1.64±0.50	.515
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	1.73±0.45	1.61±0.49	1.64±0.50	.515
4.25. They get encouragement and support from peers	1.67±0.48	1.50±0.50	1.36±0.50	.112
4.26. Their classmates ignore them	4.33±0.48	4.21±0.41	4.57±0.51	**.018**
4.27. Their classmates exclude them from class activities	4.33±0.48	4.21±0.41	4.57±0.51	**.018**
4.28. Their classmates bully them	2.61±0.93	2.29±0.94	2.50±0.94	.150
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	4.76±0.44	4.67±0.48	4.79±0.43	.503

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

Finally, we examined the statistically significant effect of the teachers' age in their responses to the following ways of encouragement of students at intrapersonal and interpersonal levels. As can be seen in Table 2.24, teachers significantly vary, depending on their age, at promoting intrapersonal adaptation in moment-to-moment teacher-student interaction ($x^2(2)$ = 11.093, p = .004), promoting matching of trends among students ($x^2(2)$ = 13.822, p = .001), careful planning of the lesson in order to ensure conditions for cooperation among students ($x^2(2)$ = 8.086, p = .018) and promoting role playing and realistic simulations and hypothetical situations to enhance communication and behavioral skills ($x^2(2)$ = 8.918, p = .012). Specifically, all four practices were mainly applied by younger teachers (M. = 4.64, SD = 0.65; M. = 4.55, SD = 0.56; M. = 4.82, SD = 0.64; M. = 4.58, SD = 0.61 respectively). while the smallest application is found in the age group of 51 years and over. The only exception is promoting matching of trends among students where 41-50 year old teachers gave the least positive response (M. = 4.06, S.D. = 0.69).

Table 2.24.

Impact of age on teachers' responses to encouragement of students with dyslexia (special education)

Group of questions	31-40 years old (M±S.D.)	41-50 years old (M±S.D.)	>=51 years old (M±S.D.)	p*

5.1. Enriching the expression of everyday personal and emotional needs and desires	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.3. Promoting one-on-one counseling	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.4. Promoting conversations so as to update students' general development of their autonomy	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.5. Promoting the development of genuine and honest interpersonal relationships among students	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.6. Creating positive attitude coming from their motivation and participation in school life	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.7. Classroom guidance and experiential exercises for group engagement	4.73±0.45	4.49±0.50	4.64±0.50	.059
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	4.64±0.65	4.21±0.67	4.14±0.77	**.004**
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.10. Promoting matching of trends among students	4.55±0.56	4.06±0.69	4.50±0.52	**.001**
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students	4.82±0.64	4.46±0.92	4.29±1.07	**.018**
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	4.58±0.61	4.18±0.68	4.07±0.83	**.012**
5.13. Continuously encouraging their efforts and strengthening their self-esteem	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	4.67±0.48	4.42±0.50	4.43±0.51	.054
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.16. Reward after every good effort	4.94±0.24	4.88±0.33	4.86±0.36	.556
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	5.00±0.00	5.00±0.00	5.00±0.00	1.000

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

1.5. Inductive tests according to teachers' educational level

Another test worth of considering refers to the effect of teachers' educational level on their responses to questionnaire sentences *(Objectives 2-5)*. Once again, teachers who teach in typical education are separately treated from those who teach in special education. Due to the fact that both categories of teachers were divided into 5 independent educational level groups, some of which were small (below 30 observations), the existence of regularity in the data of each sample was tested by Kolmogorov-Smirnov test. Due to the violation of regularity, the ANOVA was replaced with the corresponding non-parametric median test (Kruskal-Wallis).

1.5.1 Tests for teachers in typical education

Initially, the responses of the teachers teaching in typical education are studied. They are divided into five independent groups in terms of education, which are: holders of a university degree (78 people), holders of a university and a master degree (117 people), holders of a university, master and doctoral degrees (24 people), holders of a university degree and having special education training (19 people) and holders of a university and master degree having special education training (14 people). The only group excluded from the tests, due to the very small size (2 persons), are the holders of a university, master and doctoral degree and having training in Special Education.

At first, teachers' responses to students' ability to understand and produce oral and written speech are studied (Table 2.25). As it turned out, the educational level significantly influences teachers' responses to students' ability to produce a meaningful paragraph when given specific sentences ($x^2(4)$ = 10.024, p = .040) and to answer referring questions. the context (side headings, details, conclusion) associated with narrative paragraphs ($x^2(4)$ = 10.016, p = .040). In both cases, the most positive image for students is that of teachers with a bachelor and master degree and training in special education (M. = 4.00, S.D. = 0.00 in each case). In both cases the most negative are those with a degree (M. = 3.29, SD = 1.03; M. = 3.51, SD = 0.83 respectively) and those with a bachelor degree and training in Special Education (M. = 3.37, SD = 0.96 ; M. = 3.47, SD = 0.91).

Also, the educational level influences the responses of teachers who teach in typical education on the ability of children with dyslexia to draw critical conclusions from a text (x2 (4) = 9.614, p = .047) with the latter category showing the most positive answers (M. = 3.43, SD = 0.94) while those holding the basic degree declare the highest refusal (M. = 2.92, SD = 0.98). This feature also significantly influences responses to students' ability to use information organizing strategies in a narrative text (x2 (4) = 11.093, p = .026) and to understand texts that they may encounter in specific everyday situations. their lives (x2 (4) = 18.239, p = .001). All teachers hold a neutral attitude in these cases, but the most positive responses appear between the holders of a bachelor and master degree (M. = 2.70, SD = 0.78; M. = 3.50, SD = 0.77 respectively) and the holders of a bachelor, master and doctoral degree (M. = 2.71, SD = 0.81; M. = 3.46, SD = 0.78 respectively).

Finally, educational level significantly influences teachers' responses to students' difficulty in recognizing the demands arising from a school project ($x^2(4) = 38.629$, p <.001) and the extra time they need to understand the verbal teacher's word in the classroom ($x^2(4) = 16.475$, p = .002). It is worth noting that in the first case teachers with a basic degree gave significantly more positive responses than the others (M. = 3.53, SD = 1.04) while in the second case the teachers with a bachelor and master degree and training in Education exceed in positive answers (M. = 3.00, SD = 1.41).

Table 2.25.

Impact of educational level on teachers' answers to understanding and producing oral and written speech by students with dyslexia (typical education)

Group of questions	1 (M±S.D.)	2 (M±S.D.)	3 (M±S.D.)	4 (M±S.D.)	5 (M±S.D.)	p*
2.1. They can find words from oral description.	3.37±1.06	3.41±0.92	3.67±0.96	3.11±0.94	3.71±0.91	.288
2.2. They can orally describe common words.	3.40±1.04	3.52±0.81	3.58±0.88	3.32±0.75	3.71±0.91	.488
2.3 They find it difficult to find the meaning of an unknown word.	2.87±1.17	2.54±0.93	3.08±1.25	3.00±1.11	2.71±0.99	.129
2.4. They do have the ability to associate words that express concepts relevant to each other	3.44±1.08	3.29±1.03	3.25±1.11	3.32±0.89	3.86±0.66	.338
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	3.54±0.88	3.63±0.93	3.46±1.06	3.95±0.78	3.93±0.48	.200
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	3.29±1.03	3.59±0.94	3.54±0.88	3.37±0.96	4.00±0.00	**.040**
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	3.51±0.83	3.79±0.79	3.67±0.76	3.47±0.91	4.00±0.00	**.040**
2.8. They can foresee the continuing of a story	3.45±0.95	3.73±0.65	3.96±0.62	3.58±0.77	3.93±0.27	.058
2.9. They can produce critical conclusions of the texts.	2.92±0.98	3.32±0.86	3.29±1.08	3.11±0.94	3.43±0.94	**.047**
2.10. They use strategies so as to organize information in a narrative text	2.37±0.58	2.70±0.78	2.71±0.81	2.32±0.67	2.57±1.02	**.026**
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	2.36±1.01	2.19±0.64	1.96±0.36	2.11±0.46	2.14±0.36	.474
2.12. They are able to understand a daily basis dialogue about topics	4.46±0.77	4.29±0.82	4.54±0.72	4.42±0.51	4.71±0.61	.121

considering subjects related to their own interests						
2.13. They are able to understand oral public announcements addressed to the wide school audience.	4.03±0.68	4.07±0.63	4.21±0.42	3.89±0.81	4.21±0.43	.608
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.04±0.83	4.14±0.67	4.25±0.53	3.84±0.90	4.07±0.83	.695
2.15. They able to understand short texts of everyday use.	3.96±0.67	3.92±0.73	4.04±0.46	3.53±0.51	3.79±0.43	.059
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	3.27±0.72	3.50±0.77	3.46±0.78	2.84±0.69	3.29±0.61	**.001**
2.17. They are able to produce descriptive and experiential texts	3.32±0.78	3.55±0.71	3.63±0.58	3.32±0.89	3.36±1.01	.315
2.18. They are able to compose short texts of everyday use.	3.76±0.49	3.68±0.61	3.88±0.34	3.68±0.48	3.86±0.36	.511
2.19. They have difficulty in recognizing the requirements arising from a school project	3.53±1.04	2.62±0.89	3.04±0.95	3.21±1.13	2.64±0.93	**<.001**
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.33±1.16	2.89±0.95	2.96±1.00	3.26±1.10	3.43±1.22	.060
2.21. They have difficulty in focusing in a project and have low performance	3.71±0.96	3.81±1.03	3.79±1.06	3.74±0.99	3.86±0.95	.826
2.22. They have difficulty in assessing their own cognitive performance.	2.97±1.08	2.61±0.93	3.25±1.42	2.84±0.96	2.86±0.95	.102
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	2.68±1.47	2.10±1.13	2.96±1.55	2.89±1.37	3.00±1.41	**.002**
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.37±0.71	4.33±0.78	4.46±0.66	4.63±0.68	4.57±0.65	.338
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	3.95±0.53	3.94±0.76	3.79±0.83	4.05±0.71	4.07±0.27	.797

[*]In cases where p <.05, there is a statistically significant difference in the responses between the different groups. The groups that had been examined are the following: holders of a university degree (1), holders of a university and a master degree (2), holders of a university, master and doctoral degree (3), holders of a university degree and having training in special education (4) and holders of a university and a master degree and having training in Special Education (5)

Next, are examined the responses, of the five teacher groups that teach in typical education, on the tools and methods they use in teaching. As shown in Table 2.26, depending on their educational level, teachers choose to use supervisory tools and means (x2 (4) = 15.487, p = .004)

and different marker colors and underline each line with different color in teaching ($x2$ (4) = 45.972, p <.001) in significantly different frequency. In both cases the most positive are the holders of a bachelor and master degree with training in Special Education (M. = 4.29, S.D. = 1.20; M. = 4.64, S.D. = 0.84).

Also, the 5 groups of teachers show a different frequency in providing direct teaching by informing about the lesson objective at the beginning and reviewing the main points at the end of the lesson (x^2(4) = 18.404, p = .001). Specifically, teachers with bachelor, master and doctoral degree are the most positive in this teaching method (M. = 3.33, SD = 1.20). Furthermore, educational level significantly influences the use of information flow charts that is relevant to the following lesson (x^2(4) = 25.300, p <.001), promoting the "thinking aloud" by acting as a template for teaching strategies (x^2(4) = 13.577, p = .009) and preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the text content (x^2(4) = 10.652, p = .031). Application of oral clarification and general simplification of written instructions by highlighting keywords ($x2$ (4) = 12.837, p = .012) and promoting initial reading by the teacher or a classmate and then promoting repetition of reading by themselves ($x2$ (4) = 11.657, p = .020) are two more methods preferred to significantly different degree by teachers with different educational level. However, in any case, teachers with bachelor and master degree and training in Special Education are the most positive in using these teaching methods (M. = 3.21, SD = 1.31; M. = 3.29, SD = 1.33; M. = 3.14, SD = 1.10; M. = 4.21, SD = 1.12; M. = 3.50, SD = 2.76 respectively).

Finally, promoting participation by expressing feelings and talking about personal experiences (x^2(4) = 16.697, p = .002), promoting collaboration (x^2(4) = 12.589, p = .013) and using teaching scenarios in the context of cross-thematic method (x^2(4) = 29.490, p <.001) are methods applied at significantly different frequency among teachers with different educational background. Specifically, the most widespread application of these methods is found in teachers with a bachelor degree and training in Special Education (M. = 3.95, SD = 0.41; M. = 3.26, SD = 0.87; M. = 2.68, SD = 0.67 respectively) although they seem to be generally neutral in their responses. Finally, the project method with the assignment of group research papers (x^2(4) = 15.476, p = .004) is mainly applied by holders of bachelor and master degree (M. = 3.11, S.D. = 1.07).

Table 2.26.

Impact of educational level on teachers' answers to teaching methods and tools (typical education)

Group of questions	1 (M±S.D.)	2 (M±S.D.)	3 (M±S.D.)	4 (M±S.D.)	5 (M±S.D.)	p*
3.1. Use of supervisory tools and means.	3.06±1.06	3.17±1.15	2.96±1.20	3.74±1.56	4.29±1.20	**.004**
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	2.18±0.64	2.15±0.86	2.08±0.78	2.21±0.86	2.71±1.27	.564
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	2.62±1.31	3.27±1.24	3.13±0.80	4.16±0.50	4.64±0.84	**<.001**
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	1.88±0.90	2.01±1.04	2.46±0.88	1.95±1.31	2.57±1.51	.052
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	2.22±0.45	2.18±0.60	2.46±1.02	2.37±0.50	2.07±0.27	.244
3.6. Use of technology which can convert text into sound, like audio books.	2.01±0.50	1.97±0.72	2.25±1.19	2.26±0.65	2.07±0.27	.280
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	1.88±0.97	2.17±1.36	2.29±1.52	2.00±1.29	2.00±1.67	.842
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	2.73±1.09	2.44±1.08	3.33±1.20	3.05±1.08	3.29±1.14	**.001**
3.9. Use of information flow charts that is relevant with the following lesson.	1.91±1.02	2.38±1.11	2.67±1.24	2.79±0.86	3.21±1.31	**<.001**
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	1.74±0.83	1.82±1.02	2.29±1.52	2.42±1.58	1.86±1.29	.563
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	1.73±0.60	2.12±1.04	2.21±1.14	1.74±0.99	2.14±1.61	.084
3.12. Teach learning strategies	2.15±0.43	2.41±0.92	2.17±0.64	2.26±0.81	2.64±1.28	.256
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	2.77±0.93	2.63±0.96	2.92±1.06	3.00±1.16	2.57±1.34	.421
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	2.31±0.78	2.42±0.99	2.75±0.94	2.84±0.77	3.29±1.33	**.009**

3.15. Encouraging the reader to use self-control strategies for understanding the texts.	1.82±0.66	2.07±1.10	2.17±1.09	2.42±1.17	2.50±1.23	.140
3.16. Using contextual understanding as strategy for unknown words in texts.	3.86±0.88	3.87±0.83	4.08±0.41	3.37±1.30	4.14±1.03	.202
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	2.45±1.05	2.23±1.18	2.08±1.18	2.37±1.21	3.14±1.10	**.031**
3.18. Use of text flowcharts to teach the summary strategy.	2.10±0.71	1.94±0.97	1.96±0.86	1.89±0.94	2.36±0.93	.128
3.19. Providing personalized learning support and student guidance for producing texts	1.81±1.01	1.81±1.06	1.67±1.24	1.53±1.12	2.43±1.65	.201
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	3.32±1.32	3.32±1.40	4.04±0.96	3.89±1.10	4.21±1.12	**.012**
3.21. Repetition of the instructions in a consistent and systematic way.	4.33±0.57	4.08±0.79	4.04±1.00	4.11±0.66	4.43±0.76	.152
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	2.62±1.10	3.08±1.16	3.08±1.47	2.79±1.03	3.50±0.76	**.020**
3.23. Use questions before, during, and after reading texts	3.31±1.13	3.28±1.15	3.13±0.90	3.21±1.13	3.71±0.99	.488
3.24. Encourage their active participation in the process of teaching by conducting dialogues.	2.79±0.83	2.64±1.09	2.75±1.07	3.00±0.88	3.14±1.46	.248
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	2.79±0.93	2.67±1.08	3.04±0.91	2.63±1.21	3.29±1.27	.156
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	2.18±0.91	2.25±0.93	2.29±0.91	2.58±1.22	3.14±1.29	.072
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	3.35±0.90	3.36±0.95	3.79±0.51	3.95±0.41	3.86±1.10	**.002**
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	2.33±1.05	2.25±1.16	2.54±1.22	2.79±1.13	2.29±1.59	.223
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.	2.69±0.92	2.66±1.02	2.63±0.97	2.58±0.84	2.79±0.80	.918

3.30. Promote dramatization and role rotation.	1.76±0.59	2.10±1.09	2.25±1.23	2.16±1.02	2.36±1.50	.313
3.31. Promote collaborative method and collaboration by student pairs.	2.41±1.01	2.81±1.09	2.54±1.25	3.26±0.87	2.93±1.44	**.013**
3.32. Use the project method with the assignment of group research papers.	2.47±1.05	3.11±1.07	2.75±1.23	2.79±0.63	2.57±1.02	**.004**
3.33. Use teaching scenarios in the context of cross-thematic method.	1.62±0.59	2.15±0.99	2.13±1.08	2.68±0.67	2.00±0.56	**<.001**
3.34. Assign tasks where students are capable to complete.	2.08±1.02	2.00±1.14	2.29±1.20	1.89±1.20	2.07±1.64	.468
3.35. Provide extra time to complete their work.	4.29±0.71	4.12±0.87	4.46±0.72	3.84±0.77	4.00±0.88	.064
3.36. Provide direct feedback to students about their responses.	2.62±1.11	2.40±1.23	2.17±1.20	2.21±1.32	2.14±1.61	.127
3.37. Assessment of student progress guides teaching.	2.05±1.21	2.03±0.91	1.96±0.69	1.84±1.07	2.64±1.34	.249
3.38. Use of student's descriptive assessment and individual portfolio.	1.62±0.61	1.51±0.73	1.67±1.17	1.53±0.61	1.79±0.43	.161

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups. The groups that had been examined are the following: holders of a university degree (1), holders of a university and a master degree (2), holders of a university, master and doctoral degree (3), holders of a university degree and having training in special education (4) and holders of a university and a master degree and having training in Special Education (5)

Then, teachers who teach in typical education were examined on the basis of their educational level regarding their responses to the behavior of dyslexic students (Table 2.35). It appears that educational level significantly influences teachers' responses to students' tendency to follow the rules ($x^2(4) = 10.426$, p = .034), to claim their rights ($x^2(4) = 11.948$, p = .018), discuss with teachers about issues that concern them ($x^2(4) = 16.243$, p = .003) and create classroom tension ($x^2(4) = 11.614$, p = .020). Both first positive behaviors and the creation of complications during the course seem to be more frequently identified by teachers with bachelor degree and training in Special Education (M. = 4.37, SD = 0.60; M. = 4.00 ± 0.58; M. = 4.21 ; SD = 0.79, M. = 4.42, SD = 0.77).

Also, the educational level significantly influences the teachers' responses about the indifference of children with dyslexia to the feelings of others ($x^2(4) = 24.678$, p <.001), the inability to beat their anger ($x^2(4) = 11.540$, p = .021) and fights with other children ($x^2(4) = 11.540$, p = .021). All of these negative behaviors are to a greater extent identified by teachers with a bachelor and master degree and training in special education (M. = 2.07, SD = 0.62; M. = 3.14, SD = 0.77; M. =

3.14, SD = 0.77 respectively). although they are generally neutral in the appearance of these behaviors. Also, the presence of violent reactions ($x^2(4)$ = 10.660, p = .031) is found to be more prevalent among bachelor and master degree holders (M = 2.16, SD = 0.54) while the acceptance of children with dyslexia by their peers ($x^2(4)$ = 18.360, p = .001) was most strongly reported by holders of bachelor, master and doctoral degree (M. = 4.08, SD = 0.50).

Finally, the teachers, depending on their educational level, gave significantly different answers regarding the loneliness of students with dyslexia and lack of friends ($x^2(4)$ = 18.370, p = .001), introversion and apathy ($x^2(4)$ = 18.370, p = .001), difficulty in socializing due to problems with skills ($x^2(4)$ = 18.370, p = .001) and verbal or physical violence received by their peers ($x^2(4)$ = 15.510 , p = .004). In each case, the most positive responses were scored by the group of teachers with bachelor degree (M. = 4.22, SD = 0.60; M. = 4.22, SD = 0.60; M. = 4.22, SD = 0.60; M. = 2.77, SD = 1.12 respectively).

Table 2.27.

Impact of educational level on the responses to the behavior and problems of students with dyslexia (typical education)

Group of questions	1 (M±S.D.)	2 (M±S.D.)	3 (M±S.D.)	4 (M±S.D.)	5 (M±S.D.)	p*
4.1. Follow the school rules	3.74±0.71	3.87±0.85	3.88±0.74	4.37±0.60	3.86±1.10	**.034**
4.2. Show adhesion and dependence on another classmate	1.81±0.70	1.85±0.84	1.88±0.61	1.79±0.71	2.07±1.14	.949
4.3. React to the approach and guidance from the teacher	1.94±0.84	1.97±0.69	1.67±0.48	1.95±0.23	2.07±0.62	.295
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	2.35±0.82	2.30±0.87	2.17±0.57	2.11±0.66	2.14±0.54	.746
4.5. Are uninterested in others feelings	1.97±0.64	1.85±0.63	1.71±0.69	1.32±0.48	2.07±0.62	**<.001**
4.6. Seem happy when joining the school	3.67±0.82	3.77±0.80	3.92±0.50	3.89±1.10	3.43±0.65	.161
4.7. Turn away their gaze when someone speaks to them	4.12±0.77	4.03±0.77	4.29±0.69	4.32±0.67	4.21±0.80	.316
4.8. Deny anything that is being proposed to them	4.12±0.77	4.03±0.77	4.29±0.69	4.32±0.67	4.21±0.80	.316
4.9. Claim their rights	3.59±0.73	3.62±0.76	3.54±0.78	4.00±0.58	4.00±0.00	**.018**
4.10. Cannot overcome their anger	2.72±0.79	2.76±0.50	3.00±0.59	2.42±0.96	3.14±0.77	**.021**
4.11. Discuss with the teacher about anything they are concerned	3.65±0.88	3.56±0.86	4.04±1.00	4.21±0.79	3.57±0.51	**.003**

4.12. Fight with other children	2.72±0.79	2.76±0.50	3.00±0.59	2.42±0.96	3.14±0.77	**.021**
4.13. Complicate the function of the classroom	4.09±0.49	4.03±0.68	4.33±0.64	4.42±0.77	3.64±1.34	**.020**
4.14. Indicate anxiety (complain about physical disturbances)	2.40±0.81	2.42±0.69	2.42±0.83	2.11±0.46	2.29±0.73	.200
4.15. Do not answer when someone speaks to them	4.12±0.77	4.03±0.77	4.29±0.69	4.32±0.67	4.21±0.80	.316
4.16. Have violent reactions	2.10±0.62	2.16±0.54	1.88±0.80	1.74±0.45	2.07±0.73	**.031**
4.17. Speak back and behave badly to their teacher	4.40±0.63	4.17±0.83	4.38±0.88	4.32±0.75	3.86±1.10	.176
4.18. Have the acceptance of their peers	3.62±0.97	3.55±0.65	4.08±0.50	3.95±0.78	4.00±0.00	**.001**
4.19. The lack of incentives can be distinguished	4.00±0.68	4.04±0.70	3.83±0.70	4.26±0.45	3.86±0.36	.149
4.20. It is characterized by low expectations of success	4.01±0.63	3.88±0.77	4.13±0.68	4.21±0.42	3.79±0.58	.140
4.21. It shows a lack of self-confidence and self-esteem	4.01±0.63	3.88±0.77	4.13±0.68	4.21±0.42	3.79±0.58	.140
4.22. Often are lonely and have no friends	4.22±0.60	3.76±0.95	3.96±0.36	3.47±1.02	3.86±1.10	**.001**
4.23. Usually develop an introverted character and distinguished apathy	4.22±0.60	3.76±0.95	3.96±0.36	3.47±1.02	3.86±1.10	**.001**
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	4.22±0.60	3.76±0.95	3.96±0.36	3.47±1.02	3.86±1.10	**.001**
4.25. They get encouragement and support from peers	3.64±1.12	3.78±0.71	4.00±0.59	3.84±0.60	3.36±0.84	.163
4.26. Their classmates ignore them	2.35±0.82	2.30±0.87	2.17±0.57	2.11±0.66	2.14±0.54	.746
4.27. Their classmates exclude them from class activities	2.35±0.82	2.30±0.87	2.17±0.57	2.11±0.66	2.14±0.54	.746
4.28. Their classmates bully them	2.77±1.12	2.63±0.93	2.54±0.72	2.37±0.60	1.79±0.43	**.004**
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	4.21±0.95	4.18±0.88	4.21±0.42	4.32±0.48	4.71±0.47	.125

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups. The groups that had been examined are the following: holders of a university degree (1), holders of a university and a master degree (2), holders of a university, master and doctoral degree (3), holders of a university degree and having training in special education (4) and holders of a university and a master degree and having training in Special Education (5).

Finally, it was examined whether teachers in typical education give a significantly different emphasis on the various ways of encouraging students with dyslexia to be able to respond effectively at intrapersonal and interpersonal level. As it can be seen in Table 2.28, the educational level influences most of the methods of encouraging students. In fact, almost all of

them are applied to a greater degree by holders of bachelor and master degree and training in Special Education. However, enrichment in the expression of personal and emotional needs and desires $(x^2(4) = 17.699, p = .001)$ is mainly applied by holders of bachelor, master, and doctoral degree (M. = 4.17, S.D. = 0.96). Finally, the promotion of one-on-one counseling $(x^2(4) = 22.788, p <.001)$ and the implementation of classroom guidance and experiential exercises for group engagement $(x^2(4) = 12.552, p = .014)$ are implemented in larger extent from holders of a degree and training in Special Education (M. = 2.95, SD = 1.03; M. = 2.32, SD = 1.29 respectively) than any other group.

Table 2.28.

Impact of educational level on teachers' responses to encouragement of students with dyslexia (typical education)

Group of questions	1 (M±S.D.)	2 (M±S.D.)	3 (M±S.D.)	4 (M±S.D.)	5 (M±S.D.)	p*
5.1. Enriching the expression of everyday personal and emotional needs and desires	3.21±1.25	3.37±1.22	4.17±0.96	3.95±0.97	3.86±1.29	**.001**
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	3.26±1.29	3.29±1.30	3.33±1.20	4.00±0.82	3.93±1.14	.083
5.3. Promoting one-on-one counseling	2.09±0.72	2.71±1.12	2.92±1.14	2.95±1.03	2.93±1.39	**<.001**
5.4. Promoting conversations so as to update students' general development of their autonomy	2.13±0.83	2.31±1.03	2.79±1.06	2.89±1.10	3.14±1.46	**.002**
5.5. Promoting the development of genuine and honest interpersonal relationships among students	3.40±1.21	3.79±0.92	3.96±0.96	3.79±0.79	4.14±0.77	.080
5.6. Creating positive attitude coming from their motivation and participation in school life	3.24±0.96	3.32±1.07	3.04±0.81	3.26±1.10	3.14±1.35	.793
5.7. Classroom guidance and experiential exercises for group engagement	1.68±0.61	2.10±1.00	2.25±0.99	2.32±1.29	2.21±1.05	**.014**
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	1.81±0.67	2.32±1.00	2.50±0.98	1.89±0.94	2.36±1.01	**.001**
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	3.12±1.07	3.52±0.88	3.58±0.83	4.00±0.00	4.00±0.00	**.001**
5.10. Promoting matching of trends among students	2.81±1.05	3.08±1.09	3.33±0.87	3.37±0.76	3.86±0.95	**.005**
5.11. Careful planning of the lesson in order to ensure conditions for	2.96±1.27	3.72±1.14	3.67±1.01	4.21±0.42	4.64±0.50	**<.001**

cooperation among students					
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	1.67±0.60	1.91±1.06	2.00±0.83	1.95±1.03	2.57±1.34	.088
5.13. Continuously encouraging their efforts and strengthening their self-esteem	4.44±0.50	4.51±0.52	4.71±0.46	4.32±0.48	4.93±0.27	**.001**
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	2.62±0.97	2.79±1.04	3.13±1.36	3.05±1.22	3.79±1.31	**.017**
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	4.12±0.62	4.06±0.65	3.88±0.68	3.89±0.74	4.71±0.73	**.002**
5.16. Reward after every good effort	3.10±1.33	3.15±1.17	3.79±1.02	3.26±1.10	3.86±1.17	**.041**
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	2.94±1.06	2.87±1.07	3.08±0.97	3.16±1.02	3.00±1.41	.677

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups. The groups that had been examined are the following: holders of a university degree (1), holders of a university and a master degree (2), holders of a university, master and doctoral degree (3), holders of a university degree and having training in special education (4) and holders of a university and a master degree and having training in Special Education (5).

1.5.2 Tests for teachers in special education

Subsequently, the responses of teachers in special education are examined in order to determine if their educational level significantly influences their responses to the sentences of the questionnaire. The teachers in this category were again divided into 5 groups: holders of a university and master degree (29 people), holders of a university, master and doctoral degree (11 people), holders of a university degree and having training in special education (15 people), holders of a university and master degree and having training in Special Education (59 people) and holders of a university, master and doctoral degree and having training in Special Education (7 people).

Initially, the responses to understanding and production of oral and written speech are examined. As it can be seen in Table 2.29, educational attainment significantly influences teachers' responses in most of the cases. In almost every case, the most positive answers appear

between the bachelor and master degree holders and the bachelor and master degree holders with training in special education.

However, the difficulty of students recognizing the requirements of a school project ($x2$ (4) = 13.038, p = .011), the difficulty in selecting and implementing strategies when assigning a simple project ($x2$ (4) = 10.014, p =. 040), difficulty in recognizing personal cognitive performance ($x2$ (4) = 10.270, p = .036) and the extra time required to understand the teacher's oral speech in the classroom ($x2$ (4) = 11.514, p = .021), are phenomena reported to a greater extent by degree holders with training in special education although they appear to be generally neutral (M. = 3.66, S.D. = 1.24; M. = 3.83, S.D. = 1.21; M. = 3.73, S.D. = 1.22; M. = 3.56, S.D. = 1.21 respectively).

Table 2.29.

Impact of educational level on teachers' answers to understanding and producing oral and written speech by students with dyslexia (special education)

Group of questions	1 (M±S.D.)	2 (M±S.D.)	3 (M±S.D.)	4 (M±S.D.)	5 (M±S.D.)	p*
2.1. They can find words from oral description.	3.07±1.03	3.00±0.63	2.80±0.78	2.59±0.85	3.43±0.98	**.035**
2.2. They can orally describe common words.	3.10±0.94	3.18±0.75	3.00±0.93	2.61±0.85	3.43±0.79	**.021**
2.3 They find it difficult to find the meaning of an unknown word.	3.07±1.28	2.45±0.82	3.00±1.31	3.58±1.25	2.57±0.79	**.026**
2.4. They do have the ability to associate words that express concepts relevant to each other	2.86±0.88	3.09±0.83	2.47±0.64	2.22±0.72	2.86±0.90	**<.001**
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	2.90±1.29	3.18±1.25	2.93±1.16	2.22±1.15	3.43±1.13	**.005**
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	3.24±1.19	3.36±1.12	2.80±1.21	2.44±0.95	3.57±1.13	**.002**
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	3.28±1.13	3.64±0.81	3.27±0.96	2.61±0.93	3.57±1.13	**.002**
2.8. They can foresee the continuing of a story	3.31±1.17	3.73±0.91	3.47±1.13	2.81±1.09	4.00±0.00	**.010**
2.9. They can produce critical conclusions of the texts.	3.21±1.21	3.82±1.08	3.13±1.19	2.63±1.02	3.71±1.25	**.003**
2.10. They use strategies so as to organize information in a narrative text	2.34±1.32	2.82±1.25	1.93±1.03	1.63±0.96	2.71±1.38	**.003**

2.11. They are able to summarize in writing extensive narrative or descriptive texts.	2.14±1.22	2.64±1.29	2.20±1.08	1.49±0.88	2.14±1.35	**.001**
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	4.52±0.69	4.82±0.41	4.47±0.64	4.51±0.65	4.71±0.49	.523
2.13. They are able to understand oral public announcements addressed to the wide school audience.	3.59±1.32	4.00±1.10	3.80±1.37	2.93±1.22	4.00±1.00	**.011**
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.24±0.64	4.45±0.52	4.40±0.51	4.17±0.42	4.57±0.54	.088
2.15. They able to understand short texts of everyday use.	3.34±1.37	3.91±1.30	3.60±1.55	2.75±1.45	4.00±1.00	**.028**
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	2.69±1.47	3.36±1.21	2.87±1.51	2.08±1.37	3.43±0.98	**.008**
2.17. They are able to produce descriptive and experiential texts	3.03±0.98	3.18±0.75	3.33±1.11	2.61±0.87	3.29±0.76	**.018**
2.18. They are able to compose short texts of everyday use.	3.14±1.03	3.64±0.81	3.40±1.12	2.66±0.90	3.43±0.79	**.004**
2.19. They have difficulty in recognizing the requirements arising from a school project	2.90±0.98	3.18±0.87	2.93±1.10	3.66±1.24	2.71±0.95	**.011**
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.10±1.08	3.27±1.19	3.53±1.06	3.83±1.21	3.00±1.29	**.040**
2.21. They have difficulty in focusing in a project and have low performance	3.83±1.20	4.00±1.00	3.80±0.86	4.29±0.72	4.29±1.11	.230
2.22. They have difficulty in assessing their own cognitive performance.	3.07±1.25	2.82±0.98	3.07±1.34	3.73±1.22	2.86±1.22	**.036**
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	2.79±1.47	2.36±1.43	2.60±1.45	3.56±1.61	2.14±1.46	**.021**
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.24±0.83	4.45±0.93	4.07±0.70	4.47±0.60	4.71±0.49	.148
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	2.83±1.42	3.27±1.19	3.07±1.16	2.37±1.22	3.71±0.76	**.019**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.
The groups that had been examined are the following: holders of a university and a master degree (1), holders of a university, master and doctoral degree (2), holders of a university degree and having training in special education (3) and holders of a university and a master degree and having training in Special Education (4) and holders of a university, master and doctoral degree and having training in Special Education (5).

It is then examined whether the educational level of teachers special education has a significant influence on their preference for specific teaching methods and tools. As Table 2.30 shows, the teachers' educational level significantly influences the responses to the use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro" ($x2$ (4) = 19.874, p = .001), providing direct teaching by informing about the objective of the lesson at the beginning and reviewing the main points at the end of the lesson (x^2(4) = 10.917, p = .028) and preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text (x^2(4) = 11.961, p = .018). In any case, teachers with a bachelor and master degree and training in Special Education provide the most positive answers (M. = 4.71, S.D. = 0.49; M. = 4.71, S.D. = 0.49; M. = 4.43, S.D. = 1.13 respectively).

Also, teachers of different levels of education show a significant difference in the responses to promoting initial reading by the teacher or classmates and repetition by students with dyslexia (x^2(4) = 13.265, p = .010), encouragement of interactive computer learning, audiovisual material and appropriately diversified educational material (x^2(4) = 16.027, p = .003), promoting dramatization and role rotation (x^2(4) = 9.571, p = .048) and promoting collaborative method and collaboration by student pairs (x^2(4) = 17.172, p = .002). Once again, the most often implementation of these methods is found in teachers with bachelor and master degree and training in Special Education (M. = 5.00, SD = 0.00; M. = 4.71, SD = 0.49; M. = 4.86, SD = 0.38; M. = 4.71, SD = 0.49 respectively).

Finally, teaching strategies for learning (x^2(4) = 18.094, p = .001) and guiding learners' improvement (x^2(4) = 11.289, p = .023) are more common in teachers with degrees and specialization in Special Education (M. = 4.83, SD = 0.38; M. = 4.63, SD = 0.52 respectively). It is worth noting that in almost all cases, where there was a statistically significant difference in at least one group of teachers compared to the rest, the least frequent application of the mentioned teaching tools and methods occurs between teachers holding only a basic degree and those holding a bachelor and master degree.

Table 2.30.

Impact of educational level on teachers' answers to teaching methods and tools (special education)

Group of questions	1 (M±S.D.)	2 (M±S.D.)	3 (M±S.D.)	4 (M±S.D.)	5 (M±S.D.)	p^*
3.1. Use of supervisory tools and means.	4.69±0.47	4.73±0.47	4.80±0.41	4.68±0.47	5.00±0.00	.432
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	4.52±0.51	4.55±0.52	4.73±0.46	4.56±0.50	4.86±0.38	.374
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	4.62±0.49	4.64±0.51	4.40±0.51	4.63±0.49	4.57±0.54	.597
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	4.00±0.66	3.91±1.04	4.60±0.51	4.53±0.50	4.71±0.49	**.001**
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	2.38±0.62	2.27±0.47	2.53±0.74	2.19±0.43	2.29±0.55	.270
3.6. Use of technology which can convert text into sound, like audio books.	2.38±0.62	2.27±0.47	2.27±0.46	2.17±0.38	2.29±0.76	.567
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	4.59±0.50	4.55±0.52	4.73±0.46	4.66±0.48	4.86±0.38	.585
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	4.14±0.79	4.36±0.67	4.40±0.63	4.64±0.48	4.71±0.49	**.028**
3.9. Use of information flow charts that is relevant with the following lesson.	4.31±0.76	4.27±0.91	4.47±0.64	4.53±0.50	4.86±0.38	.364
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	4.41±0.83	4.36±1.21	4.53±0.52	4.53±0.60	4.29±0.49	.767
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	4.45±0.63	4.55±0.52	4.47±0.64	4.31±0.65	4.86±0.38	.178
3.12. Teach learning strategies	4.48±0.51	4.36±0.51	4.47±0.52	4.83±0.38	4.57±0.54	**.001**
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000

3.15. Encouraging the reader to use self-control strategies for understanding the texts.	4.48±0.51	4.55±0.52	4.73±0.46	4.73±0.45	4.71±0.49	.181
3.16. Using contextual understanding as strategy for unknown words in texts.	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	4.03±0.63	4.00±0.45	4.00±0.93	4.41±0.50	4.43±1.13	**.018**
3.18. Use of text flowcharts to teach the summary strategy.	4.17±0.93	4.45±0.52	4.33±0.82	4.32±0.80	4.71±0.49	.561
3.19. Providing personalized learning support and student guidance for producing texts	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.21. Repetition of the instructions in a consistent and systematic way.	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	4.48±0.51	4.36±0.51	4.87±0.35	4.59±0.50	5.00±0.00	**.010**
3.23. Use questions before, during, and after reading texts	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.24. Encourage their active participation in the process of teaching by conducting dialogues.	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	4.31±0.47	4.18±0.41	4.47±0.52	4.53±0.50	4.71±0.49	.067
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	4.07±0.75	4.18±0.75	4.47±0.52	4.64±0.48	4.71±0.49	**.003**
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.	4.48±0.51	4.55±0.52	4.27±0.46	4.42±0.50	4.86±0.38	.119

3.30. Promote dramatization and role rotation.	4.28±0.59	4.18±0.41	4.40±0.51	4.47±0.54	4.86±0.38	**.048**
3.31. Promote collaborative method and collaboration by student pairs.	4.24±0.44	4.18±0.41	4.53±0.52	4.63±0.49	4.71±0.49	**.002**
3.32. Use the project method with the assignment of group research papers.	4.03±0.68	3.64±0.81	3.07±1.34	3.61±1.57	3.71±0.76	.220
3.33. Use teaching scenarios in the context of cross-thematic method.	3.79±0.90	3.45±1.21	3.20±1.37	3.41±1.59	4.29±1.11	.382
3.34. Assign tasks where students are capable to complete.	4.31±0.66	4.36±0.67	4.47±0.64	4.66±0.48	4.86±0.38	.053
3.35. Provide extra time to complete their work.	5.00±0.00	5.00±0.00	5.00±0.00	4.93±0.25	5.00±0.00	.366
3.36. Provide direct feedback to students about their responses.	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.37. Assessment of student progress guides teaching.	4.21±0.62	4.27±0.65	4.40±0.63	4.63±0.52	4.57±0.79	**.023**
3.38. Use of student's descriptive assessment and individual portfolio.	3.52±0.91	3.45±0.93	3.93±0.70	3.75±0.73	4.14±0.38	.216

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups. The groups that had been examined are the following: holders of a university and a master degree (1), holders of a university, master and doctoral degree (2), holders of a university degree and having training in special education (3) and holders of a university and a master degree and having training in Special Education (4) and holders of a university, master and doctoral degree and having training in Special Education (5).

