
Doctorado en Ciencias Sociales y Jurídicas

# El acceso y uso de métodos, herramientas y habilidades específicas que los educadores generales de Educación Secundaria griegos tienen para el proceso de enseñanza–aprendizaje del alumnado con necesidades educativas especiales

# The access and use of methods, tools and specific abilities that general educators of the Secondary Greek education have for the teaching–learning process of students of special educational needs

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TITULO: *The access and use of methods, tools and specific abilities that general educators of the Secondary Greek education have for the teaching-learning process of students of special educational needs*

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**TÍTULO DE LA TESIS:** El acceso y uso de métodos, herramientas y habilidades específicas que los educadores generales de Educación Secundaria griego tienen para el proceso de enseñanza–aprendizaje del alumnado con necesidades educativas especiales

**DOCTORANDA:** Eirini Boli

INFORME RAZONADO DE LAS DIRECTORAS DE LA TESIS

La presente tesis doctoral está enmarca en una investigación de carácter descriptivo y parte de la inquietud por conocer las necesidades de formación que tienen los docentes de Educación Secundaria griegos que deben atender al alumnado NEE en el aula ordinaria, con la finalidad de poder diseñar un Plan de formación que se ajuste a la realidad detectada.

El trabajo se ha estructurado en cuatro capítulos. En el primero de ellos se aborda la revisión teórica que enmarca el estudio: medidas para la inclusión en el aula ordinaria de los alumnos con NEE en las escuelas secundarias, la inclusión de los alumnos con NEE en el aula ordinaria, así como la cualificación y formación de los profesores de enseñanza secundaria para trabajar con los alumnos con NEE.

En la segunda parte se incluyen los aspectos relacionados con la metodología utilizada, mostrando entre otros, la rigurosidad en la construcción del instrumento que parten de la adaptación de herramientas aplicadas en otros estudios y su posterior validación.

La amplitud de los resultados obtenidos permite el logro de los objetivos, sobre todo el diseñar un plan de formación que dé respuesta a las necesidades de formación del profesorado.

El estudio cuenta con los indicios de calidad necesarios.

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

Córdoba, a 26 de septiembre de 2022

Firma de las directoras

Fdo.: Eloísa T. Reche Urbano. Fdo.: Begoña E. Sampedro Requena

**Resumen**

La escuela moderna, llamada a funcionar según los principios de la educación inclusiva al incluir a los alumnos con necesidades educativas especiales, configura nuevas necesidades de formación para los docentes. En este artículo, se investigan las opiniones y necesidades educativas de los profesores de Educación Secundaria de la región de Kavala con respecto a la inclusión de estudiantes con necesidades educativas especiales en la escuela general. Para implementar la investigación, se utilizó el enfoque mixto, es decir, una combinación de métodos de investigación cuantitativos y cualitativos. La muestra de la investigación cuantitativa estuvo conformada por 339 docentes quienes llenaron un cuestionario mientras que los datos recolectados fueron procesados y analizados con estadística descriptiva e inductiva. La muestra de la investigación cualitativa estuvo conformada por directores de escuelas secundarias quienes dieron una entrevista relatando sus experiencias.

Entre los resultados más importantes del estudio se encuentra la opinión positiva de la mayoría de los docentes respecto a la inclusión de los alumnos con necesidades educativas especiales en la escuela general. Además, se evidencia la necesidad de formación, y de hecho con carácter obligatorio, de todos los docentes en el campo de la Educación Especial, al tiempo que se destaca su insuficiente preparación durante sus estudios de pregrado en el campo correspondiente. En cuanto al contenido de los programas de formación, los docentes desean formarse principalmente en problemas de conducta y en el apartado temático “Gestión de alumnos con necesidades educativas especiales en la escuela general”. Además, se prefiere igualmente la formación presencial y la formación a distancia utilizando las nuevas tecnologías, eligiendo que la formación se realice dentro del horario lectivo y antes del inicio o después de la finalización del curso escolar. Además, los profesores eligen principalmente técnicas educativas experienciales. Finalmente, la principal motivación para participar en los programas de formación de Educación Especial es la conexión entre la teoría y la práctica.

Las conclusiones extraídas de los resultados de esta investigación pueden utilizarse en la planificación y organización de programas de formación para profesores de secundaria en el campo de las necesidades educativas especiales.

**Abstract**

The modern school, called to operate according to the principles of inclusive education by including students with special educational needs, forms new training needs for teachers. In this paper, the opinions and educational needs of the Secondary Education teachers of the Kavala region are investigated regarding the inclusion of students with special educational needs in the general school. To implement the research, the mixed approach was used, i.e. a combination of quantitative and qualitative research methods. The sample of the quantitative research consisted of 339 teachers who filled out a questionnaire while the data collected were processed and analyzed with descriptive and inductive statistics. The sample of the qualitative research consisted of directors of secondary schools who gave an interview giving their experiences.

Among the most important results of the study is the positive opinion of the majority of teachers regarding the inclusion of students with special educational needs in the general school. In addition, the necessity of training, and indeed with a mandatory nature, of all teachers in the field of Special Education is evident, while their insufficient preparation during their undergraduate studies in the relevant field is highlighted. Regarding the content of the training programs, the teachers wish to be trained primarily in behavioral problems and in the thematic section "Management of students with special educational needs in the general school". In addition, in-school training and distance training using new technologies are equally preferred, while the training is chosen to be conducted within school hours and before the start or after the end of the school year. Furthermore, teachers mainly choose experiential educational techniques. Finally, the primary motivation for participating in Special Education training programs is the connection between theory and practice.

The conclusions drawn from the findings of this research can be used in the planning and organization of training programs for secondary school teachers in the field of special educational needs.

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Furthermore, I would like to thank all the school directors and teachers of the Prefecture of Kavala who contributed to the conduct of my research.

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I dedicate this Phd thesis to my two cousins Afroditi Papatheodorou and Niki Spanou who despite the fact that they abandoned this earthly world too early, I carry them always alive in my heart.

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## Introduction

The school of the modern era is called upon to function within the framework of inclusive education which promotes equal access of all children to the general school. The inclusion of students with different needs and abilities in the general school is intertwined with the need to readjust the school with the aim of effectively managing diversity (Aggelidis & Stylianou. 2011; Stasinos. 2016).

The teacher is therefore called upon to take on new multi-complex roles in order to follow educational developments and be the co-shaper of school life (Pedagogical Institute, 2010; Pasias et al., 2015). In this context, he is asked to enrich his knowledge, to detect possible deviations of his students and to modify his teaching (Aggelidis & Stylianou, 2011; Kourkoutas & Caldin, 2012). The new requirements of the school reality demand the personal and professional development of the teacher through seminars, masters and training.

Training is a continuous process as new needs are constantly created due to the rapid change of knowledge (Pedagogical Institute, 2010). More generally, the effective implementation of educational programs requires scientific planning, establishment of clear teaching objectives, use of appropriate educational techniques and evaluation of the process in relation to the needs of the teachers and the application of the principles of Adult Education (Papanaoum et al., 2008).

In this context, the investigation of the opinions and educational needs of Secondary Education (SE) teachers of Kavala prefecture regarding the inclusion of students with Special Educational Needs (SE) in the general school is attempted through this research provides information that could be used in the design and implementation of training programs.

This work is structured in two parts. The theoretical part includes 3 chapters (1-3) and the research part includes three more chapters (4-6). More specifically, in the first chapter of the work Measures for inclusion in the ordinary classroom for SEN students in secondary schools are mentioned. The second chapter analyses the inclusion of SEN pupils in the ordinary classroom and the third chapter presents Qualification and Training of Secondary Education Teachers to Work with SEN Students.

In the research part of the paper, in the fourth chapter that concerns the research methodology, the importance of conducting the research is explained and its purpose and research questions are listed. The research method is analysed, the population and the sample are determined. Then, the data collection tools, namely the questionnaire

and the interview, are described. It also describes the data collection process, identifies how to ensure validity and reliability, and describes the method of presentation and analysis of survey data.

The fifth chapter includes the results of the research, as obtained through the statistical analysis of the data collected from the questionnaires and through the thematic analysis of the interviews. In the sixth chapter, an attempt is made to comment on the research findings and compare them with previous research results in relation to the research questions. This is followed by the conclusion of the research, the training plan for the attention to the SEN students of the Secondary Education Educational System, in the ordinary class, the citation of the limitations of the research as well as the suggestions for future research.

## Theoretical Framework

### 1. Measures for inclusion in the ordinary classroom for SEN students in secondary schools

#### *1.1 Inclusion measures for SEN pupils in education regulations*

The educational system of a country reflects its progress and development. The same applies to the way that treats children with special educational needs. The factors that actuate the formation, development and progress in the field of special education are the social, economical, political and legislative reforms, which determine the progress of the research and in which extend the new results will be applied (Lampropoulou & Panteliadou, 2000).

In Greece few decades ago, there weren't any notable accomplishments to demonstrate in the field of education for students with special mental or physical needs (Kardarakos, 2006). There were only occasional individual efforts in this direction. In 1905 was founded in Kallithea, Athens, the corporation "The House of Blinds" for kids between 7 and 18 years old, while the Greek educator Eirini Laskaratou, after her training in Europe as a teacher for blind students, introduced the graphic Braille system in Greek version.

In 1913 took place the educational reform, aimed for a radical transformation of Greek school, however the education of students with special needs wasn't a priority issue for the reformers. Instead, students with special educational needs were considered a problem for the "normal students". The reform included terminology such as "mental retarded students", "students with mental and ethical inadequacy" and "pathological students". The proposed solution for those students was the isolation. Many of the above students who attended the ordinary classes they soon were disappointed and quitted the school, unable to attend the lessons (Bouzakis & Berdousi, 2008).

In 1917 the education of students with antisocial behaviour was a task of the first Juvenile Reform School for girls between 8 and 16 years old and a year later in Koridallos, Athens, was founded a similar institution for boys between 7 and 12 years old. Nevertheless, the predominant character of those structures was correctional rather than educational.

1923 is the year that begins the institutionalized special education and for the first time is allowed the function of special classes for students with mental retardation (Zoniou-Sideri, 2011b). The American charity «Near East Relief», founded in Athens the first special school for 10 deaf mute students which later was transferred in Siros Island, but later in 1932 was shut down. At the same time in Athens opens the “National House of Deaf Mute», but in turn, it was forced to close in 1938, due to functional problems.

The educational Greek reform of 1929 use terms, such as, “not normal mental children”, “sick children” and even “genius children” (Bouzakis & Berdousi, 2008). In the legislation bill is included a separate chapter “Schools for not Normal Children” and “Outdoors Schools for Sick Children”. However, the isolated model is still in use this period and additionally it is proposed the foundation of a couple of schools for “problematic children”, without given any further details of their function.

The first public special school, “Model Specific School of Athens for Retarded and Anomalous Children” was founded in 1937 and its director Rosa Imvrioti applies innovative practices. She made recommendations for the formation of advisory services, special schools in big cities, boarding schools, where there would be lectured the lesson of therapeutical education to teachers attending educational colleges. He also suggested sending teachers abroad to acquire their qualifications in the special education. Her methods were based on the same methods of Montessori and Decroly (Kroustalakis, 2000).

Minister of Education K. Georgakopoulos enacted the Law for the foundation of the Prototype Specific School of Athens (Law 453/1937) and thanks to it, schools were founded in Athens and in other major Greek cities and also granted the option of functioning of special classes within ordinary schools.

This dark period for the special education and for children with educational problems lasted for a long time and unfortunately dominated by the idea that students with specific features should be not placed in the ordinary classes. However, in the end of 1950 emerges the perception that kind of children should be placed in the ordinary schools with their classmates of the same age (Tzouriadou, 1995). From the other hand the establishing of private special schools triggered the adoption of legal acts which recognized them as equivalent to the corresponding public ones.

In 1961 was founded “Parents and Guardians of Maladjusted Children Association”, five years later the Institution of maladjusted children “Holy Mary” and in 1969 the Office of Special Education.

During the entire 1970 decade the Ministry of Education becomes more proactive, regarding the special education. Many Greek scientists point out the big inequality of the educational system. A crucial solution was the social integration and the school integration of students with special needs (Xiromeriti, 1997). In 1974 was drafted the first analytical program for special schools. One year later was consolidated the educational right of all persons with special needs and was extended the training of teachers in special education from one to two years. The Office of Special Education converts into Department of Special Education and later in Directorate of Special Education.

The Law 1143/81, which had been in consultation since 1975, inaugurates a series of legislations. Aim of this Law was the provision of special education and professional training to “abnormal people”, implementation of measures of social care and their social integration considering their abilities (Lampropoulou, 2007). Article 3 of the same Law provides a medical definition for persons with special needs. Defines that special education is provided only in Special Schools and there is no reference concerning the integration of students with special educational needs in the ordinary class. Attendance isn’t obligatory (Lampropoulou & Panteliadou, 2000). During this decade are established pedagogical departments in Greek Universities, but the limited number of designated special education lessons, combined with the low attendance of students demonstrated the lack of interest from the educational status quo (Lampropoulou, 2007). However, this Law received negative criticism, since it maintained the existing educational system, excluding special education from the general and ordinary educational system. Not only did not facilitate the integration of children with special needs, but instead contributed to their marginalization. All those reactions led to the endorsement of the new Law 1566/1985, also known as “anti-309” (Zoniou-Sideri, 2011b).

Law 1566/1985, which is referred to the structure and function of the Elementary Education, incorporates special education in the general and ordinary educational system. In the same time appear and are established special classes in the ordinary schools, special kindergartens and the term “divergent person” is replaced by the term “person with special needs”. Unfortunately, there isn’t any kind of training and specialization for the educators and the policy of exclusion kept going but in refined ways. The same Law, in the articles 32-36 presents the purpose, the definition of persons with special needs as well as the form of the proposed special education system. Article 33 includes students who have particular learning difficulties such as dyslexia, speech disorders or those who are maladaptive, whilst also there is a reference to the education

and training entity of students with special needs (ordinary schools, special schools and special classes inside/outside from ordinary schools). This specific Law is also based on the medical model, since are mentioned diagnosis and differentiation of normal and abnormal pupils and the establishment of special classes and schools. From the educational process are excluded teachers, parents and the student himself and only specialists are the ones who will identify and place each student in the corresponding school or class.

In an attempt to fill the blanks of the previous Law, a new one has been voted in 1988. The Law 1771/1988 incorporated all the necessary corrective adjustments, in order to facilitate the access of students with special needs to the higher educational system and in the same year, was voted the supplementary Law 1924/1988, which institutionalized the support teaching (Zoniou-Sideri, 2004).

The next period is characterized by institutional conditions in Special Schools and gradually begins to mature in society the opinion that students with special needs don't appear to have any improvement, but on the contrary remain stationary (Lampropoulou & Panteliadou, 2011). Between 1989 and 1993 within the European Union there is a progress in the field of Special Education. Greece participate in two European programs HELLIOS I and HELLIOS II, aiming to the social integration and incorporation of children with special needs (Delassoudas, 2006).

The provisions of the Law 2817/2000 redefines the term "persons with special needs" to the term "persons with special educational needs", determines the statewide free special education for these students and the foundation of the Department of Special Education in the Pedagogical Institute. Additionally, in every administrative region of the country operates an advisory office (KDAY - Center of Diagnosis, Evaluation and Support). It is assessed that the Law 2817/2000 (is cited in Soulis, 2000) is the first law which promotes the idea of "School for Everyone". According to this Law integration of children with special needs is promoted in the general education and special school is limited only in very serious cases. Personalized programs for every single child are created and the role of special educators is reinforced. Students with special educational needs can attend lessons in classes of integration or have a parallel support. New technology is introduced, such as Braille machines and sign language glossaries. Additionally, new specializations are institutionalized, such as music therapists and interpreters of sign language in schools.

According to the Law people with special educational needs are those who have a significant learning difficult and adaptation due to physical, mental, psychological, emotional and social issues.

Are also included those who have:

(a) Mental deficiency or immaturity.

(b) Serious vision or hearing problems (blind, blurry, deaf and hard of hearing)

(c) Serious neurological or orthopedic defects or health problems.

(d) Speech problems.

(e) Special learning difficulties such as dyslexia, dyscalculia, dysanagnosia.

(f) Complex cognitive, emotional and social difficulties, autism and other developmental disorders.

Persons with special educational needs are also those who have need of special educational approach during their infantile, childhood or adolescence for a short or long school period.

Students with low school performance, for the only reason that Greek language isn't their mother language, aren't considered persons with special educational needs.

The above mentioned Law is important since it abolishes words like "disorders", "declination from normal", and foresees the participation of educators, parents and students with special educational needs in the educational procedure.

Despite the many positives aspects, the Law 2817/2000, didn't manage to fulfill its aim, the "School for Everyone". The main reason was that the Special Educational System didn't comply with the General Educational System, but it was running parallel with it. This could be attributed mostly to centralization, as the advisory offices (KDAY) were operating only in big cities and distant regions didn't have the necessary support (Zoniou-Sideri, 2011b).

During the period between 2000 and 2004 new educational structures are being created, such as co-education programs and Special Educational Technical Schools (Lampropoulou et al., 2005). Thanks to the EU's third Community Support Framework were formed programs for the public opinion awareness and for the training of educators in the teaching of pupils with special needs. In 2002 for the very first time the Pedagogical Institute drafted new analytical curricula, introducing the concept of inter-thematic[1] to the

[1] Inter – Thematic is the organization of the scholastic knowledge through subjects and not discernible lessons such as mathematic, physics etc.

“flexible zone”, which practically paved the way to the education of students with special needs in ordinary schools (Lampropoulou et al., 2005).

During the period 2004-2007 the Pedagogical Institute promotes the inter-thematic with the publication of new books. New educational software is distributed, appropriate for teaching students with special needs. Substantial improvement of the educational system and propulsion of the social integration of children with special needs was attempted between 2007-2013, thanks to the operational program “Education and lifelong learning” which was organized by the Ministry of Education (Vlachos, 2008).

Pedagogical departments of the University of Athens, Patras and Thessaloniki organize Masters in special education, which correspond to the real needs of students (Lampropoulou & Panteliadou, 2011).

In 2008 had been voted the legislative framework for Special Education, Law 3699/2008 “Special Education and Training of persons with disability or with special educational needs”, which restates the purpose and pursuits of the provided till now special education. This Law is quite improved and the term “Special Education” is now been replaced by the term “Special Education and Training”. As diagnosis is considered the educational evaluation for data collection. This can help to design and apply educational programs and interventions. Emphasis is placed to the differential diagnosis of special education needs and problems, through which are excluded any other malady with the same symptoms and to be able to reach the right diagnosis.

The same Law (3699/2008) and specifically the article 3, gives the definition of students with disabilities and special educational needs, after the abolishment of the Law of 1991, which categorized diverging children in 12 groups. Students with disabilities and special educational needs are now considered those who for a long or for a certain period present important difficulties of learning because of sensory, mentally, cognitive and development problems, of phycic and neurophycic disorders, which, according to the interdisciplinary assessment, affect the procedure of scholar adaption and learning. Also redefines the educational frameworks in which children with special educational needs can join. By this Law special education appertains to the Ministry of Education and includes KEDDY (Center of Differential-diagnosis Diagnosis and Support), replacing the previous existing KDAY. Scholastic Units of Special Education (SMEA) are founded and planned co-education programs (FEK A΄ 199/2.10.2008).

In the context of co-education, students with not severe learning difficulties can follow lessons in the ordinary school and in some cases accept parallel support from a special educator or follow lessons of integration. The interdisciplinary team of each

KEDDY develops individual curricula, tailored in order to match the requirements and particularity of each student.

Only in 2012, Greece ratifies with the Law 4074/2012, the UN Convention for rights of persons with special needs. Then follows the Law 4115/2013 (FEK A΄ 24/30.1.2013) and the provisions of article 39, according to which, Special Schools are converted into support centers of school units. The latter is named (SDEY) Scholastic Educational and Supportive Net and aims to coordinate its school members, its corresponding departments of integration and parallel educational support. Later this Law had been modified by the Law 4186/2013 (FEK A΄193/17.9.2013) and its article 28, regulates issues of special education, the frameworks of Secondary Special Professional Education and the competences of KEDDY. The latter has from now on has the exclusive responsibility of the categorization, registration, transcription and study of children with special needs in the proper school unit of special education and the responsibility for the appropriate framework of support in the ordinary school.

The Law 2217/2014 (FEK B΄2217/13.8.2014), which regulates the recruitment of Special Education teachers, perpetuates the problem of the substantial integration of students in the regular class and there is still the separation between special and ordinary education, since special education framework is recognized as a different and distinct system, which run along with the system of the regular educational system.

According to the Ministry of Education in 2016 Law 4368/2016 (FEK A 21/21.2.2016)

is envisaged that all the educators with surplus of hours can complete their didactic timetable by offering parallel educational support to students with special educational needs. Furthermore, it specifies that consultants of special education will have to hold meetings with all educators in order to provide them scientific guidance and in collaboration with the KEDDY to organize educational seminars for special educational issues. This document is an example that demonstrates that the Ministry of Education is not concerned about the required knowledge and qualifications that the teacher should possess, who is called to teach students with special educational problems.

Students with special educational needs are treated in an inappropriate manner and at the same time is being cancelled every scientific adequacy (master or PhD in special education) of educators, since the Ministry of Education considers that a few meetings with consultants of special education can replace years of specialized studies. Keeping that in mind the Ministry of Education effortlessly adopts the approach that the ordinary educators can easily replace the specialized teachers.

In 2017 a new legislation (Law 4452/2017) refers to classes where study students with special educational needs and is provisioned the decreasing number of students in these classes.

The coming Law 4549/2018 (FEK B´5614/14.6.2018) regulates the establishment of KESY (Center of Educational and Advisory Support), which replaces the existing KEDDY. Its task will not only include mainly special educational issues, but also advisory, vocational issues and psychosocial support of all the students. By this reform, different educational and pedagogical sectors are merged in one office saving resources, personnel and funds, and by no means are the actual educational needs of students served.

It could be assessed that despite the Laws voted by each government and the efforts made by each Minister of Education, in Greece continue to exist the separator model and not the co-education. Still have not been planned appropriate curricula and programs to correspond to every single student who faces educational problems. More importance is paid in the diagnosis of the students with special needs by the introduction of several medical specializations, while the role of educational intervention is downplayed. Parents of students with special educational needs and their teachers do not actively participate to the planning of the educational curricula and programs of their children and they passively accept the decisions of the competent structures. Special education in Greece focuses in therapy rather in training.

### *1.2 Schooling and space-time protocols for SEN students*

Didactic assessment is an essential part of teaching. It is defined as the systematic process of collecting information aimed at identifying, confirming and identifying problems, and arriving at decision-making regarding the education of the person being evaluated (Panteliadou, 2009).

In the context of the didactic assessment, information is collected in a systematic manner, so that the teacher can collect information and organize the way and method of teaching. We would say that this is a kind of research. The teacher observes the student's learning behaviour and formulates some assumptions regarding the student's learning abilities and weaknesses. Then he assesses the content, strategies and organization of his own teaching, and in the end, he confirms or not his own assumptions.

The didactic assessment does not coincide with the diagnostic assessment of the Center of Diagnosis, Evaluation and Support (KDAY), which is composed by a multidisciplinary committee (teachers of Primary and Secondary Education,

psychologists, social workers, speech therapists, child psychiatrists, etc.). Information including a diagnostic assessment concerns the student's atomic and medical history, his present situation, the family, the opinion of parents and teachers about the child's situation, as well as his/her performance in psychometric and learning examinations. Despite these useful elements of the diagnostic assessment, they do not help in daily teaching. The didactic evaluation relates to the whole of teaching and includes not only the student's assessment but also the evaluation of the teaching environment, which is formed by factors related to the class, the teaching itself and teaching materials/tools.

The collection of information during the didactic evaluation can be done by various means of which the most important are: observation, interview, tests, questionnaires and scales (Roth - Smith, 1991).

Observation of student's behaviour in class provides useful information. The various observation techniques can be distinguished into two categories: The systematic observation (Waterman, 1994), which deals with the recording of predetermined behaviours with their frequency, intensity and duration. The other category is the non-systematic (informal) observation, where the observer records only those behaviours he considers important. Observation may be carried out by the teacher in the classroom but also in other occasions for example during the break-time, or in an excursion, where the student is interacting and affected, and can provide valuable information regarding his school communication or social skills. Observations should be recorded carefully, since there may occur errors that prevent or invalidate the information collected. Source of errors may be the observer himself, if he does not record accurately, systematically and without prejudice. Such problems have been identified particularly if the student comes from a different cultural environment (Shin, 1998). The "observer" describes in exact terms the circumstances or undesirable behaviours, without interfering information regarding emotions or motives. He is interested in recording specific behaviours, like how many times the student gets up from his position. The use of timing ensures the validity of observation, for example how much time talks to others or moves back and forth.

Interview can provide plentiful information on many aspects of the student and especially information which educators are not able to observe alone. The more people will give their views (parents, siblings, pupils, classmates, director, fellow teachers), the more information they will be drawn. Interviews with questions are addressed to the student, parents, and teachers of other lessons. Questions should be designed in such a way as to obtain information on the problem we suspect or observe (Wallace et al., 1992). The preparation of the interviews is required to start from the school archive and

the student's history and may be carried out by a special school teacher or by another specialist like school psychologist. In all cases, the opinion of the class teacher, who knows the pupil in depth, must be taken seriously into account (Hoy & Gregg, 1994). The interviewer should summarize the interviewee's perceptions, so as so emerge similarities and differences regarding the problem and its causes, the attempts made to solve the problem and the changes in its severity.

Tests are a set of questions or exercises with predefined correct answers.

Rating – scales, may contain open or closed questions, where the respondents can answer with yes or no, choose one of the predefined answers or declare their degree of agreement in sentences, noting on a scale.

### 1.2.1 Methods and Strategies of Assessment

The way in which we organize the data collection of the teaching evaluation is largely determined by the assessment method or strategy that sets the framework of the whole process.

Analysis of the project includes analyzing an activity in steps, stages or skills that are necessary for its completion (Waterman, 1994). When a student cannot complete a task assigned to him, this method demonstrates where exactly he has difficulty or which of the prerequisite skills he possesses or misses.

Error analysis. The student's mistakes are accurately recorded by the teacher and then grouped.

Assessment based on the Curriculum. The teacher can assess the student on the basis of the curriculum. With this method, the teacher organizes a selection of tests based on the description of the objectives of the curriculum and identifies which skills have been acquired from the student and which are not. This type of assessment was developed in the late 1970s by Stanley Deno, a psychology professor. The primary purpose of this method was to help educators with students having learning difficulties to record the students' academic progress through simple steps and assess whether their teaching was effective for each student. This specific model applies to both general education and special education (Deno, 1985).

Although the curriculum-based assessment can help some students to increase their performance in specific examinations, it has received criticism because treats learning as a sterile process, using the curriculum as a measuring instrument, in order to measure who has learned a lot and who little. It overlooks important factors such as

the purpose and value of learning, for who should have meaning the learning, and whether it has been achieved and in what level (Heshusius, 1991).

Work sample file (portfolio) is the intended collection of work samples of the student showing his progress (Paulson et al., 1991). A complete portfolio should contain the student's original work, the completed student's assessment protocols, analyses by the teacher with reference to the objectives of the curriculum that the student has achieved and its weaknesses

Interactive Assessment helps to understand the processes of student's thinking. It provides elements - information regarding the strategies and learning techniques that are considered essential elements in didactic planning. This method can be facilitated by the undertaking of activities, which involves separating a particular activity into individual steps and facilitating the teacher to assist the student to complete a process.

Dynamic Assessment is a process used in England (Lidz, 1987). It consists of three stages: evaluation, intervention and re-evaluation, and allows dialogue and interaction between examiner and examinee. It enables the teacher to understand how the student thinks, and what tools are effective for him.

The purpose of this type of assessment is the investigation of the nature of learning by gathering information, with the aim to make cognitive changes and to promote learning (Sewell, 1987). Dynamic assessment is taking place through a colloquial interaction between the examiner and the examinee, and may include prompts, additional elements when solving a problem or project, and experimentation. Interaction allows the examiner to draw conclusions about the student's thought processes, reactions to a student's situation. For example, if by means of prompts and feedbacks, he produces a right response and which of teaching tools promote and maintain positive changes in the learning process (Hoy & Gregg, 1997). For the dynamic assessment several concerns have been raised about its usefulness. For example, how appropriate is the timing of such an assessment, because it is integrated in teaching, which tools considered to be most suitable to assess the performance or competence in different areas (Jitendra & Kameenui, 1993).

It is a type of assessment that focuses on the examiner - examinee interaction, providing the examiner with the ability to draw conclusions regarding the student's thinking process (Hoy & Gregg, 1994). The purpose of this type of assessment is to examine the nature of learning through the collection of information, in order cognitive changes to be applied and to achieve learning (Sewell, 1987).

As it was mentioned above, the dynamic evaluation model consists of three stages: evaluation, intervention, re-evaluation. Initially, the teacher assesses the student's academic abilities, during this process an intervention program is implemented which aims to the student's needs and afterwards his skills are re-assessed to determine the extent and nature of the modification that has been achieved (response to intervention). A second feature of this model is the ability to “modify” the performance of the student (modifiability).

The teacher receives useful information, both for the level of the student and for the necessary changes in the intervention program. This model also provides useful information regarding the planning and implementation of intervention programs (Lidz, 1987).

According to Elliot (2003), what characterizes this model is the interactive relationship between the examiner and the examinee. Interaction may include suggestion of activities from the side of the teacher, assistance during an activity and interpretation of the student's thoughts and perceptions about the activity. It may include at the same time encouragement and reward. The interaction between the examiner and the examinee allows the examiner to know which teaching tools promote and maintain positive changes in the learning process. It also provides evidence for strategic, post-cognitive processes as well as information about the student's learning style, particularly useful in the educational planning (Hoy & Gregg, 1994). Some forms of dynamic evaluation use weighted reporting sequences during teaching, while others may be more flexible with different assessment modes, depending on the student's needs (Tzouriadou, 1995).

Alternative Assessment. The student with educational needs has the ability to be evaluated individually, in sessions with increased time or no time limit in a specially designed place. Under no circumstances can this place be the corridor or other auxiliary classroom of the school. The classroom of special education is appropriate for this use. The alternative assessment refers to student assessment and to the necessity for the activities, designed to assess them to be more practical, more realistic and more attractive, than traditional written examinations. This position reflects the philosophy that when the evaluation is "authentic" in the above sense, impels and the teaching as well to become authentic and therefore more effective (Dimitropoulos, 2002).

There is the Comparative Assessment with reference to some general performance (usually average student performance) in a single criterion. Here the teacher has the ability to identify the level of the student with special educational needs,

in relation to the other classmates, but he does not know exactly what to teach or which elements of teaching should adapt.

There is also the Customized Assessment, which helps the educator to observe the student's progress and his personal progress (Panteliadou, 2009).

Differential Assessment is another type of assessment, which should begin from recording the student's individual and social background, in order to assess also psychosocial/medical factors. At the same time should be determined the child's mental potential, so as to exclude mental retardation. In the individual and social historical background, information is requested from both parents and from the school and from other important individuals of the child's environment. The gathering of this information is carried out by specially trained professionals (psychologists, social workers) or when the assessment is conducted at school, by special educators.

Pedagogical Assessment. This starts with the student's referral for diagnosing of his problems, which is usually conducted by an educator. Before the referral, the teacher should follow a careful assessment of both the child and the context, since he is the expert who knows the student the longest time and can identify problems and behaviours that may not be noted from the other specialists.

A successful assessment is not the one that gives the most information, but the one that helps the teacher to come to a conclusion regarding the content and the teaching technique.

With regards to the classification of the assessment based on the psychometric weighting (i.e. whether the evaluation is constructed according to the established psychometric principles) or not of the information used, the assessment can be distinguished in (Dimitropoulos, 2002):

(a) Typical or formal assessment.

(b) Non-typical or informal assessment.

In the Greek educational system, typical forms of assessment are of greater importance.

By the term typical assessment, we mean the forms of assessment, taking place in a given place, a given time and concern the assessment of a particular curriculum. Typical assessment has been designed earlier and the teacher has decided on the details of its implementation. All tests, competitions, questionnaires, grade papers or workshops, work files are considered as typical forms of assessment. Typical assessment cannot be done alongside teaching, but a pause is needed to make it

happen. Typical assessment is used when more precise measures are required. Typical assessment also holds a prominent position today as a means of controlling student performance.

In the typical assessment also belong objective tests Kassotakis (1989), which are subdivided into:

(a) Weighted assessment tests.

(b) Non-weighted assessment tests.

The weighted tests provide a grading or a scale that is compared to the average of the grades been gathered by this weighted test. Thanks to the weighted tests, there is an indication of the progress of the child compared to the other classmates. The information from the weighted assessment tests is used for diagnostic and interventional issues (Reid, 2003). They are drawn up with the collaboration of specialists and particularly by pedagogues specialized in student assessment issues (Kassotakis, 1989).

By weighted tests is not measured the performance of a group of students in a particular moment, but the performance of the classroom in relation to a general rule, which is also weighting criterion of the test. With the weighted tests, there is the potential for the teacher to find out whether his pupils respond to commonly accepted objectives of the teaching (Karakatsanis, 1994).

Weighted tests, as typical assessment means, contain performance - matrix tables. In these tests each student's performance is compared to the performances of students of a representative group of the same age. The use of these tests is often used for the evaluation of all students and therefore of students with learning difficulties, as they provide information for their comparison with students of the same age group. When applying the weighted test, evaluators should keep in mind that the children being assessed, are compared to a group of children, who are a representative sample of the population in terms of age, ethnicity and perhaps socio-economic status (Porpodas, 1997).

Non-weighted tests can be drawn up by any educator who possesses the necessary training and are commonly used to assess students of a particular class and for this reason are also named "teacher's tests" or "class tests". With these tests is usually intended to ascertain whether a particular teaching objective has been achieved, which is the main axis of the test and the basis for the entire construction of the test (Kassotakis, 1989).

Non-weighted tests can also be used as ranking tests for students of a class, in a classification order depending on their performance. The result obtained by this way is of limited value and is only valid with reference to the sample in which the test was given. A student, who is ranked among the very good students when compared to the limited sample of his class, can be a moderate student, when compared to a wider sample of students (Kassotakis, 1989).

An important method of examining individuals with learning difficulties is the non-typical or informal assessment means (Porpodas, 2003). They constitute a particular form of school assessment and, although they are considered to be of minor importance, they play a major role in the assessment process.

By the term non-typical assessment, we mean the observation of the expressions, the discourse and the ease in the understanding of oral discussions. Unlike the typical assessment, it is not programmed, is performed in parallel with teaching and it is spontaneous. It is also performed by the teacher when he listens to students' opinions and questions with care, and when the teacher constantly explains a problem that students have not been able to solve, or when he realizes by their expressions when something has been perceived or not (Oosterhof, 2010).

The non-typical assessment uses tests based on scientific principles, but they have more flexibility and capability of adjustment to local conditions, as it is for instance the assessment through the analytical program run by the classroom teacher (Agaliotis, 2012).

The non - typical (informal) measurement and assessment procedures include the non - typical observation and oral questions during the course of teaching, unlike the typical assessment, which requires a pause for its realization. Actually, the most part of school assessments are non - typical and take place on a daily basis. It is a continuous assessment and is applied alongside with other forms of assessment, helping students to monitor their progress and form a personal view of their potential and weaknesses (West & Tsagari, 2004).

According to researchers, non - typical assessment procedures refer to the systematic effort to collect information about students' academic, cognitive, social, kinetic capabilities and weaknesses, in order to assist for their best possible teaching (McLoughlin & Lewis, 1994).

Unlike the typical procedures, they are not based on strict quantitative measurements, but on qualitative criteria, which have as objective to describe performance rather to get compared with norms. They are used in the classroom and

are often improvised by educator or professors. They are drawn up by the class teacher to grade his students, design the lesson, or even occasionally for the evaluation of his teaching.

The non - typical tests can be adapted to the purposes and needs of day-to-day teaching, and this is considered very important because goals and needs vary from class to class and from school to school (Karakatsanis, 1994).

Among the various techniques of the non-typical assessment are the non-typical systematic observation and indirect observation through questionnaires, checklists, interviews, rating scales, structured dynamic dialogue among the participants in the learning process, work plans, systematic observation, control of work tasks, student self-evaluation, peer review and a combination of different techniques (for example, oral tests and written tests) (Jivinikou, 2015).

The non - typical assessment is spontaneous (non-systematic) and makes use of evaluative procedures, such as observation and oral questions (Petropoulou et al.,2015).

The use of non - typical forms of assessment aims at enhancing and participation students in the learning process. Researchers have proven that the continuous positive feedback and evaluation, influences learning and increases the level of positive participation in the learning process (Butler & McMunn, 2014).

The non - typical assessment tests provide that kind of information, necessary for educational decisions, especially for the didactic modifications, adaptations and interventions (Mariotti & Homan, 2012).

In the non - typical assessment the activities planned are more practical, more realistic and more attractive, than traditional written tests. The non - typical assessment presents a clear picture of both the communication skills and the learning "identity" of each student (Jivinikou, 2015).

Finally, the use of non - typical assessment forms is becoming more common. In particular, in Greece weighted tests are not systematically used, due to economic and political reasons, despite the enormous need for their use in the official diagnostic services of the Ministry of Education (KEDDY - Center for Differential Diagnosis and Support). The result of this deficit is that the assessment of the student's level of learning is conducted through the use of informal tests (Jivinikou, 2015).

### 1.2.2 Customized educational program (Cep)

According to Greek Law, the pupil's Customized Educational Program (CEP) is prepared by the interdisciplinary team of the Center for Diagnosis, Evaluation and Support (KDAY) of the prefecture where the student resides (Ministerial ruling published in FEK 1671/B/28.7.2011.

CEP is developed on the basis of weighted and informal tests and presents the child's current performance, determines goals and measurable targets for next year, defines the specific educational services and supplementary support that the student needs, describes the plan to modify his behaviour and concludes with a decision on the school placement/integration of the child.

Indicatively, the content of the CEP consists of data relating to:

- Child's capabilities.
- Results from recent assessments.
- Parents' views and expectations.
- Connection between annual and short-term objectives.
- School placement.
- Tasks for each institution and individual.

Often the assessment begins with the identification of some problems, which need to be discussed with the counsellor or other specialists, in order to make changes to the way of teaching or to classroom program.

The first step of the assessment process is the examination of the student's work, either written or verbal. For example, how long did the student take to accomplish a work, if he completed it, what kind of answers he has given. Such information can be collected over a period of time and in no case should the student be referred after the identification of the first difficulties.

The class teacher decides what to evaluate in relation to the student. For instance, a teacher may choose to examine a student's sample of work from the classroom record, while for another student may select to compare him to other students through examinations, in order to identify differences with students with and without problems.

The direct assessment of student with specified performance criteria, although questioned, can provide important elements in the assessment process. In many countries, weighted performance criteria and informal criteria are practiced. In the weighted criteria, the creator regulates the acceptable performance level of a student,

for example. 80% of the right answers as the basis. These criteria are called "Criterion Referenced Tests". Other weighted criteria are known as "Norm Referenced Tests," in which a student's performance in a class is compared to a specific group of students.

In Greece, no such criteria exist and the performance tests are based on the subject matter and on the curriculum of the lesson of class and are graded according to the existing scholastic scale (for secondary education it is 20).

This type of assessment is considered as direct, since the evaluation arises from the curriculum and the comparison is performed in relation to the other students of the classroom. In spite of the criticism, this assessment allows the educator to link the teaching to the student's abilities and assists him to make modifications, if this is judged necessary. This type of assessment unfortunately overlooks the methods and is used to give the student a specific learning task.

The interdisciplinary - diagnostic process can be completed with the outcome - based assessment, which is linked not only to the present, but also to the student's future. It is discovered whether the training provided has a meaning for the student, as well as what he needs to learn to become more efficient in his life.