Then, the possible statistically significant effect of educational level on teachers' responses to the educational level of children with dyslexia taught in special education was studied (Table 2.31). As it can be seen, the only statistically significant differences between the different teacher groups relate to the poor behavior of the students towards their teachers ($x^2(4)$ = 13.789, p = .008) and the teachers' view that sometimes support from a colleague with training in Special Education is needed ($x^2(4)$ = 21.146, p <.001). It is worth noting that in the first case, teachers with a bachelor degree (M. = 4.48, SD = 0.51) as well as those with a bachelor degree and training in Special Education (M. = 4.46, SD = 0.50) or a bachelor and master degree and training in Special Education (M = 4.43, SD = 0.54) provided significantly more positive responses than others. On the contrary, the need for a teacher with special education knowledge is more appreciated from the last two groups of teachers who possess, among other degrees, training in Special Education (M. = 4.86, S.D. = 0.35; M. = 4.86, S.D. = 0.38 respectively).

Table 2.31.

Impact of educational level on the responses to the behavior and problems of students with dyslexia (special education)

Group of questions	1 (M±S.D.)	2 (M±S.D.)	3 (M±S.D.)	4 (M±S.D.)	5 (M±S.D.)	p*
4.1. Follow the school rules	1.72±0.46	1.64±0.51	1.47±0.52	1.51±0.50	1.43±0.54	.282
4.2. Show adhesion and dependence on another classmate	4.31±0.47	4.27±0.47	4.47±0.52	4.34±0.58	4.43±0.54	.828
4.3. React to the approach and guidance from the teacher	4.28±0.46	4.18±0.41	4.60±0.51	4.47±0.50	4.14±0.38	.044
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	4.31±0.47	4.36±0.51	4.27±0.46	4.29±0.46	4.14±0.38	.892
4.5. Are uninterested in others feelings	4.55±0.51	4.36±0.51	4.33±0.49	4.54±0.50	4.43±0.54	.505
4.6. Seem happy when joining the school	1.41±0.50	1.64±0.51	1.60±0.51	1.44±0.50	1.43±0.54	.586
4.7. Turn away their gaze when someone speaks to them	4.62±0.49	4.55±0.52	4.67±0.49	4.54±0.50	4.57±0.54	.902
4.8. Deny anything that is being proposed to them	4.41±0.50	4.36±0.51	4.40±0.51	4.49±0.50	4.43±0.54	.903
4.9. Claim their rights	1.17±0.38	1.00±0.00	1.13±0.35	1.05±0.22	1.29±0.49	.118
4.10. Cannot overcome their anger	4.86±0.35	4.91±0.30	5.00±0.00	4.92±0.28	4.86±0.38	.643
4.11. Discuss with the teacher about anything they are concerned	1.41±0.50	1.55±0.52	1.53±0.52	1.46±0.50	1.57±0.54	.882
4.12. Fight with other children	4.86±0.35	4.91±0.30	5.00±0.00	4.92±0.28	4.86±0.38	.643
4.13. Complicate the function of the classroom	4.24±0.44	4.09±0.30	4.47±0.52	4.25±0.44	4.43±0.54	.220
4.14. Indicate anxiety (complain about physical disturbances)	4.24±0.44	4.36±0.51	4.40±0.51	4.37±0.49	4.29±0.49	.756
4.15. Do not answer when someone speaks to them	4.28±0.46	4.18±0.41	4.27±0.46	4.25±0.44	4.29±0.49	.981
4.16. Have violent reactions	4.45±0.51	4.45±0.52	4.40±0.51	4.47±0.50	4.29±0.49	.903
4.17. Speak back and behave badly to their teacher	4.48±0.51	4.18±0.41	4.00±0.00	4.46±0.50	4.43±0.54	**.008**
4.18. Have the acceptance of their peers	1.52±0.51	1.55±0.52	1.53±0.52	1.47±0.50	1.86±0.38	.450
4.19. The lack of incentives can be distinguished	4.62±0.49	4.36±0.51	4.47±0.52	4.39±0.49	4.86±0.38	.068
4.20. It is characterized by low expectations of success	4.52±0.51	4.36±0.51	4.60±0.51	4.32±0.47	4.29±0.49	.198
4.21. It shows a lack of self-confidence and self-esteem	4.52±0.51	4.36±0.51	4.60±0.51	4.32±0.47	4.29±0.49	.198
4.22. Often are lonely and have no friends	1.72±0.46	1.82±0.41	1.60±0.51	1.58±0.50	1.86±0.38	.294

4.23. Usually develop an introverted character and distinguished apathy	1.72±0.46	1.82±0.41	1.60±0.51	1.58±0.50	1.86±0.38	.294
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	1.72±0.46	1.82±0.41	1.60±0.51	1.58±0.50	1.86±0.38	.294
4.25. They get encouragement and support from peers	1.52±0.51	1.55±0.52	1.53±0.52	1.47±0.50	1.86±0.38	.450
4.26. Their classmates ignore them	4.31±0.47	4.36±0.51	4.27±0.46	4.29±0.46	4.14±0.38	.892
4.27. Their classmates exclude them from class activities	4.31±0.47	4.36±0.51	4.27±0.46	4.29±0.46	4.14±0.38	.892
4.28. Their classmates bully them	2.62±1.15	2.64±1.03	2.40±0.91	2.15±0.83	2.86±0.69	.101
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	4.48±0.51	4.36±0.51	4.73±0.46	4.86±0.35	4.86±0.38	**<.001**

[*]In cases where p <.05, there is a statistically significant difference in the responses between the different groups. The groups that had been examined are the following: holders of a university and a master degree (1), holders of a university, master and doctoral degree (2), holders of a university degree and having training in special education (3) and holders of a university and a master degree and having training in Special Education (4) and holders of a university, master and doctoral degree and having training in Special Education (5).

Finally, the potential impact of educational level on teachers' responses to methods of encouraging students to be more confident in themselves and to be more social was studied. As shown in Table 2.32, classroom guidance and experiential exercises for group engagement ($x^2(4)$ = 42.480, p <.001), promoting role playing and simulation of real and hypothetical situations to promote communication and behavioral skills ($x^2(4)$ = 21.874, p <.001) and having a crucial role in finding potential friendship pairs and in creating situations that require cooperation ($x^2(4)$ = 44.430, p <.001) are applied to a greater degree by bachelor degree holders and by having training in Special Education (M. = 4.83, SD = 0.38; M. = 4.51, SD = 0.75; M. = 4.57, SD = 0.54 respectively) than other groups of teachers. Also, the reward for each good effort ($x^2(4)$ = 23.592, p <.001) was found to be in good agreement with all teachers in the latter two groups having training in Special Education (M. = 5.00, S.D. = 0.00 in each case).

The last significant difference refers to the method of promoting intrapersonal adaptation in moment-to-moment teacher-student interaction (x2 (4) = 17.198, p = .002) mainly applied by bachelor and master degree holders having training in Special Education (M. = 4.71, SD = 0.49). It is worth noting that in each of the above cases, it is the teachers with a bachelor or master degree

who replied to a lesser extent that they apply these methods of encouraging students at intrapersonal and interpersonal level.

Table 2.32.

Impact of educational level on teachers' responses to encouragement of students with dyslexia (special education)

Group of questions	1 (M±S.D.)	2 (M±S.D.)	3 (M±S.D.)	4 (M±S.D.)	5 (M±S.D.)	p*
5.1. Enriching the expression of everyday personal and emotional needs and desires	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.3. Promoting one-on-one counseling	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.4. Promoting conversations so as to update students' general development of their autonomy	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.5. Promoting the development of genuine and honest interpersonal relationships among students	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.6. Creating positive attitude coming from their motivation and participation in school life	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.7. Classroom guidance and experiential exercises for group engagement	4.17±0.38	4.18±0.41	4.47±0.52	4.83±0.38	4.71±0.49	**<.001**
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	3.93±0.65	4.09±0.54	4.40±0.63	4.47±0.70	4.71±0.49	**.002**
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.10. Promoting matching of trends among students	4.10±0.72	4.18±0.60	4.27±0.59	4.31±0.68	4.57±0.79	.433
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students	4.48±0.87	4.73±0.91	4.53±1.06	4.49±0.88	5.00±0.00	.221
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	3.90±0.49	4.00±0.45	4.33±0.62	4.51±0.75	4.43±0.79	**<.001**
5.13. Continuously encouraging their efforts and strengthening their self-esteem	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.14. Having crucial role in finding potential friendship pairs and in	4.10±0.31	4.09±0.30	4.40±0.51	4.78±0.42	4.57±0.54	**<.001**

creating situations that require cooperation						
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.16. Reward after every good effort	4.69±0.47	4.73±0.47	4.93±0.26	5.00±0.00	5.00±0.00	**<.001**
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	5.00±0.00	1.000

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups. The groups that had been examined are the following: holders of a university and a master degree (1), holders of a university, master and doctoral degree (2), holders of a university degree and having training in special education (3) and holders of a university and a master degree and having training in Special Education (4) and holders of a university, master and doctoral degree and having training in Special Education (5).

1.6. Inductive tests according to teachers' work experience in typical education

The tests in this section are concerned with the statistically significant effect of work experience in typical education on teachers' responses in typical and special education *(Objectives 2-5)*. In both cases we have more than 2 independent groups in terms of years of teaching in typical education. However, in the case of teachers working in special education, because the regularity of the data is not met in all samples, the Analysis of Variance (ANOVA) test for mean difference testing was replaced by the Kruskal-Wallis test for medians.

1.6.1 Tests for teachers in typical education

Teachers who work in typical education are divided into the following four groups according to their formal teaching years: 3-8 years (33 people), 9-14 years (97 people), 15-20 years (91 people) and> = 21 years (33 people). All tests were performed with Analysis of Variance or Brown-Forsythe correction if homoscedasticity was violated. Also, in cases with equal population fluctuations, paired controls were performed using the Tukey method while in the other cases the Games-Howell method was applied.

First, teachers' responses to students' ability to comprehend and produce written and oral speech are studied. As it is shown in Table 2.33, in most cases there was at least one group significantly differed in terms of students' verbal and written abilities. It is worth noting that the greatest divergence is observed between the two extreme groups. Specifically, teachers with 3-8

years of service in the typical education are the most positive about the ability of children with dyslexia to verbal and written issues in school life, while teachers with more than 20 years of service are the ones who gave the most negative answers.

Table 2.33.

Impact of work experience in typical education on teachers' answers to understanding and producing oral and written speech by students with dyslexia (typical education)

Group of questions	3-8 years (M±S.D.)	9-14 years (M±S.D.)	15-20 years (M±S.D.)	>=21 years (M±S.D.)	p*
2.1. They can find words from oral description.**	4.03±0.53	3.16±0.98	3.63±0.97	3.00±0.87	**<.001**
2.2. They can orally describe common words.**	4.06±0.50	3.28±0.89	3.68±0.86	3.00±0.87	**<.001**
2.3 They find it difficult to find the meaning of an unknown word.	3.09±1.10	2.79±1.01	2.60±1.02	2.58±1.25	.107
2.4. They do have the ability to associate words that express concepts relevant to each other.**	3.94±0.75	3.14±1.07	3.51±1.02	3.09±0.91	**<.001**
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence.**	4.09±0.68	3.65±0.90	3.57±0.90	3.30±0.95	**.003**
2.6. When sentences are given to then, they reproduce a paragraph that makes sense.**	3.97±0.39	3.54±0.94	3.40±0.99	3.24±1.12	**.005**
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs.**	3.88±0.42	3.86±0.61	3.55±0.86	3.33±1.14	**.003**
2.8. They can foresee the continuing of a story.**	3.70±0.73	3.67±0.75	3.73±0.70	3.45±0.97	.423
2.9. They can produce critical conclusions of the texts.**	3.58±0.75	3.25±0.91	3.09±1.02	2.94±0.86	**.015**
2.10. They use strategies so as to organize information in a narrative text	3.03±1.02	2.60±0.72	2.51±0.67	2.27±0.67	**<.001**
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	2.48±0.80	2.24±0.67	2.22±0.83	1.85±0.44	**.005**
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	4.70±0.77	4.16±0.84	4.53±0.64	4.48±0.71	**.001**
2.13. They are able to understand oral public announcements addressed to the wide school audience.	4.24±0.50	4.03±0.62	4.11±0.57	3.88±0.89	.104
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.36±0.86	3.94±0.75	4.21±0.68	4.00±0.66	**.009**

2.15. They able to understand short texts of everyday use.**	4.03±0.47	3.88±0.63	3.95±0.67	3.79±0.89	.476
2.16. They are able to understand texts they might encounter in special occasions of their everyday life.**	3.45±0.51	3.59±0.67	3.25±0.74	2.97±1.02	**<.001**
2.17. They are able to produce descriptive and experiential texts.**	3.79±0.89	3.65±0.60	3.29±0.74	3.09±0.88	**<.001**
2.18. They are able to compose short texts of everyday use.**	4.00±0.25	3.82±0.38	3.71±0.50	3.27±0.84	**<.001**
2.19. They have difficulty in recognizing the requirements arising from a school project.**	2.88±1.19	2.85±1.07	3.00±0.91	3.39±1.06	.085
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.30±1.21	3.07±1.06	3.10±0.97	2.88±1.14	.446
2.21. They have difficulty in focusing in a project and have low performance.**	4.18±0.68	3.92±0.79	3.57±1.12	3.52±1.25	**.005**
2.22. They have difficulty in assessing their own cognitive performance.	2.88±1.14	2.74±1.04	2.91±1.01	2.64±1.08	.512
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	2.94±1.41	2.35±1.33	2.56±1.27	2.15±1.48	.071
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.**	4.48±0.51	4.46±0.60	4.32±0.82	4.27±0.98	.384
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.**	4.21±0.42	4.10±0.53	3.80±0.58	3.64±1.17	**.002**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.
** In these cases the Brown-Forsythe correction was applied. The corresponding paired tests were performed using the Games-Howell method.

Subsequently, it was examined whether years of teaching in typical education significantly influence the teaching methods and tools preferred by teachers. As it can be seen from the Table 2.34, this feature significantly affects the responses to almost all of the reported teaching tools and methods. In almost every case, the most positive in using these tools and methods are teachers with 3-8 years of working experience in typical education while there are also cases where those who work 9-14 years in these departments are superior. In contrast, teachers with the most years of working experience in typical education (over 20 years) are the ones who showed the least agreement on these tools and methods.

Table 2.34.

Impact of work experience in typical education on teachers' answers to teaching methods and tools (typical education)

Group of questions	3-8 years (M±S.D.)	9-14 years (M±S.D.)	15-20 years (M±S.D.)	>=21 years (M±S.D.)	p*
3.1. Use of supervisory tools and means.**	4.61±0.50	4.04±0.89	2.27±0.58	2.15±0.36	**<.001**
3.2. Use of diversified teaching reclaiming Information and Communication Technologies.**	3.00±1.20	2.36±0.78	1.99±0.59	1.61±0.56	**<.001**
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.**	3.94±1.12	3.33±1.25	3.42±1.06	1.58±0.75	**<.001**
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".**	2.97±1.40	2.09±1.06	1.95±0.87	1.39±0.56	**<.001**
3.5. Use of the Digital Learning Platform for students and teachers "e-me".**	2.27±0.63	2.43±0.69	2.00±0.39	2.30±0.64	**<.001**
3.6. Use of technology which can convert text into sound, like audio books.**	2.12±0.78	2.32±0.80	1.87±0.50	1.70±0.64	**<.001**
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.**	3.24±1.66	2.06±1.31	1.91±1.06	1.55±0.71	**<.001**
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson.**	2.91±1.36	2.77±1.00	2.87±1.18	2.00±1.03	.002
3.9. Use of information flow charts that is relevant with the following lesson.**	3.12±1.19	2.42±1.17	2.33±1.01	1.52±0.91	**<.001**
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").**	2.55±1.52	2.04±1.14	1.71±0.95	1.39±0.50	**<.001**
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.**	2.70±1.40	2.07±1.12	1.84±0.62	1.58±0.75	**<.001**
3.12. Teach learning strategies.**	2.76±1.35	2.49±0.79	2.11±0.41	2.03±0.88	.001
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one.	3.03±1.13	3.04±0.96	2.55±0.91	2.12±0.96	**<.001**
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.**	3.33±1.11	2.66±0.88	2.29±0.74	1.85±0.97	**<.001**

3.15. Encouraging the reader to use self-control strategies for understanding the texts.[**]	3.00±1.39	2.09±1.05	1.89±0.80	1.61±0.56	**<.001**
3.16. Using contextual understanding as strategy for unknown words in texts.[**]	4.42±0.56	4.04±0.84	3.46±0.99	3.97±0.17	**<.001**
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text.[**]	2.67±1.34	2.72±1.15	2.14±1.08	1.64±0.78	**<.001**
3.18. Use of text flowcharts to teach the summary strategy.[**]	2.30±1.24	2.14±0.99	1.96±0.68	1.67±0.78	**.029**
3.19. Providing personalized learning support and student guidance for producing texts.[**]	3.06±1.56	1.90±1.21	1.49±0.62	1.36±0.49	**<.001**
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.[**]	4.36±0.82	3.81±1.07	3.44±1.32	1.82±1.01	**<.001**
3.21. Repetition of the instructions in a consistent and systematic way.[**]	4.21±0.86	4.18±0.82	4.11±0.71	4.36±0.49	.390
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	2.97±1.02	3.11±1.21	2.92±1.09	2.36±1.25	**.016**
3.23. Use questions before, during, and after reading texts.[**]	3.27±1.51	3.35±1.08	3.16±1.01	3.55±0.97	.424
3.24. Encourage their active participation in the process of teaching by conducting dialogues.[**]	3.79±1.19	2.89±1.03	2.42±0.80	2.39±0.70	**<.001**
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.[**]	3.82±1.36	2.90±0.98	2.42±0.84	2.48±0.71	**<.001**
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.[**]	3.18±1.19	2.48±0.98	2.11±0.81	1.61±0.66	**<.001**
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences.[**]	3.82±0.92	3.77±0.74	3.36±0.91	2.61±0.66	**<.001**
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.[**]	3.03±1.43	2.38±1.30	2.25±0.95	1.97±0.81	**.002**
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.[**]	3.27±1.13	2.82±1.04	2.44±0.79	2.36±0.70	**<.001**
3.30. Promote dramatization and role rotation.[**]	2.88±1.47	2.15±1.09	1.79±0.69	1.64±0.55	**<.001**

3.31. Promote collaborative method and collaboration by student pairs.**	3.70±1.05	2.47±1.23	2.67±0.98	2.61±0.66	**<.001**
3.32. Use the project method with the assignment of group research papers.**	3.18±1.33	2.71±1.13	2.74±0.96	3.12±0.89	.063
3.33. Use teaching scenarios in the context of cross-thematic method.**	2.42±1.15	2.12±1.06	1.88±.79	1.85±0.36	**.011**
3.34. Assign tasks where students are capable to complete.**	2.76±1.70	2.23±1.25	1.66±0.75	2.06±0.75	**<.001**
3.35. Provide extra time to complete their work.**	4.00±1.20	4.14±0.83	4.26±0.70	4.27±0.52	.420
3.36. Provide direct feedback to students about their responses.**	3.33±1.49	2.47±1.37	2.04±0.87	2.52±0.91	**<.001**
3.37. Assessment of student progress guides teaching.**	3.36±1.11	2.14±1.12	1.75±0.68	1.45±0.51	**<.001**
3.38. Use of student's descriptive assessment and individual portfolio.**	2.12±0.78	1.74±0.89	1.43±0.50	1.09±0.29	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.
** In these cases the Brown-Forsythe correction was applied. The corresponding paired tests were performed using the Games-Howell method.

The third set of questions relates to the behaviors that children with dyslexia present or receive (Table 2.35). Working experience in typical education appears to significantly differentiate teachers' views on the problems that students with dyslexia create or suffer from. In most cases, teachers with more than 20 years of service in typical education are more likely to report that students with dyslexia exhibit negative behavior, indifference, introversion, and loneliness.

Table 2.35.

Impact of work experience in typical education on the responses to the behavior and problems of students with dyslexia (typical education)

Group of questions	3-8 years (M±S.D.)	9-14 years (M±S.D.)	15-20 years (M±S.D.)	>=21 years (M±S.D.)	p*
4.1. Follow the school rules.**	4.03±0.68	3.54±0.88	4.08±0.62	4.12±0.55	**<.001**
4.2. Show adhesion and dependence on another classmate.	2.03±0.95	2.05±0.93	1.64±0.55	1.61±0.50	**<.001**
4.3. React to the approach and guidance from the teacher.**	1.88±0.55	2.31±0.81	1.66±0.48	1.67±0.48	**<.001**
4.4. Do not protect themselves and do not defend themselves when someone is attacking them.**	1.91±0.68	2.48±0.90	2.30±0.71	2.03±0.64	**<.001**
4.5. Are uninterested in others feelings.**	1.82±0.85	1.97±0.78	1.70±0.46	1.88±0.33	**.047**
4.6. Seem happy when joining the	3.58±0.97	3.31±0.80	4.13±0.52	4.06±0.61	**<.001**

school .**					
4.7. Turn away their gaze when someone speaks to them.**	4.12±0.33	3.63±0.75	4.47±0.64	4.55±0.51	**<.001**
4.8. Deny anything that is being proposed to them.**	4.12±0.33	3.63±0.75	4.47±0.64	4.55±0.51	**<.001**
4.9. Claim their rights.**	4.03±0.53	3.36±0.70	3.88±0.63	3.45±0.87	**<.001**
4.10. Cannot overcome their anger.**	2.55±0.91	2.72±0.83	2.84±0.40	2.88±0.49	.146
4.11. Discuss with the teacher about anything they are concerned.**	3.36±0.82	3.04±0.72	4.27±0.67	4.12±0.65	**<.001**
4.12. Fight with other children.**	2.55±0.91	2.72±0.83	2.84±0.40	2.88±0.49	.146
4.13. Complicate the function of the classroom.**	3.64±0.78	3.73±0.60	4.53±0.50	4.33±0.48	**<.001**
4.14. Indicate anxiety (complain about physical disturbances).**	2.58±0.94	2.67±0.88	2.10±0.34	2.09±0.29	**<.001**
4.15. Do not answer when someone speaks to them.**	4.12±0.33	3.63±0.75	4.47±0.64	4.55±0.1	**<.001**
4.16. Have violent reactions.**	1.85±0.36	2.00±0.52	2.24±0.78	2.09±0.29	**<.001**
4.17. Speak back and behave badly to their teacher	3.91±0.91	3.92±0.90	4.67±0.50	4.39±0.50	**<.001**
4.18. Have the acceptance of their peers.**	3.76±0.66	3.44±0.90	3.70±0.57	4.21±0.60	**<.001**
4.19. The lack of incentives can be distinguished.**	3.97±0.85	4.02±0.75	3.98±0.49	4.21±0.65	.407
4.20. It is characterized by low expectations of success.**	3.79±0.65	3.90±0.71	4.05±0.57	4.09±0.91	.171
4.21. It shows a lack of self-confidence and self-esteem.**	3.79±0.65	3.90±0.71	4.05±0.57	4.09±0.91	.171
4.22. Often are lonely and have no friends.**	3.55±1.12	3.72±1.03	4.08±0.50	4.27±0.52	**<.001**
4.23. Usually develop an introverted character and distinguished apathy.**	3.55±1.12	3.72±1.03	4.08±0.50	4.27±0.52	**<.001**
4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing.**	3.55±1.12	3.72±1.03	4.08±0.50	4.27±0.52	**<.001**
4.25. They get encouragement and support from peers.**	3.70±0.73	3.19±0.92	4.12±0.49	4.36±0.49	**<.001**
4.26. Their classmates ignore them.**	1.91±0.68	2.48±0.90	2.30±0.71	2.03±0.64	**<.001**
4.27. Their classmates exclude them from class activities.**	1.91±0.68	2.48±0.90	2.30±0.71	2.03±0.64	**<.001**
4.28. Their classmates bully them.**	2.12±0.96	2.79±0.92	2.42±0.72	3.03±1.26	**<.001**
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training.**	4.33±1.08	4.22±0.71	4.49±0.57	3.48±1.03	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

** In these cases the Brown-Forsythe correction was applied. The corresponding paired tests were performed using the Games-Howell method.

Finally, teachers in typical education are examined on the impact of years of service in these kind of education on their responses of ways to enhance self-esteem and extroversion of students with dyslexia. As Table 2.36 shows, all methods of encouragement are applied on a significantly different scale depending on this characteristic. It is worth noting that in all cases, teachers with 3-8 years of service in typical education are the most positive in using these methods to contribute the self-confidence of students with dyslexia while teachers with more than 20 years of service are the most negative.

Table 2.36.

Impact of work experience in typical education on teachers' responses to encouragement of students with dyslexia (typical education)

Group of questions	3-8 years (M±S.D.)	9-14 years (M±S.D.)	15-20 years (M±S.D.)	>=21 years (M±S.D.)	p*
5.1. Enriching the expression of everyday personal and emotional needs and desires.**	4.42±0.50	3.72±1.00	3.26±1.36	2.39±1.06	**<.001**
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge.**	4.36±0.90	3.52±1.05	3.34±1.35	2.15±0.91	**<.001**
5.3. Promoting one-on-one counseling.**	3.33±1.43	2.35±1.07	2.64±0.93	2.39±0.83	**<.001**
5.4. Promoting conversations so as to update students' general development of their autonomy.**	3.24±1.32	2.56±1.01	2.11±0.97	1.97±0.53	**<.001**
5.5. Promoting the development of genuine and honest interpersonal relationships among students.	4.52±0.67	3.75±1.10	3.67±0.93	2.91±0.68	**<.001**
5.6. Creating positive attitude coming from their motivation and participation in school life	3.55±1.18	3.48±0.96	2.99±1.04	3.12±0.93	**.003**
5.7. Classroom guidance and experiential exercises for group engagement.**	2.79±1.36	1.97±1.10	1.89±0.66	1.85±0.36	**<.001**
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction.**	2.64±1.17	2.07±1.08	2.09±0.76	2.21±0.74	**.026**
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students.**	3.58±1.12	3.21±0.97	3.57±0.88	3.91±0.29	**<.001**
5.10. Promoting matching of trends among students.**	3.55±1.18	3.28±1.21	2.81±0.83	2.91±0.81	**.001**
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students.**	4.33±1.11	3.62±1.27	3.73±0.99	2.30±0.53	**<.001**

5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills.**	2.76±1.32	1.82±1.11	1.77±0.62	1.70±0.59	**<.001**
5.13. Continuously encouraging their efforts and strengthening their self-esteem.**	4.55±0.51	4.65±0.50	4.53±0.50	4.09±0.29	**<.001**
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation.**	3.55±1.28	2.88±1.25	2.77±0.97	2.39±0.50	**<.001**
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change.	4.36±0.70	3.99±0.67	4.07±0.66	4.18±0.64	**.039**
5.16. Reward after every good effort.**	4.36±0.60	3.68±1.15	2.80±1.00	2.15±1.00	**<.001**
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support.**	3.85±1.15	3.07±1.10	2.65±0.96	2.58±0.66	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.
** In these cases the Brown-Forsythe correction was applied. The corresponding paired tests were performed using the Games-Howell method.

1.6.2 Tests for teachers in special education

As for teachers in special education, they are divided into three categories according to years of working in typical education: 0-2 years (55 people), 3-8 years (45 people) and 9-14 years (21 people) . In each case, the Kruskal-Wallis test was used to determine whether there was a statistically significant difference in the responses between the three groups of teachers teaching in typical education.

First, the responses to the students' ability to comprehend and produce oral and written speech are examined. As shown in Table 2.37, almost all cases are significantly affected by years of service in typical education. Specifically, teachers with the most years of service in these kind of education are the most positive in the ability of students with dyslexia in oral and written speech demands.

In contrast, younger teachers are more likely to state that students have difficulty finding the meaning of an unfamiliar word (M. = 3.51, SD = 1.32), to recognize the requirements of a school project (M. = 3.51, SD = 1.15).), choose and implement strategies when assigned a simple project (M. = 3.80, SD = 1.13). Also, teachers in special education with 0-2 years of working in typical education are those who emphasize to a greater extent the difficulty of students to concentrate

on a project and the appearance of poor performance (M. = 4.36, SD = 0.75), the difficulty to identify personal their cognitive performance (M. = 3.55, SD = 1.26) and the extra time needed to understand teachers' oral speech in the classroom (M. = 3.35, SD = 1.59).

Table 2.37.

Impact of work experience in typical education on teachers' answers to understanding and producing oral and written speech by students with dyslexia (special education)

Group of questions	0-2 years (M±S.D.)	3-8 years (M±S.D.)	9-14 years (M±S.D.)	p*
2.1. They can find words from oral description.	2.73±0.95	2.76±0.86	3.19±0.81	.055
2.2. They can orally describe common words.	2.73±0.91	2.84±0.88	3.33±0.80	**.026**
2.3 They find it difficult to find the meaning of an unknown word.	3.51±1.32	3.13±1.16	2.67±1.11	**.030**
2.4. They do have the ability to associate words that express concepts relevant to each other	2.38±0.76	2.58±0.87	2.76±0.89	.105
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	2.45±1.32	2.62±1.13	3.10±1.22	.095
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	2.65±1.11	2.78±1.09	3.38±1.16	**.035**
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	2.76±1.02	3.04±1.07	3.52±0.93	**.017**
2.8. They can foresee the continuing of a story	2.96±1.17	3.18±1.17	3.67±0.86	.057
2.9. They can produce critical conclusions of the texts.	2.71±1.10	3.13±1.24	3.48±0.98	**.009**
2.10. They use strategies so as to organize information in a narrative text	1.71±1.06	2.13±1.29	2.52±1.03	**.005**
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	1.60±0.99	1.98±1.22	2.38±1.02	**.003**
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	4.56±0.57	4.67±0.48	4.24±0.94	.186
2.13. They are able to understand oral public announcements addressed to the wide school audience.	3.05±1.25	3.38±1.35	4.10±1.00	**.010**
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.27±0.45	4.31±0.47	4.14±0.73	.748
2.15. They able to understand short texts of everyday use.	2.93±1.48	3.20±1.49	3.76±1.22	.156
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	2.18±1.39	2.60±1.53	3.24±1.09	**.014**

2.17. They are able to produce descriptive and experiential texts	2.73±0.95	2.82±0.86	3.48±0.93	**.007**
2.18. They are able to compose short texts of everyday use.	2.80±0.99	3.00±0.98	3.52±0.93	**.018**
2.19. They have difficulty in recognizing the requirements arising from a school project	3.51±1.15	3.33±1.19	2.62±0.92	**.011**
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	3.80±1.13	3.49±1.25	2.86±0.96	**.008**
2.21. They have difficulty in focusing in a project and have low performance	4.36±0.75	3.98±0.94	3.62±1.12	**.009**
2.22. They have difficulty in assessing their own cognitive performance.	3.55±1.26	3.44±1.24	2.67±1.11	**.026**
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	3.35±1.59	3.09±1.73	2.29±1.01	**.046**
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.51±0.54	4.38±0.78	4.05±0.87	.103
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	2.55±1.33	2.60±1.27	3.48±0.93	**.014**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

Next, it was examined the possible statistically significant effect of years of teaching in standard sections on teachers' responses on their teaching methods and tools (Table 2.38). As it turns out, teachers with different years of service in typical education show a significant difference in the use of supervisory tools and tools ($x^2(2) = 7.690$, p = .021), the use of the Digital Learning Platform for students and teachers "e-me". ($x^2(2) = 14.511$, p = .001) and the use of technology that can convert text to sound ($x^2(2) = 23.604$, p <0.001). In any case, teachers in special education and have completed 3-8 years of teaching in typical education are the most positive (M. = 4.87, SD = 0.34; M. = 2.47, SD = 0.55; M. = 2.49, SD = 0.55 respectively).

Also, years of working in typical education influence the responses of teachers teaching in special education on the use of the KWL technique ($x^2(2) = 22.029$, p <.001), the use of text flowcharts to teach the summary strategy ($x^2(2) = 12.282$, p = .002), encouraging interactive computer learning, audiovisual material and appropriately diversified educational material ($x^2(2) = 8.741$, p = .013) and using the project method with the assignment of group research papers ($x^2(2) = 8.161$, p = .017). In any case, teachers with 9-14 years in typical education are the ones who apply these teaching methods to the greatest extent (M. = 4.90, SD = 0.30; M. = 4.62, SD = 0.50; M. = 4.67, SD = 0.73; M. = 4.14, SD = 0.57 respectively) while teachers with 0-2 years of service in this

kind of education are the most negative (M. = 4.27, SD = 0.56; M. = 4.02, SD = 0.97; M. = 4.29, SD = 0.63; M. = 3.13, SD = 1.60 respectively).

Finally, teachers who teach in integration departments significantly differ in promoting initial reading by the teacher or a classmate and then repetition of reading by the students with dyslexia ($x^2(2)$ = 13.114, p = .001), promotion of collaborative method and collaboration by student pairs ($x^2(2)$ = 8.970, p = .011), providing extra time to complete their work ($x^2(2)$ = 9.884, p = .007) and student's descriptive use assessment and individual portfolio ($x^2(2)$ = 16.763, p <.001) depending on their years of service in typical education. The teachers with the least experience in typical education (0-2 years) are those who apply the above teaching methods on a larger scale (M. = 4.76, SD = 0.43; M. = 4.64, SD = 0.49; M. = 5.00, SD = 0.00; M. = 3.98, SD = 0.85) while teachers with 9-14 years of working experience are less receptive to these methods (M. = 4.33, SD = 0.48; M. = 4.33, SD = 0.48; M . = 4.86, SD = 0.36; M. = 3.33, SD = 0.91).

Table 2.38.

Impact of work experience in typical education on teachers' answers to teaching methods and tools (special education)

Group of questions	0-2 years (M±S.D.)	3-8 years (M±S.D.)	9-14 years (M±S.D.)	p*
3.1. Use of supervisory tools and means.	4.64±0.49	4.87±0.34	4.62±0.50	**.021**
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	4.49±0.51	4.71±0.46	4.57±0.51	.085
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	4.51±0.51	4.69±0.47	4.62±0.50	.187
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	4.49±0.51	4.69±0.47	4.62±0.50	.280
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	2.15±0.49	2.47±0.55	2.29±0.64	**.001**
3.6. Use of technology which can convert text into sound, like audio books.	2.07±0.33	2.49±0.55	2.19±0.51	**<.001**
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	4.62±0.49	4.71±0.46	4.62±0.50	.588
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	4.36±0.73	4.56±0.50	4.57±0.60	.418
3.9. Use of information flow charts that is	4.38±0.68	4.51±0.59	4.57±0.60	.472

relevant with the following lesson.				
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	4.27±0.56	4.51±0.90	4.90±0.30	**<.001**
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	4.51±0.66	4.36±0.53	4.29±0.72	.163
3.12. Teach learning strategies	4.69±0.47	4.58±0.50	4.67±0.48	.490
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.15. Encouraging the reader to use self-control strategies for understanding the texts.	4.69±0.47	4.56±0.50	4.76±0.44	.192
3.16. Using contextual understanding as strategy for unknown words in texts.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	4.07±0.77	4.42±0.50	4.24±0.54	.064
3.18. Use of text flowcharts to teach the summary strategy.	4.02±0.97	4.56±0.50	4.62±0.50	**.002**
3.19. Providing personalized learning support and student guidance for producing texts	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.21. Repetition of the instructions in a consistent and systematic way.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	4.76±0.43	4.53±0.51	4.33±0.48	**.001**
3.23. Use questions before, during, and after reading texts	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.24. Encourage their active participation in the process of teaching by conducting dialogues.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	4.44±0.50	4.53±0.51	4.29±0.46	.168
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	4.29±0.63	4.53±0.55	4.67±0.73	**.013**
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.	4.40±0.49	4.51±0.51	4.48±0.51	.530

3.30. Promote dramatization and role rotation.	4.44±0.60	4.42±0.50	4.33±0.48	.638
3.31. Promote collaborative method and collaboration by student pairs.	4.64±0.49	4.38±0.49	4.33±0.48	**.011**
3.32. Use the project method with the assignment of group research papers.	3.13±1.60	4.07±0.78	4.14±0.57	**.017**
3.33. Use teaching scenarios in the context of cross-thematic method.	3.13±1.63	3.82±1.11	3.95±0.74	.158
3.34. Assign tasks where students are capable to complete.	4.55±0.63	4.53±0.51	4.52±0.60	.878
3.35. Provide extra time to complete their work.	5.00±0.00	4.98±0.15	4.86±0.36	**.007**
3.36. Provide direct feedback to students about their responses.	5.00±0.00	5.00±0.00	5.00±0.00	1.000
3.37. Assessment of student progress guides teaching.	4.40±0.68	4.53±0.51	4.48±0.60	.765
3.38. Use of student's descriptive assessment and individual portfolio.	3.98±0.85	3.56±0.50	3.33±0.91	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

Subsequently, the relationship between working experience in typical education and the responses to dyslexic behaviors by teachers teaching in the integration departments were investigated. As presented in Table 2.39, years of service in typical education significantly influence the responses of teachers who teach in special education regarding the obedience of students with dyslexia to school rules ($x^2(2) = 8.531$, p = .014) and existence violent reactions ($x^2(2) = 9.368$, p = .009). The teachers with the most years of service (9-14 years) gave the most positive answers in both cases (M. = 1.71, S.D. = 0.46; M. = 4.71, S.D. = 0.46 respectively).