All information collected for the student, as well as re-evaluations, is placed in the file and the portfolio. It enables all interested parties to be informed about the situation of the child in different development periods. Especially the "cross - discipline portfolios" (diachronic - interdisciplinary assessment records) may help modify or adapt programs, not only from year to year but also within the same school year. These records for students with learning difficulties highlight even the small steps that they have succeeded (Keefe, 1995).

All methods of the assessment process are what is called "good practice". However, without the assessment and collaboration of the experts, no educational program would be effective. Students' assessment should be done on a regular basis (regular intervals) in order to ascertain the progress of the child and the effectiveness of the interventions, and mostly to perform adjustments to pedagogical interventions and corrective actions.

### 1.2.3 Assessment in Greek Educational System.

The Laws which regulate special education in Greece are the 1143/1981 and 1566/1985 and it could be said that they were voted relatively late. In recent years new Laws have been voted, the 2817/2000 and 3499/2008 and so the legal framework has

been modernized and harmonized with European policy, for the combat of the exclusion of children with special needs and the education of students with special needs in the ordinary schools.

The assessment in Greece according to the Law presents the following procedure: The class teacher locates and evaluates the student's learning problems and his relationship with the classroom. In the process is furthermore involved the principal or supervisor of the school unit, as well as the school teachers' association. They are consulted and a common approach is shaped.

After that the ordinary school Education Counselor and the class teacher plan a Short-Term Intervention Program (STIP) in the general class, modifying and diversifying the way of teaching, setting short-term goals and defining the means to be used, in order to become more effective. During the implementation, the teacher notices the student's response, re-evaluates and modifies the program.

Finally, after the implementation of the STIP, teacher presents the results, as well as his suggestions regarding additional actions that could be adopted. If, however, the goal is not achieved, the ordinary School Counselor after co-operation with the Special Education School Counselor and KEDDY (Center for Differential Diagnosis and Support), suggests to refer the child to KEDDY for evaluation.

Assessment is important because it gathers information about the student, as well as the educational opportunities offered to him. It recognizes his strong points, but also points where he lacks and has weaknesses. These lead to diagnosis and then to intervention. In addition, with the assessment the teacher presents his conclusions and suggestions.

The assessment leads to the diagnosis of possible educational needs, is a basis for the design of appropriate intervention and substantiates the student's rights as defined by the law.

As described above, the assessment identifies the main source of learning problems and integrates them into a specific diagnostic category. This specifying is made by excluding other possible causes that could lead to the same learning difficulties (differential diagnosis). Based on the diagnosis, the student's learning profile is created that refers to his learning abilities and weaknesses.

The assessment when is correct and effective, makes up the basis for an integrated intervention training program to cope with any possible learning difficulties, which are identified - observed.

Students with dyslexia, presenting a particular difficulty in reading, need a specialized approach to teach them reading. This specialized teaching is advised to begin on the basis of the already acquired level of reading, which may differ from that of the classroom.

Assessment helps teachers and parents together to identify the weaknesses of the student and shows where to start the intervention in order to overcome any learning difficulties.

Additionally, the assessment is important because the student after being identified of having learning difficulties can have all the means provided by law, such as the exemption from written examinations. It also provided to him the right for financial support from the State, in order to be able to have some treatment sessions (e.g. special education, occupational therapy, etc.).

The teacher recognizes students with special educational needs in the classroom and prepares a list of their names. It proposes their support from the special education integrated classroom and submits a list to the principal of the school unit. Then the school Principal co-operates with school teachers, so that the referrals comply with Law 3699/2008. Particular attention and care must be taken to avoid misunderstandings, as to the type and category of special educational needs that pupils need to have, in order to receive educational support from the special education integrated classroom.

The principal draws up the list of the proposed students and cooperates with the teacher of the special education integrated classroom, in order to form the final list of the proposed pupils.

Thereafter, the teacher of the special education integrated classroom assesses the proposals conveyed to him by the school Principal. After that evaluates all the students of the special education integrated classroom and proposes the final list of pupils to be supported by the special education integrated classroom, taking into account the gravity of the educational needs, the need for a specialized training program, the age and the classroom in which students are attending.

The teacher of the special education integrated classroom then informs, in cooperation with the school Principal, the student's parents about the "Special Educational Needs Report" required by Law 3699/2008, which the child must have. It also informs parents about the alternatives to get this report from KEDDY or medical-pedagogical services.

Finally, the teacher of the special education integrated classroom welcomes the child and creates a special personal file that is secret and is kept secured.

The dealing of pupils with special educational needs constitutes a direct priority of educational systems. Given the fact that they are students who can be trained and fully integrated into the educational system and their pedagogical approach musters the interest of the researchers.

Students with special educational needs demand specially designed customized programs in order to meet their particular needs, depending on the type and gravity of the problem. It is beneficial for these students to get co-educated with their peers, if the conditions allow it (school grade, curriculum requirements) for as long as possible. In order to achieve this, these pupils should be supported either individually or in small groups, while there is a need for programming. Such a schedule - program cannot be done randomly and should be based on pupil, program, and context assessment.

### *1.3 The Community SEN students*

A birth of a child is a miracle. Every human being comes to the world with unlimited abilities and has the power to create, to participate and to discover new alternative solutions, to offer hope to the humanity. A birth of a child is for the most families a moment of joy, pride and a gathering occasion of beloved persons who celebrate the renewal of happiness. However, for some families the birth of their child isn't a happy event. On the contrary is a moment of desperation, confusion and fear and the beginning of a completely new and different life (Buscaglia, 1974).

Every parent after the birth of a child has plans, dreams and expectations and designs his future route in life. But when a child with special needs come to the family all these dreams and plans are cancelled and parents are forced to review their plans and expectations and adapt to the new situation. This issue is one of the most composite that a parent is called to deal and many times provokes confused and conflicting emotions.

Scientists and psychologist study such cases in order to understand and describe parental reactions, feelings and the various stages and phases of their sentimental status. Parents might come up against serious problems of dysfunction of their family life or even develop mental and physical issues after the diagnosis of their child.

A model of parental reaction is described by Cunningham and Davis. The first phase is the shock phase, which can last a few minutes or many days. The second phase is the phase of reaction. Thanks to the expression of sentiments parents have the opportunity to reorganize through the dialogue. The next phase is the adjustment phase, where parents move to a realistic evaluation and try to learn how they can help their child. In the end comes the phase of orientation, which is characterized by actions of

parents who search for information and assistance and plan their future. Parents often experience a wavering between phases or even experience more than one phases at the same time. There are parents who remain in the same phase without going to the next. This doesn't mean that it is a "non healthy reaction. (Cunningham & Davis,1985)

Naomi Dale, a clinical psychologist, mentions that there are many psychological models for the description and the explanation of the parents' reactions, when their child is diagnosed with difficulties. Nevertheless, there is no model that can describe completely the variety and the intensity of their feelings and reactions. In her book "Working with families of children with special needs" she refers to the "Stages model", when parents come up against their child diagnosis. She describes a sequence of sentimental reactions which present many resemblances with the mourning stages. The first stage is called the shock stage, for the reason that parents were expecting a healthy baby and they are shocked by the unexpected reality. Then follows the stage of denial, where parents try to escape from the reality and they are skeptical about the relevant diagnosis. Next is the stage of sadness, anger and agony, followed by the adjustment stage, when the strong feelings retreat and parents are able to take care of their child. The last stage is the one of reorganization when parents adopt a positive attitude and a long-term acceptance (Dale, 1995).

Kandel and Merrick in "The child with disability" advocate that there are four characteristics of the disability acceptance: (a) appropriate parental perception for the skills that the child has and estimation of his infirmity (b) a realistic perspective for the child with special needs and estimation of the complications which are created in the family (c) parents who are looking for possible services in a logical way and don't search for a magical solution (d) parents who accept the special need status of their child and are in position to love their own child without feelings of rejection or extreme protection (Kandel & Merrick, 2007).

The results of another research conducted by Anan and Yamaquchi concerning the acceptance process of a child with special needs, lays importance in two basic concepts: the stage of sadness and the stage of lasting sadness, expressed by parents after their child is diagnosed as a person with special needs. These sadness stages are characterized by a long-term procedure, during which parents try to accept the new situation of their child, a stage which conducts to the acceptance. This lasting sadness appears again in critical moments as the child grows up (Anan & Yamaquchi, 2007).

Another model that refers to the stages of reaction of parents is the one described by Kubler - Ross. It includes denial, anger, negotiation, depression and acceptance

(Kubler - Ross, 1969). Other studies such as that of Drotar, argues that parents of children with special needs are going through different sentimental reactions that finally conclude to the acceptance of their children situation (Drotar et al., 1975).

At first parents experience a shock which is manifested with cry, feeling of incapability, despair and disappointment. Then it follows a period of denial, where parents thinking of their child future, the displeasure and all the responsibilities they have to take over, they don't accept that their child has a difficulty or a special need. They suffer from depressive symptoms, as they believe that they are helpless to cope with their obligations. They feel guilty because they blame themselves for their child's difficulty or they have been punished by God for doing something wrong.

Their biggest obstacle is the anger which is appears in two ways: anger toward something general (why has this happened to us?) or towards a specific person who has nothing to do with the situation, or even towards their own child. All these anger feelings are accompanied by shame. Parents are ashamed and avoid any kind of social contact. Only later parents start to recognize the real status of their child, to adapt in it and to focus on the care and attention of the child. Gradually all the negative feelings retreat and eventually they are led to accept their child's condition (Drotar et al.,1975).

Zoniou-Sideri (2011a), a Greek scientist, distinguish two phases of a parental reactions during the upbringing of a child with special needs: (a) the partitioned - divisive phase of reaction (a shock status). This phase is accompanied by a subconscious desire of parents for the death of their own child or for their own death. In general, they consider that their child is an offence of their narcissism and they often try to have another child in order to lessen their guilts and improve their agitated self confidence (b) The different phase of adaptation - restoration phase, which is characterized by large sentiments diversity.

According to researches, each one parent of children with special needs, perceive with different manner the situation of their children (Seligman & Darling, 2009). This is due to the parents' different personality, experiences, their reaction to difficult situations as well as their varying economical and social status, the different type and the level of their children disability and accordingly the problems and the needs that they have to confront (Tsimpidaki, 2007). Parents' reactions depend on many factors, such as its sentimental maturity, the kind of the child's need, his gender and also his birth order, the existing supportive structure and family's cultural trend (Kontopoulou, 1998). It's obvious that a child with special needs has an impact on the psychology of his parents. Taking care of such a child is a financial burden for the family, which has also

to cope with a possible problematic behaviour. In many occasions parents present psychosomatic problems and in general poor psychological health in comparison with parents whose children don't have any kind of special needs (Greenberg et al., 2011).

Sometimes parents develop defensive reactions even against doctors and scientists who confirm and certify the problem of their child (Kandel & Merrick, 2007). They believe that they are alone and they don't know where to turn for help. There is also apparent the feeling of denial, anger, fear, guilt that they might be responsible for their children disability of and the weakness to change the situation. Many parents don't accept the fact of the disability and perhaps may reach to depression (McGill Smith, 2003).

One parent may adopt an optimistic attitude and the other a pessimistic one. In general fathers tend to outline in a more negative way his child and have low expectations than mothers, who have positive attitude for them. A father focuses his attention on the future consequences of the disability in child's life, while mother focuses on the current situation and on the current requirements of her child with special needs. Regarding mothers whose children have special needs, they don't have only different ways of reaction, but also different ways of pedagogical attitude. They tend to protect their child from real or non real dangers or give priority at their child's desires. As a result, their lives are exclusively adapted to him and they neglect the other members of the family (Zoniou-Sideri,2011a).

Hastings after research completed in 2009, the "Journal of Intellectual & Developmental Disability", reports that the stress feelings of parents are connected to the status of the child. There is a correlation between three factors: the problematic behaviour of a special needs child, the stress of his parents and their corresponding behaviour (Hastings, 2009).

The upbringing of a child with special needs, special educational needs and disabilities demand a systematical avocation from his parents. The family ambience of a child with special needs influences his efficiency at school more than other variable which is connected with the organized educational system, such as the analytical curricula and its quality (Symeou, 2003).

In 2001 Smith in his study revealed that factors, such as the income of the family, the available time for interaction with a special needs child and the social support, affect the stress level of parents. The stress level is lower, when the above factors are positive or are less problematic (Smith et al., 2001).

However, there are references about positive reactions and effects of families with children who have special education's needs. Families speak about sentimental reward while they take care of their child to manage with the special educational problems. But in the same time, they undergo fatigue and anxiety (Lustig, 2002). There are cases where families adapt quite well when a child with special need comes in their life. A child with special needs may be a source of pain and toil, but in the same time it is a source of sentimental, spiritual and social development. This comes as a result of the new experiences realities that the family confronts and the discovery of personal aspects that otherwise wouldn't had been found (Selingman & Darling,2009).

Until the end of 1970 scientists of mental health were influenced by the general theoretical framework of the era. That had been based in the psychoanalysis and behaviourism and focused only in the person and in his special educational needs, without taking into consideration the family (Tsimpidaki, 2007). After the end of this decade began the first studies, which investigated the impact of a child with special needs in the family environment. These studies were conducted from the perspective of the pathological model, which considered that disability is a disease and has negative effect in the entire family (Giulio et al., 2014). Studies of that period ascertained the existence of high anxiety levels and the psychological disorders for the members of families whose children have educational needs and disabilities.

During the 1980 two significant changes appeared: The Ecological Systems Theory Approach of Brofenbrenner and the development of early interventions programs. These two, in order to be successful, demanded the involvement of parents. As a result, the researchers' interest was directed towards the lack of services and towards the needs of the families with such children, which were the main source of stress and were not covered yet. In these researches emphasis was placed on practical and material nature problems, which parents are challenged to deal with and were proposed ways of better organization to public and private services. From those researches has started to emerge that families with special needs children are heterogeneous and each should be treated as unique and special (Byrne & Cunningham, 1985).

They have been proposed many theories trying to explain the way of parental reactions. All of them converge to the conclusion, that the diagnosis of a child with special needs and special educational needs cause a family crisis, which includes a series of stages.

Another approach regarding the feelings of parents with special needs children is described by Rolland (1999). According to his theoretical model, there are three elements to take into consideration: (a) the characteristic of the child's difficulty (b) the circle of life of the child, of the family and their difficulties (c) the family value system and its ethnic - cultural features. These three elements interact with each other and define family's reaction. In Rolland's model are combined individual, familial and environmental characteristics with the characteristics of the appearance, the course and the severity of child's status. Importance also was been given to the dimension of time. Rolland claims that just as the child with special educational needs and his family pass through several phases in their lifetime, the same occur to the needs and therefore the needs have their own circle. Consequently, special needs shouldn't be confronted as something stable, but instead it should be taken into consideration their dynamic character and the several phases, which determine adjustments and requisites that should be applied each time by the family (Rolland, 1999).

Families day by day have to deal with practical problems, such as taking care of their children, the time to dedicate for them, the attempt to find the proper services, the planning of their education and the required cost for the above (Dunlap & Hollinsworth, 1997). They are forced to modify their daily routine and their needs and in the same time to face their feelings, the society and the reactions of their social circle, like their relatives, neighbors or even the possible reactions of their children's educator (Lustig, 2002). Time management, economical issues and the everyday care of their child appear to be the biggest problems of families (Reichman et al., 2008). All these issues trigger to the parents intense stress, anxiety, possible psychical and mental diseases and sadness, which increase in periods of developmental transition, for example when child's school life, adolescence or adulthood begins (Cameron et al., 1992).

Moreover, the existence of a child with special educational needs it is likely to cause the negligence of the needs of the other members of the family and may affect the relationship between parents. It is also possible that it might be affected the allocation of time and funds, between the child with special educational needs and his other siblings. Even more it is possible that might be affected the parental practices and expectations from the siblings with no special educational needs as well (Reichman et al., 2008). The birth of a child with special educational needs it is likely to trigger the divorce of his parents. A mother of a child with special education needs is hard to work while it may lead to the reduction of father's working hours and to a possible denial to have another child (Powers, 2003). The birth of a child with special educational needs it is likely to

trigger the divorce of his parents. It is possible also to lead both parents to a denial of having another child (Reichman et al., 2008).

Every person is different and as such has his own way to react and face the difficulties; nevertheless, researches reveal that sentiments and the very first reactions of families with special needs children don't differ so much between them. Each case is unique and therefore a general reference to family reactions and emotions can be considered as misleading. It is likely that all these analyses express our need to categorize, to marginalize or to understand families with special need children (Kontopoulou, 1998).

To sum up, reactions of families with special children vary and are related to their particular characteristics of their personality, the specific child's problem and the wider social context where they live. When in the social and cultural environment there is lack of information and tendency of rejection of the diversity, all these reactions and feelings become more acute. Then, it is usual for the family to present the tendency to conceal the problem and to withdraw from the society. On the other hand, when there are the necessary support and information, parents can more easily accept the problem and the particularity of their children. This fact places the issue in its real dimension as a social and not as exclusively personal one (Kontopoulou, 1998).

The adapting phase lasts a lifetime and it is a continuous research of a balance between inner contradictory sentiments and outer demands. Most parents find a solution when the child with special needs is integrated in an appropriate program. Regarding themselves they feel encouraged and more accepted mainly when get in contact with other parents who are encountering similar problems. In this phase there are parents who make the choice to have an altruistic reaction and they are dedicated to offer support to other parents through associations and organizations. Other parents are more demanding and assertive and try to contribute in a change through legal proceedings and organizations, in order to press the state to establish appropriate structures for children with special needs. However, there are parents who get isolated, because of practical problems, such as unemployment or due to psychological and physical health issues. This kind of reaction is common in parents from lower social and economical levels who lack the necessary knowledge and potentials (Tafa, 1997).

Regardless the time that parents will be informed about the diagnosis of their child, this fact will trigger a sentimental crisis. At the same time they will be confronted with the "death" of the ideal child and thus their reactions will be very intense, similar to those of a lost of a beloved person (Reeve & Cobb, 2000).

Inevitably they experience emotions such as shock, denial, guilt, anger, cancellation and insecurity, until the time of balance again. It's difficult for the family to acquire again homeostasis[2] because the special issues of their child remain, demand solutions, reminding the "loss" of the ideal child (Reeve & Cobb, 2000).

[2] The ability or tendency of a living organism, cell, or group to keep the conditions inside it the same despite any changes in the conditions around it, or this state of internal balance.

## 2. The inclusion of SEN pupils in the ordinary classroom

### *2.1 Inclusive Education in Secondary Education*

According to Zoniou-Sideri (2011a) inclusion of students with special educational needs in the Secondary Educational System has a variety of forms.

(a) Placement of SEN student in ordinary class. Student participates in the regular school class and in most of the activities. Depending on the case, it may be possible that the student receive assistance by the provision and application of countermeasures in order to mitigate his educational issues. This is an ideal form of integration.

(b) Placement of SEN student in inclusion class. Inclusion class is part of ordinary school and intends to cater students who can join the ordinary class, but it is required special educational assistance for the entire curriculum or in some courses. Teacher of this class is a special educator and has a clear picture of his student's capabilities and needs, but also knows how to apply the appropriate methods and learning strategies.

Depending on educational needs of pupils, the inclusion class is divided into two types:

(a) Full study inclusion class.

Full study inclusion class is intended for students whose integration in the ordinary class is blocked by their special needs. Students in these classes are mentally retarded with IQ 50-55 to 65-70, scholastic immature students or students with sentimental and mental issues.

(b) Partial study inclusion class.

Partial study inclusion class is for those pupils who don't face serious special needs and they are able to attend some courses in the ordinary classroom and the rest of the courses in the inclusion classroom. Usually they have mild mental retardation, speech issues and other cognitive disabilities (Polixronopoulou, 2003).

However, the identification and the initial assessment of SEN students who can attend inclusion classes is a very demanding and complicate procedure consisting of four steps.

1st step: Class teacher having the appropriate knowledge, identify students with SEN. Afterwards he compiles and presents a list of those students to the school director, suggesting their support and participation in the inclusion class.

2nd step: School director collaborates with school educators so that pupil's references, in order to attend inclusion class, are according to the law 3699/2008. He collaborates with the special educator of inclusion class and during this process is taken in consideration: the severity of the educational needs, the necessity of personalized educational program, student's age and the number of applicant students.

3rd step: The educator of the inclusion class evaluates the proposed references made by the school director and then he assesses those students, in order to identify firstly their learning profile and secondly their learning difficulties. Afterwards he submits to the school counselor of special education his own final list with SEN students, who should attend lessons in the inclusion class, a documented proposal, a timetable and all the required students' data.

In inclusion class may be registered many students, but it can run with fewer. Special educator creates groups and covers the school timetable based not in their cognitive inadequacy, but in their disorders and the behavioural problems that accompany them. In the case of students without severe SEN issues, there is cooperation between class teacher and special educator. The latter monitors the process of each student in the ordinary class and in many cases, he provides instructions and supportive material to ordinary class teacher, in order to help students to overcome their discrepancies so that they don't have to attend the inclusion class. Subsequently inclusion school teacher, in collaboration with school director, informs student's parents regarding the required by the law "Special educational needs report", that every SEN student is obliged to have.

4th step: The inclusion class teacher drafts a student's specific and confidential personal file which is kept secured and contains student's familial, social background and status, his special educational need type, his learning achievement and a descriptive assessment of the reference causes in the inclusion classroom.

Sometimes the above mention procedure could changed and be adjusted.

Other form of integration is the parallel support. Special educator helps special need student in the ordinary class. In Greece according to the law 3699/2008, students with special needs and SEN are able to attend lessons in the ordinary class, thanks to the parallel support offered by a special educator when their type and gravity of their needs permit it. Parallel support is offered to pupils who with the appropriate educational support could attend and follow the school curriculum. Parallel support and teaching for students with serious SEN is provided only in cases when it doesn't exist special school or inclusion class or when parallel support is necessary according to the report from

KESY, the responsible body which determinate the hole procedure (timetable of parallel support). Parents of SEN student having the KESY report could apply for parallel support to the school director and get approval from the Greek Ministry of Education.

### 2.1.1 Collaboration protocol of ordinary and special education

There is also the collaboration protocol of ordinary and special education. The purpose of this protocol is to help educators of SEN students, always in accordance with the procedures provided by law, and to fill student's personal file, useful also for the next school years.

The key steps at the beginning of each school year are the awareness of student's personal file, his initial assessment and of course the goals that need to be achieved.

According to the Law 4368/2016 the purpose of inclusion classes is to integrate students with disabilities and SEN through special educational interventions. Special educator supports SEN students in the ordinary class in collaboration with the teacher of the same class, aiming to the differentiation of activities and practices as well as to the appropriate adaptation of educational material and environment. Therefore, in the context of inclusion and integration, it is possible the cooperation between teachers of special education and ordinary teachers under the principles of mainstreaming education.

Protocol of cooperation consists of:

(a) Description of the intervention and cooperation in school with or without inclusion class.

(b) Initial informal assessment of students by completion of a Descriptive Pedagogical Report (DPR)

(c) Copy of student's personal file in inclusion class from kindergarten/ elementary school.

### 2.1.2 Description of cooperation and intervention

Student's behaviour in the ordinary class that concerns teacher is initially dealt by him with the assistance of student's family and then follows the involvement of inclusion class teacher. In case there isn't an improvement, both teachers have to fill the DPR with parent's consent and if necessary, forward it to school counsellor of special

education. In case that in school there isn't special education teacher then the above mentioned report is filled by the teacher of the ordinary class.

Subsequently school's director and teachers association opinion is requested and at the same time school counsellor of General Secondary Education is informed.

A Short Term Intervention Program (STIP) is planned for a couple of months. Planning is based on:

(a) Short-term goals for the student

(b) The description of the program

(c) Means used to achieve the objectives

(d) Results of the program's implementation

Special educator and ordinary teacher collaborate on a regular basis to monitor the student's curriculum and its necessary adaptations and modifications, as well as to evaluate the student's progress during this period. If goals of STIP are not achieved, school counsellors of general and special secondary education propose the student's reference to KESY or to a medical educational centre.

According to the same Law 3699/2008, students without the appropriate report from KESY but with the permission of the school counsellor of special education can attend the inclusion classroom. Pupils with low school competency due to cultural and linguistic particularities aren't considered students with special educational needs.

### *2.2 Characteristics of SEN students to develop inclusive education*

Learning difficulties is a general term to describe them, regardless of their causes and for the first time it was used by Samuel Kirk in 1962 in his work "Educating Exceptional Children" (Krokou, 2007). Students with these educational difficulties aren't a homogeneous group nor have same characteristics.

Often there is confusion between learning difficulties and special educational needs or difficulties, but these two terms are different. Special educational need is a term used to describe difficulties in reading, arithmetic, writing without physical or sensorial defects and concern pupils without mental retardation. In addition, term "special" it refers to the restricted field where these difficulties appear and in the same time indicates the presence of other academic skills where these students have high performance.

Therefore, in Greece according to the Law 3699/2008 special educational needs are dyslexia, dysanagnosia, dyscalculia, dysgraphia and dysorthography and students

can study in ordinary schools when they have mild special educational needs, attending lessons in inclusion classes or having a parallel support.

Characteristics of SEN students in each special educational need are the follows:

### 2.2.1. Dyslexia

Dyslexia is the most common from the learning disorders, known as Specific Learning Difficulties (SpLDs), that is, those situations that suspend - prevent a child with normal intelligence from acquiring certain skills such as, reading skill, skill of correct spelling, writing or other mental skills. A child with dyslexia may have difficulties in both, understanding and encoding/decoding the written language (reading and writing) (Livaniou, 2004). In general, dyslexia could be described as a "cognitive locus" where the symptoms of SpLDs may be camouflaged and get concealed or worsened by environmental or social conditions and circumstances (Frith, 1999). The exact definition of dyslexia is an issue for scientists. Despite numerous efforts, there are still disagreements and controversies over its definition.

**Towards a definition of Dyslexia**

Dyslexia is divided into two main categories: (a) Acquired Dyslexia, due to neurological damage and occurs in adult individuals; and (b) Developmental Dyslexia, which concerns children who present a deficiency or lack in the development of skills of writing and reading, due to genetic influences.

Today instead of Developmental Dyslexia is used the term Dyslexia, which was first used in 1887 by German professor Berlin of the University of Stuttgart to characterize the reading difficulty (Stasinos, 2013). Etymologically it derives from the Latin verb "legere" (= read) or from the prefix "dys" (which is used to state something that is done with difficulty) and the word "lexis". Therefore, the word dyslexia denotes people who have difficulty reading the words.

There are different types of approach to dyslexia from different scientific spaces in order to determine it. The medical approach to dyslexia attributes a causal factor to the difficulties faced by children in the written discourse. According to the medical approach, dyslexia was considered to be the result of minimal brain dysfunction or delay in central nervous system maturation, while other researchers also focus on the factor of hereditary predisposition (Avlidou-Doikou, 2002). Many psychologists and

pedagogues start from the precondition that there must be a significant lack of correlation between the performance at school and the child's ability (Stasinos, 1999).

Even in the domain of pedagogy two different approaches prevail. The first approach takes into account the cognitive deficit of the child with dyslexia. Dyslexia is therefore examined as a deficiency in perception, verbal coding, and verbal memory. The second approach uses a psycho-lingual framework to investigate the nature of the reading and orthographic writing processes of that individual, which has been influenced by some factors (Stasinos, 2013).

According to the definition of the World Federation of Neurology, formulated in 1968, special evolutionary dyslexia is a “disorder that manifests itself as a difficulty in learning of reading despite adequate education, sufficient intelligence and socio-cultural opportunities. It dependents on basic cognitive dysfunctions, which origin are often organic” (Pumfrey & Reason, 1991). This definition determines dyslexia as a difficulty in reading, emphasizing the child's difficulties in the cognitive level (Karapetsas, 1993). Also, in the definition are used several terms that are not exactly explained, such as sufficient intelligence, adequate education and socio-cultural opportunities (Snowing, 2000).

Modern definitions give emphasis on the cognitive deficits and skills that are affected by dyslexia (Riddick, 1996).

In 1989, the British Dyslexia Association (BDA) gave the definition of dyslexia, according to which it is “a special difficulty in learning in one or more fields of reading, spelling and written speech, while may coexist difficulties in arithmetic”. It is mainly related to the acquisition and use of written language, although may, in some extend, affect the oral speech (Pumfrey & Reason, 1991). This definition has an educational/psychological orientation since it does not refer to the justification of the difficulties of children with dyslexia. As Gjessing and Karlsen (1989) point out, definitions with an educational/psychological orientation do not refer to the justification of difficulties such as medical orientation definitions.

The British Dyslexia Association in 1989 reports that dyslexia refer to “shortfall in organization or in learning that limits the student's ability to process information, his kinetic skills and even the working memory, with the result to create serious constraints on some or all skills of speaking, reading, spelling, writing, mathematics and on behaviour” (Chatzichristou, 2004).

The International Dyslexia Association (IDA), previously named as Orton Dyslexia Society of the USA, in 1994 gave the following definition of dyslexia: “Dyslexia

is one of several distinct learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulty in single word decoding, usually reflecting insufficient phonological processing abilities. These difficulties in single word decoding are often cognitive unexpressed in relation to age and other cognitive and academic abilities. They are not the result of generalized developmental disability or sensory impairment. Dyslexia is manifested by variable difficulty with different forms of language, often including, in addition to problems reading, a conspicuous problem with acquiring proficiency in writing and spelling" (Snowling, 1987).

This definition is considered important, as it recognizes dyslexia as a learning difficulty, highlights the existence of phonological difficulties accompanied by dyslexia and determines that it is about difficulties in decoding and writing with correct spelling (Lundberg, 1999). In this definition is also given emphasis to the neurological base of dyslexia (Polichroni et al., 2006).

In 1997, the British Dyslexia Association, (BDA, 1996), reports that: "Dyslexia constitutes a complex neurological condition of constitutional origin. Symptoms may affect many areas of the individual's learning and function and may be characterized as a particular difficulty in learning of reading, spelling and writing. It occurs in one or more of these areas, but may also affect the individual's ability of counting, his schematic-depiction ability, his/her kinetic and organizational skills. However, the problem of dyslexia is particularly related to the learning of written language, although oral speech may also be influenced to a certain extent (Anastasiou, 1998).

The British Psychological Society published in 1999 that "the specific dyslexia disorder is obvious when the ability to read and spelling, with accuracy and ease, is acquired incompletely or with great difficulty".

The International Dyslexia Association (IDA), under the weight of findings for dyslexics in phonological skills, gave the following definition: "Dyslexia is of a neurological nature, often familial, disorder, associated with the acquisition and processing of speech. It varies on severity, is manifested by difficulties in language acquisition and linguistic expression, including phonological processing, with difficulty in reading, writing, spelling and sometimes in arithmetic. Dyslexia is not due to lack of motivation, sensory damage, inadequate teaching or inappropriate environmental conditions; however, it may coexist with these situations. Even though dyslexia is a life problem, some dyslectic individuals often respond successfully to timely and appropriate intervention" (Snowling & Thomson, 1991).

The British Dyslexia Association (BDA) in 2001 defines dyslexia as a "combination of abilities and difficulties affecting the learning process in one of the following areas: reading, writing and spelling. Accompanying difficulties may exist in the rate of information processing, short-term memory, sequence, acoustic and visual perception, and graphic character. Dyslexia affects the acquisition and use of written language, including alphabetic, numerical or musical symbols. It occurs in people with normal or higher intelligence that have adequate schooling, regardless of nationality and socio-economic class".

According to the Greek Society of Dyslexia, Dyslexia is one of the learning difficulties and it's a difficulty in learning to read and write, appearing to children who have all the abilities and capabilities for these tasks. The cognitive potential of these children is normal or superior to normal, hearing and vision are normal, social environments are positive and they are attending organized schools, however these children are facing school failure.

Children with dyslexia have no problem with verbal expression, unless coincidentally, happens to exist some disorder in the articulation and speech. Dyslexia means extreme difficulty in the processing of written speech, and hence difficulty in reading, disproportionately persistent in the age and cognitive potential of the student, and also persistent weakness in learning of spelling of the words and in automization of spelling ability (Mavrommati,1995).

The existence of so many definitions of dyslexia demonstrates how complex it is to formulate a commonly accepted definition. There is also a lot of confusion in finding the reasons that cause it, but also in the ways - strategies to deal with it.

**Types and symptoms of Dyslexia**

Dyslexia, as a problem of processing of written speech, as it is mentioned above, is distinguished in two major categories: acquired dyslexia and specific or developmental dyslexia.

Acquired dyslexia

Acquired dyslexia refers to a person who has acquired reading and writing skills, but has lost them partially or completely, (Anastasiou, 1998) following a brain injury or stroke in the temporal area of the left hemisphere of the brain (Porpodas, 1997). Acquired dyslexia primarily interests psychiatrists, neurologists and neuropsychologists. There are the following types of Acquired dyslexia:

(a) Deep dyslexia. Semantic errors are observed in reading of individual words (e.g. street instead of road). Are noticed substitutions of letters and errors in derivative words. The main difficulty is observed in the meanings of words and not in the syntactical structure, thus people with deep dyslexia are almost incapable of reading abstract words. In deep dyslexia the basic feature is the presence of semantic errors in the voice reading of individual words (Newton & Barry, 1997).

(b) Surface dyslexia. It is characterized by a specific damage to the posterior parietal region of the brain (Rosenham & Seligman,1989) which affects the ability to read words that do not show a smooth spelling. On the contrary, the ability to pronounce smooth words or pseudo-words remains unaffected, as does the understanding of their meanings. This form of dyslexia is related to way a person understands the meanings of symbols, letters and words of the language in a proper written form. They are able to recognize that “speech” are printed words but are unable to understand the definition of words through the visual image of the written word. They have a good understanding of the vocal meanings in general, but a great difficulty in reading and spelling of whole words (www.thepadc.com/sdud/indexphp_11k).

The primary characteristics of surface dyslexia is that the person reads all regular words but appears to have difficulty in reading exception or irregular words. These people read regularly spelt words as well as pseudo-words that are combination of letters which are not words but follow the phonological patterns of the language and therefore sound like words, with normal accuracy and near normal speed. But when required to read aloud exception or irregular words they make regularization errors (Prathibha, 2003).

(c) Phonological dyslexia. It is the most common type of dyslexia, synonymous with dyslexia itself. Its extreme difficulty reading that is a result of phonological impairment, meaning the ability to manipulate the basic sounds of language. The individual sounds of language become “sticky” unable to be broken apart and manipulated easily (www.dyslexia_reading-well.com). The defining symptom of phonological dyslexia is the difficulty in reading non words which appear alongside correct reading of words that are stored in the orthographic input lexicon. Individuals with phonological dyslexia cannot read new words, only words that are already in their orthographic input lexicon. The most basic type of phonological dyslexia is a deficit in the conversation of single letters into phonemes, and it’s evident not only in reading non words, but also when single letters are presented (Friedmann & Coltheart, in press).

In general, they read familiar words, while they have difficulty reading non-familiar words. They do not make semantic mistakes as it is speculated that the “visual analogue comparisons” strategy is being used. However, as a result it is likely that visual errors may occur (Carlson, 1994). Individuals have difficulty pronouncing a written word they have never seen, even if they use it verbally, because of damage to the back of the left hemisphere (Rosenham & Seligman, 1989). They are unable to make a graphical-phonetic match, so word recognition is only done through the visual dictionary.

(d) Direct dyslexia. People with direct dyslexia can read loudly, but they do not understand the meaning of what they read. They are in position to read simple non-difficult orthographically words, which were familiar to them before brain damage, but they cannot correctly read pseudo-words or unusual words that probably did not belong before in their vocabulary (Diamantopoulos, 2014).

(e) Wordform or letter by letter dyslexia. These people cannot recognize the words as a whole or read them syllabically. They can recognize individual letters and read the word, letter-by-letter, one at a time, (aloud or in low voice) so that they then pronounce the word as a whole. Thus, they read with very slow rhythm, especially polysyllabic words, while when they try to read more quickly, they make many lexical errors (Anastasiou, 1998). Letter-by-letter dyslexics are individuals who are able to read words only by identifying one letter at a time from left to right in a slow and laborious fashion (Shallice & Warvington, 1980).

Except from the above categorization of dyslexia, which is widely accepted and the most common used in the bibliography, there are scientists like the neurologist Norman Geschwind, who distinguish three more types in the acquired dyslexia.

The first type is characterized by serious incompetence in understanding oral and written speech and a difficulty in the production of texts.

The second type and less common presents very important difficulties in reading and writing. The third type is mainly characterized by difficulties in reading skills and not as many as in writing (Porpodas, 1997).

Developmental dyslexia

Developmental dyslexia is characterized so, because it determines the inherent weakness of the child during the period of its evolutionary development. It is considered to be a more serious form, as the child acquires language skills with great difficulty, while at the same time it means that his ability to acquire and use the written language falls

significantly short his mental level. Given that developmental dyslexia constitutes the most serious form of the problem and because it presents many aspects, researchers distinguish it in different species. This differentiation in addition to the theoretical documentation is of practical importance, as it contributes effectively to the proposed confrontation model (Diamantopoulos, 2014).

The first person to suggest that there are different types of developmental dyslexia was the educational psychologist Helmer Myklebust (Myklebust, 1965). He suggested that some dyslexic children have difficulty in learning to read, because they "could not acquire the auditory equivalent of the appearances of the letters". Myklebust referred to this condition as "auditory dyslexia". For other dyslexic children the problem is "inability to mentally visualize letters and sounds" referred to this condition as "visual dyslexia" (Helmer et al., 1967).

The types of developmental dyslexia are three: visual dyslexia, auditory dyslexia and mixed dyslexia.

(a) Visual dyslexia. Visual dyslexia is the most common and widespread form of dyslexia and is associated with deficits of visual perception, visual discernment, and visual memory. The child with such deficits has not acquired the required or familiar automation in the recognition of words and the pairing of written symbols in oral terms (Stasinos, 2013). Weaknesses are noticed in the distinction of complex forms and designs, the understanding and reproduction of visual sequences and possible weakness in kinetic skills.

The visual dyslexic student during the reading process tends to confuse letters that look visually alike (for example confuses "b" to "d") and words that are symmetrical (e.g. reads "on" instead of "no"). This causes the child a serious inability to see the words as morphological totals, with the result not to be able to read at a regular pace. On the contrary it reads very slowly and confusingly. In general, student during reading faces the words as if he sees them for the first time, even if he has already seen and read them many times.

In spelling, the performance of the visually dyslexic student is extremely poor, with phonemic errors being the main feature. Namely he writes by ignoring the correspondence between graph and phoneme, thus skipping or adding letters (for example writes "Chrismas" instead of "Christmas" or "tabele" instead of "table") (Diamantopoulos, 2014).

Students with visual dyslexia have a difficulty in reading the words "totally". They process words analytically, using analysis and synthesis, which helps them to read even

pseudo-words. It is indicative that, if a regular reader needs three minutes to read a three-line sentence, the student with visual dyslexia will need at least fifteen minutes (Porpodas, 1997).

Visual dyslexia is distinguished in two subcategories:

(1) The grammatical form, in which the child fails to recognize the individual letters.

(2) The verbal form, where the child recognizes the letters, but has difficulty composing words or fails completely (Serdaris, 1998).

Visual dyslexia as a disorder has little to do with the sight of the individual, and this was ascertained by tests performed on children with visual dyslexia. These tests demonstrated that their visual ability is functioning physiologically (Porpodas, 1997).

The student's language deficit is visible, not only in the accurate and smooth reading of texts, but also in the copying of information that a teacher is writing on the board during the lesson. A teacher who does not know and understands the nature of such a difficulty, often misunderstands the child's behaviour as laziness and indifference (Stasinos, 2013).

(b) Auditory dyslexia. The main characteristic of the dyslexic student is the serious weaknesses in the discernment of acoustic similarities and differences, with result the appearance of difficulties in the analysis of the words in syllables and vice versa the synthesis of syllables in verbal groups. It possible to have difficulty distinguishing the acoustic details of the words he hears, while it is likely to have difficulty in the reproduction of sound unities (for example, learning a poem by heart). People with acoustic dyslexia cannot fully understand the initial or final sounds of the words, as well as the double sound in group of consonants (writes and reads “tain” instead of “train” or “umbella” instead of “umbrella”).