Also, years of service in formal departments significantly influenced the responses of students with dyslexia to teachers' approach and guidance (x2 (2) = 7.388, p = .025), creating complications in teaching (x292) = 10.900, p = .004) and bad behavior towards teachers (x2 (2) = 6.328, p = .042). These behaviors are most pronounced among teachers with 0-2 years of working in typical education (M. = 4.53, S.D. = 0.50; M. = 4.42, S.D. = 0.50; M. = 4.49, S.D. = 0.51). Finally, teachers with 3-8 years of service in typical education consider the need for support from teachers specializing in Special Education more intense than other colleagues (M. = 4.87, S.D. = 0.34).

Table 2.39.

Impact of work experience in typical education on the responses to the behavior and problems of students with dyslexia (special education)

Group of questions	0-2 years (M±S.D.)	3-8 years (M±S.D.)	9-14 years (M±S.D.)	p*
4.1. Follow the school rules	1.42±0.50	1.67±0.48	1.71±0.46	**.014**
4.2. Show adhesion and dependence on another classmate	4.42±0.60	4.27±0.45	4.33±0.48	.196
4.3. React to the approach and guidance from the teacher	4.53±0.50	4.27±0.45	4.33±0.48	**.025**
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	4.24±0.23	4.27±0.45	4.48±0.51	.111
4.5. Are uninterested in others feelings	4.42±0.50	4.62±0.49	4.43±0.51	.103
4.6. Seem happy when joining the school	1.51±0.51	1.47±0.51	1.38±0.50	.607
4.7. Turn away their gaze when someone speaks to them	4.58±0.50	4.56±0.50	4.62±0.50	.887
4.8. Deny anything that is being proposed to them	4.45±0.50	4.47±0.51	4.38±0.50	.799
4.9. Claim their rights	1.09±0.29	1.11±0.32	1.10±0.30	.943
4.10. Cannot overcome their anger	4.95±0.23	4.84±0.37	4.95±0.22	.165
4.11. Discuss with the teacher about anything they are concerned	1.47±0.50	1.51±0.51	1.38±0.50	.617
4.12. Fight with other children	4.95±0.23	4.84±0.37	4.95±0.22	.165
4.13. Complicate the function of the classroom	4.42±0.50	4.13±0.34	4.19±0.40	**.004**
4.14. Indicate anxiety (complain about physical disturbances)	4.42±0.50	4.24±0.44	4.33±0.48	.191
4.15. Do not answer when someone speaks to them	4.31±0.47	4.16±0.37	4.33±0.48	.148
4.16. Have violent reactions	4.45±0.50	4.31±0.47	4.71±0.46	**.009**
4.17. Speak back and behave badly to their teacher	4.49±0.51	4.24±0.44	4.38±0.50	**.042**
4.18. Have the acceptance of their peers	1.56±0.50	1.40±0.50	1.67±0.48	.091
4.19. The lack of incentives can be distinguished	4.47±0.50	4.56±0.50	4.33±0.48	.243
4.20. It is characterized by low expectations of success	4.45±0.50	4.40±0.50	4.29±0.46	.409
4.21. It shows a lack of self-confidence and self-esteem	4.45±0.50	4.40±0.50	4.29±0.46	.409
4.22. Often are lonely and have no friends	1.69±0.47	1.56±0.50	1.76±0.44	.192
4.23. Usually develop an introverted character and distinguished apathy	1.69±0.47	1.56±0.50	1.76±0.44	.192

4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	1.69±0.47	1.56±0.50	1.76±0.44	.192
4.25. They get encouragement and support from peers	1.56±0.50	1.40±0.50	1.67±0.48	.091
4.26. Their classmates ignore them	4.24±0.43	4.27±0.45	4.48±0.51	.111
4.27. Their classmates exclude them from class activities	4.24±0.43	4.27±0.45	4.48±0.51	.111
4.28. Their classmates bully them	2.49±1.07	2.24±0.93	2.38±0.59	.354
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	4.78±0.42	4.87±0.34	4.19±0.40	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

Finally, teachers who teach in inclusion departments were tested for significantly different methods of encouraging children with dyslexia depending on their years of service in typical education (Table 2.40). It seems that this characteristic significantly influence the promotion of matching of trends among students ($x^2(2) = 31.506$, p <.001) and the promotion of role playing and simulations of real and hypothetical situations to enhance communication and behavioral skills ($x^2(2) = 7.174$, p = .028) with the most inexperienced teachers to be the most positive in these methods of encouragement (M. = 4.62, SD = 0.49; M. = 4.49, SD = 0.54).

Also, careful planning of the lesson in order to ensure conditions for cooperation among students ($x^2(2) = 11.176$ p = .004) finds teachers fully compatible with 9-14 years of service in formal departments (M. = 5.00, S.D. = 0.00) while teachers with 3-8 years of service in formal departments were completely positive (M. = 5.00, SD = 0.00) in reward after every good effort ($x^2(2) = 12.498$, p = .002).

Table 2.40.

Impact of work experience in typical education on teachers' responses to encouragement of students with dyslexia (special education)

Group of questions	0-2 years (M±S.D.)	3-8 years (M±S.D.)	9-14 years (M±S.D.)	p*
5.1. Enriching the expression of everyday personal and emotional needs and desires	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.3. Promoting one-on-one counseling	5.00±0.00	5.00±0.00	5.00±0.00	1.000

5.4. Promoting conversations so as to update students' general development of their autonomy	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.5. Promoting the development of genuine and honest interpersonal relationships among students	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.6. Creating positive attitude coming from their motivation and participation in school life	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.7. Classroom guidance and experiential exercises for group engagement	4.55±0.50	4.56±0.50	4.62±0.50	.842
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	4.40±0.74	4.36±0.53	4.00±0.84	.105
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.10. Promoting matching of trends among students	4.62±0.49	3.84±0.67	4.19±0.60	**<.001**
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students	4.45±1.03	4.44±0.81	5.00±0.00	**.004**
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	4.49±0.54	4.07±0.84	4.24±0.63	**.028**
5.13. Continuously encouraging their efforts and strengthening their self-esteem	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	4.53±0.50	4.40±0.50	4.62±0.50	.210
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	5.00±0.00	5.00±0.00	5.00±0.00	1.000
5.16. Reward after every good effort	4.87±0.34	5.00±0.00	4.71±0.46	**.002**
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	5.00±0.00	5.00±0.00	5.00±0.00	1.000

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

1.7. Inductive tests according to years of work experience in special education

The latest tests have been carried out on the possible statistically significant effect of working experience in special education in teachers' responses *(Objectives 2-5)*.

1.7.1 Tests for teachers in typical education

In the question about years of service in special education the whole of the teachers typical education belongs to the first category (0-2 years). Consequently, there is no need for test of the mean or median difference in the responses of this category of teachers according to the years of service in special education.

1.7.2 Tests for teachers in special education

In contrast, teachers special education are divided into two groups by years of service in these departments: 3-8 years (41 people) and 9-14 years (77 people). However, there were also 3 teachers who responded that they had been working in typical departments for 15-20 years but these were excluded from the subsequent tests due to the very small sample size. Because both groups are large enough, the Independent Samples t-test was performed in any sentence of the questionnaire.

Initially, the potential differences of teachers in special education depending on their background in these departments were studied. As Table 2.41 shows, almost all methods of understanding and producing oral and written speech by students with dyslexia show a statistically significant difference between the two teacher groups. Specifically, teachers with 3-8 years of service in special education are those who support in the greatest degree the ability of children with dyslexia to verbal and written needs while teachers with 9-14 years of service in this kind of education emphasize the inability of pupils to cope with any oral or written demand.

Table 2.41.

Impact of work experience in special education on teachers' answers to understanding and producing oral and written speech by students with dyslexia (special education)

Group of questions	3-8 years (M±S.D.)	9-14 years (M±S.D.)	p*
2.1. They can find words from oral description.	3.59±0.71	2.44±0.73	**<.001**
2.2. They can orally describe common words.	3.61±0.59	2.52±0.81	**<.001**
2.3 They find it difficult to find the meaning of an unknown word.	2.22±0.48	3.71±1.23	**<.001**
2.4. They do have the ability to associate words that express concepts relevant to each other	3.02±0.85	2.29±0.69	**<.001**
2.5. They can place the words they read in the right order so as to produce a proper conceptual sentence	3.46±1.14	2.23±1.08	**<.001**
2.6. When sentences are given to then, they reproduce a paragraph that makes sense	3.56±1.21	2.47±0.90	**<.001**
2.7. They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs	3.76±0.77	2.64±0.97	**<.001**
2.8. They can foresee the continuing of a story	4.10±0.49	2.71±1.10	**<.001**

2.9. They can produce critical conclusions of the texts.	3.68±1.06	2.68±1.07	**<.001**
2.10. They use strategies so as to organize information in a narrative text	2.73±1.03	1.66±1.10	**<.001**
2.11. They are able to summarize in writing extensive narrative or descriptive texts.	2.59±1.07	1.53±0.97	**<.001**
2.12. They are able to understand a daily basis dialogue about topics considering subjects related to their own interests	4.46±0.75	4.58±0.57	.367
2.13. They are able to understand oral public announcements addressed to the wide school audience.	4.46±0.51	2.82±1.22	**<.001**
2.14. They are able to produce a daily oral speech about topics considering subjects related to their own interests.	4.49±0.55	4.16±0.46	**.002**
2.15. They able to understand short texts of everyday use.	4.44±0.50	2.56±1.37	**<.001**
2.16. They are able to understand texts they might encounter in special occasions of their everyday life	3.63±0.86	1.99±1.35	**<.001**
2.17. They are able to produce descriptive and experiential texts	3.71±0.68	2.49±0.79	**<.001**
2.18. They are able to compose short texts of everyday use.	3.80±0.60	2.61±0.92	**<.001**
2.19. They have difficulty in recognizing the requirements arising from a school project	2.51±0.81	3.65±1.12	**<.001**
2.20. They have difficulty in selecting and implementing strategies when a simple project is assigned.	2.66±0.94	3.94±1.07	**<.001**
2.21. They have difficulty in focusing in a project and have low performance	3.73±1.05	4.29±0.83	**.005**
2.22. They have difficulty in assessing their own cognitive performance.	2.27±0.55	3.87±1.15	**<.001**
2.23. More time is needed so as to comprehend teachers' oral speech during the class.	1.78±0.69	3.68±1.53	**<.001**
2.24. They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process.	4.24±0.77	4.45±0.68	.128
2.25. They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others.	3.88±0.60	2.14±1.16	**<.001**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

It is then checked whether the teaching methods and tools chosen by the teachers in special education significantly vary according to their years of service in them (Table 2.42). As it turned out, teachers with different years of service in the integration departments paid significantly different attention to promote their initial reading by the teacher or a classmate and then repetition of reading by the students with dyslexia (t(76.139) = - 2.105, p = .039), in providing extra time to complete their work (t(40) = - 2.080, p = .044) and in using student 's descriptive assessment and individual portfolio (t(116) = - 2.431, p = .017). In any case, the teachers with the most years of working experience (9-14 years) are those who persist most in the specific teaching methods (M. = 4.69, SD = 0.47; M. = 5.00, SD = 0.00; M. = 3.83, SD = 0.75 respectively).

Table 2.42.

Impact of work experience in special education on teachers' answers to teaching methods and tools (special education)

Group of questions	3-8 years (M±S.D.)	9-14 years (M±S.D.)	p[*]
3.1. Use of supervisory tools and means.	4.66±0.48	4.74±0.44	.355
3.2. Use of diversified teaching reclaiming Information and Communication Technologies	4.63±0.49	4.58±0.50	.603
3.3. Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial.	4.66±0.48	4.55±0.50	.234
3.4. Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".	4.37±0.92	4.38±0.49	.944
3.5. Use of the Digital Learning Platform for students and teachers "e-me".	2.39±0.74	2.25±0.43	.257
3.6. Use of technology which can convert text into sound, like audio books.	2.24±0.58	2.26±0.44	.869
3.7. Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords.	4.63±0.49	4.65±0.48	.871
3.8. Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson	4.49±0.64	4.48±0.64	.953
3.9. Use of information flow charts that is relevant with the following lesson.	4.46±0.67	4.48±0.62	.890
3.10. Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED").	4.37±0.92	4.53±0.58	.228
3.11. Use of concept mapping as a teaching, learning, and evaluation tool during the learning process.	4.44±0.59	4.42±0.66	.849
3.12. Teach learning strategies	4.59±0.50	4.66±0.48	.412
3.13. Analyze the process of a project in steps and teach the steps of the hierarchy one by one	5.00±0.00	5.00±0.00	-
3.14. Promote the "thinking aloud" by acting as a template for teaching strategies.	5.00±0.00	5.00±0.00	-
3.15. Encouraging the reader to use self-control strategies for understanding the texts.	4.59±0.50	4.68±0.47	.335
3.16. Using contextual understanding as strategy for unknown words in texts.	5.00±0.00	5.00±0.00	-
3.17. Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text	4.12±0.78	4.30±0.59	.169
3.18. Use of text flowcharts to teach the summary strategy.	4.39±0.67	4.30±0.88	.559
3.19. Providing personalized learning support and student guidance for producing texts	5.00±0.00	5.00±0.00	-
3.20. Oral clarification and general simplification of written instructions by highlighting keywords.	5.00±0.00	5.00±0.00	-
3.21. Repetition of the instructions in a consistent and systematic way.	5.00±0.00	5.00±0.00	-

3.22. Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves.	4.49±0.51	4.69±0.47	**.039**
3.23. Use questions before, during, and after reading texts	5.00±0.00	5.00±0.00	-
3.24. Encourage their active participation in the process of teaching by conducting dialogues.	5.00±0.00	5.00±0.00	-
3.25. Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.	4.46±0.51	4.45±0.50	.927
3.26. Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material.	4.49±0.71	4.44±0.60	.708
3.27. Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences	5.00±0.00	5.00±0.00	-
3.28. Emphasis on practicing students by dedicating significant time and active participation in the lesson.	5.00±0.00	5.00±0.00	-
3.29. Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms.	4.46±0.51	4.47±0.50	.966
3.30. Promote dramatization and role rotation.	4.44±0.55	4.42±0.55	.825
3.31. Promote collaborative method and collaboration by student pairs.	4.46±0.51	4.52±0.50	.566
3.32. Use the project method with the assignment of group research papers.	3.59±114	3.68±1.39	.723
3.33. Use teaching scenarios in the context of cross-thematic method.	3.44±1.38	3.60±1.40	.557
3.34. Assign tasks where students are capable to complete.	4.46±0.60	4.60±0.57	.233
3.35. Provide extra time to complete their work.	4.90±0.30	5.00±0.00	**.044**
3.36. Provide direct feedback to students about their responses.	5.00±0.00	5.00±0.00	-
3.37. Assessment of student progress guides teaching.	4.46±0.55	4.48±0.64	.885
3.38. Use of student's descriptive assessment and individual portfolio.	3.46±0.84	3.83±0.75	**.017**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

The third case of tests concerns the responses of teachers who teach in special education on the behaviors that children exhibit or experience in dyslexia at school (Table 2.43). Apparently, years of service in special education are most likely to affect children's behavior, and in almost all cases teachers with fewer years of service (3-8 years) are more likely to identify students with performing behaviors with dyslexia.

Table 2.43.

Impact of work experience in special education on the responses to the behavior and problems of students with dyslexia (special education)

Group of questions	3-8 years (M±S.D.)	9-14 years (M±S.D.)	p*
4.1. Follow the school rules	1.56±0.50	1.56±0.50	.979
4.2. Show adhesion and dependence on another classmate	4.49±0.51	4.29±0.54	**.049**
4.3. React to the approach and guidance from the teacher	4.41±0.50	4.39±0.49	.794
4.4. Do not protect themselves and do not defend themselves when someone is attacking them	4.41±0.50	4.22±0.42	**.037**
4.5. Are uninterested in others feelings	4.51±0.51	4.51±0.50	.953
4.6. Seem happy when joining the school	1.46±0.51	1.47±0.50	.966
4.7. Turn away their gaze when someone speaks to them	4.76±0.44	4.48±0.50	**.003**
4.8. Deny anything that is being proposed to them	4.41±0.50	4.44±0.50	.781
4.9. Claim their rights	1.05±0.22	1.13±0.34	.118
4.10. Cannot overcome their anger	5.00±0.00	4.86±0.35	**.001**
4.11. Discuss with the teacher about anything they are concerned	1.46±0.51	1.48±0.50	.861
4.12. Fight with other children	5.00±0.00	4.86±0.35	**.001**
4.13. Complicate the function of the classroom	4.32±0.47	4.26±0.44	.513
4.14. Indicate anxiety (complain about physical disturbances)	4.37±0.49	4.34±0.48	.762
4.15. Do not answer when someone speaks to them	4.41±0.50	4.18±0.39	**.012**
4.16. Have violent reactions	4.46±0.51	4.44±0.50	.822
4.17. Speak back and behave badly to their teacher	4.37±0.49	4.40±0.49	.700
4.18. Have the acceptance of their peers	1.49±0.51	1.56±0.50	.468
4.19. The lack of incentives can be distinguished	4.41±0.50	4.51±0.50	.346
4.20. It is characterized by low expectations of success	4.22±0.42	4.52±0.50	**.001**
4.21. It shows a lack of self-confidence and self-esteem	4.22±0.42	4.52±0.50	**.001**
4.22. Often are lonely and have no friends	1.78±0.42	1.60±0.49	**.037**
4.23. Usually develop an introverted character and distinguished apathy	1.78±0.42	1.60±0.49	**.037**

4.24. Often deal with problems referring to their skills and as a result they find difficulty in socializing	1.78±0.42	1.60±0.49	**.037**
4.25. They get encouragement and support from peers	1.49±0.51	1.56±0.50	.468
4.26. Their classmates ignore them	4.41±0.50	4.22±0.42	**.037**
4.27. Their classmates exclude them from class activities	4.41±0.50	4.22±0.42	**.037**
4.28. Their classmates bully them	2.15±0.69	2.52±1.06	**.023**
4.29. It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training	4.51±0.51	4.81±0.40	**.002**

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

Finally, years of service in special education are examined for their statistically significant influence on the ways teachers choose to encourage students with dyslexia at both intrapersonal and interpersonal level (Table 2.44). Specifically, there is a statistically significant difference in promoting intrapersonal adaptation in moment-to-moment teacher-student interaction (t(116) = - 2.008, p = .047) with teachers of 9-14 years of working experience focusing more on this method (M. = 4.42, SD = 0.68). In contrast, careful planning of the lesson in order to ensure conditions for cooperation among students (t(76) = 5.817, p <.001) is a method that is highly preferred by all teachers with 3-8 years of working experience in special education (t(76) = 5.817, p <.001). M. = 5.00, SD = 0.00).

Table 2.44.

Impact of work experience in special education on teachers' responses to encouragement of students with dyslexia (special education)

Group of questions	3-8 years (M±S.D.)	9-14 years (M±S.D.)	p*
5.1. Enriching the expression of everyday personal and emotional needs and desires	5.00±0.00	5.00±0.00	-
5.2. Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge	5.00±0.00	5.00±0.00	-
5.3. Promoting one-on-one counseling	5.00±0.00	5.00±0.00	-
5.4. Promoting conversations so as to update students' general development of their autonomy	5.00±0.00	5.00±0.00	-
5.5. Promoting the development of genuine and honest interpersonal relationships among students	5.00±0.00	5.00±0.00	-
5.6. Creating positive attitude coming from their motivation and participation in school life	5.00±0.00	5.00±0.00	-

5.7. Classroom guidance and experiential exercises for group engagement	4.46±0.51	4.60±0.49	.166
5.8. Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction	4.15±0.73	4.42±0.68	**.047**
5.9. Ensuring control in the classroom, when I face hostile and dominant behavior of students	5.00±0.00	5.00±0.00	-
5.10. Promoting matching of trends among students	4.29±0.46	4.25±0.78	.689
5.11. Careful planning of the lesson in order to ensure conditions for cooperation among students	5.00±0.00	4.32±1.02	**<.001**
5.12. Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills	4.44±0.50	4.26±0.75	.125
5.13. Continuously encouraging their efforts and strengthening their self-esteem	5.00±0.00	5.00±0.00	-
5.14. Having crucial role in finding potential friendship pairs and in creating situations that require cooperation	4.59±0.50	4.47±0.50	.226
5.15. Emotionally support of students to improve their ability to cope with characteristics that they cannot change	5.00±0.00	5.00±0.00	-
5.16. Reward after every good effort	4.88±0.33	4.90±0.31	.768
5.17. Cooperation with ΕΔΕΑΥ and school psychologist for counseling support	5.00±0.00	5.00±0.00	-

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

1.8. Correlation tests (Unit 2 vs Unit 3)

In this section it was examined if there is any statistically significant correlation between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and Teaching/Learning Methodologies and Educational Tools used for student's with dyslexia to better understand and produce oral and written speech *(Objective 6)*.

The following table (Table 2.45) shows the results for teachers teaching in typical education. It seems that students' effectiveness in complex oral and written demands and critical ability have a significant positive relationship with pleasant and interactive teaching (r = .246, p <.001; r = .141, p = .024). This means that teachers who declare to a greater degree that students with dyslexia effectively respond to complex oral and written speech and perform critical ability are more intend to apply interactive and pleasant teaching. Also, teachers who believe to a greater extent that students with dyslexia respond to simple oral and written demands are more likely to use electronic media and promote expression (r = .230, p <.001).

Table 2.45.

Correlations between the variables of Unit 2 and Unit 3 (typical education)

Variables of Unit 2	Variables of Unit 3	r	p
Effectiveness in Composite Oral and Written Requirements	Guidance and encouragement for personal work	.047	.455
	Use of electronic media and promotion of expression	.112	.076
	Pleasant - Interactive teaching	.246	**<.001**
Effectiveness in Simple Oral and Written Requirements	Guidance and encouragement for personal work	.055	.380
	Use of electronic media and promotion of expression	.230	**<.001**
	Pleasant - Interactive teaching	.103	.100
Critical Ability	Guidance and encouragement for personal work	.057	.369
	Use of electronic media and promotion of expression	.099	.114
	Pleasant - Interactive teaching	.141	**.024**

*In cases where p <.05, there is a statistically significant correlation between the corresponding variables.

The following are the results reported by the teachers teaching special education (Table 2.46). In this case, there is no significant positive or negative relationship between the variables related to teachers' perceptions of students' performance and the teaching techniques they use.

Table 2.46.

Correlations between the variables of Unit 2 and Unit 3 (special education)

Variables of Unit 2	Variables of Unit 3	r	p
Effectiveness in Composite Oral and Written Requirements	Guidance and encouragement for personal work	.016	.864
	Use of electronic media and promotion of expression	.060	.514
	Pleasant - Interactive teaching	.129	.157
Effectiveness in Simple Oral and Written Requirements	Guidance and encouragement for personal work	.027	.773
	Use of electronic media and promotion of expression	.040	.662
	Pleasant - Interactive teaching	.104	.258
Critical Ability	Guidance and encouragement for personal work	.081	.379
	Use of electronic media and promotion of expression	.046	.619
	Pleasant - Interactive teaching	.143	.118

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

1.9. Correlation tests (Unit 2 vs Unit 4)

Moreover, it was examined if there is any statistically significant correlation between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and teachers' perceptions of student's with dyslexia in Gymnasium about their intrapersonal and interpersonal adaptation in an inclusion classroom *(Objective 7)*.

The first table (Table 2.47) concerns the group of teachers who teach in typical education. It seems that teachers who believe that students with dyslexia can cope with the complex demands of oral and written speech are more likely to identify these students with ignorance and indifference (r = .123, p = .050).

Table 2.47.

Correlations between the variables of Unit 2 and Unit 4 (typical education)

Variables of Unit 2	Variables of Unit 4	r	p
Effectiveness in Composite Oral and Written Requirements	Introversion and violent behaviors	.057	.367
	Ignorance and indifference	.123	**.050**
Effectiveness in Simple Oral and Written Requirements	Introversion and violent behaviors	-.027	.668
	Ignorance and indifference	.083	.185
Critical Ability	Introversion and violent behaviors	-.031	.624
	Ignorance and indifference	.033	.601

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

The Table 2.48 presents the corresponding results of the special education teachers. Once again, there are no significant relationships between variables related to students' ability to oral and written and interpersonal and interpersonal adaptation in an inclusion class.

Table 2.48.

Correlations between the variables of Unit 2 and Unit 4 (special education)

Variables of Unit 2	Variables of Unit 4	r	p
Effectiveness in Composite Oral and Written Requirements	Introversion and violent behaviors	-.023	.800
	Ignorance and indifference	.018	.843
Effectiveness in Simple Oral and Written Requirements	Introversion and violent behaviors	-.078	.396
	Ignorance and indifference	.014	.879
Critical Ability	Introversion and violent behaviors	-.045	.623
	Ignorance and indifference	-.064	.483

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

1.10. Correlation tests (Unit 2 vs Unit 5)

The last correlation tests refer to the Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and methodology used on students with dyslexia in the aim of their intrapersonal and interpersonal adaptation in an inclusion classroom *(Objective 8)*.

The first table (Table 2.49) presents the correlations for the population of formal education teachers. It seems that the teachers who mostly use methods of indirect encouragement on students with dyslexia are those who believe that these students can effectively respond to complex demands (r = .174, p = .005) and simple requirements (r = .283, p <.001) in both oral and written speech.

Table 2.49.

Correlations between the variables of Unit 2 and Unit 5 (typical education)

Variables of Unit 2	Variables of Unit 5	r	p
Effectiveness in Composite Oral and Written Requirements	Direct Encouragement	.114	.070
	Indirect Encouragement	.174	**.005**
Effectiveness in Simple Oral and Written	Direct Encouragement	.040	.523

Requirements	Indirect Encouragement	.283	**<.001**
Critical Ability	Direct Encouragement	.105	.096
	Indirect Encouragement	.108	.086

*In cases where p <.05, there is a statistically significant difference in the responses between the different groups.

The results for the population of special education teachers are presented in the Table 2.50. It is noteworthy that teachers who mostly apply methods of indirect encouragement on students with dyslexia are also those who state to a greater degree that these students are effective in complex oral and written demands (r = .525, p <.001), simple requirements (r = .484, p <.001) and perform critical ability (r = .393, p <.001).

Table 2.50.

Correlations between the variables of Unit 2 and Unit 5 (special education)

Variables of Unit 2	Variables of Unit 5	r	p
Effectiveness in Composite Oral and Written Requirements	Direct Encouragement	-.073	.428
	Indirect Encouragement	.525	**<.001**
Effectiveness in Simple Oral and Written Requirements	Direct Encouragement	-.053	.560
	Indirect Encouragement	.484	**<.001**
Critical Ability	Direct Encouragement	-.129	.159
	Indirect Encouragement	.393	**<.001**

* In cases where p <.05, there is a statistically significant correlation between the corresponding variables.

PART V: CONCLUSIONS AND DISCUSSION

1.1.Conclusions

The preceding analysis reveals the significantly more negative view of teachers in special education about the behaviors of children with dyslexia and the greater need to apply specific teaching methods and techniques to encourage these students compared to teachers working in formal education. It also became clear that the demographic characteristics of each of the two teacher groups significantly influence their responses to many of the questionnaire suggestions. This section summarizes the most useful conclusions drawn from the description of sample responses and the inductive statistics tests.

As follows we aim to analyze the results of empirical research, compared to the data previously provided by the literature. First, the results obtained are discussed and the most relevant conclusions are presented after the completion of this study. The findings of our research are described in detail below, based on the objectives set out in the methodological design and discussing the results achieved in light of the theory presented in the chapters of the theoretical framework. The presentation of the results and their correlation with the references of the theoretical part of the research are divided into answering the research's goals and the six research questions of the main research.

1.2.Teachers' profile

In the research 375 teachers were participated. Of these, 254 work in typical education while 121 work in special education. The effect of the teachers' demographic characteristics were described separately for teachers who teach in typical education and those who teach in integration courses. However, it was also conducted a comparison of sociodemographic features between the two categories of teachers. The overwhelming majority of the sample consists of women. Almost all of the teachers are over 30 years old and almost 50% of them are in the 41-50 age group. Furthermore, almost the total group of teachers in typical education have no type of training in special education. On the other hand almost 3 of 4 teachers in special education have been trained in special education. The vast majority of teachers in a typical classroom have completed 9 to 20 years of experience in this field of education in contrast to the second category who teach

in typical education classroom up to 14 years. Finally, all of the teachers in a typical classroom stated that they have 0-2 years of experience in integration departments in contrast to the special education teachers who state that their teaching years in a special classroom is mostly from 3 to 14 years. The above demographics are consistent to demographics of Feskemenlidou (2016) and Evdoridou (2016) studies. It is presented that teachers who do not work in special education have lower level of special education training. The necessity to train teachers from typical educational classrooms is recognized as an urgent need, as their scientific training helps to reduce the problems of dysfunction in education, fulfill the new role and adapt the school reality to the socio-cultural conditions.

1.3. The effect of sociodemographic variables on teachers' perceptions on understanding and producing oral and written speech in students with dyslexia

Teachers' opinions about students' ability to comprehend and produce oral and written speech differ significantly due to the type of classroom they work in (typical or special education). Findings shows that teachers confirm the existence and reflection of the sub-factors of the research tool used. A review of the relevant literature on the subject of references identified previous research, which addresses the issue of knowledge and perceptions of formal or special education teachers.

The issue of learning difficulties concerns both scientific and social news (Saripanidou, 2017). Teachers at all levels of education are now called upon to meet the different educational needs of students in general, but also of students with special learning difficulties such as dyslexia in particular. The goal is the equal access of all students to the Curriculum (Roussos, 2019).

As mentioned earlier, through research findings both typical education teachers and teachers who teach in special education have knowledge of the nature of dyslexia. Thompson's (2013) findings show that the teachers feel adequate in relation to the cope with children with

dyslexia in the classroom. At this point, it is worth noting that there is some research that suggests that teachers do not feel adequate and often feel unprepared to manage children with dyslexia when called upon to do so (Vassiliou & Charitaki, 2015; Elias, 2014; Lopes et al., 2004; Tzouriadou et al., 2015; Fesmekenidou, 2016).

The difference between the findings of the research mentioned above and the findings of this study is not surprising. It is a fact that year by year the interest of teachers in secondary education and the state for the training on learning difficulties and dyslexia is constantly increasing, especially in terms of how to cope with these students in the special education classroom. Thus, either through scientific books or through seminars organized within schools and the region they work in or even through programs and postgraduate university institutions it issure that teachers be informed about current developments in the field of education and the proper management of children with dyslexia in special education classroom. Until recently, there were no postgraduate programs of Special Education in Greek universities, while in the undergraduate departments, even of the considered "professional" schools, there was no provision for the subject, nor as an elective course (Trikou, 2012).

The differences, therefore, observed between the surveys mentioned and in the present research may be due to the ever-increasing training and the better preparedness of the teachers to support the students with dyslexia in the special education classroom.

There are several differences through the findings in the effectiveness in composite oral and written requirements between typical and special educational teachers. Teachers in formal education are quite positive in students' abilities. On the other hand, teachers who teach in special education point out that students are only able to participate in simple dialogues and to initiate a basic dialogue on topics of interest to them. These two groups of teachers seem to be significantly different in almost all responses to dyslexic students' comprehension and production of oral and written speech through the fact that teachers in special education recognize greater difficulty for their students in both simple and complex oral requirements. The attitude of teachers towards students with dyslexia plays a vital role in the success of any

program in education. Teachers' attitudes and beliefs about non-exclusive practices affect the learning environment of the school and equal learning opportunities for students with different needs (Kofidou & Mantzikos, 2016).

The findings from typical classroom teachers are consistent with research conducted by Peterson et al., 2013, where they point out that it is a common phenomenon for a student with dyslexia to be incorrect in pronouncing vowels while pointing out their difficulty in finding the proper words in a sentence which reflects in difficulties for the child to rhyme as well as to recall words. These results are consistent with research conducted by Cunningham & Carroll, 2015 who point out that the child with dyslexia is characterized by frequent distraction and there are often daydream intervals. The above presents a student with dyslexia that is not able to follow a successful dialogue. Also, Matric (2018), points out that the development of oral linguistic skills is necessary both for the needs of daily communication and for the internal organization of the thinking of the particular pupils while their participation in dialogue and the development of students verbal expressiveness should be everyday teaching objectives within the language lesson. On the other hand, in the context of the level of education where teachers work, there were no discrepancies in the views related to the difficulties of students with dyslexia in writing and reading in Papailiou's (2018) research.

Furthermore, both men and women who teach in special education recognize same levels of difficulty for their students in both simple and complex oral requirements. In Feskemenlidou's study (2016), general education teachers consider, to a greater extent than special education teachers, that dyslexia affects the ability to speak and write. According to the Greek and international literature, the main difficulties that students with dyslexia have are mainly related to the handling of both oral and written speech (Pavlidis & Giannouli, 2003, as cited in Feskemenlidou, 2016). Respectively, a survey by Arnold, Li & Goltl (2015), investigates (a) if the gender of the teachers is related to their perceptions towards people who have some kind of learning difficulty and (b) if the perceptions of teachers and the general population are the same. Regarding the first question, the research showed that women, who were also the majority of the sample, had clearer perceptions, as did older, higher education participants who had some kind of involvement with people with difficulties. The results showed no differences in perceptions of teachers and the general population. In the present doctoral thesis, male and female teachers in

typical education significantly disagree about students' ability in several issues of understanding and producing oral and written speech. Female teachers are more likely than male teachers to think that deficits in phonological awareness are the cause of dyslexia (Feskemenlidou, 2016).

Age seems to have a significant influence on the responses of teachers in typical education on the understanding and production of oral and written speech by students with dyslexia. Specifically, middle age teachers are the ones who have the most positive image for students while older teachers are the most negative. In terms of special education, older teachers are more negative than their younger counterparts in the ability of students with dyslexia to comprehend and produce oral and written speech. These results are consistent with research conducted by Thompson (2013) were younger teachers showed more knowledge about dyslexia.

The educational level of teachers in formal education does not appear to significantly affect their responses to the understanding and production of oral and written speech by dyslexic students. On the other hand, the most qualified teachers provided significantly more positive responses to some cases related with the critical ability of students with dyslexia. This is consistent with the findings of Chong's et al. (2017), who said that training for dyslexia leads teachers to a better academic success for children with dyslexia.

With regard to special education, bachelor and master degree holders and those who have been trained in special education appear to be the most positive group regarding on the ability of students with dyslexia to comprehend and produce oral and written speech. This is consistent with the findings of Zika's (2017) study.

Years of service in typical education affect teachers' responses to the understanding and production of oral and written speech by students with dyslexia with those with more than 20 years of service to seem the most negative about the ability of students to meet oral and written speech requirements. On the contrary, teachers in special education with fewer years of service are those who indicate to a greater degree the difficulty of students in finding the meaning of an unfamiliar word, identifying requirements, and applying strategies to a project assigned to them and recognizing their personal cognitive performance.

Also, teachers in special education seem to perform a statistically significant difference in their answers to several questions according to their years of experience in this field of education. Specifically, teachers with 3-8 years of service more strongly support students' ability

to respond to oral and written requirements, while those who have completed 9-14 years of service in special education are the ones who respond most strongly. Teachers in special education show more awareness of dyslexia although their years in education which is consistent to the findings of Basu et al (2014).

In conclusion, from the findings of the research it was found that teachers in special education have higher knowledge about dyslexia, its nature and facts that indicate dyslexia.

1.4. The effect of sociodemographic variables on teachers choice of teaching and learning methodologies and educational tools used for students to better understand and produce oral and written speech

Another fact of statistically significant difference between teachers in typical education and those in special classrooms is the use of teaching tools and methods, too. It is noteworthy that in any case teachers in special classrooms show greater agreement on use of these tools and methods than those working in typical classrooms.

The only exception in tools and methods is the digital teaching methods that are implemented on a small scale by both teacher groups. Also, students with dyslexia in formal education have a significantly higher degree of introversion, apathy, and negative behavior than those in the inclusion classrooms. That is consistent with the view of Cavioni et al., 2017 who mentioned that children with dyslexia usually develop an introverted character and show apathy due to the lower use of different teaching methods and tools.

Also, teachers in the typical departments appear to be opposed to applying sophisticated teaching techniques using digital learning programs and information flowcharts. The above results contradict the view of Koch, 2017 who states that students with dyslexia could use computers to attend lessons and that they are greatly facilitated by visual and acoustic stimuli, the technological appearance of the text and the various activities provided by a digital environment. Specifically, Koch mentions that tools such as text processing software are useful for students with dyslexia which may help them express themselves in writing much more easily

and even show greater self-confidence. It is shown that educational use of multimedia, due to dynamic applications and audiovisual aid, also helps significantly in the understanding of concepts and in the development of the students' thinking, especially the student with dyslexia, whose knowledge in relation to his classmates is more limited.

It is important to note that although they do not have the same experience as special education teachers, they are not reluctant to teach these students in typical classrooms and their efforts are recorded. This contradicts the findings of the research of Trikou (2012, as cited in Roussos, 2019) where it is stated that teachers in typical classrooms do not differentiate their teaching at all, stating that the typical class does not make them responsible for such differentiations.

Also, teachers views contradict the views of the study made by Berninger et al. (2015), where it is referred the use of classroom software for students with dyslexia. In this study it is verified the effective use of technology tools which allows readers with dyslexia to develop their reading skills. It is shown that the reading literacy of these children is improving and is stated that technology allows improvement in the understanding of the text as well when it is used by children with dyslexia.

Furthermore, the above contradict the view of Hargreaves and Crabb, (2016) who suggest the use of charts and diagrams in the use of the prediction strategy which may be applied before, during and after reading. It is mentioned that a flowchart may include before reading all those text features and text structure that may help the student to understand the content of the text by using tools as titles and subtitles, punctuation marks, bold letters, charts, diagrams, colors, symbols. Also, McLoughlin and Leather (2013), report the clarification strategy for unknown words that can be applied to different types of texts and various causes of incomplete understanding. That may be used as a flowchart in the way a teacher may teach students with dyslexia by helping their unknown words in a text to be clarified either by using a dictionary or based on the context and the analysis of the words themselves.

Also, teachers in the typical departments are negative for promoting dramatization and role rotation in contrast with special education teachers' responses. Those findings contradict the view of Ampatuan & San Jose, 2016, who point out that various exercises as role playing and

simulations can be used within the classroom to help students with dyslexia develop their communication skills.

With the above, students can been helped in creating their own reality, experimenting with their knowledge from the real world and developing interpersonal communication with their classmates.

Moreover, teachers in the typical classrooms are negative to use teaching scenarios in the context of cross-thematic method even though the Greek curriculum includes the fundamental concepts of a cross-thematic approach, as mentioned in the D.E.P.P.S.[23]. (Government Gazette 303 / 13-3-03, published by the Greek Ministry of Education Research and Religious Affairs, 2002: 61-63), which is related to the modules being taught or to a thematic field that students have discussed before. The study carried out by Tajuddin and Shah (2015) has shown that a significant number of teachers seem to lack the necessary knowledge or skills to provide effective phonological and phoneme instruction as it seems to happen to our typical education teachers. The authors concluded that teachers are unable to choose the appropriate material or activities for assignment and lack the ability to analyze written words and phonemes due to that luck.

Furthermore, teachers in formal classrooms are content to repeat the instructions in a consistent and systematic manner and provide students with dyslexia extra time to complete the tasks assigned to them. However, this teachers group seems to be quite positive about using the other learning methods and tools. They above are consistent with the accommodations referred in N.C.L.D., 2014, such as repeating the instructions, reading the questions by the teacher, aesthetic and functional differentiation of the worksheets and other teaching material using larger fonts, and graphic organizers. Also, there are differences in their responses on the use of free educational material and software. Teachers from special education use in a higher degree

---

[23] In the Cross-Thematic Framework of Curriculum Programs of D.E.P.P.S. (Government Gazette: 1366, "18-10-2001 / 1373," B ", 18-10-2001 / 1374," B ", 18-10-2001 / 1375, 18-10-2001 / 1376, "B", 18-10-2001), the distinctive lessons are maintained, but at the same time it is sought the proper organization of the curriculum of each subject, in order to ensure the processing of topics from multiple angles (horizontal interconnection). This broader cross-thematic approach, in which discrete lessons are retained, is referred to as an Interdisciplinary Approach. D.E.P.P.S. in Greek is the acronym of the words "Diathematiko Enieo Plesio Programmaton Spoudon".

those tools than their colleagues in typical classrooms. Emphasis is placed on the concept of differentiated teaching, as well as on supporting students with Learning Disabilities in different cognitive subjects. Specifically, they include differentiated teaching, as well as ways to enhance students' cognitive and emotional characteristics with learning difficulties, phonological awareness, reading decoding, comprehension and fluency, written language, mathematical skills and comprehension (http://prosvasimo.iep.edu.gr). Different responses came also for the use of the KWL technique or the use of student's descriptive assessment and individual portfolio which are useful techniques for understanding the information of an informative text (Maryam Hamid et al., 2015)

Due to teachers' sex in the typical education the two groups significantly differ in the use of differentiated teaching with methods and tools. Mostly women appear to be more willing to use the most presented tools and methods provided by the questionnaire with exceptions of the use of Digital Learning Platforms, the contextual understanding for unknown words and the provision of direct feedback which found men teacher to apply them more. Teachers in special education seem be more content on the different teaching methods regardless to their gender. However, they still hold different attitudes toward specific tools and methods. That is consistent with the findings of Papailiou (2018).

Findings show that in both categories of teachers teaching methods and tools mentioned in the questionnaire are mainly applied by younger teachers rather than older teachers (over 50 years old). In the case of teaching methods and tools there does not seem to be any specific pattern regarding the group of teachers who mostly apply these methods. On the contrary, the responses to teachers' methods and tools in special education by teachers with lower time in education appear to be approximately the same in each case. The above are consistent with the findings of Thompson (2013), who found that younger teachers had higher median scores than the older ones due to the knowledge of dyslexia. Those findings may be explained by the possibility that they received pre-service training in a more adequate way and/or continued in-service training than the category of the older teachers.

Furthermore, all teachers give approximately the same importance to most of the teaching methods and tools described in the questionnaire. This is consistent with the findings of Thompson (2013) who assumed that teachers who were trained in special needs would be more

knowledgeable about dyslexia and the tools to be used but the results did not support this assumption.

However, in cases where a statistically significant difference is observed, depending on the educational level, the teachers with special education holding a bachelor or master degree are the ones who place the most importance on applying the methods to the educational process which is consistent with the findings of Zikou (2017). On the contrary, the educational level does not seem to have a significant impact on teachers' responses to their teaching methods and tools. The above are consistent with the findings of Thompson (2013), who found that there is no significant differences in the findings even if teachers had a three-year teacher's diploma, a bachelor's degree or an honours degree. Also, in few cases where there was a statistically significant effect of educational level on responses, these teaching methods and tools are used to a lesser degree by bachelor degree holders or bachelor and master degree holders without any training in Special Education. As it is understood from the above findings, teachers having higher training in special education show higher efficacy in using tools and methodology for children with dyslexia to better understand and produce oral and written speech.

1.5. The effect of sociodemographic variables on teachers perceptions about students' intrapersonal and interpersonal adaptation in an inclusion classroom

Teachers in typical education largely admit that students with dyslexia exhibit negative behavior. This can be based on the fact that they only understand the hard time they face and they cannot answer the big question of 'why this happens to them' so that situation directly affects their emotion and inner world (Novita, 2016).

Particularly, they are negative in approaching others, cause problems during class, fail to answer questions, and behave badly towards teachers. However, they are not used to adhesion to their classmates, they do not display violent behavior, they know how to defend themselves but are sometimes lonely and introverted. The above are consistent with the views mentioned by Cavioni et al. (2017), who mention that children with dyslexia are not very cooperative and it is

not easy for them to gain social contacts with their peers due to the difficulty they have in interpreting the stimuli they receive from their interaction with the environment in order to choose and apply the behaviour that will help them so as to avoid unpleasant situations. So, children with dyslexia usually develop an introverted character and show apathy. Even though, it turns out that children show behaviour that is not socially acceptable, such as aggression, although this situation has arisen through the inability to socialize. Children with dyslexia usually develop an introverted character and show apathy due to Cavioni et al., 2017. Also, due to Papadopoulou (2017), children with dyslexia have difficulty in translating speech into thinking and thinking into speech and she mentions that consequently, these children face problems in the field of communication and thus in the development of friendly relations. Therefore maintaining friendly relations is a challenge and are more often socially isolated than children without special learning difficulties.

In contrast, teachers who teach in special education state to a greater extent that students with dyslexia are ignored, unable to defend themselves, perform low degrees, and poorly react in the classroom. The findings are contadict with the findings in Martimianaki's study (2015), that reveals that students with learning difficulties were statistically significantly lower at both psychosocial adjustment and in the general self-esteem as compared to pupils without learning difficulties. That means that they show statistically significantly lower scores on psychosocial adaptation and self-esteem. The performing of low degrees and is also consistent with the findings of other studies as Jimenez-Fernandez et al., 2015; Farquharson, et al.,2014; Ainscow et al., 2016. However, teachers in special education state that students with dyslexia are not lonely, they do not appear to be introverted and apathetic, nor are they particularly difficult to socialize. Research has shown that there are social benefits for the inclusion of students with learning difficulties in a formal classroom when students have understanding and acceptance by teachers and their peers. Surveys show high levels of loneliness in children with dyslexia compared to typical developmental children (Pesli, 2018).

Also, teachers of both groups acknowledge to a great extent that sometimes their own effort is not sufficient but that a colleague with special education training needs to contribute in order for the educational task to work smoothly. This is consistent with the Law 4368/21.02.2016 (article 82) which promotes inclusive education, the creation of co-education

programs and many proposals for co-operation between schools from mainstream and special education (European Agency of Special Needs Education-Greece, 2018). Although, the above are consistent to the findings of Feskemenlidou research (2016), where most teachers' view of the help available to special education teachers is that they often consider it available. But is also inconsistent with that of Vlachou, Didaskalou and Beliou (2004, as cited in Feskemenlidou, 2016), where 24% of special educators stated that there was no substantial collaboration with the general teacher and 62% reported some forms of collaboration mainly with small class teachers. However, various studies have shown that cooperation between the two specialties is very important, as it not only facilitates the learning process, but also gives general education teachers a stronger sense of efficiency and greater professional satisfaction (Janney, Snell, Beers & Raynes, 1995, as cited in Feskemenlidou, 2016).

Furthermore, male and female teachers, in typical education, significantly disagree in several states about the behavior and problems of students with dyslexia. Male teachers in typical education are significantly more likely to find negative behaviors of students with dyslexia, introversion, peer conflicts, and difficulty in socializing than their female counterparts. On the contrary, women are more likely to have an positive impact through their sex on their responses to the behavior and problems of students with dyslexia. It is also women who place greater importance on encouraging students, enhancing their self-esteem, creating conditions for cooperation and emotional support so that they do not react badly to traits that cannot be changed. Instead, men tend to more apply discussions with students in order to strengthen their autonomy.

On the other hand, gender of teachers in special education does not significantly affect their responses on the behavior of students with dyslexia. Creating complications during the lesson and reacting to the teacher's approach and guidance are the only cases where men show more negative opinion of students with dyslexia than their female colleagues.

Moreover, teachers over the age of 50 who teach in inclusion classrooms are the ones who give a more negative view of students with dyslexia about indifference to others and bad behavior toward teachers. However, this group is the most positive about the support students with dyslexia receive from their peers. On the other hand, age does not appear to significantly influence teachers' responses to special education in relation to the behavior displayed or accepted by students with dyslexia. However, older teachers seem to identify to a greater extent

with younger colleagues the inability of students with dyslexia to defend themselves when someone is attacked, the indifference they receive from their peers, and their exclusion from their activities which is consistent with the findings of Martimianaki (2015).

Moreover, the educational level significantly influences teachers' responses in the typical classroom by showing that those with training in special education respond more positive perceptions about students' intrapersonal and interpersonal adaptation in the classroom. However, it is the teachers with special education who are mostly in favor of the need for a colleague with special education in order for the educational process to run smoothly. Basu (2018), comment that special educators can be used as strategic agents and can ensure students' learning and continuity in school.

In most cases of ways to encourage students at the interpersonal and interpersonal levels, years of working experience in typical education do not appear to significantly affect teachers' responses working in special education.In he case of the special education there were not any differences as all the teachers of this category answered the same working experience. The results are consistent with the answers of Papaeliou's research (2018).

1.6. The effect of sociodemographic variables on teachers choices of methodology used about students with dyslexia and their intrapersonal and interpersonal adaptation in an inclusion classroom

Teachers who teach in special education are significantly more positive in applying the different methods to develop their students' self-confidence and extraversion than their colleagues in typical education. The methods of encouraging students with dyslexia at intrapersonal and interpersonal level appear to be moderately applied by teachers in formal education. The only instances where they are positive refer to encouraging students with dyslexia, enhancing their self-esteem and supporting students to improve their ability to cope with characteristics that cannot be changed. Those findings are consistent to Leontopoulou findings (2013) whose teacher sample tend to guide students' self-esteem and encourage their actions and their results in order to update their self-esteem so that there is a constant, dynamic, reciprocal process due the learning procedure. At the same time, the willingness of formal

education teachers contrasts with the reduced willingness of formal education teachers to teach children with dyslexia in Tzouriadou's research (2015). On the contrary, the results of Papaeliou's (2018) research show that teachers are ready to work with students with dyslexia.

On the other hand, teachers with low experience within typical education would feel more at ease and would have anxiety and fear of harming the student. Teachers with low teaching experience, as not having the necessary knowledge on dyslexia, may find it difficult to manage students with such learning difficulties as it is proved from the low level of promoting role playing, communication and behavioral skills in contrast to special education teachers. Supporting people with special learning difficulties in the classroom is a difficult task, and most teachers, when faced with such issues, either ignore giving priority to daily teaching or seek parental guidance in diagnosing or diagnosing the student for counseling from their special education colleagues, because they are not sure that they can cope with the difficulty themselves and because they believe that it does not fall within their competence (Gately & Hammer, 2005, as cited in Feskemenlidou, 2016). The importance of the role of the teacher in the process of integrating students with dyslexia and general learning difficulties in a typical classroom is in a high level. According to Filipatou and Ventista (2017), the teacher needs to guide and support students, by offering a variety of knowledge acquisition opportunities through choices based on students' particular characteristics. It is also called upon to create the appropriate educational environment for the implementation of differentiated teaching and the provision of appropriate support.

The positive attitude of teachers in a typical classroom towards students with dyslexia and their willingness to provide assistance, also serves as an example for other students and contribute to the smooth integration of these children in the general classroom (Kofidou & Matzikos, 2016).

On the contrary, teachers in special education appear to be positive in all methods of encouraging students. In fact, in many cases, teachers are absolutely positive about the overall counseling of students with dyslexia, fully support the cooperation with ΕΔΕΑΥ, school psychologists and other counselors. Special educational teachers' views are consistent with Tziolas (2013) "key points" for the social and emotional adaptation of secondary education

students with dyslexia which are peer-to-peer solidarity, opportunities to compensate for the difficulties and continuous encouragement. Also, Habib & Naz (2015) pointed out that children's frustration needs to be readily recognizable by educators and has to be treated with motivation, by continuously encouraging their efforts and by strengthening their self-esteem. In contrast, teachers of special education, as expected, consider to a greater extent than typical education teachers that they know how to treat students with dyslexia from their education, from personal experience and could deal with the case of a student with dyslexia on their own, using all available means. This is probably due to the fact that they know more about dyslexia, on the one hand because of their specialty and on the other hand because they teach exclusively to students with special educational needs and therefore have more experience in managing and dealing with dyslexic students. It is consistent to Feskemenlidou study (2016) findings were shows the fact that special education teachers have more specialized knowledge and therefore can modify their teaching and resort to more detailed design and implementation of intervention methods and strategies in order to effectively teach students with dyslexia and comprehend their interpersonal and intrapersonal adaptation. On the other hand, general education teachers, as mentioned in the above study, do not have the necessary knowledge and even claim that their undergraduate studies do not offer them the necessary skills for the teaching modifications and methodological adaptations required for the most effective treatment of children with special needs. learning difficulties (Agaliotis, 2008, as cited in Feskemenlidou, 2016).

In typical education, women place greater importance than men on encouraging students, enhancing their self-esteem, creating conditions for cooperation and emotional support so that they do not react badly to traits that cannot be changed. Instead, men focus on promoting discussions in order to strengthen students' autonomy.

However, methods of encouraging students with dyslexia at both interpersonal and interpersonal levels do not appear to be significantly influenced by gender in special education. In particular, all teachers in this field of education place great importance on the application of these methods of supporting students with dyslexia in enhancing their self-esteem and extroversion. However, the application of methods aimed at student collaboration is more evident in women than in male teachers in special education which is relevant to Papailiou's (2018) findings. On the other hand, regarding the factors related to the effectiveness of

improving dyslexia and students adaptation, it was found that female teachers believe more than men that positive motivations, as well as voluntary participation of student with dyslexia in classroom activities, work effectively in their adaptation. This finding is probably due to the nature of women, who are not as strict as men and by giving positive reinforcement and freedom to the student's desires, they consider that in this way they contribute to the better treatment of the problem. Women, according to Gwernan-Jones and Burden (2010, as cited in Feskemenlidou, 2016), have a significantly more positive attitude towards dyslexia than men and feel more capable and empowered to cope with any difficulties these students experience.

Teachers in the group of 31-40 years old place greater emphasis on applying methods to encourage students with dyslexia to gain confidence and to be more extroverted. In contrast, older teachers are the most disadvantaged in using these methods. That may occurs by the fact that younger teacher have more training in methodology due to their knowledge in dyslexia, have better education and understand better through their lately studies the issue of dyslexia.

Also, teachers in special education do not seem to apply significantly different methods of encouraging students at the interpersonal and interpersonal levels. However, younger teachers seem to be significantly more focused on developing the extroversion of students with dyslexia and working together. The age of the teachers in both educational categories is mentioned to Thompson's (2013) research due to the fact that younger teacher apply more tools and better methodology than the older teachers.

Also, it is the holders of Bachelor, Master degree and having training in Special Education that attach particular importance to applying methods of encouraging students to become confident and extrovert and receptive to collaboration and friendships. On the other hand, in the only cases where educational level influences the methods of encouragement that teachers use in special education, those having training in special education are the most positive. In contrast, bachelor degree holders or bachelor and master degree holders are the most uninterested to applying methods to encourage students and their extroversion. This is consistent with the findings of Zikou (2017).

Furthermore, teachers with 3-8 years of experience in typical education declare they are quite positive about using different methods of encouraging students with dyslexia while teachers with more than 20 years of service are the most negative in using these methods. The

difference in years of experience with students with dyslexia is referred to the findings of Feskemenlidou (2016) too.

Regarding the teachers in special education, all responded that they have completed 0-2 years. Therefore, there is no difference in the responses the methods of encouraging these students to gain self-esteem and and greater self-confidence.

Finally, in most cases the methods of encouraging students at the interpersonal and intrapersonal level do not seem to be significantly influenced by their years of service in special education as all teachers are positive about using these methods. This is probably due to the fact that teachers with teaching experience know how to deal with such students from their personal experience or from their education as it is mentioned in Feskemenlidou study (2016) too.

In summary, despite the timely and valid assessment and diagnosis, which can be particularly important for any child with dyslexia, the teachers' perceptions play a key role in the outcome of this learning difficulty. So, the image that teachers will form affects the way the problem is handled, as well as the course of the child's development (Roussos, 2019). The importance of the results of this research is understood, both for teachers and for education, as it puts them in a process of assess its original perceptions and attitudes regarding dyslexia, methodology and tools which they use in the context of providing assistance to students for their oral and written development as well as for their adaptation at the interpersonal and interpersonal level. Thus, the great role that training plays in improving and developing the educational process is recorded.

1.7. The correlation between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and the Teaching and Learning Methodologies and Educational Tools used for student's with dyslexia in Gymnasium to better understand and produce oral and written speech

The correlations made between the Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia, Teaching/Learning Methodologies and Educational Tools used. From the findings of typical education teachers those

who point out to a greater level that students with dyslexia respond effectively to complex oral and written demands, tend to use more enjoyable and interactive methods. This positive climate should be based on interaction, collaboration, acceptance and respect, so that students feel comfortable and do not feel excluded and marginalized (Stasinos, 2016). They also tend to use methods such as indirect encouragement due to their high level responses of a greater degree of ignorance and indifference on the part of students with dyslexia. Finally, of particular importance is the development of students' interest in dyslexia, linking the content of their teaching to the interest of students. this event focuses on more attractive and effective teaching for students. Differentiated teaching is based on the concept of student motivation and interest (Bellou, 2019).

Although, the use of electronic media and the promotion of students' expression during teaching is pointed out in teachers higher responses about students' effectiveness in simple oral and written requirements. References point out that electronic media and technology has become an important tool for helping dyslexic readers for studying, both at school and at home. there is a huge development of strategies for coping with difficulties of students with dyslexia with the use of technology. Students with dyslexia can use software programs with the combination of optical character recognition, text to speech utilities, spell checkers and predictors etc (Shiavo & Buson, 2014). The use of technology can make the oral and written requirements of students with dyslexia in a more easy way as to comprehend with them.

Lastly, teachers from the typical education who respond that students with dyslexia perform critical ability tend to use use of pleasant and interactive teaching. The teacher must first assess the level of readiness of each student and then, using a variety of materials and activities, respond appropriately to each student's needs. In order to evaluate, but also to cultivate learning readiness, various methods and strategies are proposed. Some of these are examining texts of different difficulty, as well as using a variety of teaching, audiovisual and interactive material (Bellou, 2019).

It is worth mentioned to be the fact that there is no significant positive or negative relationship between the variables related to teachers' perceptions of students' performance and the teaching techniques they use.

1.8. The correlation between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and their perceptions about students' intrapersonal and interpersonal adaptation in an inclusion classroom

Findings present teachers who believe that students with dyslexia can cope with the complex demands of oral and written speech are more likely to identify these students with ignorance and indifference. In this aspect there is much disagreement over references. The indifference and ignorance of students with dyslexia is not in line with the ease of dealing with difficult situations they face in terms of oral and written speech. According to Stasinos (2016), dyslexia is a disorder in the acquisition of written language, which is mainly expressed as a weakness in the recognition and decoding of words, resulting in poor reading and spelling skills. In addition, it is a disorder that occurs when the deficit is not due to lack of teaching, intelligence or the child's social and cultural level or other social and cultural reasons. We conclude that students with dyslexia do not easily manage oral and written speech and therefore cannot be linked to any ignorance and indifference they may provide in their classroom. As for teachers from special education settings there are no significant relationships between variables related to students' ability to oral and written and interpersonal and interpersonal adaptation in an inclusion class.

1.9. The correlation between Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia and the methodology used about students with dyslexia and their intrapersonal and interpersonal adaptation in an inclusion classroom

Teachers from typical classrooms mostly use methods of indirect encouragement on students with dyslexia when they believe that students can effectively respond to complex demands and simple requirements in both oral and written speech. The teacher should encourage the establishment of collaborative actions in which not only the cognitive

encouragement of students with dyslexia can be achieved but also the socio-emotional one, which is often presented as less than that of typically developing students. In general, encouraging inclusive practices by educating teachers on inclusion and learning difficulties will provide the highest level of participation in active intervention and, on the other hand, in creating a climate conducive to standardized dyslexia (Stasinos, 2016). Furthermore, by choosing to teach differently, it encourages the student with dyslexia to participate equally in the inclusive school and at the same time creates an atmosphere of encouragement in the classroom that is friendly to learning difficulties (Bastea, 2016).

In special education settings those who mostly apply methods of indirect encouragement on students with dyslexia are also those who state to a greater degree that these students are effective in complex oral and written demands as in simple requirements and perform critical ability.

1.10.   Strengths, limitations of the study and future lines of research

The objective of this study has been at all times to contribute through empirical analysis of the data to a better understanding of dyslexia and the correlation between comprehension and production of speech and their adaptation in the classroom. The results obtained and the conclusions that have been reached after the research have provided us with new data and have clarified aspects that were not yet sufficiently defined in previous works. However, this contribution to the scientific field of correlation of the above mentioned variables should not obviate the limitations that have been found during the research process, since they have stimulated the approach of new lines of work.

Possibly one of the strengths of our work lies in the two-dimensional approach for which we have opted to analyze and deepen in teachers' responses who teach students with dyslexia. This approach has made it possible to describe more precisely the differences between an inclusion classroom and special education in the need of comprehension and production of speech in students with dyslexia and their adaptation in the classroom. It has been correlated the attitudes and methodology that teacher use on behalf of students speaking and writing and also

their adaptation to an inclusion classroom. In this sense, we will say that we have contributed to a more precise and detailed image of the lack of knowledge and attitudes towards dyslexia found in typical classes.

Another of the strengths of our research was related to different methodological aspects. An example of this has been the representative sample that has been available, which includes teachers of different ages from both formal and special educational classrooms. The selection of the participants was made by means of a sampling that allowed extrapolating or generalizing the data to the Greek teaching population. Likewise, it was important to use an extensive questionnaire created and based on extensive references withdrawn internationally and not just from Greek findings. The research tool is the result of an extensive study and adequately covers the four parts of the research related to teachers' perceptions and methods used for comprehension and production of speech and the adaptation of students with dyslexia.

The analysis of the prevalence of the attitudes and methods used through sociodemographic variables could also be considered as a strength of the study, since previous studies didn't pointed out differences between those variables in such an extent.

One of the limitations of the study has been not correlating the results of the mentioned variables through age and years of experience and were only correlations through the fact if they teach in a typical education or in special education classroom.

We conclude with one of the most interesting questions with a view to present and future researcher who deal with topics related to the teaching of students with dyslexia. After carrying out this study, it seems important to us to investigate the effects from being in a inclusion classroom as a student with dyslexia or to be supported from a more special education environment to be helped to manage all those issues that concur with the findings for learning difficulties. In addition, the comparison of attitudes, methods and tools used by teachers in an inclusion classroom for other learning difficulties except dyslexia, such as dyscalculia or dyspraxia also seems to us that it would be an interesting subject to investigate. Similarly, it would be appropriate to assess which variables would work in the context of the analysis of these learning difficulties.

REFERENCES

Accariya, Z., & Khalil, M. (2016). The Socio-Emotional Adjustment of Learning-Disabled Students Undergoing School Transitions. *Creative Education, 7,* 139-151.

Agrafioti, G. (2019). *Views of Secondary Education teachers on their readiness to deal with Special Learning Difficulties.* Greek Open University. Patra.

Ahmad, A. & Kamin, Y. & Md Nasir, Ah. N.. (2018). Applying Psychomotor Domain for Competency Based Teaching in Vocational Education. *Journal of Physics: Conference Series, 1049*

Ainscow, M. (2016). Diversity and Equity: A Global Education Challenge. *New Zealand Journal of Educational Studies, 51*(2), 143–155

Alexander-Passe, N. (2016) The School's Role in Creating Successful and Unsuccessful Dyslexics. *J Psychol Psychother 6*, 238.

Alhawamdeh H. A. (2016). The Impact of Exploration and Thinking Loudly Strategies on Analytical Reading and Linguistic Intelligence among Second Middle Grade Female Students in Najran. *Journal of Education and Practice, 7*(36).

Ampatuan, A R. & San Jose, Ar.. (2016). Role Play As An Approach In Developing Students' Communicative Competence. *International Journal for Innovation Education and Research, 4.*

APA, American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders, (4 th ed., text revision). Washington, DC: American Psychiatric.

APA, American Psychiatric Association.(2013). *Diagnostic and statistical manual of mental disorders (D.S.M.-5®).*American Psychiatric Pub.

Ausubel, D. P. (1963). *The Psychology of Meaningful Verbal Learning.* New York: Grune and Stratton.

Avcıoğlu, H. (2013). Zihinsel yetersizliği olan öğrencilere selam verme becerisinin öğretiminde videoyla model olmanın etkililiği [The effectiveness of video modeling on students with intellectual disabilities on teaching the skill of how to say hello]. *Kuram ve Uygulamada Eğitim Bilimleri Dergisi, 13*, 455–477.

Barbiero, C., Lonciari, I., Montico, M., Monasta, L., Penge, R., Vio, C., et al. (2012) The Submerged Dyslexia Iceberg: How Many School Children Are Not Diagnosed? Results from an Italian Study. *PLoS ONE 7*(10): e48082.

Basu, S.C., Poonam and Beniwal, A. (2014). A Study to Find the Challenges Faced By Teachers in the Class of Child with Dyslexia. *Educationia Confab,. 3*(5).

Berninger, V.W., Nagy, W., Tanimoto, S., Thompson, R., D. & Abbott, R. (2015). Computer instruction in handwriting, spelling, and composing for students with specific learning disabilities in grades 4-9. *Computers Educ. 81*, 154-68.

Bibou, A., Polychroni, F., Hadjihristou, Ch. (2010*). 5th Classification, Evaluation and Intervention.* Athens: Greek Letters. version. Specific Learning Difficulties, Dyslexia

Bower, E.M. (1969). *Early identification of emotionally handicapped children in school (2nd ed.).* Springfield, IL: Thomas.

Bower, J.M., Carroll, An., Ashman, Adr. F. (2012). Adolescent perspectives on schooling experiences: The interplay of risk and protective factors within their lives. *International Journal of Educational Research, 53*, 9–21.

British Dyslexia Association (B.D.A., 2017) Available online at http://www.bdadyslexia.org.uk/

British Dyslexia Association (B.D.A., 2017) Available online at http://www.bdadyslexia.org.uk/

Burns, G.L., Boe, B., Walsh, J.A., Sommers-Flanagan, R., & Teegarden, L.A (2001). A confirmatory factor analysis on the DSM-IV ADHD and ODD symptoms: What is the best model for the organization of these symptoms? Journal *of Abnormal Child Psychology,29*, 339-349.

Cabbage K. L. Hogan T. P., Carrell Th. D. (2016). Speech perception differences in children with dyslexia and persistent speech delay . *Speech Communication 82,* 14–25.

Carroll, J.M., Mundy, I.R. and Cunningham, A.J. (2014). The roles of family history of dyslexia, language, speech production and phonological processing in predicting literacy progress. *Developmental Science 17*(5), 727–742.

Casserly, A.M. (2013). The socio-emotional needs of children with dyslexia in different educational settings in Ireland. *Journal of Research in Special Educational Needs, 13*(1), 79-91.

Casserly, A.M. and Gildea, A. (2014). A review of a reading class placement for children with dyslexia, focusing on literacy attainment and pupil perspectives. *European Journal of Special Needs Education, 30*(3), 304–322. DOI: http://dx.doi.org/10.1080/08856257.2015.1009700

Castles, A. & Coltheart, M. (1993). Varieties of developmental dyslexia, *Cognition,* 47, pp.149-180.

Cavioni, V., Grazzani, I. & Ornaghi, V. (2017). Social and emotional learning for children with Learning Disability: Implications for inclusion. *International Journal of Emotional Education. Special Issue 9*(2), 100-109.

Chatziara, Ev. (2014) *Social representations for the dynamic theory and the act by teachers views.* Thesis. Aristotle University of Thessaloniki.

Chong, Agn., Normah, Che Din, Norhayati, Ibr., Mahadir, Ah., Kai, P. & Rogayah, A. (2018). A Review on Phonological Awareness and Visual-Spatial Ability among Children with Dyslexia. *Jurnal Sains Kesihatan Malaysia, 16*, 145-154.

Chong, T.T.-J., Apps, M., Giehl, K., Sillence, A., Grima, L.L., Husain, M. (2017). Neurocomputational mechanisms underlying subjective valuation of effort costs. *PLoS Biol 15*(2): 1002598. DOI: https://doi.org/10.1371/journal.pbio.1002598

Choudhary, M., Jain, A., Chahar, C., Singhal, A.K. (2012). A case control study on specific learning disorders in school going children in Bikaner city. *Indian J Pediatr. 79*, 1477-81.

Conner, L. (2017). Understanding dyslexia: competing theories, expanding definitions and ongoing controversy. *The STeP Journal*, 4(2), 11-18.

Conradi, K., Jang, B. G., & McKenna, M. C. (2013). Motivation terminology in reading research: A conceptual Review. *Educational Psychology Review, 26(1),* 127-164.

Cortiella, C. and Horowitz, Sh. H. (2014). *The State of Learning Disabilities: Facts, Trends and Emerging Issues.* New York: National Center for Learning Disabilities.

Coslett, H.B. & Turkeltaub, P. (2016). Acquired Dyslexia. *Neurobiology of Language*, 791–803

Cowen, E., Pederson, A., Babigian, H. Izzo, L. & Trost, M. (1974). Longterm Follow-up of Early Detected Vulnerable Children. *Journal of consulting and clinical psychology, 41*.

Cruickshank, W.M*. (1986). Dyslexia: Its Neuropsychology and Treatment.* Chichester: John Wiley, xiii-xvi.

Cui, Z., Xia, Z., Su, M., Shu, H., Gong, G., 2016. Disrupted white matter connectivity underlying developmental dyslexia: a machine learning approach. *Hum. Brain Mapp. 37*, 1443–1458.

Cunningham, A. J., & Carroll, J. M. (2015). Early predictors of phonological and morphological awareness and the link with reading: Evidence from children with different patterns of early deficit. *Applied psycholinguistics*, 36(03), 509-531.

Dahle, A.E. & Knivsberg, A.M. (2014). Internalizing, externalizing and attention problems in dyslexia, *Scandinavian Journal of Disability Research, 16*(2), 179.

Daniels, P.T. & Share, D.L. (2017). Writing System Variation and Its Consequences for Reading and Dyslexia, Scientific Studies of Reading, 22(1), 101-116.

Decker, A. and Lawley, E. L. (2013). Life's a game and the game of life: How making a game out of it can change student behavior. *Proceeding of the 44th ACM Technical Symposium on Computer Science Education*. Denver, ACM., pp. 233-238

Dickens, R. H., Meisinger, E. B., & Tarar, J. M. (2015). Comprehensive test of phonological processing-2nd ed. (CTOPP-2). *Canadian Journal of School Psychology, 30*(2), 155-162. DOI: 10.1177/0829573514563280

Differentiated Curriculum, Education of Children with Special Learning Difficulties. Available online at http://www.pi-schools.gr/special_education_new/html/gr/8emata/ma8isiakes_disk/ma8isiakes.htm

Dix, K. L., Slee, P. T., Lawson, M. J., & Keeves, J. P. (2012). Implementation quality of whole-school mental health promotion and students' academic performance. *Child and adolescent mental health*, *17*(1), 45–51.

Dogru, S. Sunay Yildirim. (2015). Efficacy of Montessori education in attention gathering skill of children. *Educational Research and Reviews* 10.6, 733.

Döhla, D., & Heim, S. (2016). Developmental Dyslexia and Dysgraphia: What can We Learn from the One About the Other?. *Frontiers in psychology*, *6*, 2045.

Duncan, Naomi. (2018). A qualitative study of UWL students with dyslexia and how they cope with the demands of higher education. *Journal of Psychology & Clinical Psychiatry, 9.*

Dyslexia International (2018). *Annual Report 2017. Available online at* https://www.dyslexia-international.org

E.P.E.A.E.K. (2018).*Operational Program that was designed for Education and Initial Vocational Training.* Available online at http://www.epeaek.gr/epeaek/el/home.jsp,

Elhoweris, H. (2017). The Impact of Repeated Reading Intervention on Improving Reading Fluency and Comprehension of Emirati Students with Learning Disabilities. *International Journal of Psycho-Educational Sciences, 6*(2).

Elliott, J. G. & Grigorenko, E. L. (2014). *The Dyslexia Debate.* Cambridge: University Press.

ELSTAT (2019). Greek statistical authority. Available online at http://www.statistics.gr/

Erstad O., Eickelmann B. & Eichhorn K. (2015). Preparing teachers for schooling in the digital age: A meta- perspective on existin strategies and future challenges. *Education and Information Technologies, 20*(4), 641-654.

Farquharson, K., Centanni, T. M., Franzluebbers, C. E., & Hogan, T. P. (2014). Phonological and lexical influences on phonological awareness in children with specific language impairment and dyslexia. *Frontiers in Psychology*, *5*, 1-10. DOI: 10.1016/j.ridd.2014.11.002

Farris, E. A., Ring, J., Black, J., Lyon, G. R., & Odegard, T. N. (2016). Predicting Growth in Word Level Reading Skills in Children With Developmental Dyslexia Using an Object Rhyming Functional Neuroimaging Task. *Developmental Neuropsychology*, *41*(3), 145-161.

Feskemenlidou, Aik. (2016). *The perceptions of typical and special education teachers on phonological awareness of students with dyslexia and ways of managing them.* Bachelor's thesis. University of Western Macedonia, Nursery Department, Greece.

Field A., (2009). DISCOVERING STATISTICS USING SPSS. London: Sage Publications. Available at http://www.soc.univ.kiev.ua/sites/default/files/library/elopen/andy-field-discovering-statistics-using-spss-third-edition-20091.pdf

Filias, B. (2003). *Introduction to Methodology and Techniques of Social Research*. Athens: Gutenberg.

Fisher, C., Chekaluk, E., & Irwin, J. (2015). Impaired driving performance as evidence of a magnocellular deficit in dyslexia and visual stress. *Dyslexia, 21*(4), 350–360.

Fostick, L., Bar-El, S., & Ram-Tsur, R. (2012). Auditory temporal processing as a specific deficit among dyslexic readers. *Psychology Research, 2*(2), 77–88.

Foundation for people with learning disabilities. *Dyslexia*. *Available online at* https://www.mentalhealth.org.uk/learning-disabilities/a-to-z/d/dyslexia

Franceschini S., Gori S., Ruffino M., Viola S., Molteni M., Facoetti A. (2013). Action video games make dyslexic children read better. *Curr Biol. 23*(6),462-6. DOI: 10.1016/j.cub.2013.01.044. Epub 2013 Feb 28.

Fumiko Hoeft, McCardle, Pugh K. (2015). *The Myths and Truths of Dyslexia in Different Writing Systems. Available online at* https://dyslexiaida.org/the-myths-and-truths-of-dyslexia/

Furnes, B., & Samuelsson, S. (2011). Phonological awareness and rapid automatized naming predicting early development in reading and spelling: Results from a cross-linguistic longitudinal study. *Learning and Individual Differences, 21*(1), 85-95.

Gaab, N. (2017). *It's a myth that young children cannot be screened for dyslexia*. Baltimore, MD: International Dyslexia Association. Available online at http:// dyslexiaida.org/its-a-myth-that-young-children-cannot-be-screened-fordyslexia/

Gabay, Y. and Holt, L. (2015). Incidental learning of sound categories is impaired in developmental dyslexia. *Cortex, 73*, 131-143. DOI: 10.1016/j.cortex.2015.08.008.

Garcia, R. B., Mammarella, I. C., Tripodi, D., & Cornoldi, C. (2014). Visuospatial working memory for locations, colours, and binding in typically developing children and in children with dyslexia and non-verbal learning disability. *British Journal of Developmental Psychology, 32*(1), 17–33.

Georgovrettakou, S., Vintou, A. (2015). *Ways of supporting and educating students with dyslexia.* The Proceedings of the 2nd Congress "New Pedagogue" Athens, 23 & 24 May 2015

Gerasymova, I., & Gerasimova, N. (2016). Intrapersonal conflict as a factor of adaptation of students to conditions of teaching at universities. *International Letters of Social and Humanistic Sciences*, 70, 1-7.

Gersten R, Compton D, Connor CM, Dimino J, Santoro L, Linan-Thompson S, Tilly WD. (2008). *Assisting students struggling with reading: Response to intervention and multi-tier intervention for reading in the primary grades.* A practice guide (NCEE 2009–4045) U.S. Department of Education, National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences; Washington, DC. Available online at http://ies.ed.gov/ncee/wwc/publications/practiceguides/

Giraldo-Chica, M., Hegarty, J. P., & Schneider, K. A. (2015). Morphological differences in the lateral geniculate nucleus associated with dyslexia. *NeuroImage: Clinical*. DOI: https://doi.org/10.1016/j.nicl.2015.03.011

Gómez, R.; García, A. & Cordón, J. (2015). APPrender a leer y escribir: aplicaciones para el aprendizaje de la lectoescritura. *Teoría de la Educación. Educación y Cultura en la Sociedad de la Información*. Diciembre, 118-137

Gori, S., Mascheretti, S., Giora, E., Ronconi, L., Ruffino, M., Quadrelli, E., & Marino, C. (2015). The DCDC2 intron 2 deletion impairs illusory motion perception unveiling the selective role of magnocellular-dorsal stream in reading (dis) ability. *Cerebral Cortex, 25*(6), 1685–1695.

Goswami, U., Barnes, L., Mead, N., Power, A. J., & Leong, V. (2016). Prosodic Similarity Effects in Short-Term Memory in Developmental Dyslexia. *Dyslexia (Chichester, England)*, *22*(4), 287–304. DOI: http://doi.org/10.1002/dys.1535

Granzen, T. (2018). *How High School Students With Dyslexia Use Assistive Technology; A Teacher's Perspective.* Dissertation, Concordia University-Portland

Habib, A. & Naz, F. (2015). Cognitive failure, teacher's rejection and interpersonal relationship anxiety in children with dyslexia. *Pak J Med Sci., 31*(3), 662-6.