In addition, the auditory dyslexic student has the amazing ability to directly replace words which he encounters and has difficulty to read, either because they contain a difficult phonetic group or because they do not belong to his visual vocabulary (for example, he replaces the word “profession” with the word “job” maybe because the "pr" group causes a problem in decoding and pronunciation).

The performance of the auditory dyslexic student in writing and spelling is low, certainly to an extent less than his reading ability. Student makes characteristic mistakes such as the omission of the intermediate syllables of words, because of his inability to

discern the whole word (for instance he writes “automatic” instead of “autonomic”) (Diamantopoulos, 2014).

It is the most difficult form of dyslexia, especially in terms of the way it is treated. It is associated with deficits in acoustic perception, acoustic discernment and acoustic memory.

Children with auditory dyslexia have difficulty reproducing distinctive sounds of the spoken language, that is, they are unable to easily discern small acoustic differences between sounds that exist in vowels or consonants and link them with the relevant written symbols, to synthesize sounds. They experience difficulties to easily name persons, things or situations, and to memorize auditory information or to accurately remember oral instructions or instructions from others and mainly from their parents and classroom teachers.

These children do not have a functional hearing problem. Their problem resembles more the so-called “tonic deafness” observed in the music world. That is, although they are able to pick up sounds or certain tones of music, they cannot clearly and easily discern small differences in the discourse.

Their performance in spelling is expected to be very low. For the majority of people with auditory dyslexia the use of familiar phonetic method in the linguistic teaching of primary schools is almost meaningless.

The child with auditory dyslexia is never sure that hears words or phrases of a text correctly, and that is why he often asking for the dictation of the text to be repeated. A child with dyslexia of this type needs three to five minutes to write a simple sentence in dictation (Stasinos, 1999). The same happens during the teaching in classroom. He is used to asking repeatedly the teacher for clarification over points that are considered self-evident for the majority of his classmates.

It is common the tendency of a child with auditory dyslexia to misinterpret or distort the pronunciation of some words with rhyme (for example, home / tone, meat / read etc.) and generally to have his own falsified or distorted linguistic behaviour regarding homophonous or rhyme words.

Children with auditory dyslexia, as well as those with visual dyslexia, for linguistic reasons, cleverly resort to alternative or compensatory strategies, that is the use of the intact visual communication path, which they can manage with great ease and efficiency.

Auditory and visual dyslexia may be subject to drastically different therapeutic approaches, and the prospect of effective treatment may vary from case to case.

The recognition of auditory dyslexia is based on the view that reading, although is directly related to the visual - symbolic system, is assisted by acoustic nature functions, such as the ability to discern sound similarities or differences and the ability to synthesize sounds in words and vice versa.

Children with auditory dyslexia have difficulty in analysing words, syllables, and syllable audio groups in verbal unities with conceptual content. There may also be difficulties in discernment acoustic details and reproducing sound modules.

According to Myklebust (1967), the main problem of these people is their inability to perceive the similarities of the initial or final sounds of the words. Generally, they can link words to their meanings, but they have difficulties in converting the visual linguistic symbols into audible. That is, they cannot associate the audibility equally with the visual object. Their performance in writing and spelling is low and even inferior to their reading performance. The only words that can write correctly are those that exist in their visual vocabulary.

They omit the intermediate syllables of the word, perhaps because they cannot distinguish all parts of the whole word. Sometimes the auditory dyslexic person replaces words with others that resemble their visual outline (Boder, 1973).

(c) Mixed dyslexia.

Scientific research rarely encounters occasions only of visual or auditory dyslexia. Normally, these two types coexist, and this can be noticed by the type of errors made either in writing or reading. For this reason, two researchers, Ingram and Boder, (Porpodas, 1997) identified a third type of Developmental Dyslexia, which they named it mixed. In this type is identified a malfunction in both the visual and acoustic channels of the written speech.

The reading difficulties of these children are mixed, that is, they have difficulty learning full words or analysing their vocabulary. These people are described as “non-readers” with “alexia”, which simply means that they have difficulty in discernment and learning words with ease. This type of dyslexia remains the subject of systematic research and clinical observation by specialist scientists (Stasinos, 2013).

According to Bakker (1979), there are two basic types of dyslexia, type “L” and type “P”. The first type “L” reads quickly, ignores letters, words, or even phrases within a text. He makes important errors in his reading substituting letters. The second type “P” shows an overgrowth of the functions of the right hemisphere of the brain. This type is sensitive to the perceptual symbols of the text, reads slowly, and makes notional and hypothetical mistakes during reading.

In 1987 Margeret Snowling proposed the classification of dyslexics into two categories. Phonological Dyslexia and Surface Dyslexia. Phonological dyslexia refers to a group of people who confront difficulties in decoding words through the correspondence between sounds - letters; as a result recognition of words is only conducted through the visual dictionary.

Surface dyslexia presents the opposite characteristics. People in this category are able to decode words based on phonemes but have problems in perception and reading lexical units as a visual group.

The most recent classification is that of Bowers & Wolf (1993), who report three types of categorization, depending on the problems presented:

(a) Dyslexia with phonological deficits (Phonological Deficits, PD), which includes errors of phonological encoding and acoustic discernment.

(b) Dyslexia with deficits in the name processing speed (Processes Naming - Speed Deficits, NSD), that includes difficulty in automatically finding suitable words and

(c) Dyslexia with double deficit (Double - Deficit Subtype, DD), where the two dysfunctions co-exist.

**Clinical types of Dyslexia**

Other researchers discerned dyslexic individuals in different categories, not based on pathological symptoms, but according to their importance. Thanks to the clinical study of dyslexic cases, scientists find out that even among individuals with the same type of dyslexia very often symptoms and their appearance differ in intensity and in dynamic.

Depending on the severity of pathological symptoms, scientists distinguish dyslexia into four categories (Karpathiou et al., 1994)

Mild dyslexia: The clinical picture of this type of dyslexia is characterized by confusion of specific pairs of letters, which last for a short period of time (This happens during the first class of Primary School). There are few cases of anagrammatism, but are observed only in polysyllabic words, and a little delay in learning reading skills. Students with mild dyslexia present less interest for school, difficulty in understanding meanings, however their behaviour is almost normal. They may also present mild psychological and sleep disorders.

They are involved with lessons and homework only if they are interested in and not with the obligatory ones. In general students with mild dyslexia don't study at all but they are satisfied only with what they learn from the teaching in the classroom. They may be particularly vivid in their general activities, while it is observed inaptitude in their limbs. The percentage of girls in this group is significantly higher compared to boys.

Classical dyslexia: The clinical picture of this type of dyslexia is characterized by confusions among letters, by plenty of anagrammatism and by a remarkable delay in learning of reading skills. Delay may also appear in the comprehension of texts through reading as well as through hearing. Scribble is observed in written texts of the student who also present a low interest in school life. All these phenomena are often accompanied by behavioural disorders and lack of concentration. Many time students undertake a variety of activities, but they leave them unaccomplished and start to work with others, as a result they never complete anything. They do not like books and they consider school as a place to play and they present a lot of bizarre fears and emotional insecurity.

Severe dyslexia is characterized by intense confusion into specific pairs of letters and many letters replacements and difficulties in arithmetic. Students' writing is inconceivable, they have difficulty to concentrate and may present psychological and sleep disorders. It seems that these students are spoiled, untamed, and awkward, they don't have any interest in school and when they have to read, they yawn or seem very tired. In this type of dyslexia boys' percentage is higher compared to girls.

Very Severe Dyslexia is a heavy type that is described as a minor cerebral dysfunction. Apart from the intense learning problems students may have also pathological problems which give the picture of a light mental retardation.

Summarizing the above theories, there is an apparent convergence in the two main categories of dyslexia, auditory or phonological and visual. Both categories are the fruit of large-cell system theory which argues that dyslexic individuals exhibit a different cell size in the large-cell system in the Central Nervous System, in relation to the general population. This system is responsible for the functions of visual and acoustic processing of information and in which dyslexics are lagging behind.

### 2.2.2. Dysanagnosia

Dysanagnosia is a special educational difficulty of reading and has been analysed more than any other. According to the DSM-IV this kind of difficulty in reading is characterized by reduced performance of the child in precision, in velocity and in

comprehension of what he reads. The child either reads out aloud or not, his reading presents deformations, substitutions, the rate of recitation is slow and the child cannot understand the meaning of the text (Triga-Mertika, 2010).

Therefore, reading performance is significantly lower than expected for his age, education, and mental level (IQ), as a result to affect school performance or other activities requiring reading skills.

There is issue in the discernment of words, confusion in their sequence in the phrase and difficulty in the vocal-auditory-visual integration (Panteliadou & Patsiodimou, 2007a).

Reading is a puzzle in which all systems of speech, the phonological, conceptual, morphosyntactic are involved. These systems progressively become part of the individual through the developmental procedure, starting from the phonological system which is associated to the decoding, which is the first stage of reading (Aidinis, 2007).

Many scientists sustain that the reading as like the speech is an inherent function, that may begin from the birth of the child and last till the age of six (pre-reading stage). Other scientists believe that reading originates naturally but needs to be taught.

Most children go through the stage of decoding during the 1st and 2nd class of Primary School, where they have to match the phoneme with the grapheme. During the next stage, which starts in the end of the 2nd class of Primary School and lasts until the end of the 3rd class of Primary School, knowledge of the phonological system and reading skill are consolidated.

At the same time, the conceptual and morphosyntactic systems are integrated, while the decoding process is completed. A child without any kind of learning difficulties, at the end of the 3rd class of the Primary School may be considered proficient in reading skills and able to understand concepts corresponding to his age. He also recognizes and discerns the morphosyntactic elements of a text (Legaki, 2007).

Children with reading difficulties may present these difficulties from the decoding stage as is usually happen with children with visual-perceptual deficits. Children with these sorts of deficits try to counterbalance their phonological disadvantages by memorizing complete words, a fact that leads to acquire also difficulties in their conceptual and morphosyntactic system (Protopapas, 2007).

On the contrary children in whom the reading disorder is caused by speech disorder, while they can decode, they encounter problems - especially after the 2nd class in the Primary School - with the text comprehension. This comes as a result of the

implication of the conceptual and morphosyntactic system in reading, because they spend a lot of time decoding the words.

In both cases, students with reading difficulties don't proceed to higher levels and they don't acquire reading skills. As a result, reading difficulties are depicted to their written speech (Westwood, 2001).

Dysanagnosia, is often accompanied by specific learning difficulties in written expression (Dysgraphia), in spelling (Dysorthography) and in Maths (Dyscalculia). Unfortunately the above mentioned difficulties rarely are diagnosed without Dysanagnosia (Vrionis, 2004).

The frequency of Dysanagnosia's appearances estimated at 4% of school-age children, with the 60%-80% being boys. The diagnosis of dysanagnosia doesn't take place before the end of the 1st class of Primary School, and is usually delayed if the child has a high IQ. An early diagnosis and intervention is accompanied by positive results (Athanasiadi, 2001).

The most common feature of reading difficulties is the inadequacy to discern sounds in the hearing words. This deficit is of crucial importance, because phonological skills are the basic prerequisite of the reading capacity (Triga-Mertika, 2010).

Typical difficulties of child with reading disorders is mirroring (for example reads "b" instead of "d"), permutation of lettersin a word (for example reads "spot" instead of "stop"), inversion (for example reads "m" instead of "w") and omissions (for example reads "rain" instead of "train") (Livaniou, 2004).

The main deficit associated to reading disorders, is related to the difficulties of decoding (that is the acknowledgment of individual letters and syllables of a word) in combination with difficulties in reading simple and small words. If the child can't perceive the phonological structure of the language and recognize automatically simple words then it is likely to have a problem in his reading ability. The slow and laborious decoding and reading of simple words demands a very big effort and has as a result the capacity limitation of the child to hold the basic meaning of a phrase or even the meaning of a whole paragraph. The child with reading disorders is deprived of the basic linguistic skills, which are required for essential reading, spelling and writing (Panteliadou, 2009).

For Floratou (2009), some other features of children reading difficulties are:

- Confusion of the lines in the book.
- Longer time to comprehend the reading skills, compared to their classmates.
- Reading without voice coloring.

- Lack of punctuation in reading.
- Confusion of similar letters.
- Reversing or changing the order of the letters within the same word.
- Misreading of words, guessing from the first known syllable.
- Difficulties in polysyllabic and non-familiar words.
- Intonation of words.
- Replacing words with others that have the same or related meaning (river - water).
- Difficulty in the complex of consonants (“pove” instead of “prove”).

### 2.2.3. Dyscalculia

Dyscalculia is a special learning difficulty in arithmetic. In 1961, in the magazine “Archives of Neurology”, was published an article of the American researcher Cohn, in which it was expressed the opinion that the difficulties in mathematics, in mathematical concepts and skills that some children present may be due to dysfunction of the central nervous system. The proposed term for this article was dyscalculia (Agaliotis, 2009).

Nonetheless he wasn’t the only scientist who dealt of dyscalculia. During 1930 many other scientists described cases of children who were physically intelligent, but they presented difficulties in mathematics (Agaliotis, 2009). By the term dyscalculia are indicated increased difficulties that some children meet in the way of calculation as well as other related issues, such as the problematic comprehension of numbers, the affiliation between them and the ability to estimate the result of a calculation (Jordan et al., 2003).

There was proposed many different theories and explanation about this type of problem in mathematics and in arithmetic.

A complete recording of children characteristics with dyscalculia was proposed by Newman in 1997 (Agaliotis, 2009). According to this recording child with dyscalculia:

- Have normal linguistic development and adequate performance in non mathematical topics.
- Present difficulty in understanding the concepts of time and orientation in space, in remembering names and using money.
- Have difficulties in writing and reading, omitting, replacing and interchanging figures.

- They present deficit in the mental calculation and it's very hard to perceive and revoke mathematical concepts, algorithms and memorize numerical data.
- Form unclear mental representations and they fail to develop strategic planning. Difficulties in mathematics may be associated with either low performance in arithmetic calculation (addition, subtraction etc.) or are associated with difficulties in understanding basic concepts that are a prerequisite for mathematics

Different studies have not come into conclusion, whether dyscalculia is an autonomous learning difficulty, or it is an aspect of special learning difficulties in math. The theory about the autonomous character of dyscalculia sustains that this type of learning difficulty refers to a group of disorders in mathematics, clearly distinct from the rest learning disorders in maths, which are not attributed to low intelligence or to inadequate school attendance, but they are attributed to problems of the Central Nervous System (Ramaa & Gowramma, 2002).

Dyslexia affects the whole system of mathematics, from the pro-mathematical concepts to solving mathematical problems. Students with dyscalculia present persistence on the use of specific mathematical standards and stiffness of their cognitive profile. For example, they insist on the use of objects during calculations and do not proceed to the figurative and symbolic level. There are indications that students with dyscalculia have problems regarding their short-term memory when they have to deal with math problems given in visual way. Also it's difficult for them to decode mathematical information given in the same visual way, despite the fact that their verbal skills appear to be in a very good level (Shalev et al., 2001).

The definition of dyscalculia that prevails until today is the one that was formulated by Kosc, who during research in 1974, reported that dyscalculia is a structural disorder of mathematical skills, that has its roots in a genetic disorder or in a birth damage, in those parts of the brain which are the substrate for the maturation of mathematical skills. However, it is not affected the general mental and cognitive function (Papadatos, 2005).

Carl & Bell, (1994) in the American Psychiatric Association in the diagnostic DSM-IV, define that mathematical ability of individuals with mathematical disorder, as been calculated by standard tests, is significantly lower from the expected, considering their age, intelligence and education status. However, they are in position to fulfill their daily activities which require mathematical skills Carl & Bell (1994).

Types of Dyscalculia

Dyscalculia as a special learning difficulty is divided in two categories: Developmental dyscalculia and Acquired dyscalculia. Developmental dyscalculia is a cognitive disorder of childhood which affects the ability of a smart and healthy child to learn math. Acquired dyscalculia can occur after brain damage (Papadatos, 2005).

Dr Ladislav Kosc distinguishes six basic types of dyscalculia:

(a) Verbal Dyscalculia, which manifests with the difficult in understanding and use of mathematical terms and the inability to express verbally mathematical relations.

(b) Pratognostic Dyscalculia is the inability to translate abstract mathematical knowledge in real-world actions. Students have difficulties to work with actual math in a practical way.

(c) Lexical Dyscalculia is the difficulty to recognize and read numerical symbols. Persons with lexical dyscalculia contrariwise can understand mathematical concepts when talking about them.

(d) Graphical Dyscalculia causes difficulty in writing mathematical symbols. A student with this type of dyscalculia can understand mathematical concepts when talking about them, and can read mathematical information, but he/she has problem writing math symbols.

(e) Ideognostic Dyscalculia is manifested by the difficulty of understanding mathematical ideas and relationships, such as identifying sequences of numbers from bigger to smaller.

(f) Operational Dyscalculia: Operational dyscalculia is a difficulty with performing, mathematical operations or calculations (Triga-Mertika, 2010).

In 1983 Bandin proposed a new categorization of dyscalculia:

(a) Alexia or Numerical Agraphia, is the inability to write mathematical symbols, numbers.

(b) Spatial Dysarithmisia is the difficulty to estimate dimensions and relationships of space.

(c) Acalculia is the difficulty to carry out math calculations.

(d) Attention-Memory Dysarithmisia causes difficulties to keep attention in specific mathematical operations such as algorithms.

(e) Mix Type is any combination of the above mentioned categorization (Triga-Mertika, 2010).

According to classification of Geary (2004), there are three different types of students with dyscalculia who have different cognitive, developmental, neurologic and genetic characteristics.

(a) Students with problems in the use of procedures. Their main cognitive characteristics are errors in applying procedures, such as algorithms and the use of "immature" strategies, like calculating with fingers. Students with this type of dyscalculia have a normal but slow in rhythm development, yet their improvement is remarkable as they get bigger.

(b) Students with problem in their semantic memory. They can't revoke basic mathematical symbols and data. They still face problems to revoke the results of a simple calculation with two numbers. Many times, the revocation of results is slow and it is accompanied by mistakes, related to the digits which are used in calculation (for example they write 2+3=4, because 4 comes right after 3 in the order of numbers). This type of dyscalculia is an obstacle to the development of many other mathematical skills. These students also have phonological deficits and learning difficulties in reading.

(c) Students with visual-spatial concept problems. Their main cognitive characteristic is that they make mistakes during calculations. They don't align vertically the digits in a proper column (the tens, the hundreds, the thousands and so on) an as a consequence the result of calculation is wrong. They may interchange or reverse numbers (for instance 4.350 for 4.530). Finally, students have also learning difficulties in reading (Geary, 2004).

Symptoms of Students with Dyscalculia

Many scientists agree that there are common symptoms regarding the appearance of dyscalculia (Anagnostopoulos & Sini, 2003).

- Difficulty in distinguishing numbers when they are pronounced orally (for example two/ three, etc.).
- Difficulty in learning the name of numbers, in understanding the arithmetic system and calculation problems with digits that exceed hundred or thousand.
- Difficulty in repeating arithmetic sequences.
- Difficulty in understanding the arithmetic signs and symbols (-, +, ÷, x) and mirroring writing (for example 6 for 9).

- Difficulty in the right replacement of numbers during calculations and difficulty in solving mathematical problems which require combination of math operations.
- Slow rhythm in calculations.
- Difficulty in learning and understanding the basic knowledge of arithmetic calculations, like addition, subtraction, multiplication and division. They may find it difficult to comprehend words like “plus”, “add together” or may confuse equal quantities.
- Difficulty in understanding the commutative property (for instance 2+4=4+2).
- Difficulty in understanding the proportionality (for example, 12+1=13 and 22+1=23).
- Difficulty with concepts of money, distance, area, weight, days, of the week, year etc.
- Difficulty keeping score during games.
- Difficulty in learning the multiplication table. Problems with insight mental arithmetic.
- The short term memory may malfunction and during insight mental calculations may forget some numbers (Anagnostopoulos & Sini, 2003).

So, mathematics has its own vocabulary and terminology and last years prevails the tendency to consider them as a different language. Another way to confront special learning difficulties in math is to be taught as a second and distinct language (Vaidya, 2004).

Math teacher should emphasize and demonstrate to children the importance of mathematics in everyday life.

It’s important teacher to explain and exhibit that mathematics have many uses and that they are the basis of technology, of science and to underline their significance in industry, market and work (Hughes, 1991).

### 2.2.4. Dysgraphia

By the term Dysgraphia is defined the weakness of correct writing. It is identified as a difficulty in the automatic mental depiction and learning of the sequence of muscular movements which are required in the writing of letters or numbers (Hamstra-Bletz & Blöte, 1993). It is a special learning difficulty which is manifested with unusual and persistent difficulty in the ability of writing at the level of a word, at the level of a sentence

and at the level of a written paragraph. The child displays also an unexplained difficulty in the ability to match easily phonemes and graphemes and to apply the grammatical rules to all types of writing (Mitsiou, 2000) and (Zafiropoulou & Kalantzi-Azizi, 2004).

This kind of difficulty is in disharmony with the intelligence of the child, with his regular education and has its basis on neurological mechanisms (Rijnjes, et al., 1999).

Very often dysgraphia coexists with dysanagnosia, but is also possible to appear without obvious disorders in reading (Snowling, 1987).

Types of Dysgraphia

There are two types of Dysgraphia: Developmental dysgraphia and Acquired dysgraphia.

Developmental dysgraphia appears in the early years of learning and is defined as a delay in the development of written skills. This delay does not coincide with the child's mental level. Developmental dysgraphia is distinguished in: phonological dysgraphia, kinetic dysgraphia and visual-spatial dysgraphia.

Phonological dysgraphia is characterized by illegible written text and poor spelling. Text copying is relatively good although for some children can be quite difficult. Often may be presented a reading difficulty because it’s a visual recognition procedure and is related to the ability to understand phonemes and graphemes (Maridaki-Kasotaki, 2005).

Kinetic dysgraphia is characterized by illegible written text, even it is about copying. Spelling is fine, but the drawing of the writing is problematic. This kind of dysgraphia appears mainly in children with kinetic and mechanical processes that affect the calligraphy. Kinetic dysgraphia is divided in kinetic dysgraphia due to a lack of co-ordination and in kinetic-dyspraxical dysgraphia (Papadatos, 2005).

Visual-Spatial dysgraphia is characterized by illegible written text. Students with this kind of dysgraphia present difficulty in the design and in the structure of the written text, they leave margins or even blanks, they write diagonally, skip letters and they can’t compute correctly the space at the end of the page (Papadatos, 2005).

Acquired dysgraphia refers to persons who previously had acquired the skills of spelling and it is due to brain damage. It is distinguished in Central acquired dysgraphia and in Peripheral acquired dysgraphia. The Central acquired dysgraphia has the following subdivisions: Surface acquired dysgraphia, Phonological acquired dysgraphia and deep acquired dysgraphia (Stasinos, 1999).

**Central acquired dysgraphia**

Surface acquired dysgraphia refers to a person's absence of ability to recognize and write a number of familiar words as a component and consequently has a particular difficulty with words that have an irregular spelling. Very often students with surface dysgraphia try to normalize the spelling of words. It is due to damage of the left brain hemisphere, which for the majority of people has the main responsibility of the language (Papadatos,2005).

Phonological acquired dysgraphia is related to the difficulty of individual to write unknown words, pseudo-words or phonetic non-regular words. There is no difficulty with copying, while most students face difficulty in the acoustic structure of the oral language (Papadatos, 2005).

Deep acquired dysgraphia is associated with semantic errors when the child copies or writes names of subjects and is more successful in writing of specific words rather than abstract ones. Writing pseudo-words is impossible in deep acquired dysgraphia (Papadatos, 2005).

**Peripheral acquired Dysgraphia**

Peripheral acquired dysgraphia regards problems in the conversion of graphemes into handwriting. There are observed interchanges between upper case and lower case letters within the same word (Stasinos, 2011).

The number of students with difficulties in producing writing (dysgraphia) seems to be bigger than the number of those who have difficulties in reading (dysanagnosia). According to studies and researches, students with problems in writing are a heterogeneous group, which corresponds to 10%-34% of students (Graham et al., 1997).

Symptoms of children with dysgraphia

- Awkward or problematic pencil hold.
- Problematic position of the hand wrist, of the body's position and of the placement of the notebook.
- Coexistence of vertical, lateral and continuous writing of the words.
- Inability of keeping notes (Spantidakis, 2004).
- Whispering of words during writing.
- Inability to apply the spelling rules in all words, rhyming words or derivative ones.
- Inability of self-correcting during writing.
- Errors in the sequence of words in the sentence.

- Inability of keeping of a logical or temporal sequence.
- Difficulty in creation of paragraphs.
- Difficulty in completion of phrases.
- Use of verbs and nouns in a wrong way.
- Use of common instead of original words.
- Difficulty in writing texts that require imagination, fantasy, personal style and originality.
- Ideas that do not correspond to the required issue.
- Problems in sequence and coherence of information.
- Difficulty in finding and developing ideas, arguments, or supportive proposals (Panteliadou & Botsas, 2007).
- Difficulty in distinguishing between identical oral or visual letters. As a result, in their writings appear repetitions, omissions of letters and syllables within the same word, inversions and transpositions of letters and syllables and difficulties with consonant complexes.
- Difficulties into separating words and memorizing the appropriate grapheme.
- Difficulty in understanding the grammatical features.

These children, although they know the grammatical rules and norms, they make basic spelling mistakes (suffixes of substantives and verbs), syntactical and grammatical errors in verbs and wrong use of prepositions and conjunctions (Anastasiou, 1998).

Regarding the way of writing, children with dysgraphia present deficit in the following sectors:

- Content: they don’t write big texts and they have a limited vocabulary.
- Writing style: large blanks between letters, imperfect alignment of phrases and different size of letters. Plenty of smudges in the paper and very slow rhythm of writing.
- Morphological elements: absence of punctuation marks and difficulty in syntax and grammar.
- Acoustic perception: lack of intonation or wrong accentuation. During writing the child separates words which shouldn’t be separated (for example he writes "prepare", instead of "prepare") or incorrectly unites two different words in one (for instance he writes "myfriend" instead of "my friend").
- Visual perception: confusion of letters' direction and use of upper case and lower case letters in the same word.

### 2.2.5. Dysorthography

Linguists use the term orthography when they refer to the written system of a language (Stasinos,1999**).**

Dysorthography is a special learning difficulty which concerns the difficulty of writing a word, a whole phrase or a paragraph. These difficulties in orthography may coexist with dysanagnosia and with dyslexia. It's very rare the manifestation of dysorthography without others disorders. The basic inadequacy is the incapacity of the individual to connect the phoneme with the right form or to match visual sequence with the auditory sequence (Mixelogiannakis & Tzenaki, 1998).

What differentiates a student, whose spelling is correct from a student with bad spelling, isn't the visual memory but the orthographic memory. The orthographic memory is very important because students have to remember the figure of letters and words (Athanasiadi, 2001).

Students with correct spelling have developed phonological skills which help them to pronounce words and learn the forms of letters trough these skills. Knowledge of syntactic rules, of semantics, of morphology, the phonological awareness and the orthographic rules help student to write with correct spelling. Many students manifest problems in spelling, because even if they can connect the sound with the relative symbol, they have difficulty in remembering the sequence of the letters. Students with errors in spelling rely on the connection between sound and letter and they don't make use of their visual memory or of the orthographic rules (Pampoulou et al., 2007; Spantidakis, 2009).

Dysorthography is a special learning difficulty which concerns also children with normal intelligence. Mistakes are due to:

- Disorders in visual and acoustic perception and sequence.
- Disorders in the development of oral speech.
- Difficulty in organizing space and time (Messinis, 2000).

There are different types of mistakes in a spelling test of a student with dysorthograpy, such as:

- Spelling errors.
- Syntax errors.
- Intonation errors.
- Confusion in the use of capital and lower case letters in the same word.
- Thematic and suffix errors (Panteliadou & Patsiodimou, 2007b).

Students with dysorthography don’t use in their texts punctuation, question marks or comma but they do use period. They apply in wrong way the singular and plural and they don’t possess a wide vocabulary, compared to their classmates of the same age. They find it difficult to use passive voice or indirect speech (Fourlas, 2007).

## 3. Qualification and Training of Secondary Education Teachers to Work with SEN Students

### *3.1 Teaching skills to work with SEN students*

An inclusive approach is understood as meaning that the education of all students covering the spectrum of diversity takes place in adequately supported regular classrooms in the educational context that would be attended if the form of diversity were not present, normally the neighbourhood school (Jordan, 2007).

One of the main issues of the science of pedagogy is the skills, the qualities and the required characteristics of the teacher towards an effective inclusive and not only teaching.

The teaching skills and qualities, the personality and the identity of educators characterize and determine the educational science. The way in which teacher caries out his work is determined by two factors: by his professional qualities, skills, traits and the acquired knowledge and by his personal qualities and his personality. These important trends play a key role to the way of teaching pupils but furthermore of working with students with special educational needs included in the ordinary class.

We can say that we have two kinds of teacher's professional identity: a teacher's personal traits and attitudes and a teacher's educational skill which is an important essay.

A basic qualification is the acquisition of an extended body of knowledge which contributes to teacher's perform in practice (Birman et al., 2000).

A teacher's training is classified in three sectors: pedagogical and didactic studies, subject knowledge, and teaching practice.

For a teacher to cope with the above "professional studies" are required to have:

(a) curriculum studies (Shulman,1987).

(b) pedagogical content knowledge

There are knowledge fields that constitute a necessary prerequisite for every teacher or at least for a large part of them (Meijer et al., 2001). These fields include:

(a) Subject knowledge. Teaching a particular subject requires familiarization with scientific knowledge. Teacher's efficacy is strongly influenced by the opinion teachers have of the teaching subject (Newton & Newton,1998).

(b) Knowledge of learners. It's important the knowledge on the social, psychological and cognitive background of pupils. Educators should notice if exist any type of behavioural problems, adjustments issues and learning difficulties.

(c) Teaching methodology. Teacher should be in search for the most suitable teaching methods.

(d) Curriculum knowledge**.** The school curriculum is a tool which helps the didactic choices of a teacher. The inclusive teacher should therefore know rules and laws of the educational system and sometime adapt the curriculum to his students needs.

(e) General pedagogical knowledge. Include the organization of the class, pedagogical theories, strategic classroom management.

(f) Knowledge of contexts. A teacher is called to interpret contexts in which he teaches and evaluates the surrounding circumstances. Be able to use techniques and strategies depending on the situation.

(g) Knowledge of "self". According to Kagan (1992), this kind of knowledge is related to teacher's views on their role, their responsibilities, training and qualifications, rights, working conditions, values and philosophy. It is connected to their professional development through reflection, to learning through their teaching experience.

According to Shulman (1987) pedagogical thought and action go through the following stages:

(a) Understanding/perception.

(b) Modification/transformation.

(c) Teaching.

(d) Evaluation.

(e) Feedback.

(f) Reflection.

The way teachers perceive their role defines not only their options but also the way they comprehend, interpret and use knowledge (Clandinin & Connely, 1987). Teacher's ability to organize educational process is relevant just as their personal traits and their knowledge of the fundamental didactic strategies of heterogeneous group education.

Teacher's pedagogical and teaching skills are also essential in their work. Skill that helps them to improve teaching of students with special educational needs is

knowledge. It's the way of teaching, of use of appropriate forms, methods and examples. The ability of group and individual teaching, the planning of activities, the differentiation of techniques and the knowledge of school curriculum and textbooks, such as the use of extra-curricular teaching material and the use of internet in order to facilitate the hole progress is necessary for a successful teach.

Understanding student's needs and trying to adjust teaching and provide information and teaching aids is another parameter. All educators should be in constant search for the most suitable teaching method, observe their students and make decisions, plan the educational process flexibly and consistently, adapt ways and strategies of teaching to the pupil's individual needs but in the same time be able to create attractive learning activities and new modern teaching techniques, which follow the latest developments.

In case of a pupil's difficulty to understand and learn or in case of failure educators should change or adjust their teaching style and methods in the new reality. An effective teacher allows students to make mistakes, helps them to discover themselves, to choose their field of interests, provides opportunities to express themselves and defend their opinions and thoughts. Although students want a possibility to feel independent in the learning process, they also need a methodically provided professional assistance. There is a clear need for teaching styles and methods which take in consideration students' age, abilities, experience.

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The differentiated instruction demands the reorganization of the classroom instruction and learning strategies so students with SEN have different options of accessing information. As Collision & Keith (2012) cited different methods of teaching, different ways of presenting ideas, new tools and strategies can lead to a better comprehension outcome, so as a result effective learning can take place. Students with learning issues can attend regular classrooms when they are given sufficient opportunities in order to participate actively and develop their capabilities with the help of special educators who design lessons that can match all students (Florian & Linklater, 2010).

High teaching results can be achieved through teachers' co-operation. Teamwork and collaboration are essential for all special educators just like the contribution from other teachers and educational professionals. According to Salisbury & Chambers (1994), collaboration and assistance might involve interactions between classroom teachers and speech specialists, counselors, school psychologists and special education specialists. Being open to proactive in "using" colleagues and other professionals as sources of learning and inspiration is beneficial.

Valuing learners diversity is considered as resource and an asset to education just like supporting all students and have high expectations and in the same time promoting the academic, practical, social and emotional learning of students and planning their success. Tomlinson (2005) sees the teacher as the professional in the classroom, a suitably trained individual who assists, mentors and leads each learner with the appropriate techniques towards his or her potential within the learning context.

Although heterogeneous classes include students with different abilities and cognitive level, teachers when organizing the classroom educational process, try to differentiate their tasks in a way that makes every student aim at his best personal result. In this way they encourage students to learn because the learning activity becomes more interesting. Educator's decision working in heterogeneous classes, should be based on

an inclination which target to the success of every single student by creating flexible, child-oriented educational environment and by involving them in the learning activity.

Working with parents and families, respecting their social and cultural background, and most of all listening to their observations regarding their child, is a powerful tool for teachers in special education. Berger (2004) claims that when there is a constructive scholastic and parental communication, teacher has better opportunities to be informed about his student with special educational needs and as a consequence improve his teaching.

Listening carefully to parents as they spend longer time with their child, showing confidence and making them feel welcome and not like they belong to a minority because their child has learning difficulties, is important. On a regular basis teacher has to inform them about their child difficulties in a clear and simple way and discuss the options together. Teacher's discretion, receptivity, positive attitude, consistence, sensitivity and empathy towards parent's feelings should characterize his entire work.

Every teacher and particularly teachers in the field of special education know that teaching is a learning activity and they have the responsibility for their own lifelong learning, for being open to new skills, methods, strategies and programs since changes and enhancement are constant and they need all the necessary skills to manage and respond to changing needs and demands throughout their careers.

Educator's personality traits, attitudes and beliefs, all these contribute to mainstream schools and conduct to an inclusive environment.

Traits such as flexibility in terms of the appearance of students, a sense of humor, a sense of fairness, patience, enthusiasm, creativity, care and interest in the students all have an important role to the teacher's effectiveness (Malikow, 2006).

Attitudes of teachers affect also their degree of commitment to their duties, the way of their teaching, the way they treat their students as well as how they perceive their professional growth (Darling-Hammond, 1999).

Teacher thanks to an everyday contact with his students knows about their abilities and their difficulties can develop a meaningful relationship with them support them in a psychological way and inspire them.

Teacher's ability to understand and to listen, to respect and accept students with SEN it's very important for a positive ambience and collaboration. He should be kind and not only have the role of scientist.

In order for the teacher to behave authentically and without adopting a stereotypical and hypocritical attitude towards students, personal balance is needed.

Self-knowledge and ability of self-perception, the better elaboration of his own feelings towards his student with special educational needs is essential.

Having a personal awareness of his experiences might help teachers to feel student's sentimental status and reactions and differentiate them from their own experiences in order to help them even more. Knowledge of self and contemplation are worth mentioning, in that they presuppose critical and careful reflection, on the part of the teacher, on his actions and self (Turner-Bisset, 2001). Unconditional respect, acceptance, lack of negative comments and in general a favourable attitude from teacher helps students to feel comfortable to open themselves and participate as they can in the teaching procedure. Student's diversity is to be respected, valued and understood as a resource that enhances learning opportunities and adds value to schools, local communities and society.

Another positive personal quality for inclusive and ordinary teacher is empathy, the ability to recognize and understand how students with special educational needs conceive the world and put themselves in their position. In this way teacher shows that he understands not only their thoughts, but also their sentiments. A teacher needs to be compassionate, but not violate student's dignity and inclined to sympathize them and aiming to help every single pupil to experience personal success and encourage to reach their limits. Teacher's openness to the pupils failure and their readiness not only to help, solve arising problems but also lead them towards success, it's crucial.

Student's confidence toward educators is also achieved by self-disclosure when teachers reveal aspects of their personality or personal facts which indicate teacher's confidence toward them.

McBer (2000), categorized educator's characteristics into five groups:

(a) Professionalism: commitment, confidence, trustworthiness, respect.

(b) Thinking: analytic and conceptual thinking.

(c) Expectations: disposal of achievement of high objectives, disposal for permanent comprehension of reality and undertaking of initiatives.

(d) Leadership: flexibility, accountability, passion for learning.

(e) Relations with others: fertile interaction with involved in the educational process, skills of common work, comprehension.

Teachers need to be able to experience success and failure together with their students, to feel their needs and defaults and build a relationship of partnership with them. Pupils need teachers who can create and promote a joyful microclimate in the class, a cheerful and good mood, creative and funny. It's important a joyful educational environment, a good sense of humor and an elevated mood.

From the other hand the inclusive education environment calls for teacher's creativity and resourcefulness. The ability to understand students' behaviour and why they react in certain ways or be able to analyse the reasons for their success and failure it's a critical factor.

The image of a good inclusive teacher demands a pedagogue who is constantly building elevated and work encouraging atmosphere and creating a favourable emotional frame during teaching.

Educators should make a clear division between a student's special educational need and his person, express equal and respectful attitude towards the personality of these pupils as to all the other ones. Although overseeing and ignoring difficulties a student faces due to his need is impossible, teacher's compassion should be rational and not restrict pupil's independence and efficiency.

Other key terms are teacher's insistence next to assistance, justness towards students, lack of favourite and the capacity of making fair and equal decisions.

Teachers in special education should aim to prepare their students for an independent life, teach them to use their possibilities and work for the best result. Observe difficulties and limits to capabilities that emerge in every student but at the same time teacher should avoid any sense of pity.

Teacher's role for the effectiveness of their pedagogical and teaching work but also for the empowerment of student's self confidence and self- esteem is crucial. School is a community and social environment that affects students self confidence. Classroom population is constantly changing and diversity cannot be seen as static concept. Educators should always be aware of helping every student with or without special educational needs by estimating and utilizing student's capabilities trying to attenuate any difficulties.

Love for their pupils and for their work, imagination, creativity, sense of humor, determination, strong will and a lot of enthusiasm, responsibility and desire of continuous work and self improvement are the elements for an effective teachers.

### *3.2. Initial High School Teacher´s Training on students with Special Educational Needs*

Educators of Secondary Education in Greece should be graduates of Higher Education, holding at least a first cycle degree. The same applies to teachers of Foreign Languages, Music, Arts and Physical Education, who receive initial training in University departments which provide education related to the subjects they teach.

Regarding the teaching staff in both compulsory and non-compulsory Secondary Education, prospective teachers receive their initial training at University Departments of the country, which provide studies relevant to the subjects included in Secondary Education curricula. The majority of these departments belong to the so-called Teacher Education Faculties.

More specifically, Teacher Education Faculties are university departments whose graduates are directly appointed in Secondary Education schools according to the decrees of Law 1566/1985 as in force, without requiring additional degrees or pedagogical training certificates. This is because, parallel to their studies at the corresponding university departments, they also receive pedagogical training.

Teacher Education Faculties include the university departments where teachers of the following specializations are trained: Theology, Greek Language and Literature, Mathematics, Physics, Foreign Languages, English, French, German, Italian and Spanish), Arts, Physical Education, Economics, Music, Theatre Studies, Methodology, Philosophy and History of Science, Information Technology at University (Law 4521/2018) and the School of Pedagogical and Technological Education (ASPETE). According to the Law 4186/2013, ASPETE consists of the Pedagogical Department and the Departments of Electrical Engineering Educators and Electronic Engineering Educators, Mechanical Engineering Educators and Civil Engineering Educators.