Habib, M, Giraud, K. (2013). Dyslexia. *Handbook Clin Neurol. 111*, 229- 35.

Hachmann, W. M., Bogaerts, L., Szmalec, A., Woumans, E., Duyck, W., & Job, R. (2014). Short-term memory for order but not for item information is impaired in developmental dyslexia. *Annals of dyslexia*, 64(2), 121-136.

Haft, S.L., Myers, Ch. A., Hoeft, F. (2016). Socio-emotional and cognitive resilience in children with reading disabilities. *Current Opinion in Behavioral Sciences 10*, 133-141

Hamid, M. S., Rahman Q. & Atmowardoyo H. (2016). The Use of Prezi with Know, Want, and Learn (KWL) *Strategy to Enhance Students Reading Comprehension. 3*, 16-31.

Hammill, D. D. (1998). *Detroit Tests of Learning Aptitude* (4th ed.). Austin, TX: Pro-Ed.

Handler, S. (2016). Dyslexia: What you need to know. *Contemporary Pediatrics, Montvale, 33*(8), 18–23.

Hanus M., Fox J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education*, 80. DOI: 10.1016/j.compedu.2014.08.019.

Hargreaves S., & Crabb J.(2016). *Study skills for students with dyslexia* 3rd revised edition . London, Sage

Heerashree P, Manjula P. (2015). Prevalence of dyslexia in higher primary school children and its effect on behavioural problems. *Karnataka J Agric Sci. 28*(4), 592–5.

Hernandez, N., Andersson, F., Edjlali, M., Hommet, C., Cottier, J. P., Destrieux, C., et al. (2013). Cerebral functional asymmetry and phonological performance in dyslexic adults. *Psychophysiology,* 50, 1226–1238.

Hollander, E. (2012). *Inclusive leadership: The essential leader- follower relationship.* New York, NY: Routledge.

Houwer, J. D., Holmes, B. & Moors, A. (2013). What is learning? On the nature and merits of a functional definition of learning, *Psychonomic Bulletin & Review, 20*, 631–642

Huettig, F., Lachmann, T., Reis, A. &Petersson, K.M. (2017). Distinguishing cause from effect – many deficits associated with developmental dyslexia may be a consequence of reduced and suboptimal reading experience, Language, Cognition and Neuroscience, 33(3), 333-350.

Hughes, A. (2013). *Testing for language teachers.* Cambridge: Cambridge University Press

I.D.A. (International Dyslexia Association) (2017). *Definition of Dyslexia.* IDA Board of Directors.

Idan, O, Margalit, M. (2014). Socioemotional self-perceptions, family climate, and hopeful thinking among students with learning disabilities and typically achieving students from the same classes. *J Learn Disabil 47*, 136-152.

Institute of Educational Policy, Collection of Educational Material and Software. Available online at: http://prosvasimo.gr/el/ekpaideutiko-uliko

Jang, H., Kim, E. J., & Reeve, J. (2012). Longitudinal test of self-determination theory's motivation mediation model in a naturally occurring classroom context. *Journal of Educational Psychology, 104*(4), 1175-1188

Jimenez-Fernandez, G., Gutierrez-Palma, N., & Defior, S. (2015). Impaired stress awareness in Spanish children with developmental dyslexia. *Research in Developmental Disabilities, 37*, 152-161. DOI: 10.1016/j.ridd.2014.11.002

K.A.N.E.P. (2019). *Annual report on the education of 2017-18 in Greece*. Available online at https://www.kanep-gsee.gr/nea-anakoinoseis/-/deltio-typou-parousiasi-etisias-ekthesis-meros-v-gia-tin-ekpaidefsi-2017-18-tou-kanep-gsee-se-synergasia-me-tin-e-s-a-mea-me-thema-tin-eidiki-agogi-kai-ekpaidefsi-stin-ellada-makrys-o-dromos-gia-e/

Kafyulilo, A., Keengwe, J. (2014). Teachers perspectives on their use of ICT in teaching and learning: A case study. *Educational and Information Technologies,* 19(4), 913-923.

Kathleen, K. (2013). *Scoping Review of the Evidence Base for Dyslexia-friendly Classroom Teaching and Whole School Approaches*. Manchester Metropolitan University.

Keane T., Keane W. (2016). Achievements and challenges: Implementing a 1:1 program in a secondary school. *Education and Information Technologies, 22,* 1-17.

Kennison, Sh. (2013) First Impressions: We start to pick up words, food preferences and hand-eye coordination long before being born, *Scientific American, 313*(1), 24.

Kilic M., Cakmak M. (2013). Concept Maps as a tool for meaningful learning and teaching in chemistry education. *International Journal on New Trends in Education and Their Implications,* 4(4).

Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. Hoboken NJ: Wiley & Sons.

Kjersten, J. (2017). Understanding and working with dyslexia in individual and couple therapy: Implications for counselors and psychotherapists. *Research Gate 37*(1), 1-23.

Knight, C. (2018) What's dyslexia? An exploration of the relationship between teachers' understanding of dyslexia and their training experiences. *Dyslexia, 1-13.*

Ko, T. & Tejero H.M. (2015). Reading Comprehension Instruction for Adolescents with Learning Disabilities: A Reality Check. *Education Sciences. 5*. 413-439.

Koch K. (2017). Stay in the Box! Embedded Assistive Technology Improves Access for Students with Disabilities. *Educ. Sci., 7*, 82; DOI: 10.3390/educsci7040082.

Kohn, M. L. (1977). (2nd ed.). *Class and Conformity: A Study in Values*. Homewood, Ill.: Dorsey

Kokkinidou, An. & Dimitrakopoulou, M. (2018). *Certificate of Knowing Greek: Support and quality promotion of teaching/ learning Greek as a foreign/ second language.* Kentro Ellinikis Glossas.

Koponen, T., Salmi, P., Torppa, M., Eklund, K., Aro, T., Aro, M. & Nurmi, J. E. (2016). Counting and rapid naming predict the fluency of arithmetic and reading skills. *Contemporary Educational Psychology*, 44, 83-94.

Kovelman, I., Norton, E. S., Christodoulou, J. A., Gaab, N., Lieberman, D. A., Triantafyllou, C., Wolf, M., Whitfield-Gabrieli, S., & Gabrieli, J. D. E. (2012). Brain basis of phonological awareness for spoken language in children and its disruption in dyslexia. *Cerebral Cortex, 22*, 754-764. doi: 10.1093/cercor/bhr094

Ktori, M., Tree, J. J., Mousikou, P., Coltheart, M., & Rastle, K. (2016). Prefixes repel stress in reading aloud: Evidence from surface dyslexia. *Cortex, 74*, 191–205.

Kuster K., van Weerdenburg M ., Gompel M., Bosman An. (2017). Dyslexie font does not benefit reading in children with or without dyslexia. *Ann. of Dyslexia*, 1-18

Ladd, G. W., Herald-Brown, S. L., & Kochel, K. P. (2009). Peers and motivation. In K. Wentzel & A. Wigfield (Eds.), *Handbook of motivation in school* (pp. 323–348). Mahwah, NJ: Erlbaum

Ladd, G. W., -Ladd, K. Visconti, K.J., Ettekal, Id., Sechler, C.M., Cortes, K.I. (2014). Grade-School Children's Social Collaborative Skills: Links With Partner Preference and Achievement. *American Educational Research Journal, 51*(1).

Lallier, M., Thierry, G., Tainturier, M.J. (2013) On the importance of considering individual profiles when investigating the role of auditory sequential deficits in developmental dyslexia. *Cognition, 126*, 121–127.

Lambert, N. M., & Nicoll, R. C. (1977). Conceptual model for nonintellectual behavior and its relationship to early reading achievement. *Journal of Educational Psychology, 69*(5), 481-490.

Lawton, T. (2016). Improving Dorsal Stream Function in Dyslexics by Training Figure/Ground Motion Discrimination Improves Attention, Reading Fluency, and Working Memory. Front. Hum. *Neurosci. 1*0: 397.

Layes S., Lalonde R., Rebaï M. (2015). Reading speed and phonological awareness deficits among Arabic-speaking children with dyslexia. *Dyslexia. 21*(1), 80-95.

Ldao. (2018). *Learning Disabilities Association of Ontario*. Available online at http://www.ldao.ca

Le C.T. & Boen J.R. (1995) *Health and numbers: basic biostatistical methods.* John Wiley, Chichester.

León A. M., Bravo C.B., Fernández Ant. R. (2017). Review of Android and iOS Tablet Apps in Spanish to improve reading and writing skills of children with dyslexia. *Procedia - Social and Behavioral Sciences* 237, 1383 – 1389

Leontopoulou, S. (2013). A Comparative Study of Resilience in Greece and Cyprus: The Effects of Negative Life Events, Self-Efficacy, and Social Support on Mental Health. In A. Efklides and D. Moraitou (eds.), *A Positive Psychology Perspective on Quality of Life* (pp. 273-294) Springer: Social Indicators Research Series, 51.

Lim L., Oei A. (2015). Reading and spelling gains following one year of Orton-Gillingham intervention in Singaporean students with dyslexia. *British Journal of Special Education, 42.* DOI: 10.1111/1467-8578.12104

Lindamood, C.H., & Lindamood, P.C. 1979. *Lindamood Auditory Conceptualization Test.* Allen, TX: DLM Teaching Resources

Literacy. (2018). Dyslexia and provision in Europe. Prevalence of dyslexia. *Available online at* http://www.literacyportal.eu/en/info/about-literacy.html

Liu J, et al. (*2013*) Reducing sphingolipid synthesis orchestrates global changes to extend yeast lifespan. *Aging Cell, 12*(5),833-41

Loizou F.(2016) Changes in teaching in order to help students with learning difficulties improve in Cypriot primary classes, *Education 3-13, 44*(4), 371-390.

Long, G. B., Fox, R. A., & Jacewicz, E. (2016). Dyslexia Limits the Ability to Categorize Talker Dialect. *Journal of Speech, Language, and Hearing Research : JSLHR*, *59*(5), 900–914. DOI: http://doi.org/10.1044/2016_JSLHR-S-15-0106

López-Escribano, C., Suro Sánchez, J., & Leal Carretero, F. (2018). Prevalence of Developmental Dyslexia in Spanish University Students. *Brain sciences*, *8*(5), 82. DOI: 10.3390/brainsci8050082

Lyon, G. R., Shaywitz, S. E., & Shaywitz, B.A. (2003). A definition of Dyslexia. *Annals of Dyslexia, 53*, 1-14.

Magou, E. (2014). *Teachers perspectives about students with dyslexia and learning difficulties.* Thesis. Aristotelian University of Thessaloniki.

Martimianaki, C. (2015). *Psychosocial adaptation and self-esteem of students with and without learning difficulties.* Thesis for School of Human and Social Sciences. Pedagogical Department of Primary Education. Sector of Psychology. University of Patra, Greece.

Masten, Ann S. (2014). Global Perspectives on Resilience in Children and Youth. *Child Development, 85*(1), 6-20

Matric, M. (2018). Self Regulatory Systems: Self-Regulation and Learning. *Journal of Process Management – New Technologies, International, 6*(4).

McCurdy, E.E., Cole, C.L. (2014). Use of a peer support intervention for promoting academic engagement of students with autism in general education settings. *J Autism Dev Disord. 44*(4), 883-93. DOI: 10.1007/s10803-013-1941-5.

McLoughlin, D. & Leather, C. (2013). *The Dyslexic Adult - Interventions and Outcomes - An Evidence-based Approach 2nd edition*. British Psychological Society and John Wiley & Sons Ltd.

Meggoura, Th. (2017). *The importance of factual and linguistic competence in the social adaptation of primary school students with high risk in developing Special Learning Difficulties*. Ethniko kai Kapodistriako Panepistimio Athinon. Tmima Filosofias, Pedagogikis kai Psychologias.

Mehrad, A. (2016). Mini Literature Review of Self-Concept. *Journal of Educational, Health and Community Psychology, 5*(2).

MenCap. *How common is learning disability? Available online at* https://www.mencap.org.uk/

Moll, K., Kunze, S., Neuhoff, N., Bruder, J., & Schulte-Körne, G. (2014). Specific learning disorder: prevalence and gender differences. *PloS one*, *9*(7), 103537. DOI: 10.1371/journal.pone.0103537

Molnar-Smith S. (2013). Improving Reading Skills For Dyslexic Students In The English Classroom. *Malmo Hogskola*, Lärande och samhälle *Kultur, språk och medier*

Morgan, P.L., Farkas,G., & Wu, Q. (2012). Do poor readers feel angry, sad and unpopular? *Scientific studies of reading, 16*(4), 360-381

Morrow, L.M., Roskos, K.A., Gambrell, L.B. (2015). *Oral Language and Comprehension in Preschool: Teaching the Essentials*. Guilford Publications.

Mortimore, T. & Zsolnai, An. (2015). Inclusive education and social competence development. *Hungarian Educational Research Journal, 5*(1), 46–61.

Mutodi P. & Chigonga B. (2015). Concept Map as an Assessment Tool in Secondary School Mathematics: An Analysis of Teachers' Perspectives. *Eurasia J. Math. Sci. & Tech. Ed., 12*(10), 2685-2696

N.C.L.D. – National Center for Learning Dissabilities. (2014). Editorial Team. *Accommodations for Students With Learning Disabilities*. Available online at http://www.ncld.org/students-disabilities/accommodations-education/accommodationsstudents-learning-disabilities

Navas AL., Ferraz Ede C., Borges JP. (2014). Phonological processing defiits as a universal model for dyslexia: evidence from different orthographies. *Codas, 2696*, 509-519.

Nelson, J.M. (2015). Examination of the double-deficit hypothesis with adolescents and young adults with dyslexia. *Annals of Dyslexia, 65*(3), 159–177

Niapa K. (2018). *Dyslexia friendly schools*. Thesis. Cyprus: University of Nicosia.

Nicolson RI, Fawcett AJ, Dean P. (2001). Developmental dyslexia: the cerebellar deficit hypothesis. *Trends Neurosci. 24*(9), 508-11.

Nielsen, K., Abbott, R., Griffin, W., Lott, J., Raskind, W., & Berninger, V. W. (2016).Evidence-Based Reading and Writing Assessment for Dyslexia in Adolescents and Young Adults. *Learning disabilities (Pittsburgh, Pa.)*, *21*(1), 38.

Nittrouer S., Krieg LM., Lowenstein JH. (2018). Speech Recognition in Noise by Children with and without Dyslexia: How is it Related to Reading? *Res Dev Disabil. 77,* 98-113.

Nizami, Chr. & Doikou, M. (2017) Dyslexia and social relationships with peers in general school: Views of adults with dyslexia. *Pedagogiki Epitheorisi, 63*.

North Tyneside (2017). *North Tyneside Policy for Literacy Difficulties and Dyslexia*. Available online at http://www.educationservices.org.uk/Communication?Id=2974

Norton, E. S., Black, J. M., Stanley, L. M., Tanaka, H., Gabrieli, J. D., Sawyer, C., & Hoeft, F. (2014). Functional neuroanatomical evidence for the double-deficit hypothesis of developmental dyslexia. *Neuropsychologia*, *61*, 235–246. DOI: 10.1016/j.neuropsychologia.2014.06.015

Novita Sh. (2016). Secondary symptoms of dyslexia: a comparison of self-esteem and anxiety profiles of children with and without dyslexia. *European Journal of Special Needs Education, 31*(2), 279-288

Ntouka, S. (2017). *Study of how to teach and acquire English by students with dyslexia.* Thesis. University of Macedonia, Greece.

Nurss, J., & McGauvran, M. (1995). *Metropolitan Readiness Tests—Sixth Edition (MRT6).* San Antonio, TX: Psychological Corporation.

Oganian, Y., & Ahissar, M. (2012). Poor anchoring limits dyslexics' perceptual, memory, and reading skills. *Neuropsychologia, 50*(8), 1895–1905.

Ogelman, H. G. & Secer, Z. (2012). The Effect Inclusive Education Practice during Preschool Has on the Peer Relations and Social Skills of 5-6-Year Olds with Typical Development *International Journal of Special Education*, *27*(3), 169-175.

Ozernov-Palchik, O., Norton, E. S., Sideridis, G., Beach, S. D., Wolf, M., Gabrieli, J. D. E., & Gaab, N. (2016). Longitudinal stability of pre-reading skill profiles of kindergarten children: Implications for early screening and theories of reading. *Developmental Science*.

Pan, J., Song, S., Su, M., McBride, C., Liu, H., Zhang, Y., et al. (2016). On the relationship between phonological awareness, morphological awareness and Chinese literacy skills: Evidence from an 8-year longitudinal study. *Developmental Science, 19*(6), 982-991.

Pandeliadou, S. (2014). *Special Education and Effective Teaching. Mental Disability. Version 1.0.* Thessaloniki: Aristotle University of Thessaloniki

Papadopoulou G., Ladias A., Mikropoulos A., Panagiotakopoulos C., Paraskeva F., Pidelas P., Politis P., Retalis S., Sampson D., Fachantidis N., Halkidis A. (eds.), Proceedings of the 3rd Panhellenic Conference "Integration of ICT in the Educational Process "of the Hellenic Scientific Association of ICT in Education (ETPE*), Concept mapping and Learning Difficulties*, Department Digital Systems, University of Piraeus, Piraeus, 10-12 May 2013

Papadopoulou, El. (2018). *Assessment of teachers' knowledge of Phonological Awareness and its relationship with Dyslexia*. Post degree Study. University of Macedonia. Greece.

Papailiou, Chr. (2018). *Knowledge and views of primary and secondary school teachers regarding the support of the student with dyslexia in the classroom.* Bachelor's thesis. National and

Kapodistrian University of Athens. School of Educational Sciences. Department of Primary Education.

Papakonstantinopoulou, Art. (2018) *The mental resilience of school-age children and their differentiation in terms of learning difficulties.* Doctoral Thesis. University of Patras.

Pedersen, H. F., Fusaroli, R., Lauridsen, L. L., & Parrila, P. (2016). Reading processes of university students with dyslexia: An examination of the relationship between oral reading and reading comprehension. *Dyslexia, 22,* 305–321.

Pesli, V. (2018). *Learning practices in the context of inclusion of disabled educators, special educational needs. Postgraduate Diplomatic Work..* University of Macedonia, Greece.

Peterson, Lisa S.; Martinez, Andrew; Turner, Terez L. (2010). Test Review: Process Assessment of the Learner-Second Edition. *Journal of Psychoeducational Assessment, 28*(1), 80-86

Peterson, R. L., Pennington, B. F., & Olson, R. K. (2013). Subtypes of developmental dyslexia: Testing the predictions of the dual-route and connectionist frameworks. *Cognition*, *126*(1), 20–38. DOI: http://doi.org/10.1016/j.cognition.2012.08.007

Pickens-Cantrell, C. (2016). The Effectiveness of Peer Support to Increase Positive Social Interaction for Students with Special Needs" *All Capstone Projects. 186*.

Płoński, P., Gradkowski, W., Altarelli, I., Monzalvo, K., van Ermingen-Marbach, M., Grande, M., Heim, S., Marchewka, A., Bogorodzki, P., Ramus, F., Jednoróg, K. (2017). Multi-parameter machine learning approach to the neuroanatomical basis of developmental dyslexia. *Hum Brain Mapp. 38*(2), 900-908.

Polychronopoulou, S. (2012). *Children and Teenagers with Special Needs and Possibilities*. Athens: Self-publishing

Porpodas, K.D. (1997). *Reissue. Dyslexia. The Specific disorder in the learning of written language* (psychological view). Athens: Ostrich.

Power, A. J., Colling, L. J., Mead, N., Barnes, L., & Goswami, U. (2016). Neural encoding of the speech envelope by children with developmental dyslexia. *Brain and Language*, *160*, 1–10.

Pradhan, B., Parikh, T., Sahoo, M., Selznick, R.,Goodman, M. (2017). Current Understanding of Dyslexia and Pilot Data on Efficacy of a Mindfulness Based Psychotherapy (MBR-RAM) Model. *Adolescent Psychiatry, 7*(1), 44-55(12)

Protopapas, A., Karamanis, M., Skaloumbakas, C., Nikolopoulos, D., & Kriba, A. (2001). A distributed computer-based screening system for learning disabilities with centralized data processing. *Proceedings of Ed Media,* 2, 1436–1441, Tampere, Finland

Pumfrey, P.D. & Reason, R. (1991). *Specific Learning Difficulties (Dyslexia): Challenges and responses.* Windsor, Berkshire: Nfernelson.

Quach, J., O'Connor, M., Goldfeld, S., Gold, L., Hopkins, D., Beatson, R., & Aston, R. (2015). *Approaches to the provision of educational support for children and young people with additional health and developmental needs: Dyslexia.* Centre for Community Child Health, Melbourne, Victoria.

Qureshi, H.A. (2018). Theoretical Sampling in Qualitative Research: A Multi-Layered Nested Sampling Scheme. *International Journal of Contemporary Research and Review*, 9(8), 20218-20222.

R.S. Assessment. (2018). *Five findings from the latest special educational needs statistics. Available online at* http://rsassessment.com/2018/07/26/5-findings-from-the-latest-special-educational-needs-statistics/

Rao, S., Ra,j S.A., Ramanathan, V., Sharma, A., Dhar, M., Thatkar, P.V., et al. (2017). Prevalence of dyslexia among school children in Mysore. *Int J Med Sci Public Health, 6*, 159-164

Re, AM. & Cornoldi, C. (2015). Spelling errors in text copying by children with dyslexia and ADHD symptoms. *J Learn Disabil. 48*(1), 73-82

Reid, G. (2015). Effective Learning and Motivation – Ideas and strategy for Independent Learning. http://www.drgavinreid.com/wpcontent/uploads/2013/07/GR_article2_motivation.

Reid, G. (2016). *Dyslexia: A Practitioner's Handbook.* Fifth Edition. Oxford: John Wiley & Sons.

Robertson, C., & Salter, W. (1995). *The phonological awareness kit*. East Moline, IL: Linguisystems.

Saksida, A., Iannuzzi, S., Bogliotti, C., Chaix, Y., Démonet, J.F., Bricout, L., Billard, C., N'Guyen-Morel, M.A., Le Heuzey, M.-F., Soares-Boucaud, I., George, F., Ziegler, J.C., Ramus, F. (2016). Phonological skills, visual attention span, and visual stress in developmental dyslexia: insights from a population of French children. *Dev. Psychol. 52*, 1503–1516.

Salvaras, G. (2013). *Teaching children with special needs in regular school.* Athina: Pedio.

SanchezBloom, J., Garcia-Barrera, M. A., Miller, C. J., Miller, S. R., & Hynd, G. W. (2013). Planum temporale morphology in children with developmental dyslexia. *Neuropsychologia*, 51, 1684–1692

Saygin, Z. M., Norton, E. S., Osher, D. E., Beach, S. D., Cyr, A. B., Ozernov-Palchik, O., ... & Gabrieli, J. D. (2013). Tracking the roots of reading ability: white matter volume and integrity correlate with phonological awareness in prereading and early-reading kindergarten children. *Journal of Neuroscience,* 33(33), 13251-13258.

Scammacca, N., Roberts, G., Vaughn, S., Edmonds, M., Wexler, J., Reutebuch, C. K., et al. (2007). *Intervention for adolescent struggling readers: A meta-analysis with implication for practice.* Portsmouth, NH: RMC Research Corporation, Center on Instruction

Schaadt, G., Männel, C., van der Meer, E., Pannekamp, A., & Friederici, A. D. (2016). Facial speech gestures: The relation between visual speech processing, phonological awareness, and developmental dyslexia in 10-year-olds. Developmental Science, *19*(6), 1010–1034.

Schiff, R., & Joshi, R. M. (2016). *Interventions in Learning. A Handbook on Systematic Training Programs for Individuals with Learning Disabilities.* Switzerland: Springer International Publishing.

Schneps, M.H., Thomson, J.M., Chen, C., Sonnert, G., Pomplun, M. (2013). E-Readers Are More Effective than Paper for Some with Dyslexia. *PLoS ONE 8*(9), 75634. DOI: https://doi.org/10.1371/journal.pone.0075634

Serniclaes, W. & M'ballo, Seck. (2018). Enhanced Sensitivity to Subphonemic Segments in Dyslexia: A New Instance of Allophonic Perception *Brain Sci. 8*, 54

Siegelman, N. & Frost, R. (2015). Statistical learning as an individual ability: theoretical perspectives and empirical evidence. *J. Mem. Lang.* 81, 105–120

Sigurdardottir, H., Danielsdottir, H., Gudmundsdottir, M., Hjartarson, Kr., Thorarinsdottir, El. & Kristjánsson, Arn. (2017). Problems with visual statistical learning in developmental dyslexia. *Scientific Reports,* 7.

Sisler P. (2014). *Implementing the use of iPads and Technology in the Classroom.* Fort Hays State university, USA.

Skeide, M. A., Kirsten, H., Kraft, I., Schaadt, G., Müller, B., Neef, N. & Friederici, A. D. (2015). Genetic dyslexia risk variant is related to neural connectivity patterns underlying phonological awareness in children. *NeuroImage*, *118*, 414-421

Slee R. (2013). Meeting Some Challenges of Inclusive Education in an Age of Exclusion. *Asian Journal of Inclusive Education, 1(*2), 3-17

Snowling, M.J. & Hulme, C. (2012). Annual Research Review: The nature and classification of reading disorders: a commentary on proposals for DSM-5. *J Child Psychol Psychiatry, 53*(5), 593–607.

Soliman, M.S. & Madani, F.M. (2017). The Effects of Multisensory- Based Instruction Combined with Brain-Compatible Environment Techniques on Reading Fluency and Reading Comprehension of Fourth-Grade Students with Dyslexia. *Croatian Journal of Education, 19*(2), 363-397

Soriano-Ferrer, M., Morte-Soriano, M. (2017). Teacher Perceptions of Reading Motivation in Children with Developmental Dyslexia and Average Readers. Procedia - *Social and Behavioral Sciences, 237*(21), 50-56.

Sridevi D, George AG, Sriveni D, Rangaswamy K. (2015). Learning disability and behaviour problems among school going children. *J Disab Stu. 1*(1), 4-9.

Stagg, S.D., Eaton, El. and Sjoblom, Am. M. (2018). Self-efficacy in undergraduate students with dyslexia: a mixed methods investigation. *British Journal of Special Education, 45*(1), 26-42

Starowicz, F. An., Chrobak, Adr., Moskała, M., Krzyżewski, R. M., Kwinta, St., Milczarek, Ol., Rajtar-Zembaty, A. & Zielińska, D. (2107). The role of the cerebellum in the regulation of language functions. *Psychiatr. Pol. 2017*; 51(4): 661–671

Stasinos, D. (2015). *Psychology of speech and language. Development and pathology. Dyslexia and speech therapy* (Rev. Ed.). Athens: Gutenberg.

Stein J. (2018). The current status of the magnocellular theory of developmental dyslexia, *Neuropsychologia,* https://doi.org/10.1016/j.neuropsychologia.2018.03.022

Stoodley, C. J., & Stein, J. F. (2013). Cerebellar function in developmental dyslexia. *The Cerebellum, 12*(2), 267–276.

Sullivan, H., & Sahasrabudhe, S. (2017). Envisioning inclusive futures: Technology-based assistive sensory and action substitution. *Futures, 87*, 140–148.

Sun, Z., Zou, L., Zhang, J., Mo, S., Shao, S., Zhong, R., … Song, R. (2013). Prevalence and associated risk factors of dyslexic children in a middle-sized city of China: a cross-sectional study. *PloS one*, *8*(2), e56688.

Tafa, Euph. (1995). *Reading Readiness Test / Euphemia Tafa*. - Athens: Greek Letters,.

Tajuddin, E. D., & Shah, P. B. M. (2015). Teachers' knowledge of phonemic awareness and its instruction in ESL learning. Sub-urban primary school in Malaysia. *International Journal of Technical Research and Applications, 22*, 72-79.

Tamboer, P & Vorst, HC. (2015). A new self-report inventory of dyslexia for students: criterion and construct validity. *Dyslexia 21*(1),1–34.

Tamboer, P., Vorst, H.C.M., Ghebreab, S., Scholte, H.S. (2016). Machine learning and dyslexia: classification of individual structural neuro-imaging scans of students with and without dyslexia. *NeuroImage Clin. 11*, 508–514.

Tannock, R (2016) Provision of evidence-based intervention is not part of the DSM-5 diagnostic criteria for Specific Learning Disorder. *Eur J Child and Adolescent Psychiatry 25*, 209-210.

Tarasova, S.I., Dukhina, T.N., Limonova, O.O., Kolesnikova, T.V., Makhiva, I.K. (2017). Socio-Psychological Adaptation of First- Year University Students. Adaptación socio-psicológica de estudiantes universitarios de primer año. *Especial, 38*(56).

Tariq, R., & Latif, S. (2016). A Mobile Application to Improve Learning Performance of Dyslexic Children with Writing Difficulties. *Educational Technology & Society, 19*(4), 151–166.

The British Psychological Society, 2003. Available online at https://www.bps.org.uk/

The University of Edinburgh. Fuctional MRI (fMRI). Available online at https://www.ed.ac.uk/clinical-sciences/edinburgh-imaging/research/themes-and-topics/techniques-and-qa/imaging-techniques/functional-mri

Theron, L. & Donald, D. R. (2013). Educational psychology and resilience in developing contexts: A rejoinder to Toland and Carrigan (2011). *School Psychology International 34*(1), 51-66

Thompson, L. Sh. (2014) Dyslexia: an investigation of teacher awareness in mainstream high schools, University of South Africa, Pretoria, http://hdl.handle.net/10500/13373

Tigka, E., & Tsolaki, M. (2016). Pathogenetic mechanisms of dyslexia: a review. *Aristotle University Medical Journal*, *43*(1), 9-17.

Tompson, L.S. (2013). *Dyslexia: An Investigation of Teacher Awareness in Mainstream High Schools*. Dissertation, Master of Arts, University of South Africa.

Torgesen, J. K, & Bryant, B. R (1994). *Test of Phonological Awareness: Examiner's manual* Austin, TX: ProEd.

Tsampalas, Ev., Sarris, D., Papadimitropoulou P., Vergou, M. & Zakopoulou, V. (2018). Learning paths and learning styles in dyslexia: Possibilities and effectiveness- Case Study of two elementary school students aged 7 years old. *European Journal of Special Education Research 3*(1).

Tsikni, M. (2017). *Social support for younger's and adults with dyslexia*. Thesis. Panepistimio Makedonias.

Tziolas, I. (2013) *Teachers' view for Students with Learning Difficulties in the History Course in Secondary Education Schools in Pieria*. Thesis. Greece: Panepistimio Thessalias.

Tzivinikou, S. (2015). *Learning difficulties - teaching interventions*. [e-book.] Athina: Sindesmos Ellinikon Akadhmaikon Vivliothikon, Available online at: http://hdl.handle.net/11419/5332

Tzouriadou, M. (2008a). *"ΛΑΤΩ" for Speech: Psychometric-differential assessment for children and adolescents with learning difficulties*. Ministry of National Education and Religious Affairs. Operational Program of Education and Organizational Training (E.P.E.A.E.K.), Measure 1.1- Action 1.1.3-Category of Operations 1.1.3a. (Subproject 4: Psychometric language criterion capacity-sufficiency for children and adolescents). Thessaloniki: Aristotelio Panepistimio Thessalonikis.

Tzouriadou, M. (2008b). *Criterion of school-social competence.* Ministry of National Education and Religious Affairs. Operational Program of Education and Organizational Training (E.P.E.A.E.K.), Measure 1.1- Action 1.1.3-Category of Operations 1.1.3a. (Subproject 6. Psychometric criterion of school-social competence for children and adolescents).

Tzouriadou, M., Vougioukas, K., Anagnostopoulou, H. & Menexes, G. (2015). Knowledge and views of Greek teachers on dyslexia. IA' Scientific Yearbook of the Department of Psychology, AUTh.

van Viersen S., de Bree E., Kroesbergen E., Slot Est., de Jong P.(2015). Risk and protective factors in gifted children with dyslexia. *Ann. of Dyslexia 65*, 178–198

Vassiliou, E., & Haritaki, G. (2015). *Investigating the views of the General Education teachers on the integration of pupils with special learning needs.* Paper presented at the 5th Panhellenic Conference of Education Sciences, Athens.

Vidyasagar, T. R. (2013). Reading into neuronal oscillations in the visual system: implications for developmental dyslexia. *Frontiers in Human Neuroscience, 7, 811. Available online at* https://doi.org/10.3389/fnhum.2013.00811

Vidyasagar, T. R., & Pammer, K. (2010). Dyslexia: a deficit in visuo-spatial attention, not in phonological processing. *Trends in Cognitive Sciences*, *14*(2), 57–63. https://doi.org/10.1016/j.tics.2009.12.003

Vlachopoulos, L. (2015). *Guide to psychological services at school.* Instituto Ekpedeftikis Politikis. Available online at https://www.newseae.gr/ekpaideutiko-yliko/logismiko-odhgoi/141-odhgos-gia-psyxologikes-yphresies

Vlachos, F., Andreou, Andr., Delliou, Afr. (2013). Brain hemisphericity and developmental dyslexia. *Research in Developmental Disabilities 34*, 1536–1540

Volkmer, S., Schulte-Körne, G. (2017). Cortical responses to tone and phoneme mismatch as a predictor of dyslexia? A systematic review, *Schizophrenia Research 191*, 148-160

W.H.O.- World Health Organization. (1997). Oral health surveys : basic methods, 4th ed. World Health Organization. Available online at http://www.who.int/iris/handle/10665/41905

Wagner, R.K., Torgesen, J.K. & Rashotte, C.A. (1999). *Comprehensive Test of Phonological Processing (CTOPP)*. Austin, TX: PRO-ED.

Waldie, K. E., & Hausmannb, M. (2010). Right fronto-parietal dysfunction in children with ADHD and developmental dyslexia as determined by line bisection judgements. *Neuropsychologia, 48*, 3650–3656.

Waldie, K., Haigh, Ch., Badzakova-Trajkov, Gj., Buckley, J. & Kirk, I. (2013). Reading the Wrong Way with the Right Hemisphere. *Brain Sci., 3*, 1060-1075

Waldie, K.; Mosley, J. (2000). Developmental trends in right hemispheric participation in reading. *Neuropsychologia*, *38*, 462–474.

Wang, Z., Cheng-Lai, A., Song, Y., Cutting, L., Jiang, Y., Lin, O., ... Zhou, X. (2014). A perceptual learning deficit in Chinese developmental dyslexia as revealed by visual texture discrimination training. *Dyslexia, 20*(3), 280–296.

Wendorf, J.H. (2014). *The State of Learning Disabilities. Facts, Trends and Emerging Issues* (Third Edition). National Center for Learning Disabilities..

Wijnen, F., Kappers, A. M., Vlutters, L. D., & Winkel, S. (2012). Auditory frequency discrimination in adults with dyslexia: A test of the anchoring hypothesis. *Journal of Speech, Language, and Hearing Research, 55*(5), 1387–1394.

Williamson-Henriques, K.M. (2013). Secondary Teachers' Perceptions of Assistive Technology Use for Students with Learning Disabilities. Directed by Drs. William D. Bursuck and Stephanie Kurtts, 170.

Wydell, T.N. Cross-Cultural/Linguistic Differences in the Prevalence of Developmental Dyslexia and the Hypothesis of Granularity and Transparency. In: Wydell, TN. ed. Dyslexia: A comprehensive and International approach. Croatia : INTECH Open Science/Open Minds 1- 14

Zhao, J., Yang, Y., Song, Y. W., & Bi, H. Y. (2015). Verbal short-term memory deficits in Chinese children with dyslexia may not be a problem with the activation of phonological representations. *Dyslexia, 21*(4), 304–322.

Zheng C, Erickson AG, Kingston NM, Noonan PM. (2014). The relationship among self-determination, self-concept, and academic achievement for students with learning disabilities. *J Learn Disabil, 47*, 462-474.

Zika, E. (2017). *Teachers' attitudes and perceptions about students with learning difficulties.* Bachelor's thesis. National and Kapodistrian University of Athens. School of Educational Sciences. Department of Primary Education.

Zoubrinetzky R, Bielle F, Valdois S (2014) New Insights on Developmental Dyslexia Subtypes: Heterogeneity of Mixed Reading Profiles. *PLoS ONE 9*(6), 99337

Zumeta, R. O., Zirkel, P. A. & Danielson L. (2014). Identifying Specific Learning Disabilities. Legislation, Regulation, and Court Decisions. *Topics in Language Disorders, 34* (1), 8-24

APPENDIX

RESEARCH OF THE CORRELATION BETWEEN UNDERSTANDING AND PRODUCTION OF SPEECH (SPOKEN AND WRITTEN) IN STUDENTS WITH DYSLEXIA AND THEIR ADAPTATION WITHIN THE CLASSROOM (ATTITUDES AND METHODOLOGY OF TEACHERS IN MACEDONIA, GREECE)

Teachers' views and methodology on dyslexia and adaptation of pupils in the context of inclusion

The following questionnaire includes a series of questions about the production and understanding of speech and the adaptation of students with dyslexia in Gymnasium. The information you provide is confidential and will only be used to extract research findings. The questionnaire is anonymous. The resulting information will be statistically analyzed and used for research purposes only. We would like to thank you in advance for your patience and cooperation.

Part A – Demographics

Unit 1

1.1. Gender

☐ Male

☐ Female

1.2.   Age: …………………years   old

1.3. Educational level (more than one option can be checked)

☐ University degree

☐ Master degree

☐ PhD

☐ Training in special education

1.4 Years of teaching experience in a typical classroom with students that have special educational needs (If you have no corresponding experience please note 0): …………………years

1.5 Years of teaching experience in a special education classroom

(If you have no corresponding experience please note 0): ………………years

1.6. Teaching in Special Education
☐   Typical Education

☐   Special Education

Research of the correlation between understanding and production of speech (spoken and written) in students with dyslexia and their adaptation within the classroom (attitudes and methodology of teachers in Macedonia, Greece)

Part B – Personalized Questions

Unit 2: Gymnasium teachers' perceptions on understanding and producing oral and written speech in students with dyslexia

Taking into consideration that we are referring to students with dyslexia, please confirm your scale of agreement or disagreement in the following statements.

(please confirm your reply with a ✓)

		Strongly Disagree				Strongly Agree
		1	2	3	4	5
2_1	They can find words from oral description					
2_2	They can orally describe common words					
2_3	They find it difficult to find the meaning of an unknown word					
2_4	They do have the ability to associate words that express concepts relevant to each other					
2_5	They can place the words they read in the right order so as to produce a proper conceptual sentence					
2_6	When sentences are given to then, they reproduce a paragraph that makes sense					
2_7	They can respond to questions referring to the context (side headings, details, conclusion) associated with narrative paragraphs					
2_8	They can foresee the continuing of a story					
2_9	They can produce critical conclusions of the texts					
2_10	They use strategies so as to organize information in a narrative text					
2_11	They are able to summarize in writing extensive narrative or descriptive texts					
2_12	They are able to understand a daily basis dialogue about topics considering subjects related to their own interests					
2_13	They are able to understand oral public announcements addressed to the wide school audience					
2_14	They are able to produce a daily oral speech about topics considering subjects related to their own interests					
2_15	They able to understand short texts of everyday use					
2_16	They are able to understand texts they might encounter in special occasions of their everyday life					

2_17	They are able to produce descriptive and experiential texts					
2_18	They are able to compose short texts of everyday use					
2_19	They have difficulty in recognizing the requirements arising from a school project					
2_20	They have difficulty in selecting and implementing strategies when a simple project is assigned					
2_21	They have difficulty in focusing in a project and have low performance					
2_22	They have difficulty in assessing their own cognitive performance					
2_23	More time is needed so as to comprehend teachers' oral speech during the class					
2_24	They can express themselves through writing with limited skills in designing, producing and controlling the phases of the writing process					
2_25	They are able to produce speech in a variety of conditions in school life to successfully solve issues related to their transfer and their relationships with others					

Unit 3: Teaching and Learning Methodologies and Educational Tools used for student's with dyslexia in Gymnasium to better understand and produce oral and written speech

Which from the following Teaching and Learning Methodologies and Educational Tools of the Advanced Curriculum, the Cross Thematic Curriculum Framework and the Curriculum Adaptations for Students with learning difficulties for the language lesson in Gymnasium do you use as to promote the understanding and production of oral and written speech of students with dyslexia in an inclusion classroom?

(please confirm your reply with a ✓)

		Strongly Disagree				Strongly Agree
		1	2	3	4	5
3_1	Use of supervisory tools and means					
3_2	Use of diversified teaching reclaiming Information and Communication Technologies					
3_3	Using different colors of chalks or markers for each line on the board, or for every second line on printed matterial					
3_4	Use of the free educational material and software from "prosvasimo", "epitelo", "Fotodentro".					
3_5	Use of the Digital Learning Platform for students and teachers "e-me".					
3_6	Use of technology which can convert text into sound, like audio books					

3_7	Use of supportive tools and mnemonic techniques, such as acronyms, visualized reminders, keywords					
3_8	Provide direct teaching by informing about the objective of the lesson at the beginning and review of the main points at the end of the lesson					
3_9	Use of information flow charts that is relevant with the following lesson					
3_10	Use of the KWL technique (table with three columns: "What I already KNOW", What I WANT to Learn", "What I LEARNED")					
3_11	Use of concept mapping as a teaching, learning, and evaluation tool during the learning process					
3_12	Teach learning strategies					
3_13	Analyze the process of a project in steps and teach the steps of the hierarchy one by one					
3_14	Promote the "thinking aloud" by acting as a template for teaching strategies					
3_15	Encouraging the reader to use self-control strategies for understanding the texts					
3_16	Using contextual understanding as strategy for unknown words in texts					
3_17	Preview texts from different sources (browse texts by reading titles, captions of images) to create predictions for the content of the text					
3_18	Use of text flowcharts to teach the summary strategy					
3_19	Providing personalized learning support and student guidance for producing texts					
3_20	Oral clarification and general simplification of written instructions by highlighting keywords					
3_21	Repetition of the instructions in a consistent and systematic way					
3_22	Promote the initial reading by the teacher or a classmate and then promote the repetition of the reading by themselves					
3_23	Use questions before, during, and after reading texts					
3_24	Encourage their active participation in the process of teaching by conducting dialogues					
3_25	Enable previous knowledge of students by using brainstorming, questions, flowcharts, movies, computers, images, etc.					
3_26	Encourage interactive learning through computer, audiovisual material and appropriately diversified educational material					
3_27	Promote participation in the discussion by using arguments, expressing their feelings and telling their experiences					
3_28	Emphasis on practicing students by dedicating significant time and active participation in the lesson					
3_29	Linking school activities to day-to-day activities, by highlighting the communication function of writing through a variety of textual forms					

3_30	Promote dramatization and role rotation					
3_31	Promote collaborative method and collaboration by student pairs					
3_32	Use the project method with the assignment of group research papers					
3_33	Use teaching scenarios in the context of cross-thematic method					
3_34	Assign tasks where students are capable to complete					
3_35	Assign tasks where students are capable to complete					
3_36	Provide direct feedback to students about their responses					
3_37	Assessment of student progress guides teaching					
3_38	Use of student's descriptive assessment and individual portfolio					

Unit 4: Teachers' perceptions of student's with dyslexia in Gymnasium about their intrapersonal and interpersonal adaptation in an inclusion classroom

Taking into consideration that we are referring to students with dyslexia in an inclusion classroom, please confirm your scale of agreement or disagreement in the following statements. (please confirm your reply with a ✓)

		Strongly Disagree				Strongly Agree
		1	2	3	4	5
4_1	Follow the school rules					
4_2	Show adhesion and dependence on another classmate					
4_3	React to the approach and guidance from the teacher					
4_4	Do not protect themselves and do not defend themselves when someone is attacking them					
4_5	Are uninterested in others feelings					
4_6	Seem happy when joining the school					
4_7	Turn away their gaze when someone speaks to them					
4_8	Deny anything that is being proposed to them					

4_9	Claim their rights					
4_10	Cannot overcome their anger					
4_11	Discuss with the teacher about anything they are concerned					
4_12	Fight with other children					
4_13	Complicate the function of the classroom					
4_14	Indicate anxiety (complain about physical disturbances)					
4_15	Do not answer when someone speaks to them					
4_16	Have violent reactions					
4_17	Speak back and behave badly to their teacher					
4_18	Have the acceptance of their peers					
4_19	The lack of incentives can be distinguished					
4_20	It is characterized by low expectations of success					
4_21	It shows a lack of self-confidence and self-esteem					
4_22	Often are lonely and have no friends					
4_23	Usually develop an introverted character and distinguished apathy					
4_24	Often deal with problems referring to their skills and as a result they find difficulty in socializing					
4_25	They get encouragement and support from peers					
4_26	Their classmates ignore them					
4_27	Their classmates exclude them from class activities					
4_28	Their classmates bully them					
4_29	It is not just enough the effort a mainstream teacher make, but it is also necessary to provide support coming from a teacher with special training					

Unit 5: Methodology used about students with dyslexia and their intrapersonal and interpersonal adaptation in an inclusion classroom

Research of the correlation between understanding and production of speech (spoken and written) in students with dyslexia and their adaptation within the classroom (attitudes and methodology of teachers in Macedonia, Greece)

Which of the following methodology or techniques you use to help students with dyslexia with their intrapersonal and interpersonal adaptation in a inclusion classroom? (please confirm your reply with a ✓)

		Strongly Disagree				Strongly Agree
		1	2	3	4	5
5_1	Enriching the expression of everyday personal and emotional needs and desires					
5_2	Offering incentives and hope in their academic self-efficacy and in achieving the effort to knowledge					
5_3	Promoting one-on-one counseling					
5_4	Promoting conversations so as to update students' general development of their autonomy					
5_5	Promoting the development of genuine and honest interpersonal relationships among students					
5_6	Creating positive attitude coming from their motivation and participation in school life					
5_7	Classroom guidance and experiential exercises for group engagement					
5_8	Promoting intrapersonal adaptation in moment-to-moment teacher-student interaction					
5_9	Ensuring control in the classroom, when I face hostile and dominant behavior of students					
5_10	Promoting matching of trends among students					
5_11	Careful planning of the lesson in order to ensure conditions for cooperation among students					
5_12	Promoting role playing and simulations of real and hypothetical situations to promote communication and behavioral skills					
5_13	Continuously encouraging their efforts and strengthening their self-esteem					
5_14	Having crucial role in finding potential friendship pairs and in creating situations that require cooperation					
5_15	Emotionally support of students to improve their ability to cope with characteristics that they cannot change					
5_16	Reward after every good effort					
5_17	Cooperation with ΕΔΕΑΥ and school psychologist for counseling support					

Thank you very much for you participation!!!

Research of the correlation between understanding and production of speech (spoken and written) in students with dyslexia and their adaptation within the classroom (attitudes and methodology of teachers in Macedonia, Greece)

Resumen Extenso en Español

INVESTIGACIÓN DE LA CORRELACIÓN ENTRE LA COMPRENSIÓN Y LA PRODUCCIÓN DEL DISCURSO (HABLADO Y ESCRITO) EN ESTUDIANTES CON DISLEXIA Y SU ADAPTACIÓN DENTRO DEL AULA (ACTITUDES Y METODOLOGÍA DE LOS DOCENTES EN MACEDONIA, GRECIA)

Doctoranda: Christina Pantazidou
Directoras: Profa. Vega Gea, Esther Maria y
Profa. Sampedro Requena, Begoña Esther
Programa de Doctorado en Ciencias Sociales y Jurídicas
Depósito: Marzo, 2022

1. INTRODUCIÓN

La dislexia es el trastorno de aprendizaje más común, incluidacomo una de las Dificultades de Aprendizaje Específicas, conocida como aquellas situaciones que interfieren en la capacidad de un niño con inteligencia normal para adquirir algunas habilidades fonológicas (habilidades de lectura, ortografía) u otras habilidades cognitivas (Adlof y Hogan, 2018). En Grecia, es notable que el número de estudiantes que experimentan dificultades de aprendizaje aumente constantemente. Según la literatura, las dificultades de aprendizaje constituyen la categoría más grande de las necesidades educativas especiales, ya que el 56% de los estudiantes tienen las primeras, lo que afecta negativamente a su rendimiento y comportamiento escolar (Feskemenlidou, 2016).

Las diferentes formas de comportamiento de los niños en la escuela y la correlación con su capacidad de aprendizaje, adaptación y rendimiento escolar se han explorado internacionalmente (Zheng et al., 2014; Haft et al., 2016; Tarasova et al., 2017; Cavioni et al., 2017). La dificultad para adaptarse al contexto escolar implica dificultades de aprendizaje, problemas de comportamiento interpersonal e intrapersonal. Existen características de aprendizaje, necesidades y logros diferenciados. Esa heterogeneidad aumenta la necesidad de diferentes estrategias de enseñanza-aprendizaje. El currículum de las escuelas secundarias griegas propone numerosas técnicas que los maestros

podrían seguir para ayudar a los estudiantes en la producción de su habla (oral y escrita), percepciones para entender y producir el discurso oral y escrito en estudiantes con dislexia.

El rendimiento inadecuado del habla a menudo se observa en estudiantes con dificultades especiales de aprendizaje y se asocia con insuficiencia en la conciencia fonológica, con conciencia inadecuada de la morfología y de la semántica del lenguaje hablado, así como con el uso limitado de vocabulario. La motivación y actitudes hacia la lectura son factores clave que influyen en el rendimiento lector.

En estudios (Sigurdardottir et al., 2017; Goswami et al., 2016) en los que se comparó a niños con dislexia o problemas del habla y el lenguaje con niños con desarrollo normal, aunque con un nivel de lectura no correspondiente a su edad, se encontró que los niños con dislexia podían recordar menos palabras de manera precisa, que los niños de su misma edad sin dislexia.

Padersen et al. (2016), examinaron la lectura oral y la relación con la comprensión lectora entre estudiantes de 16 años, con o sin dislexia. Midieron la velocidad de lectura, los errores de lectura y las autocorrecciones mientras leían. Los estudiantes con dislexia se focalizaron más en descodificar o entender. Los hallazgos de Layes et al. (2015), en un estudio con niños árabes de entre 8 y 10 años, revelaron que los estudiantes con dislexia leían más lento que los estudiantes sin alteraciones del lenguaje, y también que no eran tan precisos como los niños que leían con fluidez.

Se examinaron los estudiantes con perfil de lectura mixta y se encontró que estaban divididos en cuatro subgrupos cognitivos diferentes, caracterizados por un solo trastorno fonológico, un solo trastorno de alteración visual, un doble defecto o ninguno de estos trastornos. Los hallazgos generales excluyen el subtipo basado en los perfiles de lectura como un método de clasificación para identificar subgrupos cognitivos homogéneos de niños con dislexia (Zoubrinetzky et al., 2014).

1.1 Metodologías de enseñanza y aprendizaje y herramientas educativas utilizadas con estudiantes con dislexia

Los niños con dificultades de aprendizaje necesitan de una intervención y tratamiento adecuado. Se requiere motivación de los profesores. Algunas de las técnicas más populares son: *La técnica de andamiaje*, *La estrategia de predicción*, *Aclaración de palabras desconocidas*, *La herramienta de resumen* (Hargreaves y Crabb, 2016), *Pensamiento en alto*, *La técnica de lecturas repetidas* (Elhoweris, 2017), así como *El uso de computadoras como herramienta de tutoría* (Hargreaves y Crabb, 2016).

Una de las innovaciones del nuevo currículum griego para niños con dificultades de aprendizaje es el énfasis en la lengua nativa y la propuesta de actividades de comprensión y producción del habla oral. En el marco del proyecto *"Diseño y desarrollo de material educativo y de supervisión accesible para estudiantes con necesidades de educación especial"* (Programas comunitarios ESPA 2007-2013), se han publicado los siguientes materiales educativos: *EPITELO*, Libros escolares interactivos, *Fotodentro*, Plataforma de aprendizaje digital para alumnos y profesores *e-me*.

Se proponen técnicas efectivas, tales como la lectura guiada. También, preguntas de opción múltiple, activación del conocimiento previo de los estudiantes, formulación de hipótesis, suposiciones orales y diagramas de estructura o cualquier tipo de representación gráfica. Asimismo, se presenta una lista de actividades generales sobre comprensión a través del habla.

Hamid et al. (2015) proponen el uso de una tabla con tres columnas, técnica KWL, en la primera "lo que sé" (what I alreadyknow); en la segunda "lo que quiero saber" (what I wanttoknow) y, finalmente en la tercera "lo que aprendí de esta lección" (what I learned). Según la Asociación Internacional de Dislexia (2017), algunas técnicas son, en general, para aclarar y simplificar las instrucciones escritas: uso de encabezados en cada párrafo, repetición de instrucciones, diferentes colores, marcadores, tamaño grande y espacio entre letras y filas, instrucciones paso a paso, comandos mnemotécnicos, y herramientas de mapeo organizacional.

1.2 Adaptación intrapersonal e interpersonal de estudiantes con dislexia en un aula de inclusión

La adaptación intrapersonal para estudiantes con dislexia se refiere a cómo se sienten y piensan sobre sí mismos, y la adaptación interpersonal se relaciona con las relaciones que mantienen con sus compañeros y maestros. Los estudiantes con dislexia tienen dificultades interpersonales para hacer y mantener amistades con sus compañeros. Son menos aceptados, y corren el riesgo de ser aislados. Su autopercepción es errónea, se creen inferiores a los demás (Novita, 2016).

Los estudiantes con dislexia presentan niveles significativamente más bajos en el ajuste psicosocial, la competencia social y la autopercepción, y muestran más problemas de comportamiento. Accariya y Khalil (2016) estudiaron la adaptación de estudiantes con dificultades de aprendizaje en diferentes niveles educativos. Los hallazgos de su estudio revelaron que estos estudiantes se sentían estresados, solos, desesperados y no aceptados por el resto de compañeros. Los niños con dislexia generalmente desarrollan un carácter introvertido (Cavioni, et al., 2017).

El éxito en la adaptación del alumno al entorno escolar está relacionado con las habilidades académicas, sociales, emocionales, de comportamiento y cognitivas. El estatus del niño como estudiante va a depender de las capacidades de los maestros para crear interacciones con sus compañeros y para fomentar el desarrollo de su autonomía (Knight, 2018).

1.3 Adaptación intrapersonal e interpersonal en un aula de inclusión

Las intervenciones relacionadas con el apoyo de asesoría deben desarrollar incentivos y mejorar la percepción del alumno, eliminar la culpa y reducir la ansiedad y los temores.

El desarrollo de actitudes positivas conduce a un mejor clima social en el aula. Se recomiendan actividades kinestésicas, visuales y prácticas (Mortimore y Zsolnai, 2016). Un aula en la que hay alumnado con dislexia debe aplicar la ética inclusiva a través de actividades alternativas (MortimoreyZsolnai, 2016).

Según Habib y Naz (2015), los educadores deben reconocer fácilmente la frustración de los niños y tratar de motivarlos, alentando continuamente sus esfuerzos y fortaleciendo su autoestima. Hacer amistades puede ayudar a evitar la estigmatización y el aislamiento social. Trabajar en parejas o en pequeños grupos puede ayudarlos a descubrir conocimientos y desarrollar habilidades sociales. Además, el juego de roles les permite trabajar a través de procesos psicológicos a nivel simbólico (Efthymiou y Kington, 2017).

2. METODOLOGÍA Y DISEÑO

2.1 Definición del problema

El presente estudio investiga la perspectiva de los profesores de educación secundaria de Macedonia Central en relación a la capacidad de los alumnos con dislexia para comprender y crear un discurso oral y escrito propio, así como la metodología que ponen en práctica con estos alumnos para solventar problemas de habla y adaptación en clase. Asimismo, se estudia la posibilidad de adaptación intrapersonal e interpersonal de los alumnos en el aula. En Grecia se percibe un vacío en la investigación, referente a la correlación entre la aparición de la dislexia y la percepción de los docentes sobre la adaptación de estos niños en el aula.

Por esta razón, se diseñó un cuestionario que fue repartido a 375 profesores (283 mujeres y 92 hombres) que imparten clases en Macedonia Central. La muestra se tomó mediante el llamado método«bola de nieve» o «muestreo en cadena». Los profesores que participaron en la investigación se dividieron en dos grupos: aquellos que enseñan en escuelas ordinarias y los que trabajan en educación especial. Después de comparar los dos grupos, a partir del análisis de sus respuestas a las principales preguntas de la investigación, se estudió cada grupo en relación a las diferencias basadas en cada una de sus características demográficas (género, edad, nivel educativo, años de experiencia en educación ordinaria, años de experiencia en educación especial).

2.2 Objetivos de la investigación

Los objetivos de la investigación son los siguientes:

1. Estudiar el perfil de los profesores especializados que trabajan en aulas especiales y típicas en relación con las variables del cuestionario sociodemográfico (edad, sexo, nivel de estudios, años de docencia...).

2. Determinar el efecto de las variables sociodemográficas de los profesores de los centros educativos de Educación Secundaria en lo referente a sus percepciones sobre la comprensión y producción del discurso oral y escrito de los alumnos con dislexia.

3. Averiguar si existe algunarelación estadísticamente significativa en las variables sociodemográficas de los profesores de centros educativos de Educación Secundariaen relación a las metodologías de enseñanza y aprendizaje, y a las herramientas educativas utilizadas, para que los alumnos con dislexia de secundariapuedan comprender y crear mejor el discurso oral y escrito y, si fuera así, determinarlo.

4. Determinar la relación de las variables sociodemográficas de los profesores decentros educativos de Educación Secundariaen relación con sus percepciones sobre la adaptación intrapersonal e interpersonal de sus alumnos con dislexia en un aula de inclusión.

5. Conocer el efecto de las variables sociodemográficas de los profesores de centros educativos de Educación Secundariaen relación a la metodología utilizada con los alumnos con dislexia y su adaptación intrapersonal e interpersonal en un aula de inclusión.

6. Encontrar el efecto correlacional significativo entre las percepciones de los profesores de centros educativos de Educación Secundaria sobre la comprensión y producción del discurso oral y escrito en los alumnos con dislexia, y las Metodologías de Enseñanza y Aprendizaje y Herramientas

Educativas utilizadas, para que los alumnos con dislexia de secundariacomprendan y produzcan mejor el discurso oral y escrito.

7. Analizar si las percepciones de los profesores de centros educativos de Educación Secundaria, referentes a la comprensión y producción del discurso oral y escrito de los alumnos con dislexia, están significativamente correlacionadas con las relativas a la adaptación intrapersonal e interpersonal de éstos en un aula de inclusión.

8. Estudiar si existe correlación significativa entre las percepciones de los profesores de centros educativos de secundaria sobre la comprensión y producción del discurso oral y escrito de los alumnos con dislexia y la metodología utilizada, así como la adaptación interpersonal e intrapersonal de estos alumnos en un aula de inclusión.

Los objetivos citados dieron lugar a la formulación de una serie de cuestiones de investigación, las cuales son:

1. ¿Qué problemas de comprensión y producción del discurso oral y escrito creen los profesores de secundaria que afrontan los alumnos disléxicos en el instituto? (Objetivo 1)

2. ¿Qué problemas de adaptación consideran los profesores que afrontan los alumnos disléxicos en el instituto? (Objetivo 1)

3. ¿Qué tipo de herramientas didácticas y metodología utilizan los profesores de Lengua de Educación Secundaria para ayudar a los alumnos disléxicos en la producción y comprensión del discurso oral y escrito? (Objetivo 1)

4. ¿Qué metodología utilizan los profesores de Educación Secundaria para adaptar a los alumnos disléxicos a las clases inclusivas? (Objetivo 1)

5. ¿Afectan las variables sociodemográficas de los profesores de instituto (años de experiencia educativa, edad, formación y estructura educativa —educación general o especial—) de forma significativa a sus

conocimientos generales sobre la dislexia y a sus métodos de enseñanza? (Objetivos 2-5)

6. Existe una correlación entre las percepciones de los profesores de centros educativos de Educación Secundaria en lo referente a la comprensión y producción del discurso oral y escrito de los alumnos con dislexia y las tres dimensiones abordadas en el estudio(Metodologías de Enseñanza y Aprendizaje y Herramientas Educativas utilizadas para que los alumnos con dislexia en centros educativos de secundaria comprendan y produzcan mejor el discurso oral y escrito, Percepción de los profesores de los alumnos con dislexia en centros educativos de secundaria sobre su adaptación intrapersonal e interpersonal en un aula de inclusión y metodología utilizada con los alumnos con dislexia y su adaptación intrapersonal e interpersonal en un aula de inclusión) (Objetivos 6-8).

2.3. Metodología

2.3.1. Participantes

Para la muestra se tuvieron en cuenta 375 profesores que impartían clases en centros de enseñanza de Educación Secundaria de Macedonia Central (Grecia), tanto de educación especial como de educación normalizada. Los participantes se seleccionaron mediante unmuestreo no probabilístico, incidental por accesibilidad, utilizando la técnica de bola de nieve (snowball sampling). En primer lugar, el investigador envió el cuestionario a los profesores de las escuelas de Macedonia Central que ya conocía. Esos participantes enviaron el cuestionario a otros compañeros y, finalmente, se pudo crear el tamaño de muestra necesario. Este proceso se denomina «muestreo de bola de nieve» (Qureshi, 2018).

Durante el curso escolar 2018/2019, en el que se llevó a cabo la encuesta, el 67.7% de los profesores trabajaban en educación ordinaria, mientras que el 32.3% lo hacía en aulas de educación especial. Las mujeres constituyeron el 75.5% de la muestra y los hombres el 24.5% restante. En cuanto a la edad, el

grupo con mayor participación fue el comprendido entre 41 y 50 años (54.3% de los profesores de educación típica y 59.5% de los de educación especial). En cuanto a la formación de los docentes, el 76.8% de los profesores de educación ordinariacontaban con título universitario o habían realizado un programa de estudios de postgrado. Es destacable que el 24% de los profesores de educación especial disponían de un título de máster y el 48.8% tenían formación específica en educación especial además de su licenciatura y su máster.

Es importante mencionar que el 67.7% de los profesores únicamente ha trabajado en educación ordinaria, el 14.7% solo ha trabajado en educación especial y el 17.6% ha trabajado tanto en educación ordinaria como en especial.

Llama la atención que no hay profesores de educación ordinaria con experiencia de cero a dos años en este tipo de educación, mientras que el 74% de ellos ha trabajado entre nueve y veinte años. Por otro lado, el 45.5% de los profesores de educación especial comentaron haber cumplido de cero a dos años de experiencia en educación ordinaria, mientras que el 37.2% de ellos respondió de tres a ocho años. Al mismo tiempo, ninguno de los profesores de educación ordinariatiene más de dos años de experiencia en educación especial, mientras que el 87.5% de los profesores especialistas en educación especialposeen experiencia entre los 3 y 14 años, diferenciándose en distintas categorías (de 3 a 8 años el 33.9% y de 9 a 14 años el 63.6%).

2.3.2. Procedimiento

La recogida de datos se realizó mediante un cuestionario. El idioma utilizado fue el griego. La encuesta se llevó a cabo de diciembre de 2018 a marzo de 2019. El formulario electrónico se envió online a los profesores que impartían clases en centros de Educación Secundaria y que tenían alumnos con dislexia en sus aulas. Se informó debidamente a los participantes sobre el título, la estructura del cuestionario, el tiempo necesario que debían dedicar a esta investigación, y sobre su derecho participar o declinar la misma. También se les aclaró cualquier cuestión relativa a la confidencialidad y al anonimato, y se les pidió que firmaran un formulario de consentimiento en el que aceptaban las condiciones de la

investigación. Solo se incluyó en la muestra a los que respondieron a todas las preguntas.

2.4 Instrumento de obtención de datos

La herramienta de investigación elegida fue un cuestionario compuesto por cinco bloques de preguntas y construido a través de la plataforma «Google Forms» para garantizar la toma de respuestas inmediata. Gracias a la modalidad online, el cuestionario puede ser enviado a lugares geográficos remotos sin necesitar de la presencia del investigador, lo que contribuye a evitar la posible influencia del investigador y por último, pero no menos importante, ofrece el tiempo necesario para que se conteste con eficacia (Filias, 2003).

En la parte A del cuestionario se presentan las características demográficas de los participantes. La parte B contiene ciento nueveítems, distribuidos en varias dimensiones o unidades, a las que los participantes tienen que responder. En cada uno hay cinco posibles respuestas codificadas en distintas puntuaciones que van desde 1 (Totalmente en desacuerdo) a 5 (Totalmente de acuerdo), es decir en escala Likert de cinco opciones de respuesta.

Este instrumentolo constituye una compilación de varios cuestionarios validados por otros autores, los cuales se han utilizado anteriormente en Grecia. Los mismos se dividen en cuatro unidades o dimensiones separadas (dimensión 2, 3, 4 y 5). En la Unidad o dimensión2, el investigador examinó la percepción de los profesores sobre la comprensión y producción del discurso oral y escrito de los alumnos con dislexia. Para llevar a cabo esta parte, se utilizaron cuestionarios validados como el «ΛΑΤΩ» sobre el habla de los alumnos con dificultades de aprendizaje y el «Criterio psicométrico de capacidad-suficiencia lingüística de niños y adolescentes», cofinanciado por el Fondo Europeo y el Y.P.E.P.TH.[1] (Tzouriadou, 2008). Se trata de un conjunto de criterios que evalúan las capacidades de habla y lectura de los alumnos.

---

[1] Y.P.E.P.TH. , de las incialesgriegas «Υ.Π.Ε.Π.Θ. – Υπουργείο Παιδείας, Έρευνας και Θρησκευμάτων», disponible online bajo la dirección https://www.minedu.gov.gr/

Los ítems de la Unidad o Dimensión3 se refieren a lasmetodologías de enseñanza y aprendizaje y herramientas educativas utilizadas con los estudiantes con dislexia en los centros de Educación Secundaria, en clases inclusivas, para comprender y producir mejor el discurso oral y escrito; es decir, aspectos relativos a los recursos y materiales que emplean en las clases (diferenciado, ordenadores, software especializado, …), mapeo de conceptos para el proceso de enseñanza y aprendizaje, el empleo de diferentes adaptaciones como el uso de diferentes colores, o el empleo de medios específicos para el cumplimiento de los criterios de evaluación.

Para llevar a cabo laparte del instrumento correspondiente a la unidad o dimensión 4, se utilizaron las Pruebas Validadas de Adaptación de los alumnos con dislexia en un aula, ajustándolas para que fueran contestadas por los profesores. Se utilizó el «Criterio de competencia escolar-social» y el «Criterio psicométrico de competencia escolar-social en niños y adolescentes» (subproyecto 6, de los criterios aplicados en estos momentos en las escuelas de Educación Secundaria griegas). Estos criterios pretenden evaluar las habilidades sociales de los niños y su autoestima. A partir de estos criterios, es posible identificar elementos relacionados con el funcionamiento emocional y social de los niños que podrían ser útiles para comprender sus dificultades de aprendizaje (Tzouriadou, 2008), persiguiendo las percepciones de los profesores sobre los estudiantes con dislexia en los centros de secundaria sobre su adaptación intrapersonal e interpersonal en un aula de inclusión.

Y, finalmente, cierra la parte B del instrumento, la unidad o dimensión 5, referente a la metodología utilizada sobre estudiantes con dislexia y su adaptación intrapersonal e interpersonal en un aula de inclusión, que recoge aspectos relativos al estímulo que provocan los docentes en sus alumnos, para lograr la autoconfianza de estos, y que expresen sus necesidades personales y emocionales y, entre otros elementos, la promoción de una convivencia sana.

2.4.1. Elementos de validación del instrumento

En relación, con los preceptos de validación y fiabilidad, que debe alcanzar el instrumento en la búsqueda de la mejor exactitud, precisión y sensibilidad o resolución en la medida de los datos, el mismo presenta los siguientes:

a) Unidad o Dimensión 2. En cuanto a la percepción de los docentes sobre la capacidad de los estudiantes para comprender y producir el discurso oral y escrito, surgieron tres factores, en los 25 ítems de los que constaba esta unidad, distribuidos de la siguiente forma:

- Eficacia en los requisitos orales y escritos simples (ítems 1, 2, 4, 5, 6, 12, 14, 15, 18, 25)
- Eficacia en los requisitos orales y escritos compuestos (ítems 3*, 7, 8, 13, 16, 17, 19*, 20*, 22*, 23*)
- Capacidad crítica (ítems 9, 10, 11, 21*, 24*)

Los datos eran adecuados para la aplicación del análisis factorial, tal y como indicaba el estadístico Kaiser-Meyer-Olkin (KMO=.910) y la prueba de esfericidad de Bartlett (x^2(276)=9576.481, p <.001). Los tres factores justifican el 70.02% de la variabilidad total de las respuestas de los profesores. Se debe indicar que el símbolo (*) que acompaña al número de ítem, señala que el mismo se enunciaba en negativo, obligando a modificar el sentido de la escala de medida.

b) Unidad o Dimensión 3. Se utilizó un cuestionario de 38 ítems, para examinar el tipo de herramientas y los métodos de enseñanza empleados por los profesores, para ayudar a los alumnos disléxicos con dificultades en el habla oral y escrita. Concretamente, los factores que arroja esta dimensión son:

- El uso de la orientación y el fomento del trabajo personal (ítems 2, 10, 11, 12, 13, 14, 15, 17, 18, 19, 23, 24, 25, 28, 29, 30, 34, 35, 36, 37, 38)
- Uso de medios electrónicos y fomento de la expresión (ítems1, 4, 8, 16, 20, 22, 26, 27)

○ Enseñanza agradable e interactiva (ítems 3, 7, 9, 31, 32, 33)

En el caso del componente «Herramientas y métodos para las dificultades del habla oral y escrita», tanto el índice Kaiser-Meyer-Olkin (KMO= 0.966) como la prueba estadística de esfericidad de Bartlett (x^2(703)=17708.199, p <0.001) mostraron fuerte correlación entre las preguntas, lo que indica su idoneidad para la aplicación del análisis factorial, con una varianza explicada del 75.64%.

Cabe destacar que el análisis factorial que se efectuó tanto en la Unidad 2 como en la Dimensión 3, fue el método *Varimax* junto con la normalización de Kaiser. En cada grupo de preguntas se calculó el peso de cada ítem en cada uno de los grupos, considerando el criterio de que los pesos inferiores a 0.4 puntos se eliminaban, pues se consideran demasiado bajos para su valoración en el estudio.

c) En la Unidad o Dimensión 4, referente a las percepciones de los profesores sobre la adaptación intrapersonal e interpersonal de los estudiantes con dislexia en aulas inclusivas en los centros de Educación Secundaria, el cuestionario congregaba 29 ítems, que se agruparon de la siguiente forma:

○ Introversión y conductas violentas (ítems 1*, 2, 3, 5, 6*, 9*, 11*, 12, 14, 16, 18*, 23*, 25*, 27)

○ Ignorancia e indiferencia (ítems 7, 8, 13, 15)

En este caso, para poder realizar el análisis factorial, se excluyeron las oraciones que tenían un contenido casi idéntico a otras. Aparte de esto, algunas no se clasificaron en ningún grupo, ya que parecen tener un significado diferente a otras del mismo factor. La adecuación de los datos se verificó tanto con el estadístico Kaiser-Meyer-Olkin (KMO=.938) como con la prueba de Bartlett (x^2(253)=8272.092, p <0.001). Los dos factores justificarían el 61.65% de la variación de los datos.

Tal y como ocurría en la unidad o dimensión 2, se debe señalar que el símbolo (*) que acompaña al número de ítem, manifiesta que el mismo se enunciaba en negativo, obligando a modificar el sentido de la escala de medida.

d) Además, se utilizó también un cuestionario de 17 ítems para examinar el tipo de herramientas y métodos de enseñanza empleados por los profesores para ayudar a los alumnos disléxicos con dificultades de adaptación en el aula, Unidad o Dimensión 5, más concretamente:

- o Uso de métodos de estímulo directo (ítems 3, 4, 6, 7, 8, 9, 10, 12, 14, 15, 17).
- o Uso de métodos de estímulo indirectos (ítems 1, 2, 5, 11, 13, 16).

Los datos eran adecuados para la aplicación del análisis factorial, tal y como indicaba el estadístico Kaiser-Meyer-Olkin (KMO=.931) y la prueba de esfericidad de Bartlett ($x^2(136)=5905.853$, p <.001), siendo el 66.98% la varianza explicada.

2.4.2. Elementos de fiabilidad del instrumento

Siguiendo con los parámetros que logran la exactitud y precisión del instrumento, en cada caso se registró el coeficiente estadístico conocido como *Alfa de Cronbach* para indicar la fiabilidad de cada grupo de ítems. Los valores superiores a 0.7 son indicativos de una alta fiabilidad (González-Alonso & Pazmiño-Santacruz, 2015); es necesario reseñar que, en cada uno de los 5 factores finales, algunos ítems se invirtieron, dado que la enunciación de los mismosse proponíacon un significado negativo, al contrario de la mayoría que están redactados en positivo.

Los resultados obtenidos por factores dentro de cada unidad o dimensión del instrumento son los siguientes:

- En la unidad 2 (percepciones de los profesores de centros de Educación Secundaria sobre la comprensión y producción del habla oral y escrita en estudiantes con dislexia, compuesta por tres factores):
  - o Eficacia en los requisitos orales y escritos simples α=.924
  - o Eficacia en los requisitos orales y escritos compuestos α=.943
  - o Capacidad crítica α=.743

- En la dimensión 3, referida a las herramientas y métodos para las dificultades del habla oral y escrita, que se estructura en tres factores:
  - El uso de la orientación y el fomento del trabajo personal $\alpha=.982$
  - Uso de medios electrónicos y fomento de la expresión $\alpha=.917$
  - Enseñanza agradable e interactiva $\alpha=.897$
- En la unidad 4 (percepciones de los profesores sobre la adaptación intrapersonal e interpersonal de los estudiantes con dislexia en aulas inclusivas en los centros de Educación Secundaria):
  - Introversión y conductas violentas $\alpha=.976$
  - Ignorancia e indiferencia $\alpha=.879$
- Y, finalmente en la dimensión 5, relativa la metodología utilizada sobre estudiantes con dislexia y su adaptación intrapersonal e interpersonal en un aula de inclusión, en los dos factores:
  - Uso de métodos de estímulo directo $\alpha=.951$
  - Uso de métodos de estímulo indirecto $\alpha=.872$

También se realizó un análisis de fiabilidad por separado para los profesores de educación general y los de educación especial, y se calculó el alfa de Cronbach para cada grupo por separado. Según los resultados, en la mayoría de los casos, este coeficiente estadístico de fiabilidad superó el 0.8 o se situó ligeramente por debajo de ese nivel, por ejemplo en el factor «El uso de la orientación y el fomento del trabajo personal» (unidad o dimensión 3), que los docentes de educación típica obtuvieron un $\alpha=.937$ y los de educación especial $\alpha=.822$; o en la unidad 3 o dimensión 3 «Utilización de medios electrónicos y fomento de la expresión» donde los de educación típica es $\alpha=.785$ y los de educación especial $\alpha=.732$.

En resumen, se observa un valor de confiabilidad bueno para la consistencia interna de las diferentes unidades o dimensiones y factores en las que las mismas se agrupan.

2.5 Análisis de datos

El procedimiento que se ha realizado de cara al análisis de datos incluye medidas descriptivas estadísticas de tendencia central (media y desviaciones típicas), y pruebas de contraste de hipótesis, respectivamente, mediante la versión 21 del SPSS (StatisticalPackagefor Social Sciences). Las pruebas de contraste de hipótesis se basaron principalmente, si los datos seguían una pauta normalizada, en estadísticos paramétricos como: la prueba T-Student para 2 muestras independientes, con el fin de descubrir cualquier diferencia estadística entre los 2 grupos principales de los profesores según la tipología de educación (normal o especial) en la que trabajan; y, se utilizó el análisis de la varianza para los casos en los que había tres o más muestras independientes.

Es necesario reseñar, que en los casos en que los datos no se distribuyen normalmente, estas pruebas se sustituyeron por sus homólogas no paramétricas, que son la prueba de U Mann-Witney y la de Kruskal-Wallis, respectivamente.

Para encontrar el origen de cualquier diferencia estadísticamente significativa se calculó la media y la desviación estándar de las respuestas de cada grupo de profesores.

Por otra parte, se examinó la posible correlación lineal entre las puntuaciones totales de cada grupo de ítems en las Unidades o Dimensiones 2 y 3 mediante el coeficiente de correlación de Pearson.

Finalmente, indicar que en cada prueba estadística el nivel de significación fue del 5%. Como resultado, un valor p inferior a 0,05 es indicativo de una diferencia estadísticamente significativa entre las muestras que se someten a examen o de una correlación estadísticamente significativa de cada par de variables.

3. RESULTADOS

En esta parte se muestran todas las pruebas efectuadas de diferencias y correlaciones, para examinar si las hipótesis de la investigación son validadas. Por tanto, los resultados se muestran siendo los primeros referidos a la

comparativa entre los profesores de educación típica y especial. Posteriormente, se exponen si sus características demográficas afectan significativamente a sus opiniones sobre los alumnos con dislexia. Por último, se presentanlos resultados obtenidos de las pruebas de correlación ejecutadas, para examinar si los déficits lingüísticos están correlacionados con el mal comportamiento de los alumnos con dislexia; estos se realizaron por separado, profesores de educación ordinaria, por un lado, y, especial, por otro.