Most Pedagogical Departments and Teacher Education Faculties devote sufficient time to practical training in addition to theoretical education through teaching in real class conditions, or through participation in relevant laboratory exercises.

However, graduates of Higher Education Institutions, Universities or Technological Sector faculties that do not belong to primary or secondary education Teacher Education Faculties are considered as non - Teacher Education Faculty graduates. Consequently, graduates of non- Education Faculties, can acquire pedagogical and teaching proficiency in special education either during their studies or after the completion of their studies (consecutive model), by successful attendance of special training programs. Graduates of non-Teacher Education Faculties can, therefore,

acquire pedagogical and teaching proficiency either during their studies or after their completion.

In particular, Law 4589/2019 stipulates that pedagogical and teaching proficiency is certified:

With a certificate issued by a Department or collaborating Departments of Higher Education Institutions (HEIs), after attending a group of courses offered under a special curriculum or under the first cycle curriculum or in combination, and are addressed to students or graduates of departments.

By holding:

a degree from the Pedagogical Departments of a University,
a postgraduate degree or doctorate in education,
a certificate of pedagogical competence of the Higher School of Pedagogical and Technological Education (ASPETE), (Law 3027/2002), an ASPETE degree.

Initial Education for Secondary school teachers who attend Teacher Education Faculties lasts four years. Initial education is extended by a year for Music teachers, graduates of Higher Education Institutions (HEIs) Music Studies Departments, Arts teachers, mainly painting, who hold a diploma of the School of Fine Arts (ASKT). An extra year also applies to graduates of ASPETE programs, the attendance of which requires half a semester for the completion of a thesis and apprenticeship in their field of specialization.

At this point it should be clarified that the staffing of SMEAE, the Integration Departments, the KESY, the early intervention programs, of programs of parallel support and provision of teaching at home (article 16 par. 1 of law 3699/2008) it is made from Primary and Secondary school teachers, belonging to all in accordance with the provisions in force in general and vocational education, specializing in EAE.

The specialization in EAE is proved by:

- Doctoral degree in EAE or School Psychology, with basic studies in HEIs (Departments of Higher Education Institutions) of the country or with recognized as an equivalent and corresponding degree abroad or
- Postgraduate degree in EAE or School Psychology, with basic studies in HEIs of the country or with a degree recognized as equivalent and equivalent abroad or
- A two-year postgraduate degree at the EAE of Home Teaching or recognized as equivalent and degree abroad, with basic studies in A.E.I. of the country or with recognized as equivalent and corresponding foreign degree or

- University degree of the home country or recognized as an equivalent and equivalent foreign degree with at least in the five-year proven previous service in EAE.
- Especially for the Physical Education sector, in addition to the above, the specialization in EAE is additionally proven by TEFAA (University of Physical Education), of domestic Universities or recognized as a corresponding and equivalent degree of other with the main specialty "EAE" or "Special Physical Education" or "Special Physical Education-Therapeutic Gymnastics" or "Adapted Physical Education" or "Adapted Physical Education" or "Exercise in chronic diseases and Disability".

Pursuant to Law 4589/2019, appointment or employment in public education positions for teachers or members of the Special Education Staff (EEP), pedagogical and teaching Proficiency is not a necessary but an extra formal qualification, that can be certified before or after the appointment (consecutive model) of the prospective teacher (European Education and Culture Executive Agency).

The structures provided for Special Education are staffed by Secondary school teachers who, as appropriate (European Commission, 2021):

- are graduates of the Pedagogical Department of Special Education at the University of Thessaly with an orientation degree as a teacher or nursery assistant or graduates of the Department of Educational & Social Policy at the University of Macedonia with an orientation degree in education for people with special needs.
- have a degree in Special Education – EAE.
- have a postgraduate qualification or PhD in Special Education or School Psychology.
- have a two-year postgraduate teacher training in Special Education, offered by a national teacher-training institute (didaskaleio).
- have an attendance certificate from an annual training-specialization seminar in Special Education (EAE) (of 400 hours duration in order to be included in the waiting appointment/employment list). The certificate and seminar should be offered by a HEI (Departments of Higher Education Institution) or another public sector body, which is supervised from the Ministry of Education.
- have at least one year of teaching experience (10 months) in the EAE (in order to be included in the waiting appointment list).

- are educators and parents of children with a disability rate of over 67% (in order to be included in the waiting appointment list).

# Methodology

## *4.1. Defining the research problem*

Special Education Needs are one of the most important factors that affect students' school performance, often leading them to school failure, but also to the difficulty of socializing at school, as the phenomenon of social exclusion is common. For this reason, today it is imperative that children with Special Education Needs receive appropriate educational support in order to provide equal opportunities in education. Effective teaching of students with Special Education Needs requires, in addition to theoretical knowledge of information on the nature of learning disabilities, the development of skills to adapt teaching objectives and teaching aids according to the special needs of students. It is a demanding process, in which the teacher must take into account not only the subject that will be taught and the cognitive level of the student, but also the basic cognitive and emotional characteristics of the student. Numerous studies have shown that there are many difficulties in applying differentiated teaching practices, including lack or inadequacy of resources, limited time to achieve specific learning objectives, and lack of specialized training programs for teachers. In summary, the application of differentiated teaching in the modern school is a difficult task and at the same time a challenge for teachers. Some of the factors that hinder its implementation concern the teachers themselves, who feel insecure and have a lack of time or have not received the appropriate training and education. Other inhibiting factors concern the broader educational context and, more specifically, the attitude of the management, the dynamics of the school, the legal framework, the curriculum and the profile of the whole of each class.

The present research will highlight (1) the attitudes of teachers towards the co-education of students with Special Education Needs, will record the level of effectiveness of General Education teachers in managing students with Special Education Needs, (2) the areas in which General Education teachers face management problems students with Special Education Needs and (3) which teaching strategies are most applied by General Education teachers in cases of Special Education Needs students. From the literature review so far, no similar research has been recorded in Greece which takes into account the attitude of teachers towards inclusive education, their effectiveness in managing Special Education Needs students and in highlighting the teaching strategies that teachers use most. These results are expected to highlight (1) possible prejudices of General Education teachers towards students with Special Education Needs and (2)

those areas in which teachers face more difficulties in dealing with and managing students with Special Education Needs. Based on these results, there could be information of the competent bodies (Ministry of Education) in order to conduct targeted training seminars or training programs depending on the needs and difficulties of teachers. This could improve conditions in General Education schools regarding the management of students with Special Education Needs.

### *4.2 Objective*

The general objective of the research is to determine the access and the use of specific methods, tools and skills that Greek educators in general Secondary Educational System have, in order to facilitate the process of teaching of SEN students, from which derive the following research objectives:

- Describe the current state of educational centers (schools) in the Secondary Educational System regarding the attention of SEN students.
- To know the teacher's competences of Greek Secondary Education to attend to the SEN student body in the ordinary classroom.
- Detect the training needs of Greek educators in the Secondary Educational System in the basic competencies, in order to serve SEN students in the ordinary class.
- Propose a training plan which allows improving the attention towards SEN students of the Secondary Educational System, in the ordinary class.

These objectives emerge in order to answer potential research questions such as:

- What is the attitude of educators toward the inclusion of SEN students in the ordinary class?
- Do the educators of the Secondary Educational System have sufficient training to assist SEN students in the ordinary class?
- How effectively can they implement inclusive teaching and learning strategies in order to assist SEN students in the ordinary class?
- What are the personal qualities of educators that contribute most to assist SEN students?
- What are the educational needs related to your role as a teacher dealing with SEN students?

### *4.3 Research variables*

Depending on the objectives formulated and the research problem posed, the variables were established, grouped into six dimensions (see figure 1):

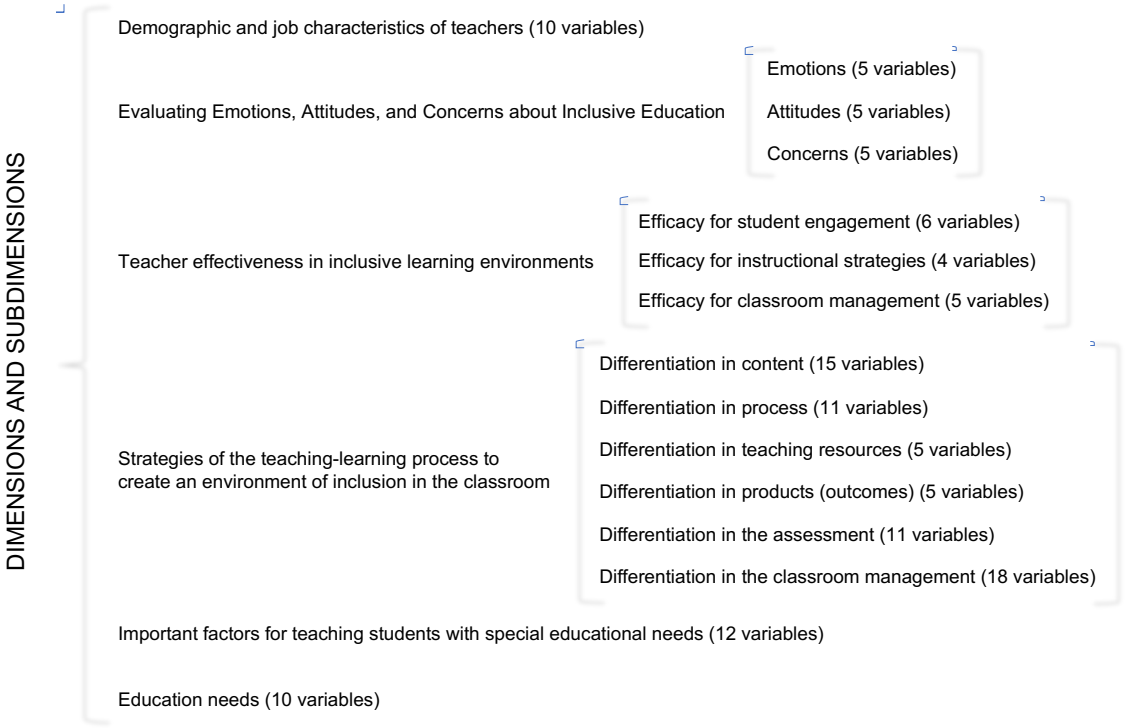
- Dimension 1. Demographic and job characteristics of teachers, composed of 10 variables.
- Dimension 2. Evaluating Emotions, Attitudes, and Concerns about Inclusive Education, consisting of 15 variables, grouped into 3 subdimensions:
  - Emotions, with 5 variables which measure the willingness of teachers towards inclusion and their feelings towards people with educational needs.
  - Attitudes, with 5 variables that address the acceptance of students with different learning needs in the ordinary classroom.
  - Concerns, with 5 variables about concerns about the implementation of inclusive practices.
- Dimension 3. Teacher effectiveness in inclusive learning environments, consisting of 15 variables, grouped into 3 subdimensions:
  - Effectiveness of student participation, with 4 variables on the actions of the teacher to favours the participation of students in their learning and families in the training of their children.
  - Effectiveness in the Instruction strategies, 5 variables that include the measures adopted by the teacher to guarantee the learning of the SEN students.
  - Effectiveness in Classroom Management, with 6 variables that raise the didactic orientations used by the teacher to achieve the inclusion of SEN students.
- Dimension 4. Strategies of the teaching-learning process to create an environment of inclusion in the classroom, consisting of 65 variables, organized into 6 subdimensions:
  - Differentiation in content, with 15 variables that allude to the adaptation of the content that is worked on in the classroom.
  - Differentiation in the process, with 11 variables that cover the actions carried out by the teacher in the development of teaching to create an inclusive environment.
  - Differentiation in didactic resources, with 5 variables that include the use of materials to promote inclusion in the classroom.
  - Differentiation in the results, with 5 variables on the adjustments made by the teacher to be able to assess the learning of students with SEN.

- Differentiation in the evaluation, with 11 variables that collect the measures adopted by the teacher in the evaluation process to ensure the needs of the students.
- Differentiation in the management of the classroom, with 18 variables about the actions or educational modes to achieve the inclusion of the NEE student body in the dynamics of the classroom.

- Dimension 5. Relevant factors to teach with an inclusive approach, with 12 variables.
- Dimension 6. Educational needs to attend students with SEN, with 10 variables.

**Figure 1**

*Study dimensions and subdimensions*




With respect to the first Dimension 1. Demographic and job characteristics of the teaching staff the variables were:

- Gender.
- Age.
- Area in which he serves as a teacher.
- Position in which you serve as a teacher.
- Years of experience as a teacher.
- Average number of students taught.
- Highest academic degree earned.
- Special Education Training.

- Students with special educational needs in the classroom.
- Typologies of student-specific educational needs.

In dimension 2. Evaluation of the emotions, attitudes and concerns of teachers about inclusive education, the following subdimensions and corresponding variables were established:

-> Subdimension 1. Emotions

- Fear of having to work students with special educational needs in the classroom.
- A tendency to serve SEN students quickly and quickly.
- Concern about having students with disabilities or SEN in the classroom.
- Fear to look directly at a person with a disability.
- Difficulty overcoming the initial impression of meeting people with severe physical disabilities.

-> Subdimension 2. Attitudes

- Consideration of relevance to regular classes of students with difficulty expressing themselves verbally.
- Consideration of regular class membership of attention-deficit students.
- Consideration of regular student class membership requiring alternative communication systems.
- Consideration of regular class membership of students who frequently suspend exams.
- Consideration of regular class membership of students who need an individualized academic program.

-> Subdimension 3. Concerns

- Concern for inclusion in the classroom of students with special educational needs.
- Difficulty providing adequate attention to all students in an inclusive classroom.
- Concerns about the increased workload of having students with disabilities in the classroom.
- Concern about stress caused by having SEN students in the classroom.
- Concerns about the training needed to teach students with disabilities.

As in the previous dimension, dimension 3. Teacher effectiveness in inclusive learning environments was composed of the following subdimensions and variables:

-> Subdimension 1. Effectiveness for instructional strategies

- Helps NEE students appreciate the value of learning.

- Encouraging the motivation of students with SEN who are not interested in the lesson.
- Helps NEE students believe in their homework progress.
- Assisting families of SEN students to support their children's progress in school.

-> Subdimension 2. Effectiveness for classroom management

- Use of a variety of assessment strategies for SEN students.
- Adaptation of the questions that are asked to students with SEN.
- Implementation of alternative learning strategies for NEE students.
- Encouraging student creativity.
- Adapting the explanations that the teacher makes in class to the needs of the NEE student body.

-> Subdimension 3. Effectiveness for students engagement

- Ability to implement a classroom management system for SEN students.
- Monitoring of the compliance of SEN students with the classroom rules.
- Efficiency in the management of students with disruptive behaviours.
- Promotion of compliance with class rules by SEN students.
- Ability to calm the disturbing or noisy student.

Dimension 4. Strategies of the teaching-learning process to create an environment of inclusion in the classroom were established with the following subdimensions and variables:

-> Subdimension 1. Differentiation in content

- Appropriateness of lessons before each class.
- Incorporation of differentiated instructional processes in teaching planning.
- Setting clear and specific lesson goals.
- Specify the appropriate time interval by learning objective.
- Consideration of individual differences and variations among students in the light of the impact it may have on student behaviour within the classroom.
- Adjusting educational content to meet educational needs.
- Offering support to students and strengthening problem-solving skills.
- Consideration to identifying the main idea(s) of the topic or unit.
- Scope analysis to be in line with the abilities and needs of different students.
- Alignment of the standard level that every student should achieve.
- Presenting content to students at different speeds, without engaging all students at the same time.

- Consideration of cognitive levels among students: Presentation of content at different levels according to the needs of the students.
- Leverage the opportunity for learners to immerse themselves in a variety of activities that motivate their minds and increase their attention.
- Diversification of pedagogy and the way in which content is presented in consideration of students' levels and abilities.
- Realization of the synthesis of part of the existing information within the content provided, without compromising the main ideas that will be taught within this topic.

-> Subdimension 2. Differentiation in the process

- Use of activities that are compatible with and appropriate to the skills students have.
- Implementation of special plans for students (regular classroom activities and complementary activities for students with SEN).
- Preparing special assignments for students.
- Additional assistance to students with learning disabilities.
- Setting the amount of time students may need to perform certain tasks.
- Setting different levels of expectations to complete a task.
- Animation of students to interact and participate in order to achieve the incorporation of the NEE students in the subject being worked on.
- Using technology-based learning with NEE students.
- Training small groups to explain the necessary ideas and skills.
- Use of diversified learning strategies that adapt to different pedagogies and fulfill the objectives pursued.
- Offering resources and information to motivate students' learning initiatives.

-> Subdimension 3. Differentiation in teaching resources

- Leveraging and using technological resources to help increase motivation and incentives among students.
- Using digital tools for writing and text, spelling and grammar, and media to aid reading.
- Use of audio-visual systems to read texts aloud.
- Use of different learning resources that serve the environment in a pleasant way that attracts students (audio-visual).
- Leverage different types of learning resources that serve the environment in a pleasant way that attracts students (books, magazines, photographs).

-> Subdimension 4. Differentiation in products

- Offering students to participate in individual or group activities.
- Offering students to present their productions verbally.
- Offering students to present their productions verbally (oral presentation, singing, poetry recitation).
- Offering students to present their productions in a written manner.
- Offering students to present their productions through acting.

-> Subdimension 5. Differentiation in the assessments

- Conduct of continuous and varied assessments of students: pre-and post-assessments.
- Adoption of evaluations from other teachers or peers.
- Use of a grade scale (rubrics) to evaluate students.
- Making copies of test papers in a large font to suit the needs of the students.
- Performing student reading of questions.
- Grant a break in the middle of the evaluation interval.
- Incorporation of some picture or picture to help students understand the questions.
- Evaluation of students according to fundamental and referenced indicators.
- Using individual and group assessments.
- Grant some students extra time to answer questions.
- Consideration of the task and test paragraphs when classifying through the classic educational taxonomy of Bloom (remember, understand and apply).

-> Subdimension 6. Differentiation in the classroom management

- Distribution of instructions in different ways to avoid chaos.
- Grouping of students in a homogeneous manner in terms of abilities.
- Distribution of students into heterogeneous groups in terms of skills.
- Monitoring student achievement and cognitive progress within the student portfolio.
- Preparing a plan for students who need more time than their peers to accomplish their homework.
- Observation of student performance and student direction.
- Identify the special skills and abilities of each student to try to answer the two questions: What does each student know? and what does each student need?
- Clarify students about permitted mobility limits.
- Training students to take responsibility for their learning by doing their homework.

- Student training in the reorganization of classroom furniture after activities.
- Training of students in skills for conducting activities, monitoring of those activities, and knowledge of their results.
- Concrete time to carry out the primary concepts and design appropriate activities per student.
- Planning how the student should present the work done.
- Specify the rules and instructions for performing an activity.
- Focus on a limited number of concepts to ensure students understand them.
- Leveraging opportunities for group, binary or individual work.
- Proposed basic rules for students that will begin and end at the beginning and end of the lesson, respectively.
- Creation of teaching materials to meet the needs of students.

In turn, dimension 5. Relevant factors for teaching with an inclusive approach, conformed to the variables:

- Solidarity and cooperation with colleagues
- Specialized university education
- Further Education, Vocational Training
- Solidarity and communication with parents
- Patience and consciousness towards children / adolescents
- Awareness about the psychological and social problems of students.
- Timeframe for good curriculum implementation
- Means and materials to achieve the objectives of the curriculum
- Specialized knowledge, skills and abilities to promote student personality development.
- Awareness
- Importance of diversity
- Importance of inclusivity

Finally, dimension 6. Educational needs to serve students with SEN, it was formed by:

- Need for training in general psychology.
- Need for training in school psychology.
- Need for training in developmental psychology.
- Need for training in teaching methodologies.
- Need for training in pedagogical theories.
- Need for training in learning theories - motivation.
- Need for training in philosophy of education.

- Need for training in theories of language development.
- Need for training in special education.
- Absence of training needs.

### *4.4 Research design*

There are many ways to collect data for each specific topic being investigated. The researcher chooses a topic to investigate based on his theoretical interest, raises some hypotheses, and chooses the specific variables to study. The information gathered about these variables is recorded in numbers, that is, in quantitative terms. This information is capable of statistical analysis in order to determine whether the original hypotheses are confirmed and contribute to the promotion of the theory in the specific scientific field. This description essentially defines 'quantitative research' (Leedy & Ormrod, 2015). Qualitative research deals with how people understand the world and how they perceive events from their own perspective. It allows in-depth analysis of the experiences of a small number of people. It uses many sources of information to study a phenomenon as it evolves in its 'natural' space. Data analysis involves descriptive and interpretive methods and the researcher interacts with the research environment (Gorard, 2001).

The use of quantitative or qualitative research methods has been linked to different epistemological positions. The first approach emphasizes the precise measurement and reproducibility of research results by other researchers, while the second emphasizes the subject's construct of meaning as reality is social construction. Both quantitative and qualitative research methods can be useful in helping researchers understand educational and psychological phenomena, regardless of their epistemological beliefs, to the extent that they guarantee certain basic quality criteria (Leedy & Ormrod, 2015).

The design of the research process was based on the characteristics of the issue under consideration which essentially dictated the choice of the particular research strategy. This research is primarily a naturalistic-descriptive, as it aims at simply recording and presenting the various factors related to the adoption of perceptions and attitudes of teachers of secondary education without any possibility of defining their nature. whether it is a causal relationship or a simple statistical contribution. In other words, the aim of the research was to define the main dimensions of the research problem. The descriptive strategy followed is common in research dealing with issues for which there is no rich literature, as in this case, and has the advantage of being able

to study multiple variables (in pairs or even in triplets, etc.), looking at multifaceted issues.

As to the practical application of the results, the research can be described as applied as its purpose is to draw conclusions that will help in the practical methods, tools and specific abilities that general educators of the Secondary Greek educational system have for the teaching-learning process of students of special educational needs.

In terms of the type of empirical data, the research is characterized as quantitative, since the perceptions of the subjects (teachers) expressed as answers to the various questions - mostly "closed" - are concentrated and reduced to specific attitudes. gradations and therefore can be expressed in quantitative - numerical terms during statistical analysis. Even the answers to some "open-ended" questions are analyzed and coded into categories, so that again the findings can be expressed in percentage by answer categories (Creswell, 2014).

In the present study, the quantitative method was considered to be the most appropriate to capture the views of the target population. According to Creswell (2014), the basic principle of using the quantitative approach is that it produces quantitative data that can be processed statistically. On the other hand, one aspect of the quantitative approach helps to summarize descriptive information. Similarly, the quantitative approach was chosen because of its validity in data analysis (Creswell, 2014).

The quantitative approach uses statistical analysis to arrive at a specific conclusion while allowing for comparisons between groups with different characteristics, for example comparisons of views by age group or years of service. It was also preferred because of the shorter time required to collect and analyse data compared to the qualitative method (Creswell, 2014). The quantitative methodology approach was adopted to answer the research questions posed in the introduction of this thesis. Quantitative research attempts to study a large number of individuals. In this way, it is also possible to study the responses of many people in different contexts.

Krosnick et al., (2014) noted that quantitative research exaggerates individuals 'common and standard views and ignores actual individual perspectives, while qualitative research exaggerates individual views and partially neglects the structural forces that shape individuals' views and actions. As mentioned earlier in the literature review, the phenomenon under consideration - teaching-learning process of students of special educational needs - begins as a global commitment, which subsequently becomes relevant in many countries around the world.

The quantitative methodology should specify the type of research design to be followed by the researcher. Research design in research concerns the approach adopted by the researcher in order to answer the research questions that have been asked (Creswell, 2014). Thus, it is important for the researcher to effectively accomplish the objectives of the research that the researcher chooses the most appropriate design (Creswell, 2014).

To investigate the questions listed in previous section quantitative research was selected based on an exploratory cross-sectional non-experimental research design. Unlike descriptive research, non-experimental research may contain variables and measurements in which the researcher does not intervene and simply study and record the views and perceptions of the participants at the given time of research. One important reason that non-experimental research is popular in the social sciences is that not many variables in the field of social research are possible to change or modify because they relate to characteristics of the characteristics, such as the gender of teachers, their working status, their work experience or other personal / professional (Groves et al., 2004). In addition, in a non-experimental study, the main purpose is to record how a phenomenon works or the reasons and causes observed.

The purpose of non-experimental research is to test and confirm one or more theories about the phenomenon being studied (here access and use of methods, tools and specific abilities that general educators of the Secondary Greek educational system have for the teaching-learning process of students of special educational needs). The hypotheses in a non-experimental research based on the literature review and through the research results are an attempt to confirm the theory (Creswell, 2014).

This research addressed the following phases of research:

- Phase 1. Identification of the research problem
- Phase 2. Research planning
- Phase 3. Fieldwork
- Phase 4. Data processing and analysis
- Phase 5. Drawing conclusions and preparing the research report

### *4.5 Population and Sample*

Depending on the research objectives, there were two informant groups. The first group was constituted by the Secondary Education teachers of the entire prefecture of Kavala, and the second was constituted by the directors of these secondary schools.

The research population was designated to be teachers serving in secondary education units. In Greece and teachers serving in special education units in Greece. According to Creswell (2014) sampling can be considered a key feature of a research. The purpose of the empirical study was not to present a representative picture of teachers 'attitudes, but to find a way of measuring teachers' attitudes towards the inclusive education of students with special educational needs. This general objective of the present study has an impact on the sampling strategy used in the present study.

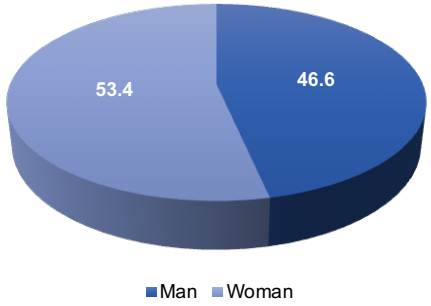
In general, probability sampling strategies and probability sampling strategies are differentiated, as described by Creswell (2014). The probability sampling type attempts to derive the sample so that it can be interpreted as a sufficient representation of the population. In these samples, as suggested by Creswell (2014), the absolute measurement results (eg, the scoring results obtained) will be allowed to be interpreted. The non-probability sampling type draws the sample in such a way as to include a variety of "relevant" individuals, but likely in a different composition than the entire population. In these samples, a picture of the general attitude of the participants can be obtained without generalizing the conclusion to the whole population (Creswell, 2014). In the present study, the general strategy was to carry out convenience sampling (Creswell, 2014).

### 4.5.1. Teachers at Secondary Schools.

The research population was designated to be teachers serving in secondary education schools in Greece and teachers serving in special education units in Greece. The group of teachers who participated in the study was from 339 of the 39 Greek secondary schools in Kavala Prefecture. Of the total population, 53.4% were women and 46.6% man (see figure 2).

**Figure 2**

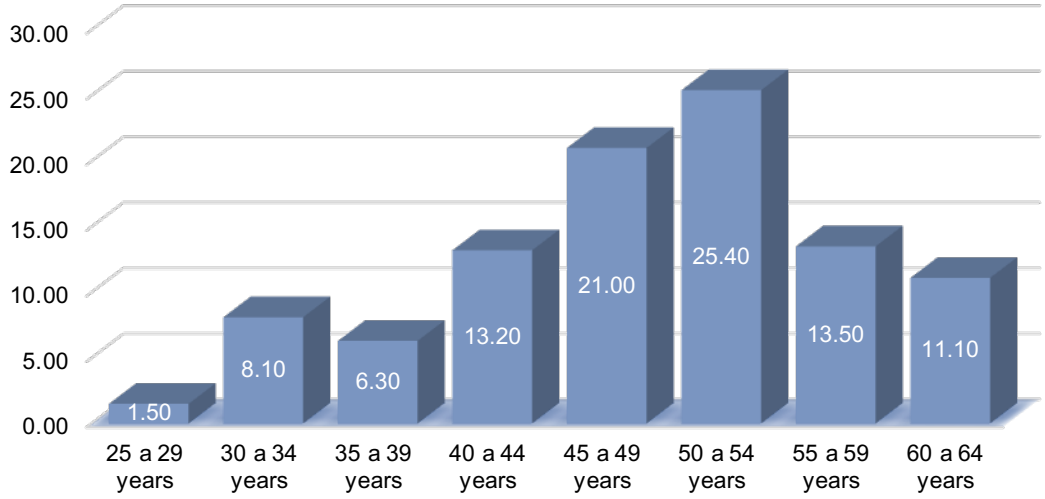
*Distribution of the sample according to sex*



Analysis of data on the age distribution of teachers showed that the average age of the participants was 48.3 (SD=8.4) years, whose ages ranged from 25 to 64 years (see figure 3).

**Figure 3**

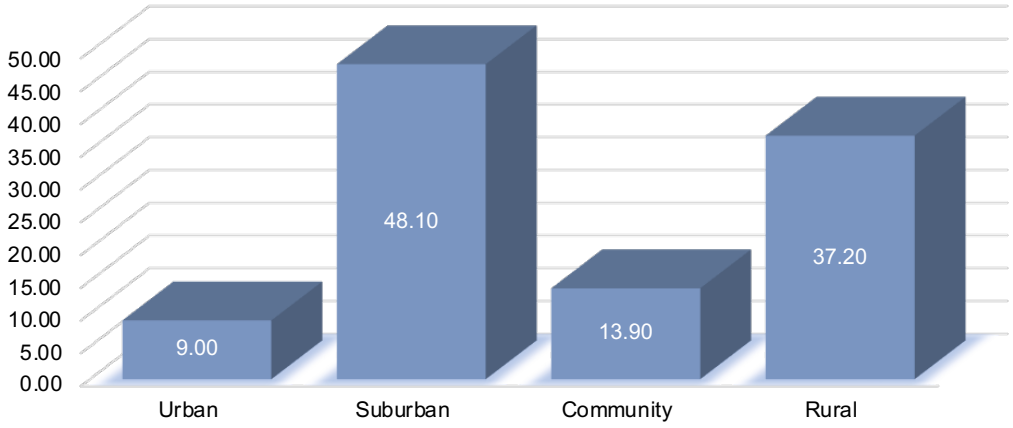
*Distribution of the sample according to age*




As for the area of work, most teach in suburban secondary schools (48.10%) or in Rural (37.20%). The lowest participation was recorded by teachers working in community (13.90%) or urban (9%) (see figure 4).

**Figure 4**

*Distribution of the sample according to the work area*

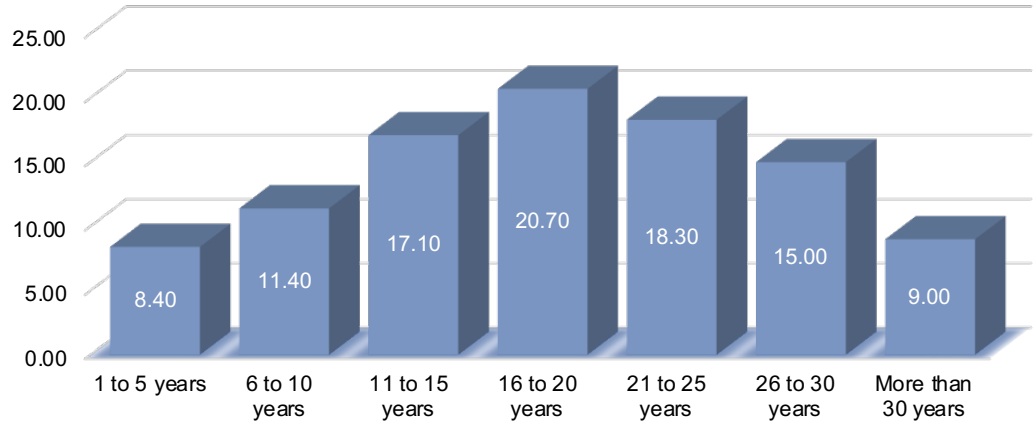



The results regarding the distribution of the teachers' years of service showed that the teachers who participated in the research had an average of 18.9 (SD= 8.7) years of service. The predominant group is those between 16 and 20 years old (20.10%),

the smaller group being those with less experience time, between 1 and 5 years old (8.40%) (see figure 5).

**Figure 5**

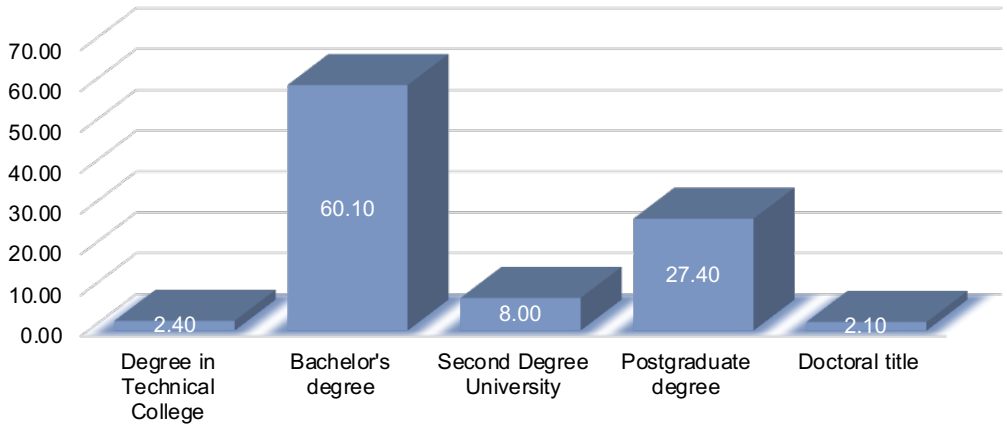
*Distribution of the sample according to the years of experience as a teacher of Secondary Education*




The majority of teachers in the sample held Bachelor's degree (60.10%) while a significant percentage of them held Postgraduate degree (27.4%). A smaller percentage of teachers were holders of Degree in Technical College (2.4%), holders of second degree (8%) and holders of doctoral degree (2.1%) (see figure 6).

**Figure 6**

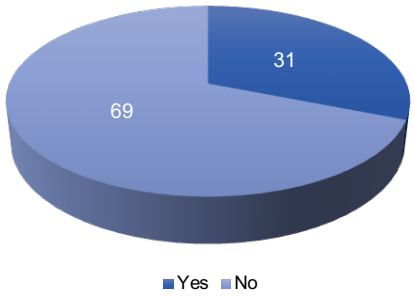
*Distribution of the sample according to academic education*



Of all the teachers who participated in the research had received special education training, 31% and 69% of them report not having special education training (see figure 7).

**Figure 7**

*Distribution of the sample according to especial education training*

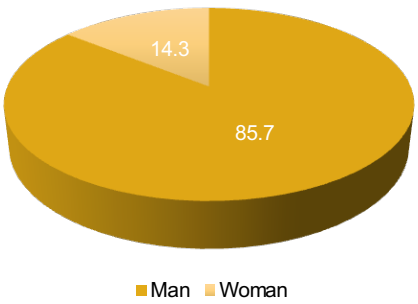



### 4.5.2. Directors of Secondary Schools

Regarding the directors of the schools interviewed, 14 of them collaborated, of which 85.7% were women and 14.4% men (see figure 8).

**Figure 8**

*Distribution of the sample according to sex*



Their ages ranged from 33 to 63 years, with years of experience as teachers being very diverse in the group of teachers interviewed (see figure 9 and figure 10).

**Figure 9**

*Distribution of the sample according to age*

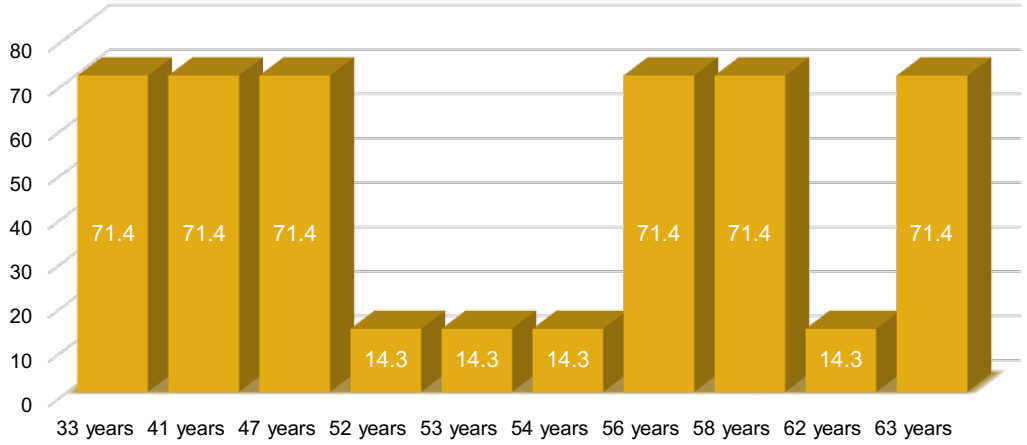
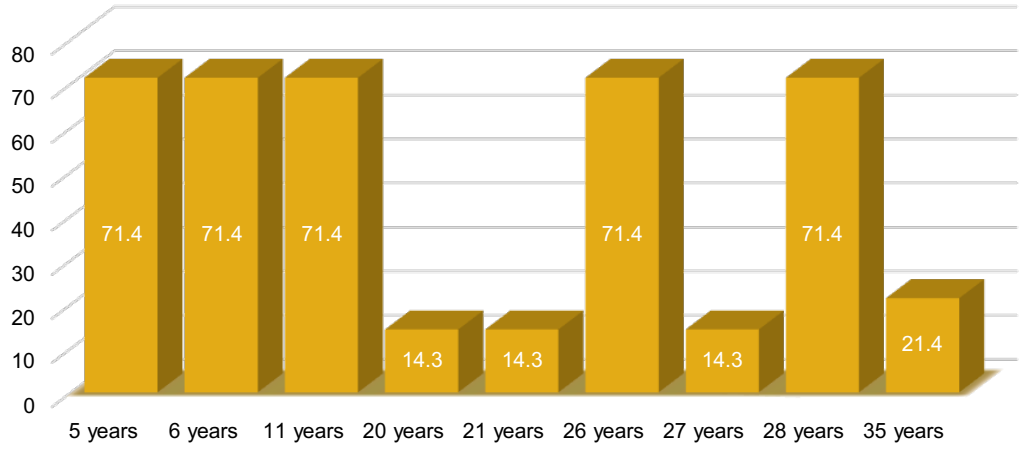



**Figure 10**

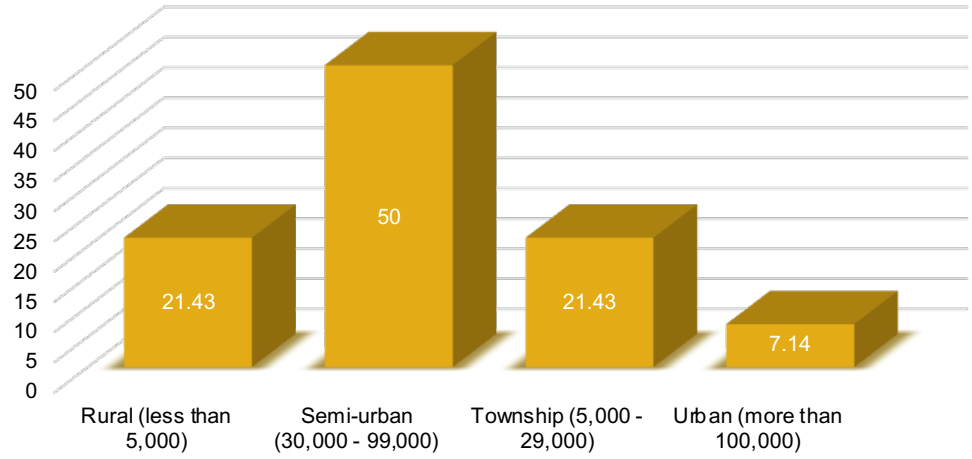
*Distribution of the sample according to the years of experience as a teacher of Secondary Education*



As for the area in which they work, 50% were from a semiurban area, 21.43% of people work in a rural area, as well as another 21.43% in township, with only 7.4% working in an urban area (see figure 11).