3.1 Resultados descriptivos

Por lo que se refiere a las percepciones de los profesores de centros de Educación Secundaria sobre la comprensión y producción del habla oral y escrita en estudiantes con dislexia (unidad o dimensión 2), podemos exponer que en líneas generales, los docentes de educación especial, parecen ser más negativos que los maestros de educación típica (por ejemplo en la idea de que los estudiantes con dislexia son capaces de producir textos descriptivos y vivenciales, los docentes de educación típica están de acuerdo, M=3.46 y DT.=.76, y menos de acuerdo los de educación especial, M=2.89 y DT.=.95). Mientras que, el uso de las herramientas y métodos para las dificultades del habla oral y escrita (unidad o dimensión 3), son los profesionales de la educación especial quienes están más de acuerdo que los de educación típica (por ejemplo, animar a los estudiantes disléxicos en el empleo de estrategias de autocontrol para la comprensión de textos, donde los docentes de educación típica están menos de acuerdo, M=2.07 y DT.=1.04, y más de acuerdo los de educación especial, M=4.65 y DT.=.48).

Asimismo, el estudio descriptivo referente a las percepciones de los profesores de educación especial y educación típica sobre la adaptación intrapersonal e interpersonal de los estudiantes con dislexia en aulas inclusivas (unidad o dimensión 4), refleja que no existe mucha discrepancia entre las valoraciones que expresan en casi todos los ítems (por ejemplo, en que los estudiantes disléxicos aparten la mirada cuando alguien les habla, donde los docentes de educación típica están muy de acuerdo, M=4.11 y DT.=0.75, al igual que los de educación especial, M=4.58 y DT.=.50).

Finalmente, en la unidad o dimensión 5, relativa a la metodología utilizada sobre estudiantes con dislexia y su adaptación intrapersonal e interpersonal en un aula de inclusión, son los profesionales de la educación especial quienes están más dispuestos a emplear metodologías que los de educación típica (por ejemplo, en tener un papel crucial en la búsqueda de posibles parejas de amigos y en la creación de situaciones que requieran cooperación, donde los docentes de educación típica están menos de acuerdo, M=2.86 y DT.=1.12, y más de acuerdo los de educación especial, M=4.50 y DT.=.50).

3.2 Resultados referentes a las diferencias entre las percepciones de los profesores que trabajan en educación típica y en la especial

Después de realizar la «prueba *t* de muestras independientes» para comparar las opiniones de los profesores que prestan servicios en la educación típica y en la especial, los resultados reflejan que los profesores de educación especial parecen reconocer que sus alumnos expresan una mayor dificultad en los requisitos orales y escritos, tanto simples como complejos, que los profesores de educación ordinaria.

Por otro lado, los profesores de educación ordinaria consideran que los alumnos con dislexia tienen un grado significativamente mayor de introversión, apatía y comportamiento negativo en comparación con la visión de los profesores de especial que trabajan en aulas de inclusión.

3.3 Resultados del efecto de las características demográficas de los profesores de educación ordinariaen lo referente a los déficits lingüísticos y el comportamiento de los alumnos con dislexia

3.3.1. Resultados en relación a la característica demográfica del género

Se observa una diferencia significativa tras analizar las respuestas de los profesores diferenciadas por género. Parece que las mujeres son más positivas en cuanto a la capacidad de los alumnos para responder a las discusiones y

tareas escritas que sus compañeros hombres. Asimismo, parece que los profesores varones encuentran más comportamientos negativos en los alumnos con dislexia, introversión, conflictos con los compañeros y dificultad para socializar que las mujeres. Por otro lado, las mujeres parecen ser más negativas en lasensaciónque tienen sobre la felicidad de los alumnos con dislexia en la escuela.

3.3.2. Resultados en relación a la característica demográfica de la edad

La siguiente característica demográfica que se estudió fue la edad, donde resulta evidente que los profesores de 31 a 40 años son los que dan respuestas más positivas sobre la capacidad de los alumnos con dislexia para comprender y producir el discurso oral y escrito. Por otro lado, los profesores de más de 50 años parecen ser los que tienen una visión más negativa. La edad de los profesores también afecta significativamente a sus percepciones sobre la marginación de los alumnos con dislexia por parte de sus compañeros y el mal comportamiento que demuestran frente a los profesores. Una vez más, los profesores de mayor edad parecen detectar este fenómeno con más frecuencia que los más jóvenes.

3.3.3. Resultados en relación a la característica del nivel educativo docente

Se realizaron pruebas de Kruskal-Wallis para averiguar si el nivel educativo de los profesores de enseñanza ordinaria afecta significativamente a su opinión sobre los déficits lingüísticos y el comportamiento de los alumnos con dislexia. Los profesores se dividen en cinco grupos: titulares de un título universitario (1), titulares de un título universitario y un máster (2), titulares de un título universitario, un máster y un doctorado (3), titulares de un título universitario y con formación en educación especial (4) y titulares de un título universitario y un máster con formación en educación especial (5). En algunos casos, las respuestas más positivas en cuanto a la capacidad crítica de los alumnos provienen de los profesores más cualificados. Sin embargo, no hay un punto de vista estadísticamente significativosobre las diferencias de opinión que tienen, en lo que respecta al comportamiento de los alumnos.

3.3.4. Resultados en relación a la característica de experiencia docente en años

En cuanto a los años de experiencia de los profesores en educación ordinaria, se realizaron pruebas ANOVA para examinar las opiniones de los correspondientes grupos de profesores que trabajan en este tipo de educación. Este factor parece afectar significativamente a sus respuestas sobre la comprensión y producción del discurso oral y escrito de los alumnos. En concreto, las respuestas más positivas las dieron los profesores con 3-8 años de experiencia, en cuanto a los alumnos con potencial disléxico, en contraste con los profesores con más de veinte años que parecen tener la peor opinión sobre los déficits lingüísticos de los alumnos. Además, sus percepciones sobre el comportamiento de los alumnos con dislexia en el aula son significativamente diferentes según sus años de experiencia en educación ordinaria. Concretamente, los profesores con quince o más años de experienciamencionan la aparición de mala conducta, indiferencia, introversión y soledad de los alumnos con dislexia en mayor grado que los que cuentan con menos experiencia.

Por último, todos los profesores responden que han realizado entre cero y dos años en cursos de inclusión. Por lo tanto, no hay diferencias en sus respuestas sobre la comprensión y producción del discurso verbal y escrito de los alumnos con dislexia ni tampoco sobre su comportamiento.

3.4 Resultados del efecto de las características demográficas de los profesores de educación especial en sus respuestas sobre los déficits del lenguaje y el comportamiento de sus alumnos con dislexia

Las pruebas de este subapartado se refieren al efecto de las características demográficas de los profesores de educación especial en sus percepciones sobre los déficits del lenguaje y la adaptación interpersonal e intrapersonal de los alumnos.

3.4.1. Resultados en relación a la característica demográfica del género

El género es la primera característica demográfica que se examinó mediante la «prueba *t* de muestras independientes». En cuanto a la capacidad de los alumnos con dislexia para comprender y producir el discurso oral y escrito, los hombres y las mujeres parecen tener una opinión similar. Sus opiniones sobre el comportamiento de sus alumnos también parecen ser las mismas en la mayoría de las oraciones propuestas, solo difieren de forma estadísticamente significativa en lo relativo a la reacción de los alumnos en el aula. En concreto, son los hombres los que coinciden en mayor medida que ellas en que los alumnos con dislexia se comportan mal en el aula.

3.4.2. Resultados en relación a la característica demográfica de la edad

La edad de los profesores de educación especial es otro factor que se examinó mediante las pruebas de Kruskal-Wallis. Este factor parece diferenciar significativamente sus opiniones en lo referente a la capacidad crítica de los alumnos y su respuesta frente a requerimientos orales y escritos simples y compuestos. Los profesores de mayor edad parecen tener peor opinión sobre este tema que sus compañeros más jóvenes. En la mayoría de los casos, los profesores tienen opiniones similares. Sin embargo, los profesores de más edad declaran que los alumnos con dislexia son excluidos por los demás, mientras que los más jóvenes no son tan estrictos en su punto de vista.

3.4.3. Resultados en relación a la característica del nivel educativo docente

La siguiente característica demográfica que se examina es el nivel educativo de los profesores. Los que trabajan en educación especial se dividen en 5 categorías: titulares de un título universitario y de máster (1), titulares de un título universitario, de máster y de doctorado (2), titulares de un título universitario y con formación en educación especial (3), titulares de un título universitario y de máster y con formación en educación especial (4) y titulares de un título universitario, de máster y de doctorado y con formación en educación especial (5). A través de la prueba de Kruskal-Wallis, los profesores con titulación de grado, máster y doctorado, así como los profesores con estas titulaciones y con

formación en educación especial, parecen ser los que se encuentran más satisfechos en cuanto a las habilidades orales y escritas de sus alumnos. Por otro lado, esta característica demográfica no diferencia significativamente sus opiniones sobre el comportamiento de los alumnos, salvo algunos casos que no revelan un patrón específico en las respuestas.

3.4.4. Resultados en relación a la característica de experiencia docente en años

Por último, se examinó a los profesores de educación especial según su experiencia en este tipo de educación. Según las pruebas *t* de muestras independientes, es evidente que los profesores que han trabajado de 3 a 8 años en educación especial declaran que los alumnos son rudimentarios en cuanto a los requisitos orales y escritos, mientras que los profesores con 9-14 años de experiencia, parecen ser extremadamente negativos a este respecto. Por otra parte, los profesores con menos experiencia detectan más comportamientos negativos de los alumnos con dislexia hacia los demás, o por parte de sus compañeros que los profesores que han trabajado de 9 a 14 años en educación especial.

3.5 Correlaciones entre las respuestas de las variables de la Unidad o Dimensión 2 y la Unidad o Dimensión 3

Como se ha venido exponiendo, la aplicación del análisis factorial en las diversas unidades o dimensiones (2, 3, 4 y 5), ha puesto de manifiesto factores específicos que influyen sobre las respuestas relacionadas con la comprensión y producción del discurso oral y escrito y en el comportamiento de los alumnos con dislexia. En este apartado se estudia la correlación de estos factores, tanto en el caso de los profesores que imparten sus clasesen la escuela formal como en el de los de educación especial.

En relación a los docentes de educación ordinaria o típica, parece que la eficacia de los estudiantes con dislexia en las demandas complejas de los requisitos orales y escritos y la capacidad crítica (ambos factores de la unidad o dimensión

2), tienen una relación positiva significativa con la enseñanza agradable e interactiva, de la unidad o dimensión 3, (r = .246, p <.001; r = .141, p = .024, respectivamente). Esto significa que los maestros de educación típica que declaran en mayor grado que los estudiantes con dislexia responden eficazmente al habla compleja oral y escrita, y realizan una habilidad crítica, tienen más intención de aplicar una enseñanza interactiva y placentera. Además, los profesores que creen en mayor medida que los estudiantes con dislexia responden a demandas simples orales y escritas (dimensión o unidad 2), tienen más probabilidades de utilizar medios electrónicos y promover la expresión de la unidad o dimensión 3, (r = .230, p <.001).

Mientras que, para los profesores de educación especial de centros de Educación Secundaria no existe una relación significativa positiva o negativa entre las distintas variables que sustentan las valoraciones que poseen sobre la comprensión y producción del habla oral y escrita en estudiantes con dislexia (dimensión o unidad 2), y la utilización de metodologías de enseñanza y aprendizaje y herramientas educativas para estudiantes con dislexia para comprender y producir mejor el habla oral y escrita(dimensión y unidad 3); por tanto, los factores relacionadas con la percepción de los docentes sobre el desempeño de los estudiantes y las técnicas de enseñanza que utilizan no tienen relación en los profesores de educación especial en los centros de EducaciónSecundaria.

4. DISCUSIÓN Y CONCLUSIONES

Se han obtenido resultados interesantes derivados de lainvestigación sobre el efecto que tiene el perfil del profesor en su percepciónde las habilidades lingüísticas y de la adaptación intrapersonal e interpersonal de los alumnos con dislexia. Esta reflexión inicial, se realiza teniendo en cuenta laformulación de algunas de las cuestiones de investigación propuestas en la introducción.

a) Interrogantes 1 y 2, referidos a qué problemas de comprensión y producción del discurso oral y escrito creen los profesores de secundaria,

y qué problemas de adaptación consideran los profesores que afrontan los alumnos disléxicos en el instituto.

Según nuestros resultados, los profesores de educación secundaria de enseñanza ordinaria responden mayoritariamente, señalando el bajo nivel de los estudiantes disléxicos para cooperar y conectar socialmente con sus compañeros debido a sus dificultades, aspecto que se relaciona con el estudio de Cavioni et al. (2017). Asimismo, Papadopoulou (2017) hizo constar los mismos resultados con respecto a los profesores de educación ordinaria, concluyendo que los estudiantes con dislexia tienen dificultades para socializar, a diferencia de aquellos que no tienen dificultades de aprendizaje. Por el contrario, los profesores de educación especial difieren, opinando que los estudiantes con dislexia no son solitarios, que no parecen ser introvertidos ni apáticos, y que no es especialmente difícil socializar con ellos. Ellose opone a los hallazgos de Pesli (2018), que señala un mayor nivel de soledad en los estudiantes con dislexia, en comparación con estudiantes sin dificultades del lenguaje. Sin embargo, cada niveleducativo podría exigir necesidades educativasdiferentes, ya que las necesidades educativas de los alumnos con dificultades de lenguaje se descubrentras el diagnóstico de la dislexia (Agrafioti, 2019).

b) Interrogante5, relativo al efecto de las variables demográficas de los profesores de instituto (años de experiencia educativa, edad, formación y estructura educativa —educación general o especial—) a sus conocimientos generales sobre la dislexia y a sus métodos de enseñanza

El género y la edad afectan significativamente a las respuestas de los profesores, tanto en la educación ordinaria como en la especial. Concretamente, los de mayor edad —de ambos entornos— tienden a dar respuestas más negativas que los más jóvenes. El estudio de Martimianaki (2015), también señala que los profesores más mayores parecen estar de acuerdo sobre la incapacidad de los alumnos con dislexia para defenderse. También, como señala Basu (2018), el nivel educativo de los profesores afecta a sus respuestas sobre los comportamientos de los estudiantes, siendo aquellos con mayor experiencia en educación especial los que responden de manera más positiva, tal y como constatan nuestros resultados.

Otro rasgo demográfico que ha repercutido significativamente en las respuestas de los profesores son los años de servicio, pero solo en los de educación ordinaria. La investigación de Papaeliou (2018), también puso de manifiesto que los profesores con menos experiencia educativa con alumnos con dislexia dieron respuestas más negativas sobre la introversión de los alumnos, la soledad o la mala conducta con los compañeros.

Además, la edad de los profesores de educación ordinariaafecta significativamente en la comparación de sus respuestas con los más jóvenes, que tienen más conocimiento sobre la dislexia, tal y como corrobora Thompson (2013). Como señalan Chong et al. (2017), los profesores más cualificados o con formación en educación especial son más optimistas en lo referido a la capacidad crítica de los alumnos con dislexia. Por otro lado, los profesores de educación especial presentan diferencias en sus respuestas sobre la comprensión y producción del discurso oral y escrito de los alumnos con dislexia, coincidiendo con el estudio de Zika (2017). Adicionalmente, la experiencia de los profesores en este tipo de educación afecta fuertemente a su positividad en varias respuestas. Por último, Basu et al. (2014), se refiere a esta cuestión al afirmar que los profesores de educación especial tienen más conciencia de la dislexia a pesar llevar más tiempo trabajando en educación.

4.1 Conclusiones

El análisis anterior revela la visión significativamente más negativa de los profesores de educación especial sobre los comportamientos de los niños con dislexia y la necesidad acuciante de aplicar métodos y técnicas de enseñanza específicos para estimular a estos alumnos en comparación con los profesores que trabajan en la educación formal. También quedó demostrado que las características demográficas de cada uno de los dos grupos de profesores, de educación especial y ordinaria, influyen significativamente en las respuestas que ofrecieron.

No obstante, y con el fin de exponer con la mayor claridad posible los hallazgos encontrados en el estudio, a continuación, se pretende en primer lugar, describir detalladamente los resultados de nuestra investigación, partiendo de los objetivos planteados en el diseño metodológico y discutir los resultados obtenidos a la luz de la teoría presentada en los capítulos del marco teórico; para finalmente presentan las conclusiones más relevantes tras la realización de este estudio. De esta forma se consideran de manera más detallada las cuestiones de investigación propuestas en la introducción, dado que las mismas aparecen relacionadas con los objetivos a los que afecta.

4.2 Reflexión del objetivo 1, relativo al perfil de los profesores

En la investigación participaron un total de 375 profesores. De ellos, 254 trabajadores en educación ordinaria y 121 en educación especial. El efecto de las características demográficas de los profesores se describió separando los profesores que enseñan en educación ordinaria y aquellos que trabajanen cursos de integración. Sin embargo, se realizó también una comparación de las características sociodemográficas entre las dos categorías de profesores. La inmensa mayoría de la muestra está formada por mujeres. Casi todos los profesores tienen más de 30 años y casi el 50% de ellos tiene entre 41 y 50 años. Además, prácticamente ninguno de los profesores de enseñanza ordinariacuenta con algún tipo de formación en educación especial. Sin embargo, casi 3 de cada 4 profesores de educación especial han recibido formación específica para trabajar con alumnos con necesidades especiales. La gran mayoría de los profesores de un aula ordinaria tenía entre nueve y veinte años de experiencia en este campo educacional, en contraposición a la segunda categoría que ha trabajado en el aula de educación ordinaria hasta catorce años. Por último, todos los profesores de un aula ordinaria declaran tener entre 0 y 2 años de experiencia en especialidades de integración, mientras que los profesores de educación especial declaran que el periodo que llevan trabajando en aulas especiales va de 3 a los 14 años. Estos datos demográficos coinciden con los de los estudios de Feskemenlidou (2016) y Evdoridou (2016). Se comprueba que los profesores que no trabajan en

educación especial tienen un nivel más bajo en este tipo formación específica. La obligación de formar a los profesores de las aulas educativas ordinarias se reconoce como una necesidad urgente, ya que estaformación ayudaría a reducir los problemas de disfunción educativa, acumplir con su nuevo papel y a adaptar la realidad escolar a las condiciones socioculturales.

4.3 Reflexión del objetivo 2, sobre el efecto de las variables sociodemográficas en las percepciones de los profesores sobre la comprensión y la producción del discurso oral y escrito de los alumnos con dislexia

Los puntos de vista de los profesores, en lo referente a la capacidad de los alumnos para comprender y producir el discurso oral y escrito, difieren significativamente dependiendo del tipo de aula en la que trabajen (educación ordinaria o especial). Los resultados muestran que los profesores confirman la existencia y el reflejo de los factores hallados en la investigación. Tras un repaso de la bibliografía relevante sobre el tema que tratamos, se encontraron investigaciones anteriores que abordan el tema del conocimiento y de las percepciones de los profesores de educación formal o especial. En este sentido, el tema de las dificultades de aprendizaje concierne tanto a las noticias científicas como a las sociales (Saripanidou, 2017).

Hoy en día, profesores de todos los niveles educativos están llamados a satisfacer las diferentes necesidades educativas de los alumnos, en general, pero también de los alumnos con dificultades especiales de aprendizaje, como la dislexia. El objetivo es la igualdad de acceso de todo el alumnado al plan de estudios (Roussos, 2019).

Como se mencionó con anterioridad, nuestra investigación demuestra que tanto los maestros de educación ordinaria como los de educación especial tienen conocimiento de la naturaleza de la dislexia. Los estudios de Thompson (2013) muestran que los profesores se sienten preparados para trabajar con niños con dislexia en el aula. Llegados a este punto, cabe señalar que existenestudios que aluden a la sensación de falta de conocimiento o preparación que sienten los

profesores a la hora de trabajar con niños con dislexia, cuando se les pide específicamente que lo hagan (VassiliouyCharitaki, 2015; Elias, 2014; Lopes et al., 2004; Tzouriadou et al., 2015; Fesmekenidou, 2016).

No sorprende, sin embargo, la diferencia entre los resultados del estudio de Thompson (2013) y los de nuestra investigación. Essabido que, año tras año, aumenta el interés tanto de los profesores de educación secundaria, como del propio Estado, por la formación de los docentesen lo que alas dificultades de aprendizaje y a la dislexia se refiere, especialmente en lo relativo al cómo desenvolverse conlos alumnos en el aula de educación especial. Así, ya sea a través de documentación científica, de seminarios organizados dentro de las escuelas, o a través de programas e instituciones universitarias de postgrado, se asegura que el profesorado esté informado y formado sobre los avances que vayan surgiendo en el campo de la educación y, en relación a la manera adecuada de trabajar con niños con dislexia, en el aula de educación especial. Hasta hace poco tiempo no existían programas de postgrado en Educación Especial en las universidades griegas, ni siquiera en los departamentos de grado de las escuelas consideradas «profesionales» se contemplaba la asignatura como optativa (Trikou, 2012).

Entendemos, por tanto, que las disparidades observadas entre los estudios mencionados y la presente investigación pueden deberse a una formación crecientey a una mejor preparación del profesorado para apoyar al alumnado con dislexia en el aula de educación especial.

Existen varias diferencias en cuanto a la efectividad en la composición de las exigencias orales y escritas entre los profesores de educación típica y los de educación especial. Los profesores de educación formal tienden a ser positivos en cuanto a las capacidades de los alumnos. En cambio, los profesores de educación especial señalan que los alumnos solo son capaces de participar en conversaciones sencillas y, de iniciar un diálogo básico sobre temas de su interés. Estos dos grupos de profesores muestran diferencias significativasen casi todas las respuestas sobre la comprensión y producción del discurso oral y escrito de los alumnos disléxicos, ya que los profesores de educación especial reconocen

una mayor dificultad en el ámbito oralde sus alumnos. La actitud de los profesores de cara a los alumnos con dislexia desempeña un papel fundamental en el éxito de cualquier programa educativo. Las actitudes y creencias de los profesores, en cuanto a prácticas educativas no excluyentes, afectan al entorno de aprendizaje del centro y a la igualdad de oportunidades de aprendizaje de alumnos con necesidades especiales (Kofidou y Mantzikos, 2016).

Los resultados de los profesores de aulas ordinariascoinciden con los de la investigación realizada por Peterson et al. (2013), donde se señala que es común para un estudiante con dislexia confundirse en la pronunciación de las vocales o a la hora de encontrar las palabras adecuadas en una oración, lo que se refleja en las dificultades del niño para rimar o para recordar palabras. Estos resultados concuerdan con la investigación realizada por Cunninghamy Carroll (2015), quienes señalan que el niño con dislexia se caracteriza por tener distracciones frecuentes, dándose, a menudo, intervalos de ensoñación. Estas características definen a un estudiante con dislexia que no es capaz de manteneruna conversaciónsatisfactoriamente. Asimismo, Matric (2018), señala que el desarrollo de las habilidades lingüísticas orales es necesario tanto para la comunicación diaria, en general, como para la organización interna del pensamiento de los alumnos, en particular, y que, por ello, el diálogo participativo y el desarrollo de la expresividad verbal de los estudiantes deberían ser objetivos didácticos diariosde la clase de Lengua. Por otro lado, en la investigación de Papailiou (2018), tras analizar los distintos niveles educativos en los que trabajan los profesores, no hubo discrepancias acerca de las dificultades de los alumnos con dislexia en la escritura y la lectura.

Tanto los hombres como las mujeres que enseñan en educación especial reconocen los mismos niveles de dificultad en las exigencias orales, simples y complejas, de sus alumnos. En el estudio de Feskemenlidou (2016), los profesores de educación ordinaria consideran, en mayor medida que los de educación especial, que la dislexia afecta a la capacidad de hablar y escribir de los alumnos. De manera concreta, las principales dificultades que encuentran los alumnos con dislexia están relacionadas principalmente con el manejo oral y escrito del habla (PavlidisyGiannouli, 2003, citado en Feskemenlidou, 2016).

Una de las investigaciones, la realizada por Arnold et al. (2015), aborda si el género de los profesores está relacionado con su visión de las personas que tienen algún tipo de dificultad de aprendizaje y si las percepciones de los profesores y de la población en general son las mismas. En cuanto a la primera condición, la investigación mostró que las mujeres, que formaban la mayor parte de la muestra, tenían una visión más clara, al igual que los participantes de mayor edad y con estudios superiores que tenían algún tipo de relación con personas con dificultades. Los resultados no mostraron diferencias entre las percepciones de los docentes y los de la población general. En el estudio de esta tesis doctoral, los profesores y profesoras de educación ordinaria discrepan significativamente sobre la capacidad de los alumnos en varias situaciones relacionadas con la comprensión y producción del discurso oral y escrito. Las profesoras son más propensas que ellos a pensar que los déficits de la conciencia fonológica son los causantes de la dislexia (Feskemenlidou, 2016).

La edad parece tener una influencia significativa en las respuestas de los profesores de enseñanza ordinaria sobre la comprensión y producción del discurso oral y escrito de los alumnos. Concretamente, los profesores de mediana edad son los que tienen una idea más positiva sobre los alumnos, mientras que los de mayor edad son más negativos. En cuanto a la educación especial, los profesores de mayor edad son más negativos que sus homólogos más jóvenes en cuanto a la capacidad de los alumnos con dislexia para comprender y producir el discurso oral y escrito. Estos resultados concuerdan con la investigación realizada por Thompson (2013), en la que los profesores más jóvenes mostraron mayor conocimiento sobre la dislexia.

El nivel educativo de los profesores de educación formal no parece afectar de manera relevante a las respuestas que dieron sobre comprensión y producción del discurso oral y escrito. Por otro lado, los más cualificados dieron respuestas de índole sustancialmente más positivaen algunos de los casos relacionados con la capacidad crítica de los alumnos con dislexia. Esto coincide con lo expuesto por Chong et al. (2017), donde se afirma que tener algún tipo de formación docente en dislexia favorece el éxito académico de menores con esta dificultad.

En lo que respecta a la educación especial, los licenciados y aquellos que han recibido formación en educación especial parecen ser el grupo más positivo en cuanto a la capacidad de los estudiantes con dislexia para comprender y producir el discurso oral y escrito, esto coincide con lo expuesto en el estudio de Zika (2017).

Los años de experiencia en educación ordinaria afectan a las respuestas de los profesores en lo referente a la comprensión y producción del discurso oral y escrito de los estudiantes con dislexia, siendo aquellos quehan trabajado más de veinte años los que tienden a ser más negativos en cuanto a la capacidad de los alumnos para cumplir con los requisitos del discurso oral y escrito. Por el contrario, son los profesores de educación especial menos experimentados, los que indican en mayor medida, la dificultad de los alumnos para encontrar el significado de una palabra desconocida, identificar los requisitos, aplicar las estrategias de los proyectos que se les asignan y reconocer su rendimiento cognitivo personal.

Según sus años de experiencia, los profesores de educación especial parecen mostrar una diferencia estadísticamente significativa en las respuestas que dieron a varias preguntas. En concreto, los profesores con experiencia de tres a ocho años apoyan firmemente la capacidad de los alumnos para responder a los requisitos orales y escritos, mientras que los que llevan entre nueve y catorce años en educación especial son los que están más convencidos. Los profesores de educación especial muestran más conocimiento sobre dislexia independientemente de sus años en educación, lo cual coincide con lo expuesto porBasu et al. (2014).

En suma, a partir de los resultados de la investigación se pudo concluir que los profesores de educación especial tienen mayor conocimiento sobre la dislexia, su naturaleza y los factores que alertan sobre ella.

4.4 Reflexión del objetivo 3, el efecto de las variables sociodemográficas de los docentes en su elección de metodologías de enseñanza y aprendizaje y de herramientas educativas para que los alumnos con dislexia comprendan y produzcan mejor el discurso oral y escrito

Otro punto de diferencia estadísticamente significativa entre los profesores de la enseñanza ordinaria y los de las aulas especiales es el uso de herramientas y métodos didácticos. Cabe destacar, en cualquier caso, que los segundos muestran un mayor acuerdo en la necesidad de utilizar estas herramientas, que los que trabajan en aulas ordinarias.

La única excepción en cuanto a las herramientas y métodos es la referente a los métodos de enseñanza digital, pues estos están siendo implementados a pequeña escala por ambos grupos de profesores. Además, los alumnos con dislexia que estudian enescuelas ordinariasmuestran un grado mayor de introversión, apatía y comportamiento negativo que los de las aulas de inclusión. Esto concuerda con la opinión de Cavioni et al. (2017), donde se menciona que los niños con dislexia suelen desarrollar carácter introvertido y mostrar apatía debido a la falta de variedad de métodos y herramientas de enseñanza.

De igual modo, los profesores de los departamentos ordinariosparecen oponerse a la aplicación de técnicas de enseñanza sofisticadas mediante programas de aprendizaje digital y diagramas de flujo de información. Los resultados anteriores contradicen la opinión de Koch (2017), que afirma que los estudiantes con dislexia podrían utilizar ordenadores para asistir a las clases, pues los estímulos visuales y acústicos, la apariencia tecnológica del texto y las diversas actividades que proporciona un entorno digital les facilitan considerablemente el aprendizaje. En concreto, Koch (2017) menciona que, herramientas como los software de procesamiento de textos, son útiles para los alumnos con dislexia, ya que pueden ayudarles a expresarse por escrito con mucha más facilidad, e incluso a mostrar una mayor confianza en sí mismos. Se demuestra que el uso educativo de los sistemas multimedia, gracias a aplicaciones dinámicas y a la ayuda audiovisual, también ayuda de manera importante a la comprensión de conceptos y al desarrollo del pensamiento de los alumnos, especialmente del

alumno con dislexia, cuyoaprendizaje está más limitado en relación con sus compañeros.

Es importante señalar que, a pesar de no tenertanta experiencia como los profesores de educación especial, los docentes de escuelas ordinarias no se muestran reacios a enseñar a estos alumnos en sus aulas; sus esfuerzos han quedado registrados. Esto contradice las conclusiones de la investigación de Trikou (2012, citado en Roussos, 2019), donde se afirma que los profesores de las aulas ordinarias no diferencian su enseñanza en absoluto bajo la justificación de que el aula no les hace responsables de dichas diferenciaciones.

Estas opiniones de los profesores contradicen las del estudio realizado por Berninger et al. (2015), donde se hace referencia al uso de distintos software de aula dirigidos a alumnos con dislexia. En este estudio, se comprueba el uso efectivo de herramientas tecnológicas que permiten a las personas con dificultades comunicativas desarrollar la comprensión lectora; se demuestra, por tanto, que la competencia lectora de estos niños mejora, acabando por afirmar que la tecnología permite, claramente, mejorar la comprensión del texto también cuando está a disposición de niños con dislexia.

Esta explicación contradice el punto de vista de Hargreaves y Crabb (2016), quienes fomentan el uso de gráficos y diagramas en el uso de la estrategia de predicción que puede ser aplicada antes, durante y después de la lectura. Se indica que un diagrama de flujo puede incluir, antes de la lectura, todas aquellas características y estructura del texto que pueden ayudar al estudiante a comprender el contenido del mismo, utilizando herramientas como títulos y subtítulos, signos de puntuación, negritas, gráficos, diagramas, colores o símbolos. Asimismo, McLoughlin y Leather (2013) exponen la estrategia de clarificación para palabras desconocidas que puede aplicarse a diferentes tipos de textos y a diversas causas de comprensión incompleta. Esto podría utilizarse como un diagrama de flujo de tal forma que un profesor podría enseñar a estudiantes con dislexia ayudando a que aclaren el significado de las palabras desconocidas de un texto, ya sea mediante el uso de un diccionario o sobre la base del contexto y el análisis de las propias palabras.

Además, los profesores de los departamentos ordinarios son negativos a la hora de promover la dramatización y la rotación de roles, al contrario que los profesores de educación especial. Estos resultados contradicen el trabajo de Ampatuan y San José (2016), que señalan que se pueden utilizar diversos ejercicios, como la dramatización y las simulaciones dentro del aula, para ayudar a los estudiantes con dislexia a desarrollar sus habilidades comunicativas. Así se les podría ayudar a crear su propia realidad, experimentando con los conocimientos que tienen del mundo real y desarrollando la comunicación interpersonal con sus compañeros. Así mismo, los profesores de las aulas ordinarias son negativos a la hora de utilizar escenarios de enseñanza en el contexto del método temático cruzado, a pesar de que el plan de estudios griego incluye los conceptos fundamentales de un enfoque temático cruzado, como se menciona en el D.E.P.P.S.[2] (Gaceta del Gobierno 303 / 13-3-03, publicada por el Ministerio griego de Investigación Educativa y Asuntos Religiosos, 2002: 61-63), que está relacionado con los módulos que se imparten o con un campo temático que los alumnos han tratado anteriormente.

El estudio llevado a cabo por Tajuddin y Shah (2015), ha demostrado que un número importante de profesores parece carecer de los conocimientos o las habilidades necesarias para proporcionar una instrucción fonológica y de fonemas eficaz, como parece ocurrir con los profesores de educación ordinaria de nuestro estudio. Estos autores determinaron que los profesores son incapaces de elegir el material o las actividades adecuadas para las tareas y que, por esto, carecen de la habilidad recomendable para analizar palabras escritas y fonemas.

Por otra parte, los profesores de las aulas formales están de acuerdo con que es necesario repetir las instrucciones de forma coherente y sistemática, y

---

[2] En el Marco Transversal de Programas Curriculares D.E.P.P.S. (Boletín Oficial del Estado: 1366, "18-10-2001 / 1373," B ", 18-10-2001 / 1374," B ", 18-10-2001 / 1375, 18-10-2001 / 1376, "B", 18-10-2001), se mantienen las lecciones distintivas, pero al mismo tiempo se busca una organización adecuada del currículo de cada asignatura, con el fin de asegurar que los temas se aborden desde ángulos múltiples (interconexión horizontal). Este enfoque transversal más amplio, en el que se mantienen los aprendizajes discretos, se denomina "Enfoque Interdisciplinar. D.E.P.P.S.", que, en griego, es el acrónimo de las palabras "DiathematikoEnieoPlesioProgrammatonSpoudon".

proporcionar a los alumnos con dislexia un tiempo extra para completar las tareas que se les asignan. Este grupo de profesores parece ser bastante positivo a la hora de utilizar otros métodos y herramientas de aprendizaje. Lo expuesto es coherente con las adaptaciones referidas en N.C.L.D., en 2014, en cuanto a la repetición deinstrucciones, la lectura de preguntas por parte del profesor, la diferenciación estética y funcional de las hojas de trabajo y otrostipos de material didáctico como fuentes tipográficas más grandes u organizadores gráficos. También existen diferencias en las respuestas que dieron en cuanto al uso de material didáctico y del software gratuito. Los profesores de educación especial utilizan esas herramientas en mayor medida que sus compañeros de las aulas ordinarias. Se hace hincapié en el concepto de enseñanza diferenciada, así como en el apoyo a los alumnos con problemas de aprendizaje en diferentes materias cognitivas. En concreto, se incluye la enseñanza diferenciada, así como las formas de potenciar las características cognitivas y emocionales de los alumnos con dificultades de aprendizaje, la conciencia fonológica, la decodificación, comprensión y fluidez lectora, el lenguaje escrito, las matemáticas y la comprensión (Instituto de Política Educativa, Departamento de educación especial, Atenas, 2017, http://prosvasimo.iep.edu.gr). Aparecieron, también, respuestas desiguales cuando se preguntó sobre el uso del método KWL o el uso de la evaluación descriptiva del estudiante y el portfolio, que son técnicas útiles para comprender la información de un texto informativo (Hamid et al., 2015).

Analizando las diferencias de género de los profesores en la educación ordinaria, se puede observar que los dos grupos difieren significativamente en las opiniones que tienen sobre el uso de la enseñanza diferenciada con distintos métodos y herramientas. Principalmente, son las mujeres las que parecen tener más predisposición a utilizar las herramientas y los métodos propuestos en esta investigación, con algunas excepciones en el uso de plataformas digitales de aprendizaje, comprensión contextual de palabras desconocidas y la concesión de *feedback* directo, pues en estos, son los hombres los que los ponen en práctica con más frecuencia. La satisfacción a la hora de utilizarmétodos de enseñanzadistintos es mayor en los docentes que trabajan en educación especial,

independientemente de su género, si bien es cierto quese siguen hallando diferencias de cara a ciertas herramientas y métodos específicos. Esto concuerda con la investigación de Papailiou (2018).

Los resultados muestran que, en ambas categorías de profesores, aquellos que aplican los métodos y herramientas de enseñanza mencionados en este estudio, tienden a ser, principalmente, los más jóvenes y no los de más edad (más de cincuenta años). En lo referente a los métodos y herramientas de enseñanza no parece haber ningún patrón específico en cuanto al grupo de profesores predominante que los aplica. Las respuestas relacionadas con los métodos y las herramientas de enseñanza en educación especial por parte de los profesores que llevan menor tiempo trabajando parecen ser aproximadamente las mismas en cada caso.

Todo ello, es congruente con el estudio de Thompson (2013), donde se comprobabacómo los profesores más jóvenes tuvieron una puntuación media más alta que los mayores, debido a que aquellos contaban con un mayor conocimiento sobre la dislexia. Estos resultados podrían explicarse debido a que, posiblemente, los más jóvenes habrían recibido una formación previa al ejercicio de la docencia, biencontinuadao bienmás adecuada, quelos de mayor edad.

Se puede observar que todos los profesores dan aproximadamente la misma importancia a cada uno los métodos y de las herramientas de enseñanza descritos en esta investigación; observación que concuerda con las conclusiones de Thompson (2013), que asumía que los profesores con formación en necesidades especiales tendrían más conocimientos sobre las herramientas a utilizar, debido a su mayor conocimiento sobre la dislexia, sin embargo, los resultados no respaldaron esta suposición.

Sin embargo, sí hay casos en los que se observa una diferencia estadísticamente significativa: en función del nivel educativo, los profesores de educación especial que cuentan con una licenciatura o un máster son los que dan más importancia a la aplicación de métodos educativos, lo que coincide con lo expuesto porZikou (2017). Por el contrario, el nivel educativo no parece tener un impacto

significativo en las respuestas de los profesores a los métodos y herramientas de enseñanza, de acuerdo a lo hallado por Thompson (2013), quien encontró que no hay diferencias significativas incluso cuandocontaban con experiencia de maestro de tres años o licenciatura. Además, en los pocos casos en los que hubo diferencias dependiendo del nivel educativo de cada profesor, los métodos y herramientas de enseñanza se utilizaban en menor medidapor licenciados o titulados en máster sin formación en educación especial. Como se puede entender de los resultados anteriores, los profesores con mayor formación en educación especial muestran una mayor eficacia en el uso de herramientas y metodología para que los niños con dislexia comprendan y produzcan mejor el discurso oral y escrito.