**Figure 11**

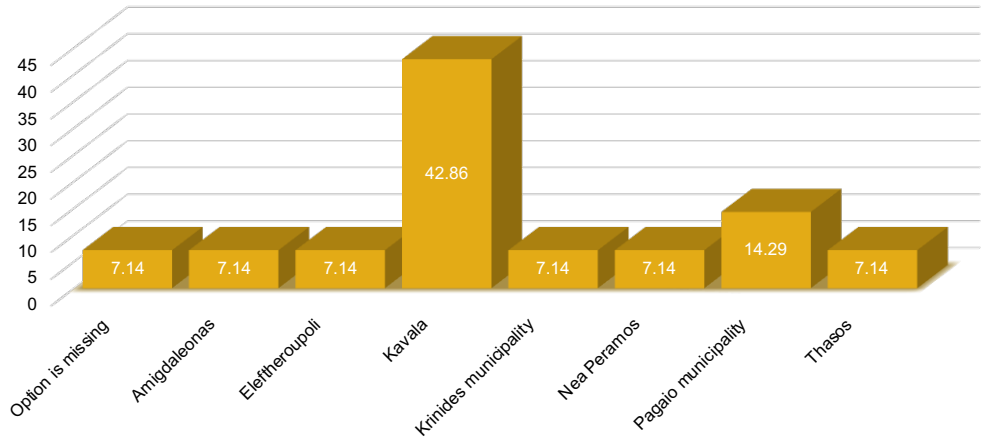
*Distribution of the sample according to the work area*




Specifically, 42.86% directors said they were working in Kavala, 14.29% in Pagaio township, while the remaining directors said they were working in Amigdaleonas, Eleftheroupoli, Krinides township, Nea Peramos and Thasos (7.14% respectively) and another 7.14% did not respond to this question (see figure 12).

**Figure 12**

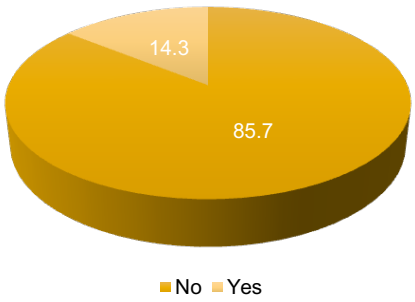
*Distribution of the sample according to school area*



Finally, most of the directors do not have training that qualifies them to attend students with special educational needs (85.7%), a minority (14.3%) does have this training (see figure 13).

**Figure 13**

*Distribution of the sample according to especial education training*




### *4.6 Information collection tool*

To fulfill research purpose, the survey technique was used for the collection of information. Survey research is defined as "the collection of information from a sample of individuals through their responses to questions" (Check & Schutt, 2012, p. 160). This type of research allows for a variety of methods to recruit participants, collect data, and utilize various methods of instrumentation. Survey research can use quantitative research strategies (e.g., using questionnaires with numerically rated items), qualitative research strategies (e.g., using open-ended questions), or both strategies (i.e., mixed methods). As it is often used to describe and explore human behaviour, surveys are therefore frequently used in social and psychological research (Singleton & Straits, 2009).

Depending on the information to be collected, different instruments were used for each of the reporting groups. The questionnaire was used with the teachers of the schools and the interview was used for the directors of the schools.

The questionnaire is a research tool that consists of a series of questions (or other types of prompts) in order to gather information from the respondents. The questionnaire was invented by the Statistical Society of London in 1838. Although questionnaires are often designed for statistical analysis of responses, this is not always the case. Questionnaires have advantages over other types of surveys in that they are inexpensive, do not require as much effort from the questioner as oral or telephone surveys, and often have standardized answers that make data collection simple. However, these standard answers may frustrate users as the possible answers may not

accurately represent their desired answers. Questionnaires are also limited by the fact that respondents must be able to read and answer the questions. Thus, for some demographic groups, conducting a survey through a questionnaire may not be specifically feasible (Saris & Gallhofer, 2014).

The second research instrument was a pre-coded interview. The qualitative research interview tries to describe and find the meanings of central themes in the life world of the interviewees (Kvale, 1996). Cohen et al. (2000, p. 267) said that “the interview is not simply concerned with collecting data about life: it is part of life itself, its human embeddedness is inescapable”.

### 4.6.1 Questionnaire

The construction of the questionnaire for teachers attended to several phases:

- Phase 1. Review of instruments that will fit the purpose of the research, of which three questionnaires were identified. The first, on feelings, attitudes and concerns about Inclusive Education, created by Forlin et al. (2011), Appendix A. The second, the Tschannen-Moran & Woolfolk Teachers' Sense of Effectiveness Questionnaire (2001), Appendix A. Finally, the Strategy Tools for Teaching Students with Special Educational Needs Tool, from Siam & Al-Natour (2016), Appendix A.
- Phase 2. Delineation of issues that will help respond to research objectives with respect to factors that teachers consider important for teaching students with special educational needs and the training needs for serving SEN students in the regular classroom.
- Phase 3. Instrument validation. Based on the use of tools that have undergone a validation process, it was wanted to check the reliability of the same as the population under study varied. To this end, the instrument was implemented in a representative sample of secondary education teachers in Kavala Prefecture, Greece (see Appendix I).
- Phase 4. Definitive construction of the instrument. Depending on the results obtained, the questionnaire to be implemented was defined.

The final questionnaire was composed of a total of 127 elements distributed in six dimensions that collect the variables under study.

The first part of the questionnaire aimed to record the demographic characteristics of teachers. To this end, in dimension 1, 9 issues were recorded: sex, age, place of work, position, years of service, number of students in the departments

they teach, educational level, training in Special Education and number of students with special educational needs who attend the department to teach classes.

The second dimension included a total of 15 questions related to the evaluation of Emotions, Attitudes and Concerns about Inclusive Education and more specifically with the inclusion of students with special educational needs. The questions were based on the Sentiments, Attitudes and Concerns about Inclusive Education (SACIE-R) (Forlin et al., 2011, Appendix A). The original instrument contained data from three pre-existing surveys: the scale of attitudes toward exclusive education, a modified version of the "Interact with People with Disabilities" scale and concerns about Inclusive Education.

This tool has undergone many improvements to produce the current 15-item scale, which includes three sections. The "Emotions" section measures how teachers feel they are dealing with people with disabilities, the "Behaviours" section measures how teachers accept students with different learning needs, and the "Concerns" section addresses the concerns the teachers may have about inclusive education. SACIE-R uses a Likert scale with options for the following options: 1 (Strongly disagree), 2 (Disagree), 3 (Neither agree or disagree), 4 (Agree) and 5 (Strongly agree).

The third dimension included a total of 15 questions related to the levels of teacher effectiveness in terms of their effectiveness in teaching. The questions were based on the Teachers' Sense of Effectiveness Scale (TSES) (Tschannen-Moran & Woolfolk, 2001; Appendix A). TSES includes three separate, but relevant factors related to three areas of educational teaching: Classroom Management (CM), Student Engagement (SE), and Instructional Strategies (IS). In its abbreviated form, TSES includes 15 questions with a scale of 1 (nothing), 2 (Very Little), 3 (Moderate), 4 (Quit a bit) and 5 (Very much).

To determine the Efficacy in Student Engagement, Efficacy in Instructional Practices, and Efficacy in Classroom Management subscale scores, unweighted means of the items that load on each factor computed.

The fourth dimension included questions related to strategies for teaching students with special educational needs. The questions were based on “Strategies for teaching students with special educational needs tool” (Siam & Al-Natour, 2016; Appendix A). The items of tool distributed into six domains: Differentiation in content (15 items), Process (11 items), Teaching Resources (5 items), Outcomes (5 items), Assessment (11 items), Classroom Management (18 items). It was organized on a rating scale of 1 (Strongly disagree), 2 (Disagree), 3 (Neither agree or disagree), 4 (Agree) and 5 (Strongly agree).

The fifth dimension included a total of 12 questions on factors considered by teachers to be important for teaching students with special educational needs, with scalar answer options with values 1 (Not at all), 2 (A Little bit), 3 (Moderate), 4 (Remove a bit) and 5 (Very much).

Finally, the sixth dimension of the questionnaire included a total of 10 questions about the education/training needs of teachers, in order to attend to students with special educational needs in the ordinary classroom. The answer options were: 1(Not at all), 2 (A little bit), 3 (Moderate), 4 (Quit a bit) and 5 (Very much).

The questionnaire was translated into Greek so that all teachers in secondary schools could understand the issues raised. This was implemented in paper support, in a self-administered manner with the presence of the researcher.

### 4.6.2 Interview

In order to be able to respond to the first of the objective, an interview was designed by which the directors of the secondary schools could provide the necessary information on the attention of students with special educational needs in their respective institutions.

The interview consisted of 23 questions. The first 6 questions were regarding participants demographic characteristics, while the next 4 questions were regarding the school they work in. The rest 13 questions of the interview were regarding the special education and the training and resources they are provided with. Specifically, the questions are the following:

- What is your gender?
- What is your age
- How many years of professional experience do you have in this field?
- Are you trained in special education?
- Please note the answer that best describes the area in which you are serving as Director this year.
- In which area of the Prefecture of Kavala do you serve as a Director or in a specialized position / service?
- How many special education teachers teach in your school?
- How many students does the school in which you serve as Principal have?
- How many of these students are students with special educational needs?
- What educational needs do students with special educational needs have?

- Do you consider the level of information available to the school staff on issues or problems related to students with SEN?
- What is the main source of information your school teachers have about SEN students?
- How often do you meet as a school principal and general and special education counselors?
- How often do you and your parents meet with SEN students?
- What resources, alternative technologies, reading and writing programs, audiovisual systems, Braille writing system does your school provide for students with SEN?
- Do you think that the teachers serving in your school need training to attend students with SEN?
- If your school offers teacher training and education courses on dealing with students with SEN, what issues have been developed?
- How often does your school have the opportunity to organize seminars, educational programs and activities for teachers who wish to be informed about the problems related to ESA?
- What is the main body that supports you in the education of students with SEN?
- Is there any kind of information for students about SEN issues that they can address in case they have special educational needs?
- For how many years has the school in which you serve as Principal been supported by the Ministry of Education in matters of students with SEN?
- To what extent are you satisfied with the funds allocated by the Ministry of Education to your school and related to Special Education?
- In which areas of Special Education are these funds invested?

### *4.7 Data analysis strategies*

For the analysis of the data, the nature of the information collected was taken into consideration, the opinion of the teachers collected through the questionnaire (quantitative) and the contributions of the directors of the schools through the interview (qualitative). The treatment and analysis of the qualitative data was carried out with the data being placed in a matrix of the SPSS statistical program, version 27, and for the qualitative data the NVivo program, version 12 was used.

The parametric study of the questionnaire was carried out through an internal consistency analysis, through the calculation of Cronbach's alpha coefficient and the

analysis of the discriminating capacity of the elements, using the Student's t test among the means of the established groups.

With regard to the tests that were applied to the data collected by the questionnaire, in order to respond to the objectives of the study, the analysis of the basic statistics of the elements by dimensions, specifically frequencies, percentages, means and standard deviation, was initially carried out.

On the other hand, to check the possible existence of significant differences between the various groups and in the variables of each of the dimensions. To this end, a Student t-test was applied for independent samples according to the variables Gender, Training in Special Education and Position, as well as the analysis of variance, one-way ANOVA for three or more independent samples, according to the variables Age and Years of experience as teachers, with confirmation by Scheffé's post hoc test.

Then, taking into account the large number of variables that make up the dimensions and subdimensions of the analysis, the summation of the items that make up each of them was carried out, calculating the new variables of the set. These were: Emotions, Attitudes, Concerns, Effectiveness of student participation, Effectiveness in instructional strategies, Effectiveness in classroom management, Differentiation in content, Differentiation in process, Differentiation in teaching resources, Differentiation in results, Differentiation in evaluation, and Differentiation in classroom management.

Correlational tests were applied to them to help determine the factors affecting Emotions, Attitudes and Concerns of the teachers to attend to the diversity of the students in the ordinary classroom and of multiple regression in order to establish the relationship between the different variables and their degree of interdependence.

Regarding interviews analysis, thematic analysis was chosen, in order to identify the themes that came out of the answers.

# Result

This chapter presents, in a descriptive way, the results of the statistical analysis of data in response to the objectives of the study. First, it shows the current status of schools in the Greek Secondary Education System in terms of the care of the NEE students, based on information gathered from teachers in secondary education school, as well as the contributions of the directors of these institutions.

Secondly, the results obtained from the questionnaires implemented to the teachers at the schools are described, sequenced by each of the dimensions: Evaluating Emotions, Attitudes, and Concerns about Inclusive Education; Teacher effectiveness in inclusive learning environments; Strategies of the teaching-learning process to create an environment of inclusion in the classroom; Relevant factors to teach with an inclusive approach y Educational needs to attend students with SEN.

Finally, the results of the inferential analysis performed based on the socio-demographic and professional variables of the teachers are presented, as well as the correlational study carried out on the variables resulting from the sum of the items in each dimension.

## *5.1. The current state of educational schools in the Secondary Educational System regarding the attention of SEN students.*

A first approximation of the current state of the Greek schools, as discussed in the section on the description of the sample, it reveals that 31% of teachers in schools have training in the care of the SEN students and 69% of them declare that they have no training in special education.

In addition, the average number of students per classroom group was 22.6 (SD=7.940), with a mean of 3.7 students with SEN (SD=4.219) (see table 1).

**Table 1**

*Average number of students per classroom and students with SEN*

| | Mean | SD | N |
|---|---|---|---|
| Number of students | 22.6 | 7.940 | 333 |
| Number SEN students | 3.7 | 4.219 | 337 |

With respect to the casuistries presented by the SEN students, 92.6% of students had learning difficulties, 58.7% behavioral problems and 15.3% of the sample had

students with mental dysfunction, being other casuistries less representative (see table 2).

**Table 2**

*Students' specific needs*

| | Yes | | No | | Total | |
|---|---|---|---|---|---|---|
| | f | % | f | % | f | % |
| Learning difficulties | 314 | 92.6 | 25 | 7.4 | 339 | 100 |
| Behavioural problems | 199 | 58.7 | 140 | 41.3 | 339 | 100 |
| Disabilities | 10 | 2.9 | 329 | 97.1 | 339 | 100 |
| Mental dysfunction | 52 | 15.3 | 287 | 84.7 | 339 | 100 |
| Deafness and/or Hearing Blindness | 1 | 0.3 | 338 | 99.7 | 339 | 100 |
| None of the above | 5 | 1.5 | 334 | 98.5 | 339 | 100 |
| All the above | 1 | 0.3 | 338 | 99.7 | 339 | 100 |

On the other hand, from the interviews carried out with the directors of the school, the results indicate the small number of teachers with training in special education, coinciding with the results obtained from the teaching staff (see table 3).

**Table 3**

*Distribution of teachers with SEN training*

| | f | % |
|---|---|---|
| 0 | 3 | 23.1 |
| 1 | 3 | 23.1 |
| 2 | 3 | 23.1 |
| 3 | 2 | 15.4 |
| 4 | 2 | 15.4 |
| Total | 13 | 100 |

Regarding the number of students in each school, 61.5% of the participants said that their schools had from 201 to 300 students, 23.1% had from 101 to 200 students, with very few indicating having from 0 to 100 students, from 201 to 300 students and more than 300 students (7.7% respectively) (see table 4).

**Table 4**

*Distribution of the number of students in schools*

| | f | % |
|---|---|---|
| 0-100 | 1 | 7.7 |
| 101-200 | 3 | 23.1 |
| 201-300 | 1 | 7.7 |
| 201-300 | 8 | 61.5 |
| Over 300 | 1 | 7.7 |
| Total | 13 | 100 |

Among these students, 53.8% of respondents said that in their center there are 1 to 10 students with SEN, 30.8% indicated 11 to 20 students with SEN, with 15.4% saying they had more than 20 students with SEN (see table 5).

**Table 5**

*Distribution of students with SEN*

| | f | % |
|---|---|---|
| 1-10 | 7 | 53.8 |
| 11-20 | 4 | 30.8 |
| Over 20 | 2 | 15.4 |
| Total | 13 | 100 |

These special educational needs are, in all cases, learning difficulties (see table 6).

**Table 6**

*Casuistries of students with SEN*

| | f | % |
|---|---|---|
| No learning difficulties | 2 | 12.5 |
| Learning difficulties | 14 | 87,5 |
| Total | 16 | 100 |

Turning to the next part of the interview, participants were first asked if teachers have adequate information about students with SEN and 53.86% of respondents answered negatively, with few (38.38%) indicating yes (see table 7).

**Table 7**

*Adequate teacher information about students with SEN*

| | f | % |
|---|---|---|
| Yes | 5 | 38.38 |
| No | 7 | 53.86 |
| Total | 12 | 100 |

As for the sources of information they have about students with SEN, 53.92% of principals said they have KESY reports, 38.38% indicated they have information from special education teachers, and 7.7% said they are informed by the curriculum (see table 8).

**Table 8**

*Sources of information*

| | f | % |
|---|---|---|
| Curriculum | 1 | 7.7 |
| KESYreports | 6 | 53.92 |
| Special Education Teachers | 5 | 38.38 |
| Total | 12 | 100 |

Regarding the frequency of meetings between the principal and the General and Special Education Councilors, 53.86% said that they are rarely given, 15.38% said they are given once a month and a minimum (7.7% respectively) They alleged that they are given once a week or once a year (see table 9).

**Table 9**

*Frequency of meetings between the principal and general and special education counsellors*

| | f | % |
|---|---|---|
| Once a week | 1 | 7.7 |
| Once a month | 2 | 15.38 |
| Once a year | 1 | 7.7 |
| Rarely | 8 | 53.86 |
| Total | 12 | 100 |

Regarding the frequency of meetings between the principal and parents of students with SEN, 61.56% of principals said they occur at the end of the semester, 23.08% that occur once a month, and 15.38% said they occur every 3 months (see table 10).

**Table 10**

*Frequency of meetings between principal and parents of students with SEN*

| | f | % |
|---|---|---|
| Every 3 months | 2 | 15.38 |
| Once a month | 3 | 23.08 |
| At the end of the semester | 9 | 61.56 |
| Total | 14 | 100 |

On the other hand, it was asked about the resources, alternative technologies, reading and writing programs, audiovisual systems, Braille writing system, etc. provided

its school for students with SEN and the vast majority (82.3%) claimed not to have specific resources and only one person said they had audiovisual media (see table 11).

**Table 11**

*Sources and systems for students with SEN*

| | f | % |
|---|---|---|
| Nothing | 13 | 82.3 |
| Audiovisual means | 1 | 7.7 |
| Total | 14 | 100 |

When asked their opinion about the need for training of teachers in their centers in attention to SEN students, 100% said yes, just as they commented that the institution does not offer this training, considering this important aspect. In addition, 23.08%, respectively, indicated as necessary training in classroom management with students with SEN and in editing of didactic means, being 15.38% the one who saw necessary training in adaptation of didactic contents (see table 12).

**Table 12**

*Topics on teacher training*

| | f | % |
|---|---|---|
| Classroom management with students with SEN | 3 | 23.08 |
| Editing of teaching aids | 3 | 23.08 |
| Adaptation of teaching content | 2 | 15.38 |
| Total | 8 | 100 |

In the same vein as the previous question, it was asked about the opportunity for the school to organize seminars, educational programs or activities for those teachers who wish to be informed about the problems related to the care of SEN students. The results that do not 38.38%, respectively, do not attend to this aspect or that they do at the end of the semester. Only 15.38% indicate that they do it every three months, and there are few who claim that on rare occasions or once a month (7.7% respectively) (see table 13).

**Table 13**

*Frequency of teacher training in SE*

| | f | % |
|---|---|---|
| Never | 5 | 38.38 |
| Rarely | 1 | 7.7 |
| Once a month | 1 | 7.7 |
| Every 3 months | 2 | 15.38 |
| At the end of the semester | 5 | 38.38 |
| Total | 14 | 100 |

About institutional support, 84.62% of the directors indicate that KESY is the body that helps in the training of students with SEN. For the rest (7.7% respectively) the aid comes from the training structures or the parents' association (see table 14).

**Table 14**

*Basic institution to support the teaching of students with SEN*

| | f | % |
|---|---|---|
| Training structures | 1 | 7.7 |
| KESY | 11 | 84.62 |
| Parents' association | 1 | 7.7 |
| Total | 13 | 100 |

On the other hand, most centers indicate that they inform students with SEN (61.5%) compared to a small number that does not (23.1%). In addition, one of the directors clarified that students are informed through General & SE teachers & teachers of the Diagnostic Educational Evaluation and Support Committee and another does so through the Psychologist and social worker (see table 15).

**Table 15**

*Inform students about SEN topics*

| | f | % |
|---|---|---|
| Yes | 8 | 61.5 |
| Never | 3 | 23.1 |
| General & SE teachers & teachers of the Diagnostic Educational Evaluation and Support Committee | 1 | 7,7 |
| Psychologist and social worker | 1 | 7.7 |
| Total | 13 | 100 |

Regarding the time that the Ministry of Education has been providing assistance to the school with respect to special education issues, 53.9% said that it exists for 6-10 years, 30.8% indicated that it exists for 1-5 years and 23.0% of the principals did not know (see table 16).

**Table 16**

*Years of ministerial support to the school on special education issues*

| | f | % |
|---|---|---|
| 1-5 | 4 | 30.8 |
| 6-10 | 6 | 53.9 |
| Don’t know | 3 | 23.0 |
| Total | 13 | 100 |

The level of satisfaction of the directors, of the centres’ interviewed, with the funds allocated by the Ministry of Education for the attention to the SEN students in general in low (92.3%), being only one that states that it is sufficient (see table 17).

**Table 17**

*Satisfaction with the funds allocated by the Ministry of Education to the Special Education School*

| | f | % |
|---|---|---|
| A little | 13 | 92.3 |
| Enough | 1 | 7.7 |
| Total | 14 | 100 |

Finally, with respect to the sectors in which these funds are invested, 53.9% of principals said that they are invested in parallel supports, 23.0% indicate that they invest in hiring special assistant teachers and special education teachers, 7.7% said that in Special Books, 7.7% indicated that in Purchase of equipment and another 23.0% of directors said they had no idea about this topic (see table 18).

**Table 18**

*Special Education sectors in which funds are invested*

| | f | % |
|---|---|---|
| Parallel support | 6 | 53.9 |
| Special books | 1 | 7.7 |
| Purchase of equipment | 1 | 7.7 |
| Recruitment of Special Assistant teachers and Special Education teachers | 3 | 23.0 |
| Don't know | 3 | 23.0 |
| Total | 14 | 100 |

### *5.2. The teacher's competences to attend to the NEE student body in the ordinary classroom.*

This section responds to the second objective of the study and describes the competencies of Secondary Education teachers to attend SEN students in the ordinary classroom. For this purpose, the results are shown according to the dimensions that make up the questionnaire and the various subdimensions that make up them.

The first section addresses the results of the Emotions, Attitudes and Concerns dimension of teachers on Inclusive Education. In the second, Teachers' abilities to manage students with special educational needs are described, addressing the subdimensions Effectiveness in Student Engagement, Effectiveness in Instructional Strategies, and Effectiveness in Classroom Management.

The third section describes the Strategies for teaching students with special educational needs, according to the dimensions of Differentiation in content, Differentiation in process, Differentiation in didactic resources, Differentiation in results, Differentiation in evaluation and Differentiation in classroom management.

The following results show the opinion of teachers on the factors important for teaching students with special educational needs and finally to see if there are significant differences between the various groups. The analysis performed according to the variables sex, age, years of experience, Training in Special Education, Position and number of students with SEN in the classroom is shown.

### 5.2.1. Emotions, Attitudes, and Concerns about Inclusive Education

First, the SACIE-R scale is analysed, which refers to the Sentiments, Attitudes and Concerns of secondary education teachers about inclusive education. It can be observed that participants have neutral to positive opinions about their feelings toward inclusion, which means that they do not think disability is something "bad" (see table 19 and figure 14).

The items with the lowest values are the items I am afraid to look directly at a person with a disability (M=1.67, SD=0.636), I find it difficult to overcome my initial shock when meeting people with severe physical disabilities (M=1.70, SD=0.660) y I tend to make contacts with people with disabilities brief and I finish them as quickly as possible (M=1.78, SD=0.751), highlighting that their greatest fear is having students with special educational needs (M=3.02, SD=0.908).

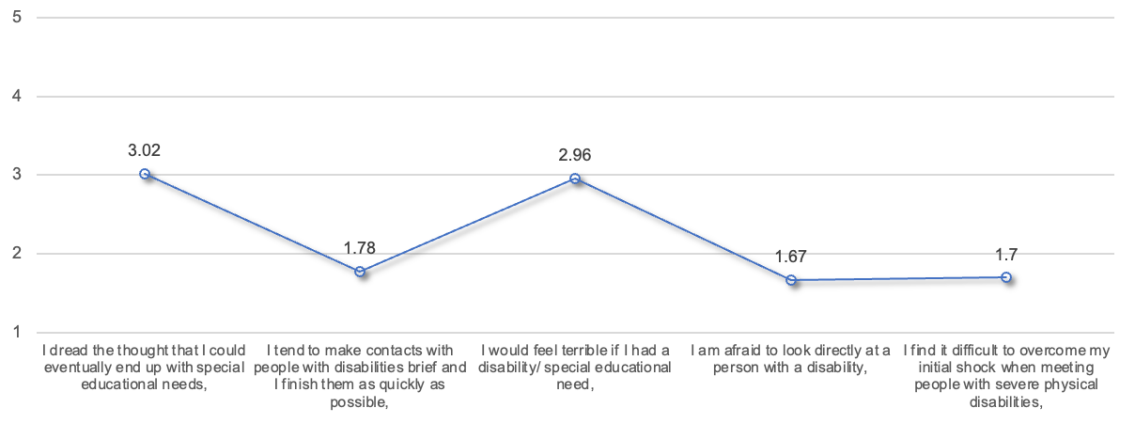
**Table 19**

*Distribution of frequencies, percentages, mean and standard deviation about Emotions scale items*

| | **Strongly disagree** | | **Disagree** | | **Neither agree or disagree** | | **Agree** | | **Strongly agree** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | **%** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | **M** | **SD** | **N** |
| I dread the thought that I could eventually end up with special educational needs. | 17 | 5 | 72 | 21.3 | 150 | 44.4 | 86 | 25.4 | 13 | 3.8 | 3.02 | 0.908 | 338 |
| I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | 124 | 36.6 | 181 | 53.4 | 21 | 6.2 | 11 | 3.2 | 2 | 0.6 | 1.78 | 0.751 | 339 |
| I would feel terrible if I had a disability/ special educational need. | 9 | 2.7 | 75 | 22.4 | 175 | 52.2 | 72 | 21.5 | 4 | 1.2 | 2.96 | 0.771 | 335 |
| I am afraid to look directly at a person with a disability. | 134 | 39.5 | 189 | 55.8 | 10 | 2.9 | 5 | 1.5 | 1 | 0.3 | 1.67 | 0.636 | 339 |
| I find it difficult to overcome my initial shock when meeting people with severe physical disabilities. | 133 | 39.2 | 181 | 53.4 | 20 | 5.9 | 4 | 1.2 | 1 | 0.3 | 1.70 | 0.660 | 339 |

**Figure 14**

*Mean of Emotions scale items*




Regarding the Attitudes of the teaching staff towards inclusion (see table 20 and figure 15), the element with the highest consideration is the one that indicates that students who need an individualized academic program should be in regular classes (M=2.61, SD=1.058), followed by items indicating that students who have difficulty expressing their thoughts verbally and/or require communicative technologies (e.g. Braille/sign language) should be in regular classes (M=2.60, SD=0.985) and that students who have difficulty expressing their thoughts verbally should be in regular classes (M=2.60, SD=0.980). On the contrary, the item with a lower rating is that it alludes to the Students who are inattentive should be in regular classes (M=2.30, SD=0.776).

**Table 20**

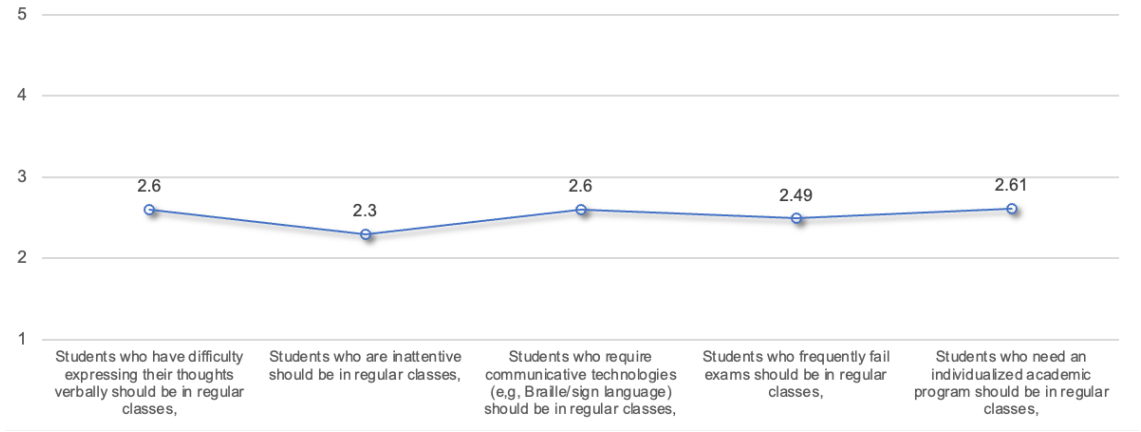
*Distribution of frequencies, percentages, mean and standard deviation of Attitudes scale items*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| Students who have difficulty expressing their thoughts verbally should be in regular classes. | 11 | 3.3 | 208 | 61.7 | 36 | 10.7 | 68 | 20.2 | 14 | 4.2 | 2.60 | 0.980 | 337 |
| Students who are inattentive should be in regular classes. | 11 | 3.2 | 261 | 77 | 28 | 8.3 | 31 | 9.1 | 8 | 2.4 | 2.30 | 0.776 | 339 |
| Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. | 16 | 4.7 | 205 | 60.5 | 25 | 7.4 | 86 | 25.4 | 7 | 2.1 | 2.60 | 0.985 | 339 |

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| Students who frequently fail exams should be in regular classes. | 9 | 2.7 | 233 | 68.7 | 32 | 9.4 | 51 | 15 | 14 | 4.1 | 2.49 | 0.924 | 339 |
| Students who need an individualized academic program should be in regular classes. | 21 | 6.2 | 201 | 59.6 | 18 | 5.3 | 82 | 24.3 | 15 | 4.5 | 2.61 | 1.058 | 337 |

**Figure 15**

*Mean of Attitudes scale items*




Finally, regarding their concerns (see table 21 and figure 16), the aspects that most concern teachers are those that state that students with special educational needs are not accepted by the rest of the class (M=3.72, SD=0.933) and that it is difficult to give adequate attention to all students in an inclusive classroom (M=3.65, SD=0.987), being the one that holds the lowest value the fact of the stress that can cause having students with disabilities in their class (M=3.05, SD=1.072).

**Table 21**

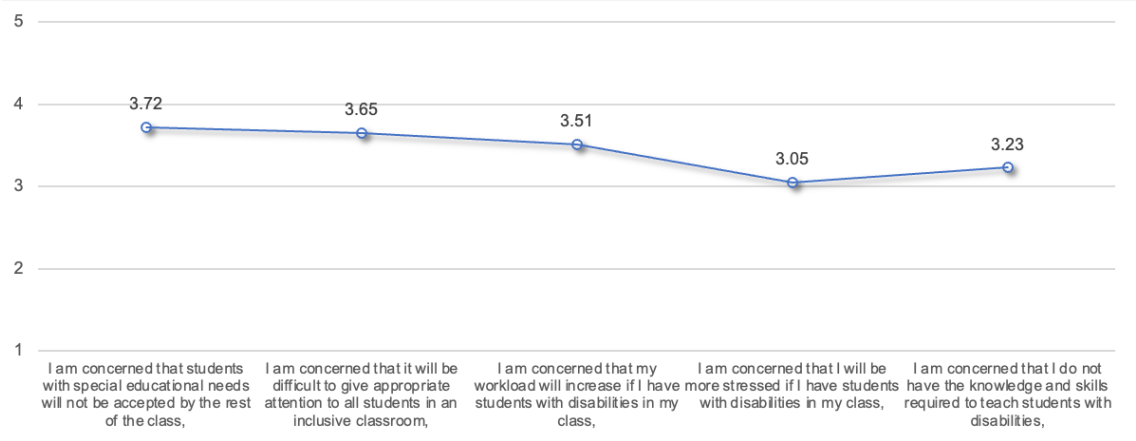
*Distribution of frequencies, percentages, mean and standard deviation of Concerns scale items*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I am concerned that students with special educational needs will not be accepted by the rest of the class. | 7 | 2.1 | 47 | 13.9 | 25 | 7.4 | 215 | 63.4 | 45 | 13.3 | 3.72 | 0.933 | 339 |
| I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | 5 | 1.5 | 64 | 18.9 | 24 | 7.1 | 199 | 58.7 | 47 | 13.9 | 3.65 | 0.987 | 339 |
| I am concerned that my workload will increase if I | 8 | 2.4 | 77 | 22.7 | 24 | 7.1 | 194 | 57.2 | 36 | 10.6 | 3.51 | 1.030 | 339 |

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| have students with disabilities in my class. | | | | | | | | | | | | | |
| I am concerned that I will be more stressed if I have students with disabilities in my class. | 16 | 4.7 | 123 | 36.4 | 43 | 12.7 | 141 | 41.7 | 15 | 4.4 | 3.05 | 1.072 | 338 |
| I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | 71 | 21.1 | 20 | 5.9 | 43 | 12.8 | 168 | 49.9 | 35 | 10.4 | 3.23 | 1.331 | 337 |

**Figure 16**

*Mean of Concern scale items*




**Emotions, Attitudes, and Concerns about Inclusive Education regarding demographics of teachers**

When applying the t-tests for independent samples (n.s.=0.05) of the Emotions dimension as a function of the Gender variable, significant differences were evidenced in 2 of the 5 items (see table 22). These are found in item I would feel terrible if I had a disability/ special educational need (t=2.020, p=0.022) and in item I am afraid to look directly at a person with a disability (t=2.187, p=0.015), in which men have higher averages than women.

The comparison of the mean values of the Attitudes dimension according to the same variable Gender, show statistically significant differences in 4 of the 5 items. These differences occur in the items Students who have difficulty expressing their thoughts verbally should be in regular classes (t=-2.810, p=0.005), Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes (t= -2.746, p=0.006), Students who frequently fail exams should be in regular classes (t=-

2.037, p=0.042) and Students who need an individualized academic program should be in regular classes (t=-2.050, p=0.041), in this case it is women who hold the highest values.

Finally, in the elements of the Concerns dimension, we only found statistically significant differences in 1 of the 5 items. These are given in the item I am concerned that I will be more stressed if I have students with disabilities in my class (t=2.232, p=0.026), where men feel most concerned.

**Table 22**

*Results of t-test criterion about Sentiment, Attitude and Concerns scale regarding gender of teachers*

| | Gender | | | | t | p |
|---|---|---|---|---|---|---|
| | Male (n=161) | | Female (n=178) | | | |
| | M | SD | M | SD | | |
| I dread the thought that I could eventually end up with special educational needs. | 3.07 | 0.881 | 2.97 | 0.932 | 0.976 | 0.165 |
| I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | 1.84 | 0.746 | 1.72 | 0.751 | 1.542 | 0.062 |
| I would feel terrible if I had a disability/ special educational need. | 3.05 | 0.794 | 2.88 | 0.743 | 2.020 | 0.022 |
| I am afraid to look directly at a person with a disability. | 1.75 | 0.602 | 1.60 | 0.658 | 2.187 | 0.015 |
| I find it difficult to overcome my initial shock when meeting people | 1.76 | 0.640 | 1.65 | 0.675 | 1.559 | 0.060 |
| Emotions | 2.30 | 0.556 | 2.16 | 0.536 | 2.211 | 0.014 |
| Students who have difficulty expressing their thoughts verbally should be in regular classes. | 2.5 | 0.900 | 2.8 | 1.000 | -2.810 | 0.005 |
| Students who are inattentive should be in regular classes. | 2.3 | 0.700 | 2.4 | 0.800 | -0.847 | 0.397 |
| Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. | 2.4 | 0.900 | 2.7 | 1.100 | -2.746 | 0.006 |
| Students who frequently fail exams should be in regular classes. | 2.4 | 0.900 | 2.6 | 1.000 | -2.037 | 0.042 |
| Students who need an individualized academic program should be in regular classes. | 2.5 | 1.000 | 2.7 | 1.100 | -2.050 | 0.041 |
| Attitudes | 2.4 | 0.700 | 2.6 | 0.700 | -2.695 | 0.007 |
| I am concerned that students with special educational needs will not be accepted by the rest of the class. | 3.8 | 0.900 | 3.6 | 1.000 | 1.835 | 0.067 |
| I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | 3.6 | 1.000 | 3.6 | 1.000 | 0.413 | 0.680 |
| I am concerned that my workload will increase if I have students with disabilities in my class. | 3.6 | 1.000 | 3.4 | 1.100 | 1.670 | 0.096 |
| I am concerned that I will be more stressed if I have students with disabilities in my class. | 3.2 | 1.100 | 2.9 | 1.100 | 2.232 | 0.026 |
| I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | 3.3 | 1.300 | 3.1 | 1.400 | 1.345 | 0.180 |
| Concerns | 3.5 | 0.800 | 3.3 | 0.800 | 1.975 | 0.049 |

When trying to establish statistically significant differences between the elements of the Sentiment dimension and the Training in special education variable, we found evidence in the 5 items, through the application of t-tests for independent samples (n.s.=0.05) (see table 23). This evidence can be found in I dread the thought that I could eventually end up with special educational needs (t=-6.112, p=0.000), I tend to make contacts with people with disabilities brief and I finish them as quickly as possible (t=-5.471, p=0.000), I would feel terrible if I had a disability/ special educational need (t=-7.814, p=0.000), I am afraid to look directly at a person with a disability (t=-5.875, p=0.000) and I find it difficult to overcome my initial shock when meeting people (t=-6.911, p=0.000), in which teachers who do not have Training in special education have the highest values.

In the elements of the Attitudes dimension and the same variable Training in special education, the statistically significant differences found are in 3 of the 5 items in the student's t-test for independent samples (n.s.=0.05). The evidence is found in Students who are inattentive should be in regular classes (t=-2.114, p=0.018), in which teachers who do not have this training have the highest average compared to those who have it. In the case of items Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes (t=4.597, p=0.000) and Students who need an individualized academic program should be in regular classes (t=3.564, p=0.000), it is the teachers with Training in special education who have a higher regard for these aspects.

Finally, in the elements of the Concerns dimension, we found evidence in 4 of the 5 items, through the application of t-tests for independent samples (n.s.=0.05). This evidence can be found in I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom (t=-11.075, p=0.000), I am concerned that my workload will increase if I have students with disabilities in my class (t=-9.415, p=0.000), I am concerned that I will be more stressed if I have students with disabilities in my class (t=-9.588, p=0.000) and I am concerned that I do not have the knowledge and skills required to teach students with disabilities (t=-22.158, p=0.000), being the teachers without training those who have the highest average.

**Table 23**

*Results of t-test criterion about Sentiment, Attitude and Concerns scale regarding training in special education*

| | Training in Special Education | | | | | |
|---|---|---|---|---|---|---|
| | Yes (n=105) | | No (n=234) | | | |
| | M | SD | M | SD | t | p |
| I dread the thought that I could eventually end up with special educational needs. | 2.59 | 0.781 | 3.21 | 0.897 | -6.112 | 0.000 |
| I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | 1.44 | 0.808 | 1.93 | 0.671 | -5.471 | 0.000 |
| I would feel terrible if I had a disability/ special educational need. | 2.51 | 0.654 | 3.16 | 0.734 | -7.814 | 0.000 |
| I am afraid to look directly at a person with a disability. | 1.37 | 0.654 | 1.81 | 0.580 | -5.875 | 0.000 |
| I find it difficult to overcome my initial shock when meeting people | 1.35 | 0.650 | 1.85 | 0.604 | -6.911 | 0.000 |
| Sentiments | 1.85 | 0.546 | 2.39 | 0.460 | -9.413 | 0.000 |
| Students who have difficulty expressing their thoughts verbally should be in regular classes. | 2.70 | 1.046 | 2.56 | 0.947 | 1.244 | 0.108 |
| Students who are inattentive should be in regular classes. | 2.17 | 0.627 | 2.36 | 0.829 | -2.114 | 0.018 |
| Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. | 2.95 | 1.050 | 2.44 | 0.911 | 4.597 | 0.000 |
| Students who frequently fail exams should be in regular classes. | 2.55 | 0.980 | 2.47 | 0.899 | 0.797 | 0.213 |
| Students who need an individualized academic program should be in regular classes. | 2.91 | 1.200 | 2.48 | 0.961 | 3.564 | 0.000 |
| Attitudes | 2.66 | 0.742 | 2.45 | 0.676 | 2.601 | 0.005 |
| I am concerned that students with special educational needs will not be accepted by the rest of the class. | 3.70 | 0.820 | 3.73 | 0.982 | -0.212 | 0.416 |
| I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | 2.89 | 1.068 | 3.99 | 0.726 | -11.075 | 0.000 |
| I am concerned that my workload will increase if I have students with disabilities in my class. | 2.81 | 1.119 | 3.82 | 0.812 | -9.415 | 0.000 |
| I am concerned that I will be more stressed if I have students with disabilities in my class. | 2.33 | 0.884 | 3.37 | 0.992 | -9.588 | 0.000 |
| I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | 1.69 | 1.150 | 3.91 | 0.673 | -22.158 | 0.000 |
| Concerns | 2.68 | 0.751 | 3.76 | 0.590 | -14.276 | 0.000 |

When checking statistically significant differences between the elements of the Sentiment dimension and the Teacher Position variable, we found no evidence in any of the 5 items, through the application of t-tests for independent samples (n.s.=0.05) (see table 24).

In the elements of the Attitudes dimension and the same teacher position variable, we also did not see statistically significant differences in any of the 5 items in the Student's t-test for independent samples (n.s.=0.05).

Finally, in the elements of the Concerns dimension, we found evidence in 4 of the 5 items, through the application of t-tests for independent samples (n.s.=0.05). This evidence can be found in I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom (t=2.443, p=0.008), I am concerned that my workload will increase if I have students with disabilities in my class (t=2.545, p=0.006), I am concerned that I will be more stressed if I have students with disabilities in my class (t=2.945, p=0.008) and I am concerned that I do not have the knowledge and skills required to teach students with disabilities. (t=2.001, p=0.023), whose highest opinion is held by those who are from General Education.

**Table 24**

*Results of t-test criterion about Sentiment, Attitude and Concerns scale regarding teacher position*

| | Position | | | | | |
|---|---|---|---|---|---|---|
| | General Education (n=329) | | Special Education (n=10) | | | |
| | M | SD | M | SD | t | p |
| I dread the thought that I could eventually end up with special educational needs. | 3.01 | 0.902 | 3.20 | 1.135 | -0.644 | 0.260 |
| I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | 1.77 | 0.720 | 2.00 | 1.491 | -0.946 | 0.172 |
| I would feel terrible if I had a disability/ special educational need. | 2.97 | 0.764 | 2.67 | 1.000 | 1.162 | 0.123 |
| I am afraid to look directly at a person with a disability. | 1.66 | 0.614 | 2.00 | 1.155 | -0.920 | 0.191 |
| I find it difficult to overcome my initial shock when meeting people | 1.70 | 0.652 | 1.80 | 0.919 | -0.490 | 0.312 |
| Sentiments | 2.22 | 0.544 | 2.38 | 0.731 | -0.839 | 0.201 |
| Students who have difficulty expressing their thoughts verbally should be in regular classes. | 2.60 | 0.970 | 2.80 | 1.317 | -0.647 | 0.259 |
| Students who are inattentive should be in regular classes. | 2.29 | 0.762 | 2.60 | 1.174 | -0.817 | 0.217 |
| Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. | 2.58 | 0.975 | 3.10 | 1.197 | -1.648 | 0.050 |
| Students who frequently fail exams should be in regular classes. | 2.48 | 0.921 | 2.90 | 0.994 | -1.417 | 0.079 |
| Students who need an individualized academic program should be in regular classes. | 2.61 | 1.059 | 2.50 | 1.080 | 0.337 | 0.368 |
| Attitudes | 2.51 | 0.697 | 2.78 | 0.877 | -1.207 | 0.114 |
| I am concerned that students with special educational needs will not be accepted by the rest of the class. | 3.73 | 0.931 | 3.30 | 0.949 | 1.446 | 0.075 |
| I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | 3.67 | 0.980 | 2.90 | 0.994 | 2.443 | 0.008 |

| | Position | | | | | |
|---|---|---|---|---|---|---|
| | General Education (n=329) | | Special Education (n=10) | | | |
| | M | SD | M | SD | t | p |
| I am concerned that my workload will increase if I have students with disabilities in my class. | 3.53 | 1.012 | 2.70 | 1.337 | 2.545 | 0.006 |
| I am concerned that I will be more stressed if I have students with disabilities in my class. | 3.07 | 1.067 | 2.20 | 0.919 | 2.945 | 0.008 |
| I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | 3.25 | 1.326 | 2.40 | 1.265 | 2.001 | 0.023 |
| Concerns | 3.45 | 0.810 | 2.70 | 0.701 | 2.888 | 0.002 |

To check the possible differences between the elements of the subdimensions depending on the variable Age of the teachers, an Analysis of Variance was applied for a Factor (n.s.=0.05) warning them in 11 of the 15 items (see table 25). After applying Scheffé's post-hoc test, 7 are confirmed to be significant, the results being the following:

- I tend to make contacts with people with disabilities brief and I finish them as quickly as possible (F=3.474, p=0.001), is more valued in the age range 50-54 than the range 30-34 years (I-J=0.754, p=0.002).
- I find it difficult to overcome my initial shock when meeting people with severe physical disabilities (F=2.802, p=0.008), is perceived with greater importance for the age range 50-54 than in the range 30-34 (I-J=0.551, p=0.042).
- Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes (F=4.117, p=0.001), obtains a higher rating for the age range 30-34 years than for those aged between 45-49 (I-J=0.979, p=0.006), 50-54 (I-J=0.890, p=0.015) and 60-64 years (I-J=1.056, p=0.009).
- Students who need an individualized academic program should be in regular classes (F=3.466, p=0.001), is more valued for the age range 30-34 compared to teachers between 60-64 years (I-J=1.093, p=0.015).
- I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom (F=6.82, p=0.001), obtains a lower rating for the age between 30-34, with respect to the ranges 45-49 (I-J=1.074, p=0.001), 50-54 (I-J=1.059, p=0.001), 55-59 (I-J=1.259, p=0.001) and 60-64 years (I-J=1.070, p=0.006).
- In the same way it happens for I am concerned that my workload will increase if I have students with disabilities in my class (F=4.957, p=0.001), the assessment in the age range 30-34 years is lower than that of the ranges 45-49 (I-J=0.908,

p=0.025), 50-54 (I-J=0.893, p=0.023), 55-59 (I-J=1.000, p=0.019) and 60-64 years (I-J=0.952 p=0.049).

- I am concerned that I do not have the knowledge and skills required to teach students with disabilities (F=8.932, p=0.001), is worse valued by the age range between 30-34 years with respect to those of 45-49 (I-J=1.617, p=0.001), 50-54 (I-J=1.508, p=0.001), 55-59 (I-J=1.615, p=0.001) and 60-64 years (I-J=1.578, p=0.001). In the same way it occurs between the age range 35-39 with respect to teachers aged between 45-49 years (I-J=1.119; p=0.037).

**Table 25**

*Results Analysis of Variance and Scheffé's post-hoc test about Emotions, Attitudes and Concerns scale regarding Age*

| | Age | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| I dread the thought that I could eventually end up with special educational needs. | 25-29 | 2.60 | 0.548 | 5 | 1.847 | 0.078 | |
| | 30-34 | 2.59 | 0.694 | 27 | | | |
| | 35-39 | 3.00 | 0.894 | 21 | | | |
| | 40-44 | 2.80 | 1.002 | 44 | | | |
| | 45-49 | 3.07 | 0.975 | 69 | | | |
| | 50-54 | 3.11 | 0.951 | 85 | | | |
| | 55-59 | 3.20 | 0.757 | 45 | | | |
| | 60-64 | 3.11 | 0.875 | 37 | | | |
| I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | 25-29 | 1.80 | 0.837 | 5 | 3.474 | 0.001 | 50-54 -> 30-34 / 0.754 (0.002) |
| | 30-34 | 1.22 | 0.506 | 27 | | | |
| | 35-39 | 1.67 | 0.730 | 21 | | | |
| | 40-44 | 1.68 | 0.800 | 44 | | | |
| | 45-49 | 1.81 | 0.728 | 70 | | | |
| | 50-54 | 1.98 | 0.859 | 85 | | | |
| | 55-59 | 1.78 | 0.517 | 45 | | | |
| | 60-64 | 1.76 | 0.495 | 37 | | | |
| I would feel terrible if I had a disability/ special educational needs. | 25-29 | 2.60 | 0.548 | 5 | 3.086 | 0.004 | |
| | 30-34 | 2.52 | 0.753 | 27 | | | |
| | 35-39 | 2.81 | 0.814 | 21 | | | |
| | 40-44 | 2.79 | 0.804 | 43 | | | |
| | 45-49 | 3.09 | 0.818 | 69 | | | |
| | 50-54 | 3.14 | 0.714 | 84 | | | |
| | 55-59 | 3.05 | 0.645 | 44 | | | |
| | 60-64 | 2.84 | 0.800 | 37 | | | |
| I am afraid to look directly at a person with a disability. | 25-29 | 1.80 | 0.447 | 5 | 3.000 | 0.005 | |
| | 30-34 | 1.37 | 0.565 | 27 | | | |
| | 35-39 | 1.38 | 0.498 | 21 | | | |
| | 40-44 | 1.52 | 0.664 | 44 | | | |
| | 45-49 | 1.64 | 0.539 | 70 | | | |
| | 50-54 | 1.81 | 0.779 | 85 | | | |
| | 55-59 | 1.80 | 0.588 | 45 | | | |
| | 60-64 | 1.78 | 0.479 | 37 | | | |
| | 25-29 | 1.80 | 0.447 | 5 | 2.802 | 0.008 | 50-54 -> 30-34 / 0.551 (0.042) |

| | Age | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| I find it difficult to overcome my initial shock when meeting people with severe physical disabilities. | 30-34 | 1.30 | 0.542 | 27 | | | |
| | 35-39 | 1.43 | 0.507 | 21 | | | |
| | 40-44 | 1.68 | 0.829 | 44 | | | |
| | 45-49 | 1.71 | 0.593 | 70 | | | |
| | 50-54 | 1.85 | 0.699 | 85 | | | |
| | 55-59 | 1.78 | 0.599 | 45 | | | |
| | 60-64 | 1.76 | 0.597 | 37 | | | |
| Students who have difficulty expressing their thoughts verbally should be in regular classes. | 25-29 | 2.8 | 1.095 | 5 | 0.857 | 0.541 | |
| | 30-34 | 2.7 | 1.074 | 27 | | | |
| | 35-39 | 2.6 | 0.973 | 21 | | | |
| | 40-44 | 2.6 | 0.975 | 44 | | | |
| | 45-49 | 2.7 | 1.038 | 69 | | | |
| | 50-54 | 2.7 | 0.971 | 84 | | | |
| | 55-59 | 2.5 | 0.944 | 45 | | | |
| | 60-64 | 2.3 | 0.693 | 37 | | | |
| Students who are inattentive should be in regular classes. | 25-29 | 2.4 | 0.894 | 5 | 3.098 | 0.004 | |
| | 30-34 | 2.0 | 0.000 | 27 | | | |
| | 35-39 | 2.1 | 0.478 | 21 | | | |
| | 40-44 | 2.3 | 0.811 | 44 | | | |
| | 45-49 | 2.5 | 0.913 | 70 | | | |
| | 50-54 | 2.5 | 0.881 | 85 | | | |
| | 55-59 | 2.1 | 0.532 | 45 | | | |
| | 60-64 | 2.1 | 0.575 | 37 | | | |
| Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. | 25-29 | 3.2 | 1.095 | 5 | 4.117 | 0.001 | 30-34 -> 45-49 / 0.979 (0.006) |
| | 30-34 | 3.4 | 1.083 | 27 | | | 30-34 -> 50-54 / 0.890 (0.015) |
| | 35-39 | 2.9 | 0.995 | 21 | | | 30-34 -> 60-64 / 1.056 (0.009) |
| | 40-44 | 2.6 | 1.017 | 44 | | | |
| | 45-49 | 2.4 | 0.910 | 70 | | | |
| | 50-54 | 2.5 | 0.971 | 85 | | | |
| | 55-59 | 2.6 | 0.917 | 45 | | | |
| | 60-64 | 2.4 | 0.824 | 37 | | | |
| Students who frequently fail exams should be in regular classes. | 25-29 | 2.8 | 1.095 | 5 | 1.046 | 0.398 | |
| | 30-34 | 2.4 | 0.847 | 27 | | | |
| | 35-39 | 2.3 | 0.730 | 21 | | | |
| | 40-44 | 2.5 | 1.000 | 44 | | | |
| | 45-49 | 2.5 | 0.912 | 70 | | | |
| | 50-54 | 2.6 | 0.974 | 85 | | | |
| | 55-59 | 2.4 | 0.863 | 45 | | | |
| | 60-64 | 2.2 | 0.672 | 37 | | | |
| Students who need an individualized academic program should be in regular classes. | 25-29 | 3.2 | 1.095 | 5 | 3.466 | 0.001 | 30-34 -> 45-49 / 1.010 (0.010) |
| | 30-34 | 3.4 | 1.281 | 27 | | | 30-34 -> 60-64 / 1.093 (0.015) |
| | 35-39 | 2.5 | 1.078 | 21 | | | |
| | 40-44 | 2.7 | 1.152 | 43 | | | |
| | 45-49 | 2.4 | 0.962 | 69 | | | |
| | 50-54 | 2.7 | 0.984 | 85 | | | |
| | 55-59 | 2.6 | 1.074 | 45 | | | |
| | 60-64 | 2.4 | 0.753 | 37 | | | |
| | 25-29 | 4.00 | 0.000 | 5 | 1.607 | 0.132 | |

| | Age | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| I am concerned that students with special educational needs will not be accepted by the rest of the class. | 30-34 | 4.00 | 0.555 | 27 | | | |
| | 35-39 | 3.81 | 0.750 | 21 | | | |
| | 40-44 | 3.52 | 1.045 | 44 | | | |
| | 45-49 | 3.63 | 0.951 | 70 | | | |
| | 50-54 | 3.61 | 1.013 | 85 | | | |
| | 55-59 | 3.91 | 0.668 | 45 | | | |
| | 60-64 | 3.95 | 1.053 | 37 | | | |
| I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | 25-29 | 2.80 | 1.095 | 5 | 6.82 | 0.001 | 45-49 -> 30-34 / 1.074 (0.001) |
| | 30-34 | 2.74 | 1.196 | 27 | | | 50-54 -> 30-34 / 1.059 (0.001) |
| | 35-39 | 3.48 | 0.981 | 21 | | | 55-59 -> 30-34 / 1.259 (0.001) |
| | 40-44 | 3.32 | 1.073 | 44 | | | 60-64 -> 30-34 / 1.070 (0.006) |
| | 45-49 | 3.81 | 0.822 | 70 | | | |
| | 50-54 | 3.80 | 0.884 | 85 | | | |
| | 55-59 | 4.00 | 0.640 | 45 | | | |
| | 60-64 | 3.81 | 1.101 | 37 | | | |
| I am concerned that my workload will increase if I have students with disabilities in my class. | 25-29 | 3.00 | 1.414 | 5 | 4.957 | 0.001 | 45-49 -> 30-34 / 0.908 (0.025) |
| | 30-34 | 2.78 | 1.155 | 27 | | | 50-54 -> 30-34 / 0.893 (0.023) |
| | 35-39 | 3.19 | 1.123 | 21 | | | 55-59 -> 30-34 / 1.000 (0.019) |
| | 40-44 | 3.11 | 1.104 | 44 | | | 60-64 -> 30-34 / 0.952 (0.049) |
| | 45-49 | 3.69 | 0.860 | 70 | | | |
| | 50-54 | 3.67 | 0.931 | 85 | | | |
| | 55-59 | 3.78 | 0.704 | 45 | | | |
| | 60-64 | 3.73 | 1.239 | 37 | | | |
| I am concerned that I will be more stressed if I have students with disabilities in my class. | 25-29 | 2.40 | 0.894 | 5 | 3.481 | 0.001 | |
| | 30-34 | 2.48 | 1.087 | 27 | | | |
| | 35-39 | 2.71 | 1.146 | 21 | | | |
| | 40-44 | 2.72 | 1.054 | 43 | | | |
| | 45-49 | 3.31 | 0.986 | 70 | | | |
| | 50-54 | 3.21 | 0.989 | 85 | | | |
| | 55-59 | 3.20 | 1.014 | 45 | | | |
| | 60-64 | 3.16 | 1.191 | 37 | | | |
| I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | 25-29 | 2.40 | 1.949 | 5 | 8.932 | 0.001 | 45-49 -> 30-34 / 1.617 (0.001) |
| | 30-34 | 1.96 | 1.531 | 27 | | | 45-49 -> 35-39 / 1.119 (0.037) |
| | 35-39 | 2.38 | 1.499 | 21 | | | 50-54 -> 30-34 / 1.508 (0.001) |
| | 40-44 | 2.72 | 1.548 | 43 | | | 55-59 -> 30-34 / 1.615 (0.001) |
| | 45-49 | 3.58 | 1.077 | 69 | | | 60-64 -> 30-34 / 1.578 (0.001) |
| | 50-54 | 3.47 | 0.959 | 85 | | | |
| | 55-59 | 3.58 | 1.196 | 45 | | | |
| | 60-64 | 3.54 | 1.216 | 37 | | | |

The Analysis of Variance for a Factor (n.s.=0.05) of the elements of the different subdimensions, considering the variable Years of experience as teachers, revealed a difference in 14 of the 15 items, being significant in 5 of them after applying Scheffé's post-hoc test, whose results are as follows (see table 26):

- Students who are inattentive should be in regular classes (F=4,243, p=0,001), is more valued in the range years of experience as teachers 11-15 years, more than those between 6-10 (I-J=0,675, p=0,012) and 21-25 (I-J=0,538, p=0,038).
- Item, I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom (F=7,376, p=0.001) teachers with a professional experience range of 16-20 (I-J=0.977, p=0.003), 21-25 (I-J=1.042, p=0.001), 26-30 years (I-J=0.987, p=0.006) and more than 30 (I-J=0.940, p=0.041) are more concerned than those with between 1 and 5 years of experience. The same happens with teachers who have 16-20 (I-J=0.870, p=0.004), 21-25 (I-J=0.934, p=0.002), 26-30 years (I-J=0.880, p=0.008) compared to those who have between 6-10 years of teaching experience.
- In the item I am concerned that I will be more stressed if I have students with disabilities in my class (F=7.232, p=0.001), is worse valued by the range of work experience of 1-5 years of seniority, with respect to teachers between the ranges of experience between 16-20 (I-J=0.869, p=0.028) and 21-25 years (I-J=0.858, p=0.038). The same is evidenced with the groups of 21-25 (I-J=1.034, p=0.001), between 26-30 (I-J=0.937, p=0.006) and more than 30 years (I-J=1.004, p=0.014) compared to those between 6 and 10 years old.
- I am concerned that my workload will increase if I have students with disabilities in my class (F=4.651, p=0.001), obtains a lower assessment by teachers with a seniority range of 6-10 years compared to those aged 16-20 (I-J=0.869, p=0.017) and 21-25 years (I-J=0.940, p=0.008).
- Finally, in the item I am concerned that I do not have the knowledge and skills required to teach students with disabilities (F=10.069, p=0.001), is valued to a lesser extent in the range of teaching experience from 6-10 years, compared to those between 11-15 (I-J=1.026, p=0.026), to 16-20 (I-J=1.601, p=0.001) and 21-25 (I-J=1.629, p=0.001). The same test leaves us evidence in the same way, regarding the range for antiquity 21-25 greater than 1-5 (I-J=1.227, p=0.008).

**Table 26**

*Results Analysis of Variance and Scheffé's post-hoc test about Sentiment, Attitude and Concerns scale regarding Experience*

| | Experience | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| I dread the thought that I could eventually end up with special educational needs. | 1-5 | 2.64 | 0.678 | 28 | 1.321 | 0.239 | |
| | 6-10 | 2.89 | 0.981 | 38 | | | |
| | 11-15 | 2.91 | 1.133 | 56 | | | |
| | 16-20 | 3.09 | 1.011 | 69 | | | |
| | 21-25 | 3.11 | 0.709 | 61 | | | |
| | 26-30 | 3.18 | 0.748 | 50 | | | |
| | More than 30 | 3.07 | 0.907 | 30 | | | |
| I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | 1-5 | 1.50 | 0.793 | 28 | 3.651 | 0.001 | |
| | 6-10 | 1.39 | 0.495 | 38 | | | |
| | 11-15 | 1.91 | 0.912 | 57 | | | |
| | 16-20 | 1.83 | 0.785 | 69 | | | |
| | 21-25 | 1.84 | 0.663 | 61 | | | |
| | 26-30 | 1.92 | 0.634 | 50 | | | |
| | More than 30 | 1.67 | 0.547 | 30 | | | |
| I would feel terrible if I had a disability/ special educational needs. | 1-5 | 2.61 | 0.737 | 28 | 3.397 | 0.002 | |
| | 6-10 | 2.74 | 0.760 | 38 | | | |
| | 11-15 | 2.80 | 0.951 | 55 | | | |
| | 16-20 | 3.14 | 0.753 | 69 | | | |
| | 21-25 | 3.17 | 0.668 | 60 | | | |
| | 26-30 | 3.08 | 0.571 | 49 | | | |
| | More than 30 | 2.80 | 0.805 | 30 | | | |
| I am afraid to look directly at a person with a disability. | 1-5 | 1.50 | 0.577 | 28 | 2.424 | 0.020 | |
| | 6-10 | 1.37 | 0.633 | 38 | | | |
| | 11-15 | 1.74 | 0.813 | 57 | | | |
| | 16-20 | 1.67 | 0.610 | 69 | | | |
| | 21-25 | 1.82 | 0.619 | 61 | | | |
| | 26-30 | 1.72 | 0.536 | 50 | | | |
| | More than 30 | 1.67 | 0.479 | 30 | | | |
| I find it difficult to overcome my initial shock when meeting people with severe physical disabilities. | 1-5 | 1.46 | 0.576 | 28 | 2.988 | 0.005 | |
| | 6-10 | 1.39 | 0.638 | 38 | | | |
| | 11-15 | 1.84 | 0.841 | 57 | | | |
| | 16-20 | 1.72 | 0.616 | 69 | | | |
| | 21-25 | 1.89 | 0.635 | 61 | | | |
| | 26-30 | 1.70 | 0.505 | 50 | | | |
| | More than 30 | 1.63 | 0.615 | 30 | | | |
| Students who have difficulty expressing their thoughts verbally should be in regular classes. | 1-5 | 2.75 | 1.110 | 28 | 2.291 | 0.027 | |
| | 6-10 | 2.58 | 0.976 | 38 | | | |
| | 11-15 | 2.95 | 1.096 | 55 | | | |
| | 16-20 | 2.61 | 1.018 | 69 | | | |
| | 21-25 | 2.36 | 0.817 | 61 | | | |
| | 26-30 | 2.60 | 0.857 | 50 | | | |
| | More than 30 | 2.27 | 0.740 | 30 | | | |
| Students who are inattentive should | 1-5 | 2.25 | 0.799 | 28 | 4.243 | 0.001 | 11-15 -> 6-10 / 0.675 (0.012) |
| | 6-10 | 2.03 | 0.367 | 38 | | | 11-15 -> 21-25 / 0.538 (0.038) |

| | Experience | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| be in regular classes. | 11-15 | 2.70 | 1.017 | 57 | | | |
| | 16-20 | 2.41 | 0.863 | 69 | | | |
| | 21-25 | 2.16 | 0.688 | 61 | | | |
| | 26-30 | 2.22 | 0.616 | 50 | | | |
| | More than 30 | 2.07 | 0.450 | 30 | | | |
| Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. | 1-5 | 3.11 | 1.133 | 28 | 2.951 | 0.005 | |
| | 6-10 | 3.00 | 1.115 | 38 | | | |
| | 11-15 | 2.63 | 0.919 | 57 | | | |
| | 16-20 | 2.43 | 1.007 | 69 | | | |
| | 21-25 | 2.48 | 0.924 | 61 | | | |
| | 26-30 | 2.52 | 0.909 | 50 | | | |
| | More than 30 | 2.37 | 0.809 | 30 | | | |
| Students who frequently fail exams should be in regular classes. | 1-5 | 2.61 | 1.031 | 28 | 2.36 | 0.023 | |
| | 6-10 | 2.61 | 0.916 | 38 | | | |
| | 11-15 | 2.74 | 1.078 | 57 | | | |
| | 16-20 | 2.45 | 0.932 | 69 | | | |
| | 21-25 | 2.33 | 0.790 | 61 | | | |
| | 26-30 | 2.42 | 0.785 | 50 | | | |
| | More than 30 | 2.17 | 0.648 | 30 | | | |
| Students who need an individualized academic program should be in regular classes. | 1-5 | 3.18 | 1.278 | 28 | 3.717 | 0.001 | |
| | 6-10 | 2.89 | 1.247 | 38 | | | |
| | 11-15 | 2.82 | 1.104 | 57 | | | |
| | 16-20 | 2.40 | 0.986 | 67 | | | |
| | 21-25 | 2.44 | 0.847 | 61 | | | |
| | 26-30 | 2.62 | 1.028 | 50 | | | |
| | More than 30 | 2.30 | 0.750 | 30 | | | |
| I am concerned that students with special educational needs will not be accepted by the rest of the class. | 1-5 | 3.9 | 0.803 | 28 | 2.188 | 0.035 | |
| | 6-10 | 3.6 | 0.948 | 38 | | | |
| | 11-15 | 3.5 | 1.020 | 57 | | | |
| | 16-20 | 3.6 | 1.019 | 69 | | | |
| | 21-25 | 4.0 | 0.671 | 61 | | | |
| | 26-30 | 3.7 | 0.931 | 50 | | | |
| | More than 30 | 4.0 | 0.964 | 30 | | | |
| I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | 1-5 | 2.9 | 1.197 | 28 | 7.376 | 0.001 | 16-20 -> 1-5 / 0.977 (0.003) |
| | 6-10 | 3.0 | 1.065 | 38 | | | 16-20 -> 6-10 / 0.870 (0.004) |
| | 11-15 | 3.6 | 1.053 | 57 | | | 21-25 -> 1-5 / 1.042 (0.001) |
| | 16-20 | 3.9 | 0.803 | 69 | | | 21-25 -> 6-10 / 0.934 (0.002) |
| | 21-25 | 3.9 | 0.727 | 61 | | | 26-30 -> 1-5 / 0.987 (0.006) |
| | 26-30 | 3.9 | 0.849 | 50 | | | 26-30 -> 6-10 / 0.880 (0.008) |
| | More than 30 | 3.8 | 0.986 | 30 | | | More 30 -> 1-5 / 0.940 (0.041) |
| I am concerned that my workload will increase if I have students with disabilities in my class. | 1-5 | 2.9 | 1.215 | 28 | 7.232 | 0.001 | 16-20 -> 1-5 / 0.869 (0.028) |
| | 6-10 | 2.8 | 1.101 | 38 | | | 16-20 -> 6-10 / 1.034 (0.001) |
| | 11-15 | 3.3 | 1.038 | 57 | | | 21-25 -> 1-5 / 0.858 (0.038) |
| | 16-20 | 3.8 | 0.797 | 69 | | | 21-25 -> 6-10 / 1.024 (0.001) |
| | 21-25 | 3.8 | 0.878 | 61 | | | 26-30 -> 6-10 / 0.937 (0.006) |
| | 26-30 | 3.7 | 0.931 | 50 | | | More 30 -> 6-10 / 1.004 (0.014) |
| | More than 30 | 3.8 | 1.073 | 30 | | | |
| | 1-5 | 2.6 | 1.166 | 28 | 4.651 | 0.001 | 16-20 -> 6-10 / 0.869 (0.017) |

| | Experience | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| I am concerned that I will be more stressed if I have students with disabilities in my class. | 6-10 | 2.4 | 0.948 | 38 | | | 21-25 -> 6-10 / 0.940 (0.008) |
| | 11-15 | 2.9 | 1.096 | 56 | | | |
| | 16-20 | 3.3 | 0.972 | 69 | | | |
| | 21-25 | 3.4 | 0.984 | 61 | | | |
| | 26-30 | 3.2 | 1.050 | 50 | | | |
| | More than 30 | 3.2 | 1.095 | 30 | | | |
| I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | 1-5 | 2.4 | 1.643 | 28 | 10.069 | 0.001 | 11-15 -> 6-10 / 1.026 (0.026) |
| | 6-10 | 2.0 | 1.515 | 38 | | | 16-20 -> 6-10 / 1.601 (0.001) |
| | 11-15 | 3.1 | 1.301 | 57 | | | 21-25 -> 1-5 / 1.227 (0.008) |
| | 16-20 | 3.6 | 0.998 | 67 | | | 21-25 / 6-10 / 1.629 (0.001) |
| | 21-25 | 3.7 | 0.964 | 61 | | | More 30 -> 6-10 / 1.507 (0.001) |
| | 26-30 | 3.4 | 1.215 | 50 | | | |
| | More than 30 | 3.5 | 1.224 | 30 | | | |

### 5.2.2. Teachers' abilities to manage students with special educational needs

The second scale of the questionnaire measures the capacities of teachers to manage students with special educational needs.

After performing the analysis of the participants' responses, it can be seen that the means obtained are relatively low (see table 27 and figure 17). The most valued items are How much can you help students with special educational needs believe that they can make progress in schoolwork? (M=3.05, SD=0.807) and How much can you motivate students with special educational needs who are less interested in the lesson? (M=2.98, SD=0.832), being the item with the lowest value How much can you help families of students with special educational needs to help their children make progress at school? (M=2.62, SD=0.803).

**Table 27**

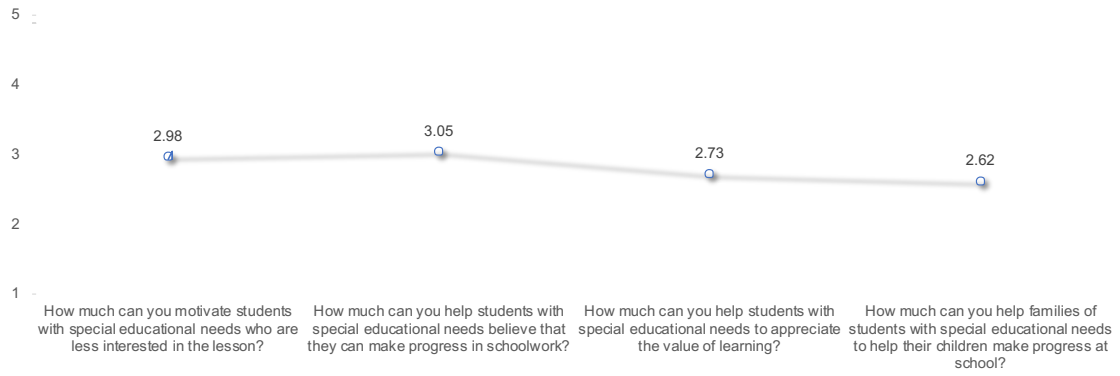
*Distribution of frequencies, percentages, mean and standard deviation about n scale items*

| | Not at all | | Very Little | | Moderate | | Quite a bit | | Very much | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| How much can you motivate students with special educational needs who are less interested in the lesson? | 0 | 0.0 | 114 | 33.6 | 126 | 37.2 | 92 | 27.1 | 7 | 2.1 | 2.98 | 0.832 | 339 |
| How much can you help students with special educational needs believe that they can make progress in schoolwork? | 0 | 0.0 | 97 | 28.6 | 133 | 39.2 | 104 | 30.7 | 5 | 1.5 | 3.05 | 0.807 | 339 |

| | Not at all | | Very Little | | Moderate | | Quite a bit | | Very much | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| How much can you help students with special educational needs to appreciate the value of learning? | 0 | 0.0 | 159 | 47.2 | 115 | 34.1 | 57 | 16.9 | 6 | 1.8 | 2.73 | 0.802 | 337 |
| How much can you help families of students with special educational needs to help their children make progress at school? | 6 | 1.8 | 178 | 52.5 | 96 | 28.3 | 57 | 16.8 | 2 | 0.6 | 2.62 | 0.803 | 339 |

**Figure 17**

*Mean of Efficacy in Student Engagement scale items*




With respect to Efficacy in Instructional Strategies (see table 28 and figure 18), we observe how the possibility of giving a different example of something to a child with special educational needs to learn is valued, it is valued with the highest average (M= 3.54, SD= 0.867), as well as its ability to adapt the questions to its students with needs (M= 3.49, SD=0.878), with the lowest values in the item To what extent can you use a variety of assessment strategies for children with special educational needs? (M=2.68, SD=1.343) and in the item To what extent can you implement alternative learning strategies for children with special educational needs? (M=2.72, SD=1.355).

**Table 28**

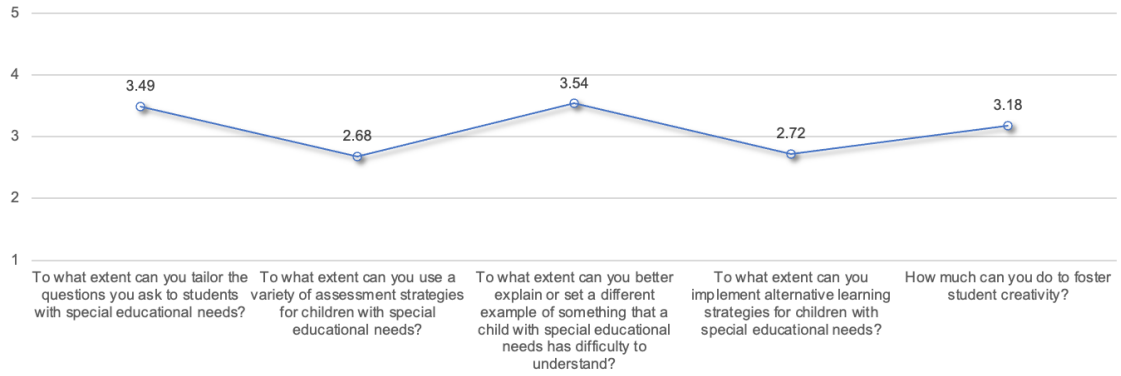
*Distribution of frequencies, percentages, mean and standard deviation about Efficacy in Instructional Strategies scale items*

| | Not at all | | Very Little | | Moderate | | Quite a bit | | Very much | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| To what extent can you tailor the questions you ask to students with special educational needs? | 3 | 0.9 | 17 | 5.0 | 193 | 56.9 | 64 | 18.9 | 62 | 18.3 | 3.49 | 0.878 | 339 |
| To what extent can you use a variety of assessment strategies for children with special educational needs? | 67 | 19.8 | 123 | 36.4 | 52 | 15.4 | 44 | 13.0 | 52 | 15.4 | 2.68 | 1.343 | 338 |

| | Not at all | | Very Little | | Moderate | | Quite a bit | | Very much | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | 0 | 0.0 | 16 | 4.7 | 193 | 56.9 | 61 | 18.0 | 69 | 20.4 | 3.54 | 0.867 | 339 |
| To what extent can you implement alternative learning strategies for children with special educational needs? | 68 | 20.1 | 113 | 33.3 | 58 | 17.1 | 46 | 13.6 | 54 | 15.9 | 2.72 | 1.355 | 339 |
| How much can you do to foster student creativity? | 0 | 0.0 | 62 | 18.3 | 159 | 46.9 | 112 | 33.0 | 6 | 1.8 | 3.18 | 0.743 | 339 |

**Figure 18**

*Mean of Efficacy in Instructional Strategies scale items*




Finally, in terms of effectiveness in classroom management (see table 29 and figure 19), the ability of the teacher to remain calm before a student who annoys (M= 3.49, SD= 0.607) or who may be challenging (M= 3.50, SD= 0.617) are the highest values, being the ones with the lowest score is related to the implementation alternative learning strategies for children with special educational needs (M=2.72, SD=1.355).

**Table 29**

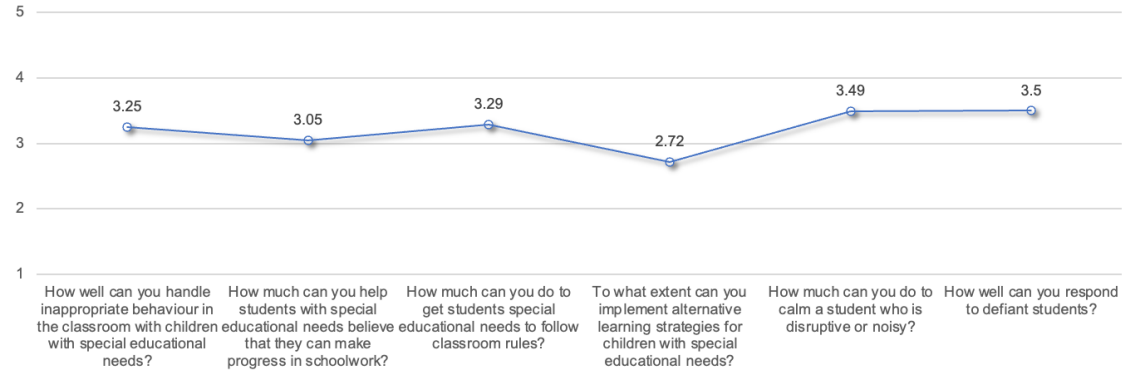
*Distribution of frequencies, percentages, mean and standard deviation about Efficacy in Classroom Management scale items*

| | Not at all | | Very Little | | Moderate | | Quite a bit | | Very much | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| How well can you handle inappropriate behaviour in the classroom with children with special educational needs? | 2 | 0.6 | 39 | 11.5 | 193 | 56.9 | 83 | 24.5 | 22 | 6.5 | 3.25 | 0.764 | 339 |
| How much can you help students with special educational needs believe that they can make progress in schoolwork? | 0 | 0.0 | 97 | 28.6 | 133 | 39.2 | 104 | 30.7 | 5 | 1.5 | 3.05 | 0.807 | 339 |

| | Not at all | | Very Little | | Moderate | | Quite a bit | | Very much | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| How much can you do to get students special educational needs to follow classroom rules? | 0 | 0.0 | 22 | 6.5 | 204 | 60.4 | 105 | 31.1 | 7 | 2.1 | 3.29 | 0.614 | 338 |
| To what extent can you implement alternative learning strategies for children with special educational needs? | 68 | 20.1 | 113 | 33.3 | 58 | 17.1 | 46 | 13.6 | 54 | 15.9 | 2.72 | 1.355 | 339 |
| How much can you do to calm a student who is disruptive or noisy? | 0 | 0.0 | 11 | 3.2 | 161 | 47.5 | 158 | 46.6 | 9 | 2.7 | 3.49 | 0.607 | 339 |
| How well can you respond to defiant students? | 0 | 0.0 | 12 | 3.5 | 156 | 46.0 | 161 | 47.5 | 10 | 2.9 | 3.50 | 0.617 | 339 |

**Figure 19**

*Mean of Efficacy in Classroom Management scale items*




**Effect of Teachers' demographics in their abilities to manage students with special educational needs**

When checking the elements of the Efficacy in Student Engagement subdimension with respect to the Gender variable (see table 30), it can be observed that there are significant differences in 3 of the 4 elements. These are given in the items How much can you motivate students with special educational needs who are less interested in the lesson? (t=-3.072, p=0.001), How much can you help students with special educational needs believe that they can make progress in schoolwork? (t=-3.433, p=0.000) and How much can you help families of students with special educational needs to help their children make progress at school? (t=-2.838, p=0.002), women have a greater perception of efficacy than men.