4.5 Reflexión del objetivo 4, el efecto de las variables sociodemográficas en las percepciones de los profesores sobre la adaptación intrapersonal e interpersonal de los alumnos en un aula de inclusión

Los profesores de la educación ordinaria admiten en gran medida que los alumnos con dislexia muestran un comportamiento negativo. Esto puede deberse al hecho de que solo entienden que se están enfrentando a un momento difícil, pero no pueden responder a la gran pregunta de «por qué les pasa esto», por lo que esa situación afecta directamente a sus emociones y su mundo interior (Novita, 2016).

En particular, tienen una actitud negativa a la hora de acercarse a los demás, causan problemas durante la clase, no responden a las preguntas y demuestran mal comportamiento con los profesores. No acostumbran a crear lazos con sus compañeros, pero no muestran un comportamiento violento, saben defenderse a pesar de que, en ocasiones, son solitarios e introvertidos. Todo esto concuerda con lo mencionado por Cavioni et al. (2017), que mencionaba que los niños con dislexia son poco cooperativos y no les es fácil lograr contactos sociales con sus compañeros, debido a la dificultad que tienen para interpretar los estímulos que reciben de su interacción con el entorno a la hora de elegir y aplicar la conducta que mejor les pueda ayudar a evitar situaciones desagradables.

Así, suelen desarrollar un carácter introvertido y mostrar apatía. En ocasiones llegan a mostrar comportamientos socialmente inaceptables, como la agresividad, si bien, como decimos, todo se debe a su incapacidad de socializar. Como explicaPapadopoulou (2017), los niños con dislexia tienen dificultades para traducir el discurso en pensamiento y el pensamiento en discurso, y menciona que, en consecuencia, se enfrentan a problemas en el ámbito de la comunicación y, por tanto, en el desarrollo de las relaciones amistosas; en otros términos, para ellos, crear amistades es un retoy suelen estar más aislados socialmente que los niños sin dificultades especiales de aprendizaje.

Por el contrario, los profesores que imparten clases en el ámbito de la educación especial mencionan que los alumnos con dislexia son ignorados, incapaces de defenderse, que tienen un rendimiento bajo y reaccionan mal en el aula. Estas afirmaciones contradicen los resultados del estudio de Martimianaki (2015), que revela que los estudiantes con dificultades de aprendizaje tienen niveles más bajos tanto en el ajuste psicosocial como en la autoestima general en comparación con los alumnos sin dificultades de aprendizaje. Esto significa que muestran puntuaciones más bajas, estadísticamente significativas, en la adaptación psicosocial y la autoestima. La obtención de malas notas también coincide con lo descubierto por estudios como los de Jiménez-Fernández et al. (2015); Farquharson, et al. (2014); Ainscow et al. (2016). Sin embargo, los profesores de educación especial afirman que los estudiantes con dislexia no son solitarios, introvertidos o apáticos, y que no les cuesta particularmente socializar. Las investigaciones han demostrado que la inclusión de alumnos con dificultades de aprendizaje en un aula ordinaria tiene beneficios sociales cuando los alumnos cuentan con la comprensión y la aceptación de los profesores y de sus compañeros. Las encuestas muestran altos niveles de soledad en los niños con dislexia en comparación con los niños de desarrollo típico (Pesli, 2018).

Los docentes de ambos grupos reconocen que, en ocasiones, su propio esfuerzo no es suficiente, sino que es necesario que algún compañero con formación en educación especial sirva de apoyo en la clase para que esta funcione sin inconvenientes. Esto está en consonancia con la Ley 4368/21.02.2016 (artículo 82), que promueve la educación inclusiva, la creación de programas de

coeducación y muchas propuestas de cooperación entre escuelas de educación ordinaria y especial (Agencia Europea de Educación Especial-Grecia, 2018). Si bien, esto concuerda con Feskemenlidou (2016), donde se menciona que la mayoría de los profesores consideran esta ayuda especializada disponible. Es, a su vez, inconsistente con Vlachou, et al., (2004, citado enFeskemenlidou, 2016), donde el 24% de los educadores especiales declararon que no había ninguna colaboración sustancial con el profesor general, mientras que el 62% informó de algunas formas de colaboración, pero principalmente con los profesores de clases pequeñas o particulares. Con todo, diversos estudios han demostrado que la cooperación entre las dos especialidades es muy importante, ya que no solo facilita el proceso de aprendizaje, sino que también proporciona a los profesores de educación general sensación de eficiencia y una mayor satisfacción profesional (Janney, et al., 1995, citado en Feskemenlidou, 2016).

Los profesores y profesoras de educación ordinaria discrepan en varios puntos relacionados con el comportamiento y los problemas de los alumnos con dislexia. Los profesores varones son más propensos a encontrar comportamientos negativos en los estudiantes con dislexia, a saber: introversión, conflictos con los compañeros y dificultad para socializar, que sus homólogos femeninos y tienden a promover el debate con los alumnos como estrategia para reforzar su autonomía. Por el contrario, las mujeres son las que dan más importancia a animar a los alumnos, a potenciar su autoestima, a crear condiciones de cooperación y apoyo emocional para que no reaccionen de manera negativa ante situaciones inevitables.

Por otro lado, el género de los profesores de educación especial no afecta significativamente a sus respuestas sobre el comportamiento de los alumnos con dislexia. La creación de complicaciones, durante la clase, y la reacción ante el enfoque y la orientación del profesor son los únicos casos en los que los hombres muestran una opinión más negativa de los alumnos con dislexia que sus compañeras.

Los profesores mayores de cincuenta años que enseñan en aulas de inclusión son los que dan la opinión más negativa en cuanto a la indiferencia y el mal

comportamiento de los alumnos con dislexia hacia los profesores. No obstante, este grupo es el más positivo en cuanto al apoyo que los alumnos reciben de sus compañeros. La edad no parece influir de manera destacable en las respuestas de los profesores de educación especial en relación al comportamiento mostrado o aceptado por los alumnos con dislexia. Sin embargo, los profesores de mayor edad parecen identificar en mayor medida, la incapacidad de los alumnos con dislexia para defenderse cuando alguien es agredido, la indiferencia que reciben de sus compañeros y su exclusión, lo que coincide con lo expuesto por Martimianaki (2015).

El nivel educativo influye significativamente en las respuestas de los profesores en el aula ordinaria mostrando que aquellos con formación en educación especial responden con percepciones más positivas sobre la adaptación intrapersonal e interpersonal de los alumnos en el aula. Sin embargo, son los profesores de educación especial los que se muestran, mayoritariamente, a favor de la necesidad de contar con un compañero con formación especial para que el proceso educativo se desarrolle sin problemas. Basu (2018), comenta que los educadores especiales pueden ser utilizados como agentes estratégicos y pueden asegurar el aprendizaje y la continuidad de los alumnos en la escuela.

En relación a las distintas formas de animar a los alumnos a nivel interpersonal e intrapersonal, los años de experiencia laboral en la educación típica no parecen afectar significativamente a las respuestas de los profesores que trabajan en la educación especial. En el caso de la educación especial no hubo diferencias, ya que todos los profesores de esta categoría respondieron la misma experiencia laboral. Estos resultados son coherentes con las respuestas de la investigación de Papaeliou (2018).

4.6 Reflexión del objetivo 5, el efecto de las variables sociodemográficas en la elección de la metodología utilizada en alumnos con dislexia y su adaptación intrapersonal e interpersonal en un aula de inclusión

Los profesores que imparten clases de educación especial son significativamente más positivos que sus compañeros de educación típica a la hora de aplicar diferentes métodos para desarrollar la autoconfianza y la extraversión de sus alumnos. Los profesores de educación ordinaria aplican puntualmente métodos para estimular a los alumnos con dislexia a nivel intrapersonal e interpersonal. Los únicos casos en los que son positivos son aquellos en los que se anima a los alumnos a mejorar su autoestima y se les apoya para que mejoren su capacidad de enfrentarse a situaciones que no se pueden cambiar. Estos datos son coherentes con los de Leontopoulou (2013), cuya muestra de profesores, en su estudio, tiende a orientarse hacia la autoestima de los estudiantes, a fomentar sus acciones y sus resultados para mejorarla, de modo que haya un proceso constante, dinámico y recíproco gracias al proceso de aprendizaje. Al mismo tiempo, la disposición de los profesores de educación formal contrasta con la reducida disposición de estos en la investigación de Tzouriadou (2015). Por el contrario, los resultados de Papaeliou (2018), muestran que los profesores están preparados para trabajar con alumnos con dislexia.

Por otro lado, los profesores con poca experiencia en educación se sentirían más a gusto y tendrían menos ansiedad y miedo a perjudicar al alumno. Los profesores con poca experiencia docente, al no tener conocimientos suficientes sobre la dislexia, pueden tener dificultades en el manejo de los alumnos con estas dificultades de aprendizaje, como seha demostrado tras reparar en la escasez de ejercicios de interpretación de roles, comunicación y comportamiento en contraste con el análisis de los profesores de educación especial. Apoyar a las personas con dificultades especiales de aprendizaje en el aula es una tarea difícil y la mayoría de los profesores, cuando se enfrentan a este tipo de problemas, bien acaban por dar prioridad a la enseñanza diaria o bien buscan el asesoramiento de los padres o de sus compañeros de educación especial, porque no están seguros de poder hacer frente a la dificultad por sí mismos y porque

creen que no es de su competencia (Gately yHammer, 2005, citado en Feskemenlidou, 2016).

El papel del profesor en el proceso de integración de los alumnos con dislexia y con dificultades generales de aprendizaje en un aula típica es de importancia considerable.Según Filipatou y Ventista (2017), el profesor debe guiar y apoyar a los alumnos, ofreciéndoles distintas oportunidades para aprender a través de opciones basadas en las características particulares de cada uno de ellos, creando un entorno educativo conveniente para la puesta en práctica de la enseñanza diferenciada y ofreciendo un apoyo adecuado.

No obstante, la actitud positiva de los profesores de un aula ordinaria hacia los alumnos con dislexia y su disposición a proporcionarles ayuda también sirve de ejemplo para otros alumnos, y contribuye a que estos menores se integren sin problemas en el aula general (Kofidou y Matzikos, 2016).

Por el contrario, los profesores de educación especial parecen apoyar todos los métodos para animar a los alumnos. De hecho, en muchos casos, los profesores son absolutamente positivos sobre el asesoramiento general de los estudiantes con dislexia, apoyan plenamente la cooperación con *ΕΔΕΑΥ*, psicólogos escolares y otros consejeros. Las opiniones de los profesores de educación especial coinciden con los «puntos clave» de Tziolas (2013), sobre la adaptación social y emocional de los estudiantes de educación secundaria con dislexia: la solidaridad entre compañeros, las oportunidades para compensar las dificultades y el estímulo continuo. Asimismo, HabibyNaz (2015) señalaron que la frustración de los niños ha de serfácilmente reconocible por los educadores y tiene que tratarse con motivación, alentando continuamente sus esfuerzos y reforzando su autoestima. Por el contrario, los profesores de educación especial, como era de esperar, tienen una seguridad de la que carecen los profesores de educación ordinaria, debido a su formación, en lo referente a que saben cómo tratar a los alumnos con dislexia y tratarlso, como es, el caso de un alumno con total autonomía, utilizando todos los medios disponibles. Esto se debe probablemente a los conocimientos que han adquirido sobre la dislexia, por una parte debido a su especialidad, y por otra, porque enseñan exclusivamente a alumnos con

necesidades educativas especiales; en consecuencia, tienen más experiencia en la gestión y el trato con alumnos disléxicos. Los resultados del estudio de Feskemenlidou (2016), muestran que los profesores de educación especial tienen más conocimientos específicos que les pueden servir para modificar sus clases y recurrir a un diseño más detallado de métodos y estrategias de intervención para enseñar eficazmente a los alumnos con dislexia y comprender su adaptación interpersonal e intrapersonal. Por otro lado, los profesores de educación general, como se menciona en el estudio anterior, no tienen los conocimientos necesarios e incluso afirman que sus estudios de grado no les ofrecen habilidades suficientes para ser capaces de modificar las clases y poner en uso las adaptaciones metodológicas requeridas para abordar de manera más eficiente a los niños con necesidades especiales de dificultades de aprendizaje (Agaliotis, 2008, citado en Feskemenlidou, 2016).

Sin embargo, los métodos para animar a los alumnos con dislexia, tanto a nivel interpersonal como en el ámbito de la educación especial, no parecen estar significativamente influenciados por el género de los profesores. En concreto, todos los profesores de este ámbito educativo dan gran importancia a su aplicación para potenciar la autoestima y la extroversión. Sin embargo, la aplicación de métodos orientados a la colaboración de los alumnos es más evidente en las profesoras que en los profesores de educación especial, lo cual es relevante para los hallazgos de Papailiou (2018). Por otro lado, en cuanto a los factores relacionados con la eficacia de la mejora de la dislexia y la adaptación de los alumnos, se encontró que las profesoras creen más que los profesores que las motivaciones positivas, así como la participación voluntaria del alumno con dislexia en las actividades del aula, funcionan eficazmente de cara a su adaptación. Este hallazgo se debe probablemente a la naturaleza de las mujeres, que no son tan estrictas como los hombres y consideran que, al dar refuerzo positivo y libertad a los deseos del alumno, contribuyen a un mejor tratamiento del problema. Las mujeres, según Gwernan-Jones y Burden (2010, citado en Feskemenlidou, 2016), tienen una actitud significativamente más positiva hacia la dislexia que los hombres y se sienten más capaces y capacitadas para hacer frente a cualquier dificultad que experimenten estos alumnos.

En relación a la edad, los profesores del grupo de treinta y uno a cuarenta años hacen más hincapié en la aplicación de métodos para animar a los alumnos con dislexia a ganar confianza y a ser más extrovertidos. Por el contrario, los profesores de mayor edad son los más reticentes a utilizar estos métodos. Esto puede deberse a que los profesores más jóvenes tienen más formación sobre metodología, tienen una educación más exigente y comprenden mejor la dislexia gracias a sus últimos estudios.

Además, los profesores de educación especial no parecen aplicar métodos significativamente diferentes para animar a los alumnos en el plano interpersonal y en el intrapersonal, si bien es cierto que se puede observar que los más jóvenes parecen estar más centrados en el desarrollo de la extroversión de los alumnos con dislexia y en el trabajo conjunto. La edad de los profesores en ambas categorías educativas se menciona en la investigación de Thompson (2013), ya que los más jóvenes aplican más herramientas y mejor metodología que los más mayores.

Por otro lado, en función de los estudios de los docentes, son los titulares de grado, máster y con formación en Educación Especial los que dan especial importancia a la aplicación de métodos para fomentar que los alumnos sean confiados, extrovertidos y receptivos de cara a colaborar en clase ya hacer amistades. En los únicos casos en los que el nivel educativo influye, en los métodos de estímulo que utilizan los profesores de educación especial, es porque aquellos que tienen formación en educación especial son los más positivos. Por el contrario, los que tienen una licenciatura o un grado y un máster, son los más desinteresados en aplicar métodos para animar a los alumnos y su extroversión, lo cual corrobora las conclusiones de Zikou (2017).

Además, los profesores que cuentan con experiencia de tres a ocho años en educación ordinaria declaran ser bastante positivos en el uso de diferentes métodos para animar a los estudiantes con dislexia, mientras que los profesores con más de veinte años tienen una visión más negativa del uso de estos métodos, lo cual coincide con el estudio de Feskemenlidou (2016), que también hace referencia a esta diferencia.

En cuanto a los profesores de educación especial, todos respondieron que habían completado, al menos, de cero a dos años en la educación, por lo tanto, no hay diferencia en las respuestas que dieron en relación a los métodos de fomentar a estos estudiantes para que ganen autoestima y confianza en ellos mismos.

Así, en la mayoría de los casos, los métodos para animar a los alumnos a nivel interpersonal e intrapersonal no parecen estar significativamente influenciados por los años de experiencia en educación especial de sus profesores, ya que todos se muestran positivos a la hora de utilizarlos. Esto se debe probablemente al hecho de que los profesores con experiencia docente saben cómo tratar con este tipo de alumnos debido a su experiencia personal o a su formación, como se menciona en el estudio de Feskemenlidou (2016).

En resumen, a pesar de un diagnóstico oportuno y válido que puede ser especialmente importante para cualquier niño con dislexia, las percepciones de los profesores juegan un papel clave en el futuro de esta dificultad de aprendizaje. Así, la imagen que se formen acerca del problema afectará a la manera de abordarlo tanto como el desarrollo mismo del niño (Roussos, 2019). Se entiende la importancia de los resultados de esta investigación, tanto para los docentes, en particular, como para la educación, en general, ya que los coloca en una posición de evaluación de sus propias percepciones y actitudes respecto a la dislexia, la metodología y las herramientas que utilizan de cara a fomentar el desarrollo de su discurso oral y escrito, y su adaptación a nivel interpersonal y de relaciones. De este modo, se constata el gran papel que desempeña la formación en la mejora y en el desarrollo del proceso educativo.

4.7 Reflexión del objetivo 6, sobre la correlación entre las percepciones de los profesores de Centros educativos de Educación Secundaria sobre la comprensión y producción del discurso oral y escrito en los alumnos con dislexia y las Metodologías de Enseñanza y Aprendizaje y Herramientas Educativas utilizadas para que los alumnos con dislexia de secundaria comprendan y produzcan mejor el discurso oral y escrito

A partir de las conclusiones de los profesores de educación ordinaria, aquellos que señalan en mayor medida que los alumnos con dislexia responden eficazmente a demandas orales y escritas complejas, tienden a utilizar métodos más o menos interactivos. Para que los alumnos se sientan cómodos y no se sientan excluidos y marginados, este clima positivo debe estar basado en la interacción, la colaboración, la aceptación y el respeto (Stasinos, 2016). También suelen utilizar métodos como el estímulo indirecto debido a sus respuestas de alto nivel sobre un mayor grado de desconocimiento e indiferencia hacia los alumnos con dislexia. Por último, es de especial importancia el desarrollo del interés de los alumnos por la dislexia, vinculando el contenido de la enseñanza al interés de los alumnos. Esta propuesta se centra en una enseñanza más atractiva y eficaz para los alumnos, pues la enseñanza diferenciada se basa en el concepto de motivación e interés del alumno (Bellou, 2019).

No obstante, las respuestas más altas de los profesores sobre la eficacia de los estudiantes en los requisitos orales y escritos simples señalan el uso de medios electrónicos y el objetivo de promover la expresión de los estudiantes durante la clase. El estudio de Cidrim y Madeiro (2017), señala que los medios electrónicos y la tecnología se han convertido en una herramienta fundamental de cara a ayudar a los lectores disléxicos a estudiar, tanto en la escuela como en casa. Hoy en día existe una amplia propuesta de estrategias para hacer frente a las dificultades de los estudiantes con dislexia con el uso de la tecnología. Los estudiantes con dislexia pueden utilizar programas que combinan el reconocimiento óptico de caracteres, conversión de texto a voz, correctores ortográficos y predictores, etc., (Shiavo y Buson, 2014). El uso de la tecnología puede hacer que los requisitos orales y escritos de los estudiantes con dislexia sean más fáciles de comprender.

Por último, son los profesores de enseñanza ordinaria que utilizan métodos amenos e interactivos los que responden que los alumnos con dislexia tienen capacidad crítica. El profesor debe evaluar, primero, el nivel de cada alumno y, después, utilizando una serie de materiales y actividades, responder adecuadamente a las necesidades de cada uno de ellos. Para evaluar, pero también para entrenar en la lectura, se proponen diversos métodos y estrategias, algunos de ellos son exámenes que incluyen textos de distintas dificultades, así como el uso de material didáctico, audiovisual e interactivo (Bellou, 2019).

Cabe mencionar el hecho de que no existe una relación significativa, ni positiva ni negativa, entre las variables relacionadas con la percepción de los profesores sobre el rendimiento de los alumnos y las técnicas de enseñanza que utilizan.

4.8 Reflexión del objetivo 7, sobre la correlación entre las percepciones de los profesores, de centros educativos de EducaciónSecundaria, sobre la comprensión y producción del discurso oral y escrito de los alumnos con dislexia y sus valoraciones sobre la adaptación intrapersonal e interpersonal de los alumnos en un aula de inclusión

Los resultados presentan que los profesores que creen que los alumnos con dislexia pueden hacer frente a las complejas exigencias del discurso oral y escrito son más propensos a identificar en estos alumnos, aspectos de ignorancia e indiferencia. En este aspecto hay mucho desacuerdo en la bibliografía existente. Por tanto, la indiferencia y la ignorancia de los alumnos con dislexia no se corresponden con la facilidad o dificultad de enfrentarse a retos del discurso oral y escrito. Según Stasinos (2016) la dislexia es un trastorno en la adquisición del lenguaje escrito, que se expresa principalmente como una debilidad en el reconocimiento y la decodificación de las palabras, lo que se traduce en unadeficiencia en la lectura y la ortografía. Además, es un trastorno que se presenta siempre que ese déficit no se deba a una falta de enseñanza, inteligencia o que tenga relación alguna al nivel social y cultural del niño u otras razones sociales y culturales. En consecuencia, llegamos a la conclusión de que los alumnos con dislexia no manejan con facilidad el discurso oral y escrito y, por lo

tanto, la ignorancia y la indiferencia que puedan mostrar en el aula no puede entenderse como una relación directa de esto.

En cuanto a los profesores de centros de educación especial, no existen relaciones significativas entre las variables relacionadas con la capacidad de los alumnos para expresarse de manera oral y escrita, así como la adaptación interpersonal e intrapersonal en una clase de inclusión.

4.9 Reflexión del objetivo 8, referido a la correlación entre las percepciones de los profesores, de centros educativos de Educación Secundaria,sobre la comprensión y producción del lenguaje oral y escrito de los alumnos con dislexia, la metodología utilizada con estos alumnos y su adaptación intrapersonal e interpersonal en un aula de inclusión.

Los profesores de las aulas ordinarias utilizan mayoritariamente métodos de estímulo indirecto sobre los alumnos con dislexia cuando creen que estos pueden responder eficazmente a las demandas complejas y a los requerimientos simples tanto en el discurso oral como en el escrito. El profesor debe fomentar que se establezcan acciones de colaboración en las que se consiga no solo un estímulo cognitivo, sino también socio-emocional, que a menudo, se observa por debajo del que muestran los alumnos de desarrollo típico. En general, el fomento de las prácticas inclusivas mediante la formación del profesorado en materia de inclusión y dificultades de aprendizaje proporcionará el mayor nivel de participación en la intervención activa y, por otro lado, en la creación de un clima propicio para la dislexia normalizada (Stasinos, 2016). Además, al optar por una enseñanza diferente, se fomenta la participación del alumno con dislexia en igualdad de condiciones en la escuela inclusiva y, al mismo tiempo, se crea un ambiente de estímulo en el aula favorable a las dificultades de aprendizaje (Bastea, 2016).

En los entornos de educación especial, los que aplican métodos de estímulo indirecto en los alumnos con dislexia son también los que afirman en mayor

medida que estos alumnos tiene competencia suficiente para resolver las exigencias simples o complejas del lenguaje oral y escrito, utilizando la capacidad crítica que poseen.

REFERENCIAS BIBLIOGRÁFICAS

Accariya, Z. & Khalil, M. (2016). The Socio-Emotional Adjustment of Learning-Disabled Students Undergoing School Transitions. *Creative Education*, 7, 139-151. http://dx.doi.org/10.4236/ce.2016.71014

Adlof, S. M. y Hogan, T. P. (2018). Comprensión de la dislexia en el contexto de los trastornos del desarrollo del lenguaje. *Servicios de lenguaje, habla y audición en las escuelas, 49* (4), 762–773. https://doi.org/10.1044/2018_LSHSS-DYSLC-18-0049

Agrafioti, G. (2019). Secondary Education teachers' views on their readiness to deal with Special Learning Disabilities. [Unpublished bachelor's dissertation]. Greek Open University.

Ainscow, M., Dyson, A., Hopwood, L. & Thomson, S. (2016). *Primary Schools Responding to Diversity: barriers and possibilities*. Cambridge Primary Review Trust.

Ampatuan, A. R. & San Jose, A. E. S. (2016). Role Play As An Approach In Developing Students' Communicative Competence. *International Journal for Innovation Education and Research, 4*(1), 18-24. https://doi.org/10.31686/ijier.vol4.iss1.503

Arnold, H. & Li, J. (2015). Associations between beliefs about and reactions toward people who stutter. *Journal of Fluency Disorders,*47, 27-37. https:doi.org/10.1016/j.jfludis.2015.12.004.

Bastea, A. & Papadatos, I. (2016). *Attention Deficit Disorder - Hyperactivity and Learning Disabilities.*Greek Conference of Science Education, 744-771.http://dx.doi.org/10.12681/edusc.1025

Basu, S., Beniwal, P. & Beniwal, A. (2014). A Study to Find the Challenges Faced By Teachers in the Class of Child with Dyslexia. *Educationia Confab, 3*(5), 1-8.

Bellou, P. (2019). The use of Differentiated Teaching to students with learning difficulties in the classroom. [Unpublished bachelor's dissertation]. University of Ioannina.

Berninger, V., Nagy, W., Tanimoto, S., Thompson, R. & Abbott, R. (2015). Computer Instruction in Handwriting, Spelling, and Composing for Students with Specific Learning Disabilities in Grades 4 to 9. *Computers & Education, 81*. https/doi.org/10.1016/j.compedu.2014.10.005.

Cavioni, V., Grazzani, I. & Ornaghi, V. (2017). Social and emotional learning for children with Learning Disability: Implications for inclusion. *International Journal of Emotional Education, 9*(2), 100 – 109.

Chong, T. T. J., Apps, M., Giehl, K., Sillence, A., Grima, L. L. & Husain, M. (2017). Neurocomputational mechanisms underlying subjective valuation of effort costs. *PLoS Biol 15*(2), 1002598. https://doi.org/10.1371/journal.pbio.1002598

Cidrim, L. & Madeiro, F. (2017). Information and Communication Technology (ICT) applied to dyslexia: literature review. *Revista CEFAC, 19*(1), 99-108. https://doi.org/10.1590/1982-021620171917916.

Cunningham, A. J. & Carroll, J. M. (2015). Early predictors of phonological and morphological awareness and the link with reading: Evidence from children with different patterns of early deficit. *Applied Psycholinguistics, 36*(3), 509–531. https://doi.org/10.1017/S0142716413000295

Efthymiou, E. & Kington, A. (2017). The development of inclusive learning relationships in mainstream settings: A multimodal perspective. *Cogent Education, 4*,1-22. http://dx.doi.org/10.1080/2331186X.2017.1304015

Elhoweris, H. (2017). The Impact of Repeated Reading Intervention on Improving Reading Fluency and Comprehension of Emirati Students with Learning Disabilities. *Psycho-Educational Research Reviews*, *6*(2), 36. https://www.journals.lapub.co.uk/index.php/perr/article/view/169.

European Agency of Special Needs Education-Greece. (2018). *Country information for Greece.* https://www.european-agency.org/country-information/greece

Evdoridou, E. (2016) Parallel Support in Primary School: the opinions of the teachers who facilitate this support and of the class's teachers. [Unpublished bachelor's dissertation]. Aristotle University of Thessaloniki

Farquharson, K., Centanni, T. M., Franzluebbers, C. E. & Hogan, T. P. (2014). Phonological and lexical influences on phonological awareness in children with specific language impairment and dyslexia. *Frontiers in Psychology*, *5*, 1-10. https:/doi.org/10.1016/j.ridd.2014.11.002

Feskemenlidou, Aik. (2016). *The perceptions of general and special education teachers on phonological awareness of students with dyslexia and ways of managing them.* [Unpublished bachelor's dissertation]. University of Western Macedonia.

Filias, B. (2003). *Introduction to Methodology and Techniques of Social Research*. Gutenberg.

Filippatou, D. & Ventista, O. (2017). Perceptions of secondary education teachers concerning differentiation of instruction [In Greek]. *ΤοΒήμα τωνΚοινωνικών Επιστημών. 17,* 147-183.

González-Alonso, J. & Pazmiño-Santacruz, M. (2015). Cálculo interpretación del Alfa de Cronbach para el caso de validación de la consistencia interna de un cuestionario, con dos posibles escalas tipo Likert. *Revista Publicando, 2*(1), 62-67. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-423821

Habib, A. & Naz, F. (2015). Cognitive failure, teacher's rejection and interpersonal relationship anxiety in children with dyslexia. *Pak J Med Sci., 31*(3), 662-666.http://dx.doi.org/10.12669/pjms.313.7065

Haft, S. L., Myers, Ch. A. & Hoeft, F. (2016). Socio-emotional and cognitive resilience in children with reading disabilities. *Current Opinion in Behavioral Sciences, 10*, 133-141. 10. https://doi.org/1016/j.cobeha.2016.06.005

Hamid, M. S., Rahman Q. & Atmowardoyo, H. (2016). The Use of Prezi with Know, Want, and Learn (KWL) Strategy to Enhance Students Reading Comprehension. *Journal of English Language Teaching, 3*, 16-31. https://doi.org/10.26858/eltww.v3i1.1876

Hamid, S, Waycott, J. Kurnia, S. & Chang, S. (2015). Understanding Students' Perceptions on the Benefits of Online Social Networking Use for Teaching and Learning. *The Internet and Higher Education, 26,* 1-9. https://doi.org/10.1016/j.iheduc.2015.02.004

Hargreaves S. & Crabb, J. (2016). *Study skills for students with dyslexia.*3rd ed. Sage

Jimenez-Fernandez, G., Gutierrez-Palma, N. & Defior, S. (2015). Impaired stress awareness in Spanish children with developmental dyslexia. *Research in Developmental Disabilities, 37*, 152-161. https:/doi.org/10.1016/j.ridd.2014.11.002

Knight C. (2018). What is dyslexia? An exploration of the relationship between teachers' understandings of dyslexia and their training experiences. *Dyslexia (Chichester, England)*, *24*(3), 207–219. https://doi.org/10.1002/dys.1593

Koch, K. (2017). Stay in the Box! Embedded Assistive Technology Improves Access for Students with Disabilities. *Educ. Sci., 7*, 82-89. https://doi.org/10.3390/educsci7040082

Kofidou, Ch. & Mantzikos, N. K. (2016). Attitudes and perceptions of teachers and students towards people with disabilities: A bibliographic review.*Educational News, 2,* 4-25.

Layes, S., Lalonde, R. & Rebai, M. (2015). Effectiveness of a Phonological Awareness Training for Arabic Disabled Reading Children: Insights on Metalinguistic Benefits. *Bellaterra Journal of Teaching & Learning Language & Literature. 8*, 24. https/doi.org/10.5565/rev/jtl3.621.

Leontopoulou, S. (2013). A comparative study of resilience in Greece and Cyprus: The effects of negative life events, self-efficacy, and social support on mental health. In An. Efkleides and D. Moraitou, (Eds.), *A Positive Psychology Perspective on Quality of Life* (pp. 273-294). *Social Indicators Research Series, 51*. https/doi.org/ 10.1007/978-94-007-4963-4.

Lopes, P. N., Brackett, M. A., Nezlek, J. B., Schutz, A., Aellin, I. & Salovey, P. (2004). Emotional Intelligence and Social Interaction. *PSPB, 30*(8), 1018-1034. https/doi.org/10.1177/0146167204264762

Martimianaki, C. (2015). *Psychosocial adaptation and self-esteem of students with and without learning difficulties*. [Unpublished bachelor's dissertation]. University of Patra

Matric, M. (2018). Self Regulatory Systems: Self-Regulation and Learning. *Journal of Process Management – New Technologies, International, 6*(4), 79-84. https/doi.org/10.5937/jouproman6-19338.

McLoughlin, D. & Leather, C. (2013). *The Dyslexic Adult - Interventions and Outcomes - An Evidence-based Approach*. (2nd ed.). British Psychological Society and John Wiley & Sons Ltd.

Mortimore, T. & Zsolnai, An. (2015). Inclusive education and social competence development. *Hungarian Educational Research Journal, 5*(1), 46–61.

N.C.L.D. – National Center for Learning Dissabilities. (2014). Editorial Team. *Accommodations for Students With Learning Disabilities*. http://www.ncld.org/students-disabilities/accommodations-education/accommodationsstudents-learning-disabilities

Novita, Sh. (2016). Secondary symptoms of dyslexia: a comparison ofself-esteem and anxiety profiles of children with and without dyslexia. *European Journal of Special Needs Education, 31*(2), 279-288.https://doi.org/10.1080/08856257.2015.1125694

Papadopoulou, El. (2018). *Assessment of teachers' knowledge of Phonological Awareness and its relationship with Dyslexia*. [Unpublished post degree study]. University of Macedonia.

Papailiou, C. (2018). *Knowledge and views of primary and secondary school teachers regarding the support of the student with dyslexia in the classroom.* [Unpublished bachelor's dissertation]. National and Kapodistrian University of Athens.

Pedersen, H. Fusaroli, R. Lauridsen, L. & Parrila, R. (2016). Reading Processes of University Students with Dyslexia - An Examination of the Relationship between Oral Reading and Reading Comprehension. *Dyslexia, 22*. https/doi.org/10.1002/dys.1542.

Pesli, V. (2018). *Learning practices in the context of inclusion of disabled educators, special educational needs.* [Postgraduate Diplomatic Work]. University of Macedonia.

Peterson, R. L., Pennington, B. F. & Olson, R. K. (2013). Subtypes of developmental dyslexia: Testing the predictions of the dual-route and connectionist frameworks. *Cognition*, *126*(1), 20–38. http://doi.org/10.1016/j.cognition.2012.08.007.

Poonam, S. C. B. & Beniwal, A. (2018). Enrich the Learning Environment Before any Dyslexic Child Leave School. *Issues and Ideas in Education*, *6*(2), 173–182. https://doi.org/10.15415/iie.2018.62012

Qureshi, H. A. (2018). Theoretical Sampling in Qualitative Research: A Multi-Layered Nested Sampling Scheme. *International Journal of Contemporary Research and Review*, 9(8), 20218-20222.https://doi.org/10.15520/ijcrr/2018/9/08/576

Saripanidou, S. (2017). *Investigation of the level of awareness of primary school teachers for specific learning difficulties*. [Thesis]. University of Western Macedonia.

Schiavo, G. & Buson, V. (2014). *Interactive e-Books to Support Reading Skills in Dyslexia*. Conference: Workshop on Interactive e-Books for Children (iBOOC'14) at IDC. Denmark.https://www.researchgate.net/publication/270896636

Sigurdardottir, H. M., Danielsdottir, H. B., Gudmundsdottir, M., Hjartarson, K. H., Thorarinsdottir, E. A. & Kristjánsson, Á. (2017). Problems with visual statistical learning in developmental dyslexia. *Scientific reports*, *7*(1), 606. https://doi.org/10.1038/s41598-017-00554-5

Sigurdardottir, H., Danielsdottir, H., Gudmundsdottir, M., Hjartarson, Kr., Thorarinsdottir, El. & Kristjánsson, Arn. (2017). Problems with visual

statistical learning in developmental dyslexia. *Scientific Reports,* 7. https://doi.org/10.1038/s41598-017-00554-5

Stasinos, D. (2015). *Psychology of speech and language. Development and pathology. Dyslexia and speech therapy*. Gutenberg.

Tajuddin, E. D. & Shah, P. B. M. (2015). Teachers' knowledge of phonemic awareness and its instruction in ESL learning. Sub-urban primary school in Malaysia. *International Journal of Technical Research and Applications, 22*, 72-79. https://www.ijtra.com/special-issue-abstract.php?id=teachersrsquo-knowledge-of-phonemic-awareness-and-its-instruction-in-esl-learning

Tarasova, S. I., Dukhina, T. N., Limonova, O. O., Kolesnikova, T. V. & Makhiva, I. K. (2017). Socio-Psychological Adaptation of First- Year University Students. Adaptación socio-psicológica de estudiantes universitarios de primer año. *Especial, 38*(56).

Thompson, L. S. (2013). *Dyslexia: An Investigation of Teacher Awareness in Mainstream High Schools*. University of South Africa.http://hdl.handle.net/10500/13373

Trikou, E. (2012). The readiness of Secondary Education teachers in detecting and dealing with learning difficulties. [Unpublished bachelor thesis]. University of Macedonia.

Tziolas, I. (2013) *Teachers' view for Students with Learning Difficulties in the History Course in Secondary Education Schools in Pieria*. [Thesis]. University of Thessaly.

Tzouriadou, M. (2008a). *"ΛΑΤΩ" for Speech: Psychometric-differential assessment for children and adolescents with learning difficulties*. Ministry of National Education and Religious Affairs. Operational Program of Education and Organizational Training (E.P.E.A.E.K.), Measure 1.1- Action 1.1.3-Category of Operations 1.1.3a. (Subproject 4: Psychometric language criterion capacity-sufficiency for children and adolescents). Aristotle University of Thessaloniki

Tzouriadou, M. (2008b). *Criterion of school-social competence.* Ministry of National Education and Religious Affairs. Operational Program of Education and Organizational Training (E.P.E.A.E.K.), Measure 1.1- Action 1.1.3-Category

of Operations 1.1.3a. (Subproject 6. Psychometric criterion of school-social competence for children and adolescents). Aristotle University of Thessaloniki

Tzouriadou, M., Vougioukas, K., Anagnostopoulou, H. & Menexes, G. (2015). *Knowledge and views of Greek teachers on dyslexia. IA' Scientific Yearbook of the Department of Psychology*. Aristotle University of Thessaloniki

Vassiliou, E. & Haritaki, G. (2015). *Investigating the views of the General Education teachers on the integration of pupils with special learning needs.* [Paper]. 5th Panhellenic Conference of Education Sciences.

Zheng, C., Erickson, A. G., Kingston, N. M. & Noonan, P. M. (2014). The relationship among self-determination, self-concept, and academic achievement for students with learning disabilities. *J Learn Disabil, 47*, 462-474. https://doi.org/10.1177/0022219412469688.

Zika, E. (2017). *Teachers' attitudes and perceptions about students with learning difficulties.* [Unpublished Bachelor's dissertation]. National and Kapodistrian University of Athens. pergamos.lib.uoa.gr

Zoubrinetzky, R., Bielle, F. & Valdois, S. (2014). New Insights on Developmental Dyslexia Subtypes: Heterogeneity of Mixed Reading Profiles. *PLoS ONE 9*(6), 99337.https://doi.org/10.1371/journal.pone.0099337

UNIVERSIDAD Đ CÓRDOBA

DOCTORAL PROGRAM IN SOCIAL AND LEGAL SCIENCES

Investigación de la correlación entre la comprensión y la producción del discurso (hablado y escrito) en estudiantes con dislexia y su adaptación dentro del aula (actitudes y metodología de los docentes en Macedonia, Grecia)

Investigation of the correlation between understanding and production of speech (spoken and written) in students with dyslexia and their adaptation within the classroom (attitudes and methodology of teachers in Macedonia, Greece)

DOCTORAL THESIS

Christina Pantazidou

DIRECTORAS

Prof. Vega Gea, Esther Maria

Prof. Sampedro Requena, Begoña Esther

Cordoba, Marzo de 2022