However, when analyzing the set of elements of the dimensions Effectiveness in Instructional Strategies and Effectiveness in Classroom Management with gender, it can be observed that there are no significant differences.

**Table 30**

*Results of t-test criterion about Efficacy in Student Engagement, Efficacy in Instructional Strategies and Efficacy in Classroom Management scale regarding gender of teachers*

| | Gender | | | | | |
|---|---|---|---|---|---|---|
| | Male (n=161) | | Female (n=178) | | | |
| | M | SD | M | SD | t | p |
| How much can you motivate students with special educational needs who are less interested in the lesson? | 2.83 | 0.838 | 3.11 | 0.806 | -3.072 | 0.001 |
| How much can you help students with special educational needs believe that they can make progress in schoolwork? | 2.89 | 0.841 | 3.19 | 0.750 | -3.433 | 0.000 |
| How much can you help students with special educational needs to appreciate the value of learning? | 2.66 | 0.791 | 2.80 | 0.807 | -1.637 | 0.051 |
| How much can you help families of students with special educational needs to help their children make progress at school? | 2.49 | 0.807 | 2.74 | 0.783 | -2.838 | 0.002 |
| Efficacy in Student Engagement | 3.01 | 0.962 | 3.21 | 0.939 | -1.941 | 0.027 |
| To what extent can you tailor the questions you ask to students with special educational needs? | 3.44 | 0.858 | 3.53 | 0.897 | -0.912 | 0.181 |
| To what extent can you use a variety of assessment strategies for children with special educational needs? | 2.53 | 1.350 | 2.81 | 1.327 | -1.906 | 0.029 |
| To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | 3.49 | 0.867 | 3.58 | 0.868 | -0.992 | 0.161 |
| To what extent can you implement alternative learning strategies for children with special educational needs? | 2.53 | 1.342 | 2.89 | 1.347 | -2.498 | 0.006 |
| How much can you do to foster student creativity? | 3.10 | 0.752 | 3.26 | 0.729 | -1.976 | 0.024 |
| Efficacy in Instructional Strategies | 3.13 | 0.690 | 3.28 | 0.633 | -2.087 | 0.019 |
| How well can you handle inappropriate behaviour in the classroom with children with special educational needs? | 3.20 | 0.773 | 3.29 | 0.755 | -1.124 | 0.131 |
| How much can you do to get students special educational needs to follow classroom rules? | 3.24 | 0.618 | 3.33 | 0.609 | -1.457 | 0.073 |
| To what extent can students with special educational needs follow the rules of your classroom? | 3.03 | 0.720 | 3.17 | 0.685 | -1.802 | 0.036 |
| To what extent can you implement a classroom management system for children with special educational needs? | 2.55 | 1.327 | 2.82 | 1.302 | -1.914 | 0.028 |
| How much can you do to calm a student who is disruptive or noisy? | 3.47 | 0.623 | 3.51 | 0.594 | -0.602 | 0.274 |
| How well can you respond to defiant students? | 3.48 | 0.643 | 3.51 | 0.594 | -0.398 | 0.345 |
| Efficacy in Classroom Management | 2.78 | 0.715 | 3.00 | 0.653 | -2.920 | 0.002 |

When applying Student's t-test for independent samples (n.s.=0.05) between the elements of the Efficacy in Student Engagement subdimension and the Training in special education variable, we found significant differences in the 4 items that compose it. These evidences are in the items How much can you motivate students with special educational needs who are less interested in the lesson? (t=12.304, p=0.000), How much can you help students with special educational needs believe that they can make progress in schoolwork? (t=12.566, p=0.000), How much can you help students with special educational needs to appreciate the value of learning? (t=10.926, p=0.000) y How much can you help families of students with special educational needs to help their children make progress at school? (t=11.646, p=0.000), in which teachers who have training hold higher values than those who do not have it (see table 31).

In the elements of the Efficacy in Instructional Strategies dimension compared to the same variable Training in special education, statistically significant differences are also found in the 5 items, when applying the Student's t-test for independent samples (n.s.=0.05). These evidences are found in the items To what extent can you tailor the questions you ask to students with special educational needs? (t=16.831, p=0.000), To what extent can you use a variety of assessment strategies for children with special educational needs? (t=17.878, p=0.000), To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand (t=19.286, p=0.000), To what extent can you implement alternative learning strategies for children with special educational needs? (t=19.484, p=0.000) and How much can you do to foster student creativity? (t=14.738, p=0.000), being the teachers with training those who have the highest values compared to those who do not.

Finally, when comparing the means of the elements of the Efficacy in Instructional Strategies dimension with the same variable Training in special education, there are statistical differences in the 6 items, after applying the Student's t test for independent samples (n.s.=0.05).

The evidence is found in How well can you handle inappropriate behaviour in the classroom with children with special educational needs? (t=13.074, p=0.000), How much can you do to get students special educational needs to follow classroom rules? (t=13.294, p=0.000), To what extent can students with special educational needs follow the rules of your classroom? (t=12.256, p=0.000), To what extent can you implement a classroom management system for children with special educational needs? (t=19.240, p=0.000), How much can you do to calm a student who is disruptive or noisy? (t=9.012, p=0.000) and How well can you respond to defiant students? (t=7.529, p=0.000), being

the teachers with training those who have the highest values compared to those who do not.

**Table 31**

*Results of t-test criterion about Efficacy in Student Engagement, Efficacy in Instructional Strategies and Efficacy in Classroom Management scale regarding Training in special education*

| | Training in Special Education | | | | t | p |
|---|---|---|---|---|---|---|
| | Yes (n=105) | | No (n=234) | | | |
| | M | SD | M | SD | | |
| How much can you motivate students with special educational needs who are less interested in the lesson? | 3.67 | 0.703 | 2.67 | 0.687 | 12.304 | 0.000 |
| How much can you help students with special educational needs believe that they can make progress in schoolwork? | 3.70 | 0.590 | 2.76 | 0.719 | 12.566 | 0.000 |
| How much can you help students with special educational needs to appreciate the value of learning? | 3.34 | 0.663 | 2.46 | 0.701 | 10.926 | 0.000 |
| How much can you help families of students with special educational needs to help their children make progress at school? | 3.28 | 0.714 | 2.32 | 0.653 | 11.646 | 0.000 |
| Efficacy in Student Engagement | 4.21 | 0.745 | 2.64 | 0.552 | 21.638 | 0.000 |
| To what extent can you tailor the questions you ask to students with special educational needs? | 4.37 | 0.800 | 3.09 | 0.568 | 16.831 | 0.000 |
| To what extent can you use a variety of assessment strategies for children with special educational needs? | 4.13 | 1.053 | 2.03 | 0.866 | 17.878 | 0.000 |
| To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | 4.48 | 0.748 | 3.12 | 0.519 | 19.286 | 0.000 |
| To what extent can you implement alternative learning strategies for children with special educational needs? | 4.22 | 0.980 | 2.05 | 0.875 | 19.484 | 0.000 |
| How much can you do to foster student creativity? | 3.84 | 0.502 | 2.89 | 0.639 | 14.738 | 0.000 |
| Efficacy in Instructional Strategies | 3.88 | 0.491 | 2.90 | 0.481 | 17.283 | 0.000 |
| How well can you handle inappropriate behaviour in the classroom with children with special educational needs? | 3.95 | 0.712 | 2.93 | 0.544 | 13.074 | 0.000 |
| How much can you do to get students special educational needs to follow classroom rules? | 3.83 | 0.509 | 3.04 | 0.489 | 13.294 | 0.000 |
| To what extent can students with special educational needs follow the rules of your classroom? | 3.69 | 0.525 | 2.84 | 0.612 | 12.256 | 0.000 |
| To what extent can you implement a classroom management system for children with special educational needs? | 4.15 | 0.978 | 2.03 | 0.838 | 19.240 | 0.000 |
| How much can you do to calm a student who is disruptive or noisy? | 3.89 | 0.445 | 3.31 | 0.585 | 9.012 | 0.000 |
| How well can you respond to defiant students? | 3.85 | 0.476 | 3.34 | 0.610 | 7.529 | 0.000 |
| Efficacy in Classroom Management | 3.53 | 0.534 | 2.61 | 0.544 | 14.570 | 0.000 |

Applied the Student's t-test for independent samples (n.s.=0.05) between the variables of the Efficacy in Student Engagement scale with the teacher position variable, we found significant differences in the 4 items. These evidences are in How much can you motivate students with special educational needs who are less interested in the lesson? (t=-3.222, p=0.001), How much can you help students with special educational needs believe that they can make progress in schoolwork? (t=-6.297, p=0.000), How much can you help students with special educational needs to appreciate the value of learning? (t=-4.826, p=0,000) and How much can you help families of students with special educational needs to help their children make progress at school? (t=-3.581, p=0.000), teachers with Speciall Education have the highest values (see table 32).

With respect to the elements of the Efficacy in Instructional Strategies dimension and the Teacher Position variable itself, statistically significant differences were found in 3 of the 5 items, when applying the Student's t-test for independent samples (n.s.=0.05). The evidence can be found in To what extent can you use a variety of assessment strategies for children with special educational needs? (t=-1.146, p=0.126), To what extent can you implement alternative learning strategies for children with special educational needs? (t=-5.899, p=0.000) and How much can you do to foster student creativity? (t=-1.808, p=0.036), being the teachers with training those who have the highest values compared to those who do not.

Finally, elements of the Efficacy in Instructional Strategies dimension and the same teacher position variable, the statistically significant differences found are in the 6 items, when performing Student's t-test for independent samples (n.s.=0.05). The evidence is appreciated in How well can you handle inappropriate behaviour in the classroom with children with special educational needs? (t=-1.908, p=0.029), How much can you do to get students special educational needs to follow classroom rules? (t=-2.706, p=0.004), To what extent can students with special educational needs follow the rules of your classroom? (t=-2.280, p=0.012), To what extent can you implement a classroom management system for children with special educational needs? (t=-4.085, p=0.001), How much can you do to calm a student who is disruptive or noisy? (t=-3.288, p=0.001) and How well can you respond to defiant students? (t=-2.099, p=0.018), being the teachers with training those who have the highest average.

**Table 32**

*Results of t-test criterion about Efficacy in Student Engagement, Efficacy in Instructional Strategies and Efficacy in Classroom Management scale regarding teacher position*

| | Position | | | | | |
|---|---|---|---|---|---|---|
| | General Education (n=339) | | Special Education (n=10) | | t | p |
| | M | SD | M | SD | | |
| How much can you motivate students with special educational needs who are less interested in the lesson? | 2.95 | 0.821 | 3.80 | 0.789 | -3.222 | 0.001 |
| How much can you help students with special educational needs believe that they can make progress in schoolwork? | 3.02 | 0.798 | 4.00 | 0.471 | -6.297 | 0.000 |
| How much can you help students with special educational needs to appreciate the value of learning? | 2.70 | 0.773 | 3.90 | 0.876 | -4.826 | 0.000 |
| How much can you help families of students with special educational needs to help their children make progress at school? | 2.59 | 0.784 | 3.50 | 0.972 | -3.581 | 0.000 |
| Efficacy in Student Engagement | 3.10 | 0.958 | 3.74 | 0.517 | -3.722 | 0.002 |
| To what extent can you tailor the questions you ask to students with special educational needs? | 3.48 | 0.880 | 3.80 | 0.789 | -1.146 | 0.126 |
| To what extent can you use a variety of assessment strategies for children with special educational needs? | 2.65 | 1.348 | 3.50 | 0.850 | -3.039 | 0.006 |
| To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | 3.53 | 0.873 | 3.80 | 0.632 | -1.303 | 0.111 |
| To what extent can you implement alternative learning strategies for children with special educational needs? | 2.68 | 1.352 | 4.00 | 0.667 | -5.899 | 0.000 |
| How much can you do to foster student creativity? | 3.17 | 0.738 | 3.60 | 0.843 | -1.808 | 0.036 |
| Efficacy in Instructional Strategies | 3.18 | 0.660 | 3.84 | 0.460 | -3.112 | 0.001 |
| How well can you handle inappropriate behaviour in the classroom with children with special educational needs? | 3.23 | 0.759 | 3.70 | 0.823 | -1.908 | 0.029 |
| How much can you do to get students special educational needs to follow classroom rules? | 3.27 | 0.608 | 3.80 | 0.632 | -2.706 | 0.004 |
| To what extent can students with special educational needs follow the rules of your classroom? | 3.09 | 0.704 | 3.60 | 0.516 | -2.280 | 0.012 |
| To what extent can you implement a classroom management system for children with special educational needs? | 2.67 | 1.331 | 3.40 | 0.516 | -4.085 | 0.001 |
| How much can you do to calm a student who is disruptive or noisy? | 3.47 | 0.594 | 4.10 | 0.738 | -3.288 | 0.001 |
| How well can you respond to defiant students? | 3.49 | 0.610 | 3.90 | 0.738 | -2.099 | 0.018 |
| Efficacy in Classroom Management | 2.87 | 0.677 | 3.76 | 0.595 | -4.116 | 0.000 |

To check the possible differences between the elements of the subdimensions according to the variable Age of the teachers, an Analysis of Variance was applied for a

Factor (n.s.=0.05) warning them in 14 of the 15 items. After applying Scheffé's post-hoc test, 8 are confirmed to be significant, the results being the following (see table 33):

- To what extent can you tailor the questions you ask to students with special educational needs? (F=7.758, p=0.000) is more valued in the age range 30-34 compared to those between 45-49 (I-J=0.948, p=0.001), 50-54 (I-J=1.075, p=0.00), 55-59 (I-J=1.000, p=0.001) and 60-64 (I-J=1.117, p=0.000).
- To what extent can you use a variety of assessment strategies for children with special educational needs? (F=10.239, p=0.000) obtains a higher rating for the age range of 30-34 years versus 45-49 (I-J=1.731, p=0.000), 50-54 (I-J=1.646, p=0.000), 55-59 (I-J=1.830, p=0.000) and 60-64 (I-J=1.777, p=0.000). In the same way it is observed in the teaching staff of 40-44 with respect to 45-49 (I-J =0.930, p=0.035) and 55-59 (I-J=1.028 p=0.034).
- To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? (F=9.214, p=0.000) is rated higher by teachers aged 30-34 compared to those aged 45-49 (I-J=1.087, p=0.000), 50-54 (I-J=1.139, p=0.000), 55-59 (I-J=1.133, p=0.000) and 60-64 (I-J=1.012, p=0.001).
- To what extent can you implement alternative learning strategies for children with special educational needs? (F=9.291, p=0.000) teachers with ages 30-34 also give it greater value compared to those who have between 45-49 (I-J=1.643, p=0.000), 50-54 (I-J=1.543, p=0.000), 55-59 (I-J=1.667, p=0.000) and 60-64 years (I-J=1.676, p=0.000, as is the case with teachers aged 40-44 with respect to the age range of 45-49 (I-J=0.967, p=0.030).
- How much can you do to foster student creativity? (F=5.127, p=0.000) it is valued higher by the ages between 30-34 compared to those between 45-49 (I-J=0.718, p=0.008) and 55-59 years (I-J=0.659, p=0.049).
- How well can you handle inappropriate behaviour in the classroom with children with special educational needs? (F=7.667, p=0.000), also teachers aged 30-34 years value it higher in relation to age groups 45-49 (I-J=0.954, p=0.000), 50-54 (I-J=0.855, p=0.000), 55-59 (I-J=0.726, p=0.017) and 60-64 years old (I-J=0.737, p=0.022).
- To what extent can students with special educational needs follow the rules of your classroom? (F=4.766, p=0.000) is estimated higher by teachers aged between 30-34 years compared to those between the ranges 45-49 (I-J=0.658, p=0.011), 50-54 (I-J=0.594, p=0.028) and 55-59 (I-J=0.741, p=0.006).

- Finally, To what extent can you implement a classroom management system for children with special educational needs? (F=10.295, p=0.000) has greater value for teachers aged 30-34 than for those aged 45-49 (I-J=1.708, p=0.000), 50-54 (I-J=1.602, p=0.000), 55-59 (I-J=1.770, p=0.000) and 60-64 years old (I-J=1.713, p=0.000). In the same way we can appreciate these differences between the ages 40-44 with 45-49 (I-J=0.944, p=0.025) y 55-59 (I-J=1.006, p=0.036).

**Table 33**

*Results Analysis of Variance and Scheffé's post-hoc test on scale Efficacy in Student Engagement, Efficacy in Classroom Management and Efficacy in Classroom Management regarding age*

| | Age | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| How much can you motivate students with special educational needs who are less interested in the lesson? | 25-29 | 3.400 | 0.894 | 5 | 2.664 | 0.011 | |
| | 30-34 | 3.519 | 0.849 | 27 | | | |
| | 35-39 | 3.095 | 0.944 | 21 | | | |
| | 40-44 | 3.091 | 0.858 | 44 | | | |
| | 45-49 | 2.829 | 0.701 | 70 | | | |
| | 50-54 | 2.906 | 0.734 | 85 | | | |
| | 55-59 | 2.867 | 0.869 | 45 | | | |
| | 60-64 | 2.946 | 0.911 | 37 | | | |
| How much can you help students with special educational needs believe that they can make progress in school work? | 25-29 | 3.400 | 0.894 | 5 | 2.791 | 0.008 | |
| | 30-34 | 3.556 | 0.751 | 27 | | | |
| | 35-39 | 3.143 | 0.854 | 21 | | | |
| | 40-44 | 3.205 | 0.823 | 44 | | | |
| | 45-49 | 2.900 | 0.705 | 70 | | | |
| | 50-54 | 3.024 | 0.771 | 85 | | | |
| | 55-59 | 2.911 | 0.848 | 45 | | | |
| | 60-64 | 2.892 | 0.843 | 37 | | | |
| How much can you help students with special educational needs to appreciate the value of learning? | 25-29 | 2.800 | 0.447 | 5 | 2.744 | 0.009 | |
| | 30-34 | 3.037 | 0.759 | 27 | | | |
| | 35-39 | 3.143 | 0.964 | 21 | | | |
| | 40-44 | 2.909 | 0.802 | 44 | | | |
| | 45-49 | 2.580 | 0.604 | 69 | | | |
| | 50-54 | 2.726 | 0.812 | 84 | | | |
| | 55-59 | 2.511 | 0.815 | 45 | | | |
| | 60-64 | 2.595 | 0.927 | 37 | | | |
| How much can you help families of students with special educational needs to help their children make progress at school? | 25-29 | 3.200 | 0.837 | 5 | 3.271 | 0.002 | |
| | 30-34 | 3.037 | 0.808 | 27 | | | |
| | 35-39 | 2.905 | 0.889 | 21 | | | |
| | 40-44 | 2.773 | 0.803 | 44 | | | |
| | 45-49 | 2.429 | 0.714 | 70 | | | |
| | 50-54 | 2.565 | 0.794 | 85 | | | |
| | 55-59 | 2.400 | 0.751 | 45 | | | |
| | 60-64 | 2.595 | 0.832 | 37 | | | |
| To what extent can you tailor the questions you ask | 25-29 | 4.400 | 0.894 | 5 | 7.758 | 0.000 | 30-34 -> 45-49 / 0.948 (0.001) |
| | 30-34 | 4.333 | 1.074 | 27 | | | 30-34 -> 50-54 / 1.075 (0.000) |

| | Age | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| to students with special educational needs? | 35-39 | 3.762 | 1.136 | 21 | | | 30-34 -> 55-59 / 1.000 (0.001) |
| | 40-44 | 3.750 | 0.892 | 44 | | | 30-34 -> 60-64 / 1.117 (0.000) |
| | 45-49 | 3.386 | 0.708 | 70 | | | |
| | 50-54 | 3.259 | 0.601 | 85 | | | |
| | 55-59 | 3.333 | 0.826 | 45 | | | |
| | 60-64 | 3.216 | 0.976 | 37 | | | |
| To what extent can you use a variety of assessment strategies for children with special educational needs? | 25-29 | 4.200 | 1.304 | 5 | 10.239 | 0.000 | 30-34 -> 45-49 / 1.731 (0.000) |
| | 30-34 | 4.074 | 1.439 | 27 | | | 30-34 -> 50-54 / 1.646 (0.000) |
| | 35-39 | 3.048 | 1.564 | 21 | | | 30-34 -> 55-59 / 1.830 (0.000) |
| | 40-44 | 3.273 | 1.246 | 44 | | | 30-34 -> 60-64 / 1.777 (0.000) |
| | 45-49 | 2.343 | 1.115 | 70 | | | 40-44 -> 45-49 / 0.930 (0.035) |
| | 50-54 | 2.429 | 1.090 | 84 | | | 40-44 -> 55-59 / 1.028 (0.034) |
| | 55-59 | 2.244 | 1.282 | 45 | | | |
| | 60-64 | 2.297 | 1.331 | 37 | | | |
| To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | 25-29 | 4.400 | 0.894 | 5 | 9.214 | 0.000 | 30-34 -> 45-49 / 1.087 (0.000) |
| | 30-34 | 4.444 | 0.892 | 27 | | | 30-34 -> 50-54 / 1.139 (0.000) |
| | 35-39 | 3.905 | 0.995 | 21 | | | 30-34 -> 55-59 / 1.133 (0.000) |
| | 40-44 | 3.818 | 1.063 | 44 | | | 30-34 -> 60-64 / 1.012 (0.001) |
| | 45-49 | 3.357 | 0.703 | 70 | | | |
| | 50-54 | 3.306 | 0.655 | 85 | | | |
| | 55-59 | 3.311 | 0.763 | 45 | | | |
| | 60-64 | 3.432 | 0.801 | 37 | | | |
| To what extent can you implement alternative learning strategies for children with special educational needs? | 25-29 | 4.200 | 1.304 | 5 | 9.291 | 0.000 | 30-34 -> 45-49 / 1.643 (0.000) |
| | 30-34 | 4.000 | 1.468 | 27 | | | 30-34 -> 50-54 / 1.541 (0.000) |
| | 35-39 | 3.190 | 1.662 | 21 | | | 30-34 -> 55-59 / 1.667 (0.000) |
| | 40-44 | 3.318 | 1.272 | 44 | | | 30-34 -> 60-64 / 1.676 (0.000) |
| | 45-49 | 2.357 | 1.104 | 70 | | | 40-44 -> 45-49 / 0.961 (0.030) |
| | 50-54 | 2.459 | 1.097 | 85 | | | |
| | 55-59 | 2.333 | 1.365 | 45 | | | |
| | 60-64 | 2.324 | 1.313 | 37 | | | |
| How much can you do to foster student creativity? | 25-29 | 3.800 | 0.447 | 5 | 5.127 | 0.000 | 30-34 -> 45-49 / 0.718 (0.008) |
| | 30-34 | 3.704 | 0.775 | 27 | | | 30-34 -> 55-59 / 0.659 (0.049) |
| | 35-39 | 3.095 | 0.944 | 21 | | | |
| | 40-44 | 3.500 | 0.699 | 44 | | | |
| | 45-49 | 2.986 | 0.648 | 70 | | | |
| | 50-54 | 3.118 | 0.680 | 85 | | | |
| | 55-59 | 3.044 | 0.767 | 45 | | | |
| | 60-64 | 3.054 | 0.705 | 37 | | | |
| How well can you handle inappropriate behavior in the classroom with children with special educational needs? | 25-29 | 4.000 | 0.707 | 5 | 7.667 | 0.000 | 30-34 -> 45-49 / 0.954 (0.000) |
| | 30-34 | 3.926 | 0.781 | 27 | | | 30-34 -> 50-54 / 0.855 (0.000) |
| | 35-39 | 3.524 | 0.814 | 21 | | | 30-34 -> 55-59 / 0.726 (0.017) |
| | 40-44 | 3.477 | 0.821 | 44 | | | 30-34 -> 60-64 / 0.737 (0.022) |
| | 45-49 | 2.971 | 0.659 | 70 | | | |
| | 50-54 | 3.071 | 0.613 | 85 | | | |
| | 55-59 | 3.200 | 0.661 | 45 | | | |
| | 60-64 | 3.189 | 0.845 | 37 | | | |
| How much can you do to get students special | 25-29 | 3.600 | 0.548 | 5 | 4.456 | 0.000 | |
| | 30-34 | 3.667 | 0.555 | 27 | | | |

| | Age | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| educational needs to follow classroom rules? | 35-39 | 3.524 | 0.602 | 21 | | | |
| | 40-44 | 3.523 | 0.698 | 44 | | | |
| | 45-49 | 3.157 | 0.528 | 70 | | | |
| | 50-54 | 3.179 | 0.541 | 84 | | | |
| | 55-59 | 3.178 | 0.576 | 45 | | | |
| | 60-64 | 3.189 | 0.739 | 37 | | | |
| To what extent can students with special educational needs follow the rules of your classroom? | 25-29 | 3.600 | 0.894 | 5 | 4.766 | 0.000 | 30-34 -> 45-49 / 0.658 (0.011) |
| | 30-34 | 3.630 | 0.565 | 27 | | | 30-34 -> 50-54 / 0.594 (0.028) |
| | 35-39 | 3.429 | 0.676 | 21 | | | 30-34 -> 55-59 / 0.741 (0.006) |
| | 40-44 | 3.159 | 0.745 | 44 | | | |
| | 45-49 | 2.971 | 0.636 | 70 | | | |
| | 50-54 | 3.035 | 0.645 | 85 | | | |
| | 55-59 | 2.889 | 0.682 | 45 | | | |
| | 60-64 | 3.000 | 0.745 | 37 | | | |
| To what extent can you implement a classroom management system for children with special educational needs? | 25-29 | 4.200 | 1.304 | 5 | 10.295 | 0.000 | 30-34 -> 45-49 / 1.708 (0.000) |
| | 30-34 | 4.037 | 1.427 | 27 | | | 30-34 -> 50-54 / 1.602 (0.000) |
| | 35-39 | 3.095 | 1.578 | 21 | | | 30-34 -> 55-59 / 1.770 (0.000) |
| | 40-44 | 3.273 | 1.227 | 44 | | | 30-34 -> 60-64 / 1.713 (0.000) |
| | 45-49 | 2.329 | 1.073 | 70 | | | 40-44 -> 45-49 / 0.944 (0.025) |
| | 50-54 | 2.435 | 1.040 | 85 | | | 40-44 -> 55-59 / 1.006 (0.036) |
| | 55-59 | 2.267 | 1.286 | 45 | | | |
| | 60-64 | 2.324 | 1.334 | 37 | | | |
| How much can you do to calm a student who is disruptive or noisy? | 25-29 | 3.800 | 0.447 | 5 | 2.366 | 0.023 | |
| | 30-34 | 3.778 | 0.424 | 27 | | | |
| | 35-39 | 3.524 | 0.750 | 21 | | | |
| | 40-44 | 3.636 | 0.487 | 44 | | | |
| | 45-49 | 3.414 | 0.625 | 70 | | | |
| | 50-54 | 3.365 | 0.633 | 85 | | | |
| | 55-59 | 3.400 | 0.618 | 45 | | | |
| | 60-64 | 3.541 | 0.558 | 37 | | | |
| How well can you respond to defiant students? | 25-29 | 3.800 | 0.447 | 5 | 2.025 | 0.051 | |
| | 30-34 | 3.815 | 0.396 | 27 | | | |
| | 35-39 | 3.524 | 0.602 | 21 | | | |
| | 40-44 | 3.636 | 0.532 | 44 | | | |
| | 45-49 | 3.443 | 0.629 | 70 | | | |
| | 50-54 | 3.412 | 0.642 | 85 | | | |
| | 55-59 | 3.444 | 0.624 | 45 | | | |
| | 60-64 | 3.486 | 0.559 | 37 | | | |

To check the possible differences between the elements of the subdimensions according to the regarding Experience variable, an Analysis of Variance was applied for a Factor (n.s.=0.05) noting them in the 15 items (see table 34). After applying Scheffé's post-hoc test, it is confirmed that 13 are significant, the results being the following:

- How much can you motivate students with special educational needs who are less interested in the lesson? (F=4.902, p=0.001) is better valued for the range

of years of experience, between 6-10 with respect to 16-20 (I-J=0.621, p=0.042) and 21-25 (I-J=0.726, p=0.009), in favor of the former.

- How much can you help students with special educational needs believe that they can make progress in school work? (F=5.102, p=0.001) is more valued for teachers with 1-5 years of experience (I-J=0.691, p=0.036) and between 6-10 (I-J=0.762, p=0.002) with respect to those between 21-25 years old.
- How much can you help students with special educational needs to appreciate the value of learning? (F=5.658, p=0.001) obtains a higher rating by teachers with 6-10 years of experience compared to those with 16-20 (I-J=0.675, p=0.010), 21-25 (I-J=0.804, p=0.001) and 26-30 (I-J=0.683, p=0.018).
- How much can you help families of students with special educational needs to help their children make progress at school? (F=6.815, p=0.001) is valued with a higher score in years of teaching experience between 6-10 compared to those who have 16-20 (I-J=0.711, p=0.004), 21-25 (I-J=0.820, p=0.00) and 26-30 (I-J=0.692, p=0.014). The same happens with teachers with experience between 11-15 years compared to 21-25 (I-J=0.566, p=0.024).
- To what extent can you tailor the questions you ask to students with special educational needs? obtains a higher rating for experience ranges 1-5 and 6-10 (F=10.057, p=0.001). Sheffé's post-hoc tests indicate significant differences in years of experience 1-5 with respect to 16-20 (I-J=0.811, p=0.006), 21-25 (I-J=0.907, p=0.001) and 26-30 (I-J=0.811, p=0.013), in favor of the former. We also observed a significant difference in favor of the range 6-10 with respect to 16-20 (I-J=0.923, p=0.000), 21-25 (I-J=1.020, p=0.000), 26-30 (I-J=0.924, p=0.000) and more than 30 (I-J=0.818, p=0.018).
- To what extent can you use a variety of assessment strategies for children with special educational needs? (F=10.666, p=0.001) is rated higher for teachers with experience between 1-5 years compared to 16-20 (I-J=1.374, p=0.001), 21-25 (I-J=1.498, p=0.000), 26-30 (I-J=1.319, p=0.005) and more 30 (I-J=1.445, p=0.006). Similarly, we observed a significant difference in favor of the range 6-10 with respect to 16-20 (I-J=1.406, p=0.000), 21-25 (I-J=1.530, p=0.000), 26-30 (I-J=1.351, p=0.001) and more than 30 (I-J=1.477, p=0.001).
- To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? (F=11.005, p=0.001) it is also estimated by teachers with a higher value between years of experience 1-5 compared to 16-20 (I-J=0.817, p=0.004), 21-25 (I-J=0.861, p=0.002) and 26-30 (I-J=0.807, p=0.010), as well as those who have

between 6-10 with respect to 16-20 (I-J=1.000, p=0.000), 21-25 (I-J=1.044, p=0.000), 26-30 (I-J=0.989, p=0.000) and more than 30 (I-J=0.856, p=0.007).

- To what extent can you implement alternative learning strategies for children with special educational needs? it is valued more by teachers with 1-5 years of experience compared to those between 16-20 (I-J=1.337, p=0.002), 21-25 (I-J =1.550, p=0.000), 26-30 (I-J=1.314, p=0.006) and more than 30 (I-J=0.856, p=0.007). Similarly, we observed a significant difference in favor of the range 6-10 with respect to 16-20 (I-J =1.386, p=0.000), 21-25 (I-J=1.599, p=0.000), 26-30 (I-J=1.363, p=0.001) and more than 30 (I-J=1.563, p=0.000), as well as those who have 11-15 with respect to those who have 21-25 years of experience (I-J=0.924, p=0.023).
- How much can you do to foster student creativity? (F=4.738, p=0.001) it is valued higher by teachers with 6-10 years of experience compared to those aged 16-20 (I-J=0.621, p=0.042) and 21-25 years (I-J=0.585, p=0.031).
- How well can you handle inappropriate behaviour in the classroom with children with special educational needs? (F=9.021, p=0.001) is more relevant for teachers with 1-5 years of experience than for those with 16-20 (I-J=0.729, p=0.004) and 21-25 (I-J=0.714, p=0.0008). Similarly, we observed a significant difference in favor of the range 6-10 with respect to 11-15 (I-J=0.667, p=0.006), 16-20 (I-J=0.909, p=0.000), 21-25 (I-J=0.898, p=0.000) and 26-30 (I-J=0.675, p=0.007).
- How much can you do to get students special educational needs to follow classroom rules? (F=8.042, p=0.001) is estimated higher by experienced teachers between 6-10 versus 16-20 (I-J=0.647, p=0.000), 21-25 (I-J=0.713, p=0.000) and 26-30 (I-J=0.563, p=0.005). We observed this same difference between 11-15 and 21-25 (I-J=0.406, p=0.044).
- To what extent can students with special educational needs follow the rules of your classroom? (F=6.718, p=0.001), teachers with 1-5 years of experience rate it higher than those with 21-25 (I-J=0.664, p=0.009), as do those with between 6-10 compared to those aged 16-20 (I-J=0.593, p=0.008), 21-25 (I-J=0.743, p=0.000) and 26-30 years of experience (I-J=0.659, p=0.004).
- Finally, To what extent can you implement a classroom management system for children with special educational needs? (F=10.667, p=0.001) is more valued by teachers with an experience between 1-5 years compared to 16-20 (I-J=1.345, p=0.000), 21-25 (I-J=1.515, p=0.000), 26-30 (I-J=1.319, p=0.004) and more 30 (I-J=1.412, p=0.007). We see higher values for those in the range of 6-10 versus 16-20 (I-J=1.351, p=0.000), and 21-25 (I-J=1.520, p=0.000) 26-30 (I-J=1.324,

p=0.001) and more than 30 (I-J=1.418, p=0.002). The teacher behaves in the same way with 11-15 years with respect to 21-25 (I-J=0.871, p=0.034).

**Table 34**

*Results Analysis of Variance and Scheffé's post-hoc test on scale Efficacy in Student Engagement, Efficacy in Classroom Management and Efficacy in Classroom Management regarding Experience*

| | Experience | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| How much can you motivate students with special educational needs who are less interested in the lesson? | 1-5 | 3.36 | 0.911 | 28 | 4.902 | 0.001 | 6-10 -> 16-20 / 0.621 (0.042) |
| | 6-10 | 3.45 | 0.921 | 38 | | | 6-10 -> 21-25 / 0.726 (0.009) |
| | 11-15 | 3.07 | 0.799 | 57 | | | |
| | 16-20 | 2.83 | 0.685 | 69 | | | |
| | 21-25 | 2.72 | 0.733 | 61 | | | |
| | 26-30 | 3.00 | 0.808 | 50 | | | |
| | More than 30 | 2.80 | 0.887 | 30 | | | |
| How much can you help students with special educational needs believe that they can make progress in school work? | 1-5 | 3.43 | 0.879 | 28 | 5.102 | 0.001 | 1-5 -> 21-25 / 0.691 (0.036) |
| | 6-10 | 3.50 | 0.797 | 38 | | | 6-10 -> 21-25 / 0.762 (0.002) |
| | 11-15 | 3.19 | 0.811 | 57 | | | |
| | 16-20 | 2.96 | 0.695 | 69 | | | |
| | 21-25 | 2.74 | 0.728 | 61 | | | |
| | 26-30 | 3.00 | 0.782 | 50 | | | |
| | More than 30 | 2.87 | 0.860 | 30 | | | |
| How much can you help students with special educational needs to appreciate the value of learning? | 1-5 | 2.96 | 0.793 | 28 | 5.658 | 0.001 | 6-10 -> 16-20 / 0.675 (0.010) |
| | 6-10 | 3.26 | 0.860 | 38 | | | 6-10 -> 21-25 / 0.804 (0.001) |
| | 11-15 | 2.96 | 0.785 | 56 | | | 6-10 -> 26-30 / 0.683 (0.018) |
| | 16-20 | 2.59 | 0.629 | 68 | | | |
| | 21-25 | 2.46 | 0.765 | 61 | | | |
| | 26-30 | 2.58 | 0.758 | 50 | | | |
| | More than 30 | 2.57 | 0.898 | 30 | | | |
| How much can you help families of students with special educational needs to help their children make progress at school? | 1-5 | 2.96 | 0.838 | 28 | 6.815 | 0.001 | 6-10 -> 16-20 / 0.711 (0.004) |
| | 6-10 | 3.13 | 0.844 | 38 | | | 6-10 -> 21-25 / 0.820 (0.000) |
| | 11-15 | 2.88 | 0.781 | 57 | | | 6-10 -> 26-30 / 0.692 (0.014) |
| | 16-20 | 2.42 | 0.695 | 69 | | | 11-15 -> 21-25 / 0.566 (0.024) |
| | 21-25 | 2.31 | 0.696 | 61 | | | |
| | 26-30 | 2.44 | 0.787 | 50 | | | |
| | More than 30 | 2.53 | 0.776 | 30 | | | |
| To what extent can you tailor the questions you ask to students with special educational needs? | 1-5 | 4.07 | 1.120 | 28 | 10.057 | 0.001 | 1-5 -> 16-20 / 0.811 (0.006) |
| | 6-10 | 4.18 | 0.982 | 38 | | | 1-5 -> 21-25 / 0.907 (0.001) |
| | 11-15 | 3.68 | 0.760 | 57 | | | 1-5 -> 26-30 / 0.811 (0.013) |
| | 16-20 | 3.26 | 0.656 | 69 | | | 6-10 -> 16-20 / 0.923 (0.000) |
| | 21-25 | 3.16 | 0.688 | 61 | | | 6-10 -> 21-25 / 1.020 (0.000) |
| | 26-30 | 3.26 | 0.828 | 50 | | | 6-10 -> 26-30 / 0.924 (0.000) |
| | More than 30 | 3.37 | 0.850 | 30 | | | 6-10 -> more 30 / 0.818 (0.018) |
| To what extent can you use a variety of assessment strategies for children with special educational needs? | 1-5 | 3.68 | 1.467 | 28 | 10.666 | 0.001 | 1-5 -> 16-20 / 1.374 (0.001) |
| | 6-10 | 3.71 | 1.450 | 38 | | | 1-5 -> 21-25 / 1.498 (0.000) |
| | 11-15 | 3.04 | 1.206 | 56 | | | 1-5 -> 26-30 / 1.319 (0.005) |
| | 16-20 | 2.30 | 1.047 | 69 | | | 1-5 -> more 30 / 1.445 (0.006) |
| | 21-25 | 2.18 | 1.088 | 61 | | | 6-10 -> 16-20 / 1.406 (0.000) |
| | 26-30 | 2.36 | 1.274 | 50 | | | 6-10 -> 21-25 / 1.530 (0.000) |
| | More than 30 | 2.23 | 1.357 | 30 | | | 6-10 -> 26-30 / 1.351 (0.001) |

| | Experience | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | | | | | | | 6-10 -> more 30 / 1.477 (0.001) |
| To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | 1-5 | 4.11 | 0.994 | 28 | 11.005 | 0.001 | 1-5 -> 16-20 / 0.817 (0.004) |
| | 6-10 | 4.29 | 0.898 | 38 | | | 1-5 -> 21-25 / 0.861 (0.002) |
| | 11-15 | 3.72 | 0.901 | 57 | | | 1-5 -> 26-30 / 0.807 (0.010) |
| | 16-20 | 3.29 | 0.644 | 69 | | | 6-10 -> 16-20 / 1.000 (0.000) |
| | 21-25 | 3.25 | 0.699 | 61 | | | 6-10 -> 21-25 / 1.044 (0.000) |
| | 26-30 | 3.30 | 0.735 | 50 | | | 6-10 -> 26-30 / 0.989 (0.000) |
| | More than 30 | 3.43 | 0.817 | 30 | | | 6-10 -> more 30 / 0.856 (0.007) |
| To what extent can you implement alternative learning strategies for children with special educational needs? | 1-5 | 3.71 | 1.487 | 28 | 10.995 | 0.001 | 1-5 -> 16-20 / 1.337 (0.002) |
| | 6-10 | 3.76 | 1.460 | 38 | | | 1-5 -> 21-25 / 1.550 (0.00) |
| | 11-15 | 3.09 | 1.214 | 57 | | | 1-5 -> 26-30 / 1.314 (0.006) |
| | 16-20 | 2.38 | 1.045 | 69 | | | 1-5 -> more 30 / 1.514 (0.003) |
| | 21-25 | 2.16 | 1.113 | 61 | | | 6-10 -> 16-20 / 1.386 (0.000) |
| | 26-30 | 2.40 | 1.309 | 50 | | | 6-10 -> 21-25 / 1.599 (0.000) |
| | More than 30 | 2.20 | 1.297 | 30 | | | 6-10 -> 26-30 / 1.363 (0.001) |
| | | | | | | | 6-10 -> more 30 / 1.563 (0.000) |
| | | | | | | | 11-15 -> 21-25 / 0.924 (0.023) |
| How much can you do to foster student creativity? | 1-5 | 3.54 | 0.744 | 28 | 4.738 | 0.001 | 6-10 -> 16-20 / 0.621 (0.042) |
| | 6-10 | 3.55 | 0.891 | 38 | | | 6-10 -> 21-25 / 0.585 (0.031) |
| | 11-15 | 3.37 | 0.698 | 57 | | | |
| | 16-20 | 3.01 | 0.653 | 69 | | | |
| | 21-25 | 2.97 | 0.682 | 61 | | | |
| | 26-30 | 3.06 | 0.712 | 50 | | | |
| | More than 30 | 3.03 | 0.718 | 30 | | | |
| How well can you handle inappropriate behavior in the classroom with children with special educational needs? | 1-5 | 3.71 | 0.897 | 28 | 9.021 | 0.001 | 1-5 -> 16-20 / 0.729 (0.004) |
| | 6-10 | 3.89 | 0.649 | 38 | | | 1-5 -> 21-25 / 0.714 (0.008) |
| | 11-15 | 3.23 | 0.866 | 57 | | | 6-10 -> 11-15 / 0.667 (0.006) |
| | 16-20 | 2.99 | 0.606 | 69 | | | 6-10 -> 16-20 / 0.909 (0.000) |
| | 21-25 | 3.00 | 0.606 | 61 | | | 6-10 -> 21-25 / 0.895 (0.000) |
| | 26-30 | 3.22 | 0.648 | 50 | | | 6-10 -> 26-30 / 0.675 (0.007) |
| | More than 30 | 3.27 | 0.785 | 30 | | | |
| How much can you do to get students special educational needs to follow classroom rules? | 1-5 | 3.50 | 0.638 | 28 | 8.042 | 0.001 | 6-10 -> 16-20 / 0.647 (0.000) |
| | 6-10 | 3.76 | 0.490 | 38 | | | 6-10 -> 21-25 / 0.713 (0.000) |
| | 11-15 | 3.46 | 0.709 | 57 | | | 6-10 -> 26-30 / 0.563 (0.005) |
| | 16-20 | 3.12 | 0.471 | 69 | | | 11-15 -> 21-25 / 0.406 (0.044) |
| | 21-25 | 3.05 | 0.534 | 60 | | | |
| | 26-30 | 3.20 | 0.535 | 50 | | | |
| | More than 30 | 3.27 | 0.691 | 30 | | | |
| To what extent can students with special educational needs follow the rules of your classroom? | 1-5 | 3.50 | 0.694 | 28 | 6.718 | 0.001 | 1-5 -> 21-25 / 0.664 (0.009) |
| | 6-10 | 3.58 | 0.683 | 38 | | | 6-10 -> 16-20 / 0.593 (0.008) |
| | 11-15 | 3.21 | 0.647 | 57 | | | 6-10 -> 21-25 / 0.743 (0.000) |
| | 16-20 | 2.99 | 0.653 | 69 | | | 6-10 -> 26-30 / 0.659 (0.004) |
| | 21-25 | 2.84 | 0.610 | 61 | | | |
| | 26-30 | 2.92 | 0.634 | 50 | | | |
| | More than 30 | 3.03 | 0.765 | 30 | | | |
| To what extent can you implement a classroom management system for children with special educational needs? | 1-5 | 3.68 | 1.467 | 28 | 10.667 | 0.001 | 1-5 -> 16-20 / 1.345 (0.00) |
| | 6-10 | 3.68 | 1.454 | 38 | | | 1-5 -> 21-25 / 1.515 (0.00) |
| | 11-15 | 3.04 | 1.164 | 57 | | | 1-5 -> 26-30 / 1.319 (0.004) |
| | 16-20 | 2.33 | 1.010 | 69 | | | 1-5 -> more 30 / 1.412 (0.007) |
| | 21-25 | 2.16 | 1.036 | 61 | | | 6-10 -> 16-20 / 1.351 (0.000) |
| | 26-30 | 2.36 | 1.274 | 50 | | | 6-10 -> 21-25 / 1.520 (0.000) |
| | More than 30 | 2.27 | 1.363 | 30 | | | 6-10 -> 26-30 / 1.324 (0.001) |

| | Experience | M | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | | | | | | | 6-10 -> more 30 / 1.418 (0.002) |
| | | | | | | | 11-15 -> 21-25 / 0.871 (0.034) |
| How much can you do to calm a student who is disruptive or noisy? | 1-5 | 3.71 | 0.600 | 28 | 2.147 | 0.039 | |
| | 6-10 | 3.74 | 0.601 | 38 | | | |
| | 11-15 | 3.51 | 0.601 | 57 | | | |
| | 16-20 | 3.41 | 0.602 | 69 | | | |
| | 21-25 | 3.38 | 0.610 | 61 | | | |
| | 26-30 | 3.42 | 0.575 | 50 | | | |
| | More than 30 | 3.47 | 0.629 | 30 | | | |
| How well can you respond to defiant students? | 1-5 | 3.71 | 0.600 | 28 | 3.868 | 0.001 | |
| | 6-10 | 3.74 | 0.503 | 38 | | | |
| | 11-15 | 3.60 | 0.623 | 57 | | | |
| | 16-20 | 3.36 | 0.641 | 69 | | | |
| | 21-25 | 3.44 | 0.592 | 61 | | | |
| | 26-30 | 3.46 | 0.542 | 50 | | | |
| | More than 30 | 3.47 | 0.629 | 30 | | | |

### 5.2.3. Strategies for teaching students with special educational needs

The next dimension Strategies of the teaching-learning process to create an environment of inclusion in the classroom is composed of 6 subdimensions. Based on the elements of the first of them, Differentiation in content, the averages indicate that the level is high in most of the elements (see table 35 and figure 20).

The highest values are found in the items I provide support to students and encourage them to immerse themselves in problem-solving skills (M=4.24, SD=0.516), I plan the lessons well before each class (M=4.22, SD=0.508), I set clear and specific lesson goals (M=4.14, SD=0.411), I specify the suitable time interval per learning goal (M=4.06, SD=0.527), Selection of content: I give consideration to the identification of the main idea(s) of the topic or unit (M=4.13, SD=0.538) and I avail the opportunity to students to immerse themselves into different activities that motivate their minds and increase their attentiveness (M=4.07, SD=0.520).

In contrast, the lowest values are in the elements I do not deviate from the standard level that every student should reach to (M=2.58, SD=0.864) and I present the content to the students in different speeds; I do not commit all students to the same timing (M=2.90, SD=0.985).

**Table 35**

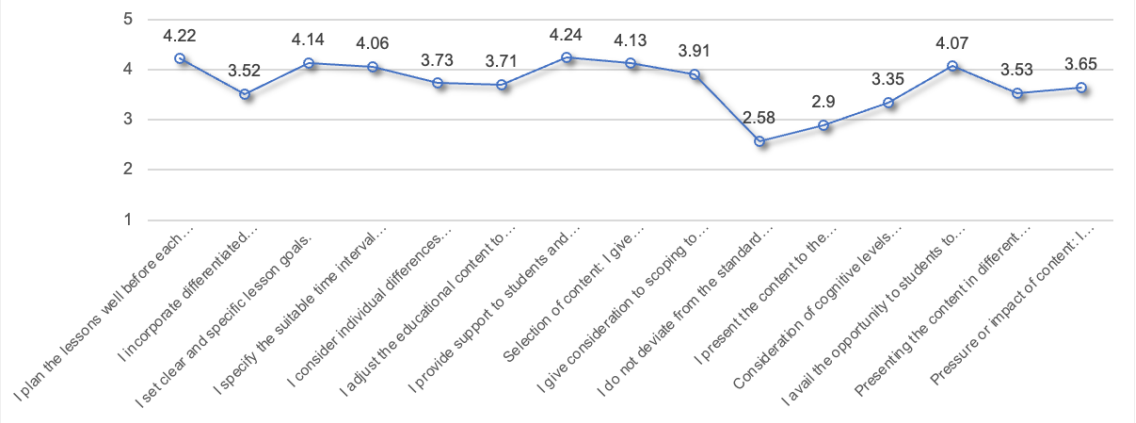
*Distribution of frequencies, percentages, mean and standard deviation about Differentiation in content scale items*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I plan the lessons well before each class. | 0 | 0.0 | 1 | 0.3 | 10 | 3 | 240 | 71 | 86 | 25.4 | 4.22 | 0.508 | 338 |
| I incorporate differentiated instruction processes when I am planning for teaching. | 0 | 0.0 | 3 | 0.9 | 169 | 49.9 | 154 | 45.4 | 13 | 3.8 | 3.52 | 0.587 | 339 |
| I set clear and specific lesson goals. | 0 | 0.0 | 0 | 0.0 | 8 | 2.4 | 275 | 81.1 | 56 | 16.5 | 4.14 | 0.411 | 339 |
| I specify the suitable time interval per learning goal. | 0 | 0.0 | 4 | 1.2 | 25 | 7.4 | 256 | 75.5 | 54 | 15.9 | 4.06 | 0.527 | 339 |
| I consider individual differences and variations among students given the important impact this creates on the students' behaviour inside the classroom. | 0 | 0.0 | 3 | 0.9 | 105 | 31 | 212 | 62.5 | 19 | 5.6 | 3.73 | 0.573 | 339 |
| I adjust the educational content to suit the educational needs, e.g. tying the content with concepts and skills that a student desires to learn. | 0 | 0.0 | 2 | 0.6 | 8 | 2.4 | 235 | 69.3 | 94 | 27.7 | 3.71 | 0.586 | 339 |
| I provide support to students and encourage them to immerse themselves in problem-solving skills. | 0 | 0.0 | 2 | 0.6 | 24 | 7.1 | 241 | 71.3 | 71 | 21 | 4.24 | 0.516 | 339 |
| Selection of content: I give consideration to the identification of the main idea(s) of the topic or unit. | 0 | 0.0 | 2 | 0.6 | 52 | 15.3 | 259 | 76.4 | 26 | 7.7 | 4.13 | 0.538 | 338 |
| I give consideration to scoping to be in line with the capabilities and the needs of different students. | 2 | 0.6 | 213 | 62.8 | 57 | 16.8 | 59 | 17.4 | 8 | 2.4 | 3.91 | 0.497 | 339 |
| I do not deviate from the standard level that every student should reach to. | 2 | 0.6 | 160 | 47.2 | 62 | 18.3 | 99 | 29.2 | 16 | 4.7 | 2.58 | 0.864 | 339 |
| I present the content to the students in different speeds; I do not commit all students to the same timing. | 2 | 0.6 | 25 | 7.4 | 176 | 51.9 | 125 | 36.9 | 11 | 3.2 | 2.90 | 0.985 | 339 |
| Consideration of cognitive levels among students: I present the content in different 15 levels in line with the needs of the students (different reading levels, recorded texts, presentation and clarification of ideas using audio-visual media). | 0 | 0.0 | 3 | 0.9 | 26 | 7.7 | 255 | 75.2 | 55 | 16.2 | 3.35 | 0.690 | 339 |
| I avail the opportunity to students to immerse | 1 | 0.3 | 7 | 2.1 | 157 | 46.3 | 160 | 47.2 | 14 | 4.1 | 4.07 | 0.520 | 339 |

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| themselves into different activities that motivate their minds and increase their attentiveness. | | | | | | | | | | | | | |
| Presenting the content in different ways: I diversify my pedagogy and the way I present the content in consideration of the levels and capabilities of the students (discussions, audio-visual media and projects). | 0 | 0.0 | 3 | 0.9 | 124 | 36.7 | 200 | 59.2 | 11 | 3.3 | 3.53 | 0.626 | 339 |
| Pressure or impact of content: I summarize some of the existing information within the content provided, I do not compromise the main idea(s) that are to be taught within this topic. | 0 | 0.0 | 1 | 0.3 | 10 | 3 | 240 | 71 | 86 | 25.4 | 3.65 | 0.558 | 338 |

**Figure 20**

*Mean of Differentiation in content scale items*




At the descriptive level, as we can see in the subdimension Differentiation in process, the most valued items are I encourage students to interact and participate; I seek to incorporate them in the topic at hand (M=4.24, SD=0.463), I use activities that are compatible and suitable to the skills that students have (M=4.06, SD=0.526) y I adjust the time interval that students may need to carry out certain assignments (M=4.04, SD=0.474).

On the other hand, the least valued item is I normally form small groups to explain needed ideas and skills (M=2.74, SD=0.762) (see table 36 y figure 21).

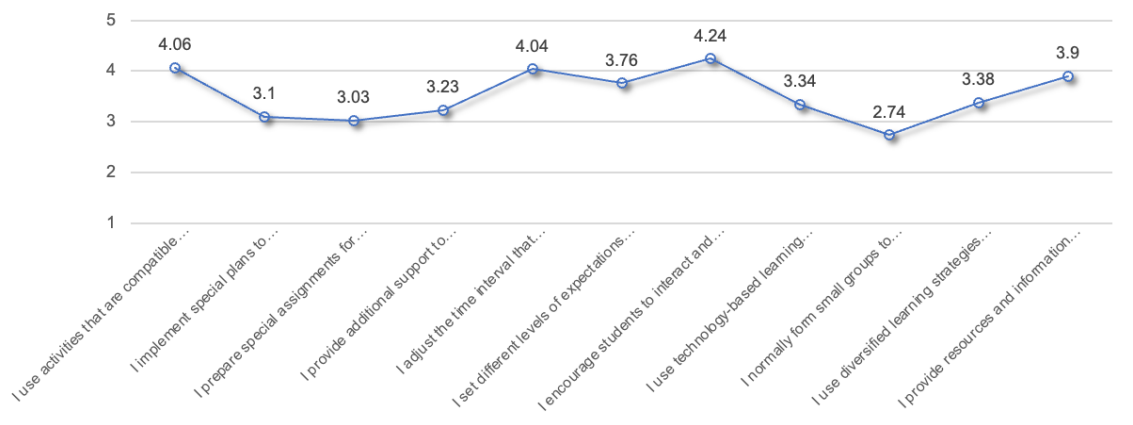
**Table 36**

*Distribution of frequencies, percentages, mean and standard deviation about Differentiation in process scale items*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I use activities that are compatible and suitable to the skills that students have. | 53 | 15.7 | 4 | 1.2 | 25 | 7.4 | 255 | 75.7 | 53 | 15.6 | 4.06 | 0.526 | 337 |
| I implement special plans to students (regular classroom activities and supplementary activities for the students with learning Disabilities). | 8 | 2.4 | 61 | 18.1 | 189 | 56.1 | 79 | 23.4 | 8 | 2.4 | 3.10 | 0.708 | 337 |
| I prepare special assignments for the students. | 0 | 0.0 | 85 | 25.3 | 163 | 48.5 | 82 | 24.4 | 6 | 1.8 | 3.03 | 0.755 | 336 |
| I provide additional support to students with learning Disabilities. | 1 | 0.3 | 55 | 16.3 | 157 | 46.6 | 112 | 33.2 | 12 | 3.6 | 3.23 | 0.772 | 337 |
| I adjust the time interval that students may need to carry out certain assignments. | 0 | 0.0 | 3 | 0.9 | 22 | 6.5 | 269 | 80.1 | 42 | 12.5 | 4.04 | 0.474 | 336 |
| I set different levels of expectations to conclude an assignment. | 0 | 0.0 | 13 | 3.9 | 75 | 22.3 | 230 | 68.2 | 19 | 5.6 | 3.76 | 0.612 | 337 |
| I encourage students to interact and participate; I seek to incorporate them in the topic at hand. | 0 | 0.0 | 0 | 0 | 5 | 1.5 | 245 | 72.7 | 87 | 25.8 | 4.24 | 0.463 | 337 |
| I use technology-based learning that decreases the span of losing attention, disabilities in memorizing and low incentives that some students with learning Disabilities may have. | 0 | 0.0 | 13 | 3.9 | 206 | 61.1 | 107 | 31.8 | 11 | 3.3 | 3.34 | 0.608 | 337 |
| I normally form small groups to explain needed ideas and skills. | 0 | 0.0 | 147 | 43.6 | 167 | 40.7 | 47 | 13.9 | 6 | 1.8 | 2.74 | 0.762 | 337 |
| I use diversified learning strategies that suit different pedagogies and meet the aspired goals. | 0 | 0.0 | 11 | 3.3 | 197 | 58.8 | 117 | 34.9 | 10 | 3.0 | 3.38 | 0.601 | 335 |
| I provide resources and information to motivate initiatives among students for learning | 0 | 0.0 | 3 | 0.9 | 71 | 21.2 | 219 | 65.4 | 42 | 12.5 | 3.90 | 0.603 | 335 |

**Figure 21**

*Mean of Differentiation in process scale items*




As we can see, in the subdimension Differentiation in teaching resource, the most valued item is I avail different types of learning resources that serve the environment in an enjoyable way that attracts the learners (video, computers, and websites) (M=4.07, SD=0.733), although there are no large differences with respect to the rest of the variables, the item that obtains the least value is Audio-visual systems that allow reading texts aloud (M=3.46, SD=0.770) (see table 37 y figure 22).

**Table 37**

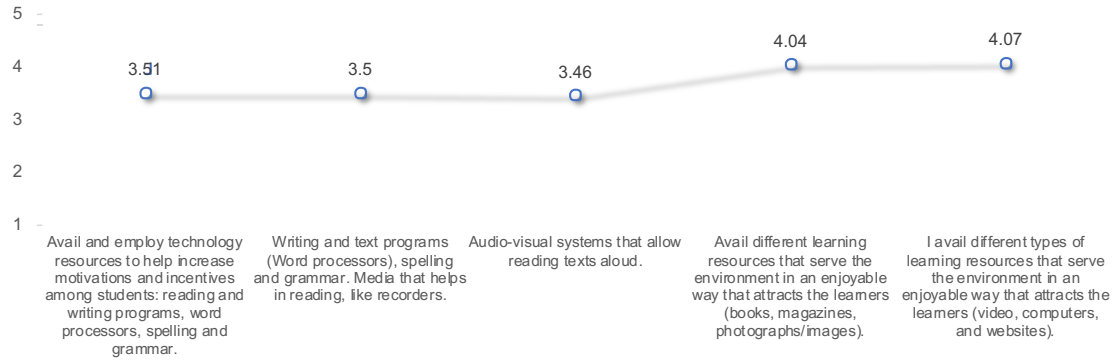
*Distribution of frequencies, percentages, mean and standard deviation about Differentiation in teaching resource scale items*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| Avail and employ technology resources to help increase motivations and incentives among students: reading and writing programs, word processors, spelling and grammar. | 4 | 1.2 | 12 | 3.6 | 165 | 48.8 | 123 | 36.4 | 34 | 10.1 | 3.51 | 0.771 | 338 |
| Writing and text programs (Word processors), spelling and grammar. Media that helps in reading, like recorders. | 2 | 0.6 | 15 | 4.4 | 166 | 49.1 | 123 | 36.4 | 32 | 9.5 | 3.50 | 0.752 | 338 |
| Audio-visual systems that allow reading texts aloud. | 5 | 1.5 | 13 | 3.8 | 172 | 50.9 | 118 | 34.9 | 30 | 8.9 | 3.46 | 0.770 | 338 |
| Avail different learning resources that serve the environment in an enjoyable way that attracts the learners (books, magazines, photographs/images). | 2 | 0.6 | 6 | 1.8 | 61 | 18.0 | 179 | 52.8 | 91 | 26.8 | 4.04 | 0.757 | 339 |

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I avail different types of learning resources that serve the environment in an enjoyable way that attracts the learners (video, computers, and websites). | 2 | 0.6 | 5 | 1.5 | 52 | 15.4 | 186 | 55.0 | 93 | 27.5 | 4.07 | 0.733 | 338 |

**Figure 22**

*Mean of Differentiation in teaching resource scale items*




With respect to the subdimension Differentiation in outcomes, we can see that all the elements are valued above 4 points, being I allow students to present their productions verbally (M=4.13, SD=0.621) which stands out slightly from the rest (see table 38 and figure 23).

**Table 38**

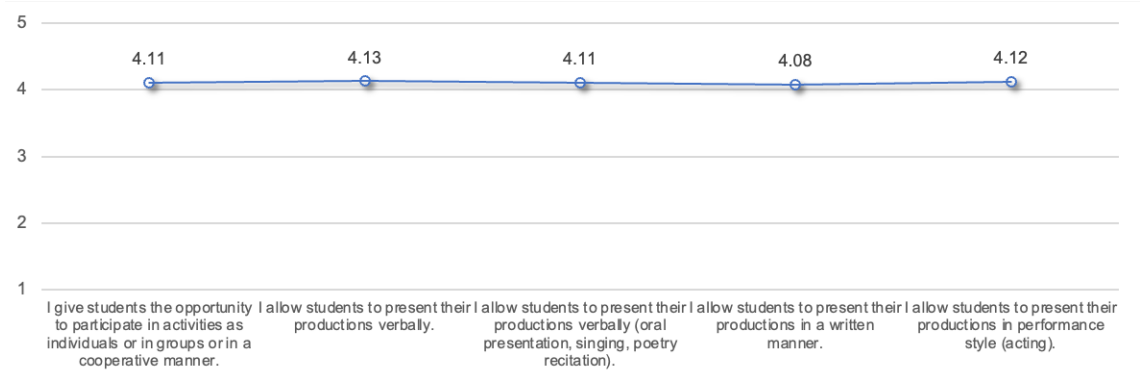
*Distribution of frequencies, percentages, mean and standard deviation about Differentiation in outcomes scale items*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I give students the opportunity to participate in activities as individuals or in groups or in a cooperative manner. | 0 | 0.0 | 1 | 0.3 | 41 | 12.1 | 217 | 64.0 | 80 | 23.6 | 4.11 | 0.598 | 339 |
| I allow students to present their productions verbally. | 0 | 0.0 | 1 | 0.3 | 43 | 12.7 | 206 | 60.8 | 89 | 26.3 | 4.13 | 0.621 | 339 |
| I allow students to present their productions verbally (oral presentation, singing, poetry recitation). | 0 | 0.0 | 0 | 0.0 | 49 | 14.5 | 203 | 60.1 | 86 | 25.4 | 4.11 | 0.623 | 338 |
| I allow students to present their productions in a written manner. | 1 | 0.3 | 3 | 0.9 | 44 | 13.0 | 210 | 61.9 | 81 | 23.9 | 4.08 | 0.652 | 339 |

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I allow students to present their productions in performance style (acting). | 0 | 0.0 | 0 | 0.0 | 37 | 10.9 | 209 | 61.7 | 93 | 27.4 | 4.12 | 0.571 | 338 |

**Figure 23**

*Mean of Differentiation in outcomes scale items*




In the subdimension Differentiation in assessment, among the most valued items we find I read the questions to the students (M=4.19, SD=0.582) and I give some students extra time to answer questions (M=4.16, SD=0.457) (see table 39 y figure 24). However, the least valued item is I print out test papers using a big / large font that is suitable to the needs of the students (M=2.85, SD=0.663).

**Table 39**

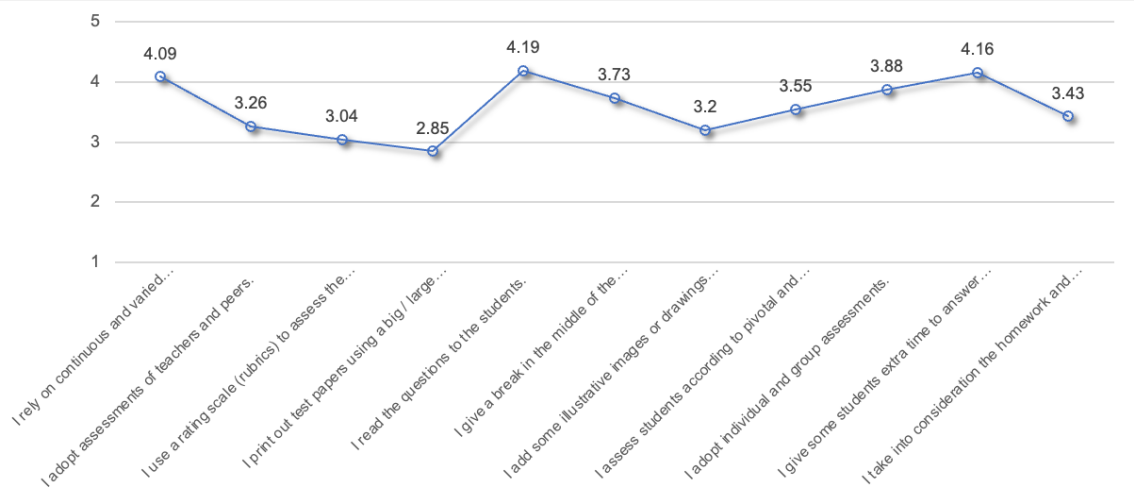
*Distribution of frequencies, percentages, mean and standard deviation about Differentiation in assessment scale items*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I rely on continuous and varied assessments of students: Pre- and Post-assessments | 1 | 0.3 | 2 | 0.6 | 28 | 8.3 | 242 | 71.4 | 66 | 19.5 | 4.09 | 0.566 | 339 |
| I adopt assessments of teachers and peers. | 3 | 0.9 | 49 | 14.5 | 147 | 43.4 | 137 | 40.4 | 3 | 0.9 | 3.26 | 0.744 | 339 |
| I use a rating scale (rubrics) to assess the students. | 2 | 0.6 | 86 | 25.5 | 151 | 44.8 | 93 | 27.6 | 5 | 1.5 | 3.04 | 0.784 | 337 |
| I print out test papers using a big / large font that is suitable to the needs of the students. | 2 | 0.6 | 95 | 28.0 | 195 | 57.5 | 45 | 13.3 | 2 | 0.6 | 2.85 | 0.663 | 339 |
| I read the questions to the students. | 2 | 0.6 | 3 | 0.9 | 40 | 2.9 | 237 | 69.9 | 87 | 25.7 | 4.19 | 0.582 | 339 |
| I give a break in the middle of the assessment interval. | 3 | 0.9 | 15 | 4.4 | 83 | 24.5 | 206 | 60.8 | 32 | 9.4 | 3.73 | 0.726 | 339 |

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I add some illustrative images or drawings to help the students understand the questions. | 3 | 0.8 | 37 | 10.9 | 197 | 58.3 | 92 | 27.2 | 9 | 2.7 | 3.20 | 0.697 | 338 |
| I assess students according to pivotal and referenced indicators. | 0 | 0.0 | 15 | 4.4 | 140 | 41.4 | 165 | 48.8 | 18 | 5.3 | 3.55 | 0.666 | 338 |
| I adopt individual and group assessments. | 1 | 0.3 | 6 | 1.8 | 52 | 15.4 | 251 | 74.5 | 27 | 8.0 | 3.88 | 0.565 | 337 |
| I give some students extra time to answer questions. | 0 | 0.0 | 3 | 0.9 | 4 | 1.2 | 269 | 79.4 | 63 | 18.6 | 4.16 | 0.457 | 339 |
| I take into consideration the homework and testing paragraphs in classifying via Bloom's classic Taxonomy of educational (remembering, understanding and applying). | 3 | 0.9 | 20 | 5.9 | 151 | 44.7 | 158 | 46.7 | 6 | 1.8 | 3.43 | 0.673 | 338 |

**Figure 24**

*Mean of Differentiation in assessment scale items*




In the subdimension Differentiation in classroom management, we observe that the most valued items are I observe the performance of students and direct them (M=4.22, SD=0.466), I distribute the instructions in different ways to avoid chaos (pre-preparations of assignment cards, working papers) (M=4.21, SD=0.576), I clarify to students the allowed mobility limits (M=4.20, SD=0.526) and I put forth basic ground rules for the students based on which they will get started and finish at the beginning and at the end of the lesson, respectively (M=4.20, SD=0.494). In contrast, the item with the lowest rating is I distribute students in homogeneous groups in terms of capabilities (M=2.24, SD=0.985) (see table 40 y figure 25).

**Table 40**

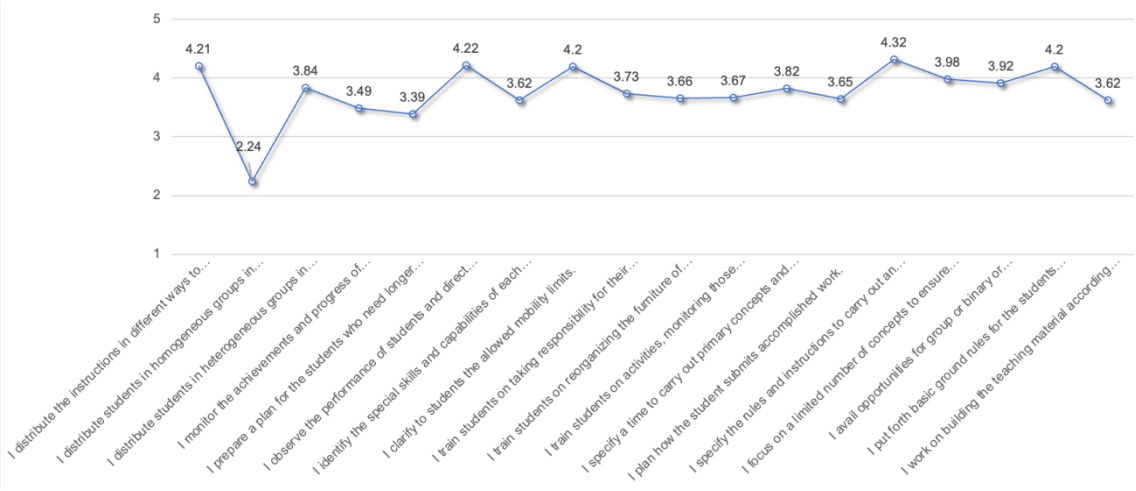
*Distribution of frequencies, percentages, mean and standard deviation about Differentiation in classroom management scale items*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I distribute the instructions in different ways to avoid chaos (pre-preparations of assignment cards, working papers). | 2 | 0.6 | 2 | 0.6 | 10 | 2.9 | 234 | 69.0 | 91 | 26.8 | 4.21 | 0.576 | 339 |
| I distribute students in homogeneous groups in terms of capabilities. | 95 | 28.0 | 102 | 30.1 | 112 | 33.0 | 26 | 7.7 | 4 | 1.2 | 2.24 | 0.985 | 339 |
| I distribute students in heterogeneous groups in terms of capabilities. | 3 | 0.8 | 10 | 2.9 | 114 | 33.6 | 122 | 36.0 | 90 | 26.5 | 3.84 | 0.882 | 339 |
| I monitor the achievements and progress of students within the cognitive portfolio of the student. | 1 | 0.3 | 16 | 4.7 | 150 | 44.2 | 161 | 47.5 | 11 | 3.2 | 3.49 | 0.654 | 339 |
| I prepare a plan for the students who need longer time than their peers to accomplish assignments. | 1 | 0.3 | 19 | 5.6 | 172 | 51.0 | 136 | 40.4 | 9 | 2.7 | 3.39 | 0.651 | 337 |
| I observe the performance of students and direct them. | 0 | 0.0 | 1 | 0.3 | 5 | 1.5 | 252 | 74.6 | 80 | 23.7 | 4.22 | 0.466 | 338 |
| I identify the special skills and capabilities of each student in order to try to answer the two questions: what does each student know? What does each student need? | 1 | 0.3 | 2 | 0.6 | 136 | 40.2 | 184 | 54.4 | 15 | 4.4 | 3.62 | 0.596 | 338 |
| I clarify to students the allowed mobility limits. | 0 | 0.0 | 3 | 0.9 | 11 | 3.3 | 241 | 71.3 | 83 | 24.6 | 4.20 | 0.526 | 338 |
| I train students on taking responsibility for their learning by doing their schoolwork and homework. | 0 | 0.0 | 0 | 0.0 | 105 | 31.1 | 219 | 64.8 | 14 | 4.1 | 3.73 | 0.530 | 338 |
| I train students on reorganizing the furniture of the classroom after performing activities. | 2 | 0.6 | 7 | 2.1 | 116 | 34.3 | 193 | 57.1 | 20 | 5.9 | 3.66 | 0.650 | 338 |
| I train students on activities, monitoring those activities and learning their outcomes. | 0 | 0.0 | 7 | 2.1 | 111 | 32.8 | 206 | 60.9 | 14 | 4.1 | 3.67 | 0.588 | 338 |
| I specify a time to carry out primary concepts and design suitable activities per learner. | 0 | 0.0 | 10 | 3.0 | 65 | 19.2 | 240 | 71.0 | 23 | 6.8 | 3.82 | 0.588 | 338 |
| I plan how the student submits accomplished work. | 0 | 0.0 | 9 | 2.7 | 117 | 34.6 | 194 | 57.4 | 18 | 5.3 | 3.65 | 0.622 | 338 |

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| I specify the rules and instructions to carry out an activity. | 0 | 0.0 | 0 | 0.0 | 9 | 2.7 | 213 | 63.0 | 116 | 34.3 | 4.32 | 0.520 | 338 |
| I focus on a limited number of concepts to ensure students grasped the concepts. | 0 | 0.0 | 9 | 2.7 | 31 | 9.2 | 256 | 76.0 | 41 | 12.0 | 3.98 | 0.566 | 337 |
| I avail opportunities for group or binary or individual work. | 0 | 0.0 | 2 | 0.6 | 74 | 22.0 | 209 | 62.0 | 52 | 15.4 | 3.92 | 0.627 | 337 |
| I put forth basic ground rules for the students based on which they will get started and finish at the beginning and at the end of the lesson, respectively. | 0 | 0.0 | 2 | 0.6 | 8 | 2.4 | 247 | 73.5 | 79 | 23.5 | 4.20 | 0.494 | 336 |
| I work on building the teaching material according to the needs of the students. | 0 | 0.0 | 10 | 3.0 | 131 | 38.9 | 174 | 51.6 | 22 | 6.5 | 3.62 | 0.654 | 337 |

**Figure 25**

*Mean of Differentiation in classroom management scale items*




## Strategies for teaching students with special educational needs regarding demographics of teachers

The dimension strategies for the teaching of students with special educational needs is subdivided into a total of five subdimensions, with a total of 65 elements, an aspect that hinders the process of statistical analysis. For this reason, it is decided to work with the summaries of each of the subdimensions of which the aforementioned dimension is composed.

The verification of the means for teaching strategies in students with special educational needs with the gender of the teachers, through the Student's t-test for independent samples (n.s.=0.05), indicates that there are significant differences in 5 of the 6 items. These are found in Differentiation in content (t=-2.472, p=0.007), Differentiation in process (t=-1.807, p=0.036), Differentiation in outcomes (t=-2.061, p=0.020), Differentiation in assessment (t=-2.891, p=0.002) and Differentiation in classroom management (t=-1.953, p=0.026), women use differentiation strategies more than men (see table 41).

**Table 41**

*Results of t-test criterion about strategies for teaching students with special educational needs regarding Gender*

| | Gender | | | | | |
|---|---|---|---|---|---|---|
| | Male (n=161) | | Female (n=177) | | | |
| | M | SD | M | SD | t | p |
| Differentiation in content | 3.66 | 0.368 | 3.76 | 0.371 | -2.472 | 0.007 |
| Differentiation in process | 3.48 | 0.415 | 3.57 | 0.444 | -1.807 | 0.036 |
| Differentiation in teaching resource | 3.66 | 0.642 | 3.76 | 0.684 | -1.383 | 0.084 |
| Differentiation in outcomes | 4.05 | 0.558 | 4.18 | 0.577 | -2.061 | 0.020 |
| Differentiation in assessment | 3.52 | 0.348 | 3.64 | 0.376 | -2.891 | 0.002 |
| Differentiation in classroom management | 3.73 | 0.298 | 3.80 | 0.338 | -1.953 | 0.026 |

When applying the Student's t-test for independent samples (n.s=0.05) among the elements of the Strategies for teaching students with special educational needs according to the variable Training in special education, it can be observed that there are significant differences in all of them, with teachers with training having the highest values compared to those who do not (see table 42).

**Table 42**

*Results of t-test criterion about strategies for teaching students with special educational needs regarding Training in special education*

| | Training in Special Education | | | | | |
|---|---|---|---|---|---|---|
| | Yes (n=105) | | No (n=233) | | | |
| | M | SD | M | SD | t | p |
| Differentiation in content | 4.01 | 0.317 | 3.59 | 0.319 | 11.188 | 0.000 |
| Differentiation in process | 3.87 | 0.364 | 3.37 | 0.366 | 11.473 | 0.000 |
| Differentiation in teaching resource | 4.28 | 0.551 | 3.46 | 0.549 | 12.537 | 0.000 |
| Differentiation in outcomes | 4.52 | 0.555 | 3.94 | 0.480 | 9.782 | 0.000 |
| Differentiation in assessment | 3.86 | 0.350 | 3.46 | 0.297 | 10.301 | 0.000 |
| Differentiation in classroom management | 4.03 | 0.283 | 3.64 | 0.259 | 12.262 | 0.000 |

To check the means according to the Teacher position variable, it can be observed that there are significant differences in 2 of the 6 subdimensions. Special education teachers have higher values than those of General education in content differentiation (t=-2,401, p=0.008) and differentiation in process (t=-3,205, p=0,004) (see table 43).

**Table 43**

*Results of t-test criterion about strategies for teaching students with special educational needs regarding Teacher position*

| | Position | | | | | |
|---|---|---|---|---|---|---|
| | General Education (n=360) | | Special Education (n=13) | | | |
| | M | SD | M | SD | t | p |
| Differentiation in content | 3.71 | 0.372 | 3.99 | 0.291 | -2.401 | 0.008 |
| Differentiation in process | 3.52 | 0.433 | 3.81 | 0.276 | -3.205 | 0.004 |
| Differentiation in teaching resource | 3.71 | 0.672 | 3.80 | 0.365 | -0.721 | 0.243 |
| Differentiation in outcomes | 4.13 | 0.575 | 3.92 | 0.391 | 1.125 | 0.131 |
| Differentiation in assessment | 3.58 | 0.370 | 3.66 | 0.248 | -0.606 | 0.272 |
| Differentiation in classroom management | 3.77 | 0.323 | 3.76 | 0.263 | 0.041 | 0.484 |

To check the possible differences between the elements of the subdimensions according to the variable Age Ranges of the faculty, a Variance Analysis was applied for one factor (n.s.=0.05), noting them in the 6 items (see table 44). After applying the post-hoc Scheffe test, it is confirmed that the 6 are significant, the results being as follows:

- Differentiation in content (F=5.861, p=0.000) is more valued by the age ranges 30-34 with respect to 50-54 (I-J=0.302, p=0.043) and 55-59 years (I-J=0.359, p=0.018). Similarly occurs between 40-44 with 50-54 (I-J=0.254, p=0.044) and 55-59 years (I-J=0.310, p=0.020).
- Differentiation in process (F=5.020, p=0.000) obtains a higher value for teachers aged between 30-34 than those between 50-54 (I-J=0.364, p=0.031) and 55-59 years (I-J=0.398, p=0.035).
- Differentiation in teaching resource (F=6.702, p=0.000) is more valued by the age range between 30-34 than those aged 45-49 (I-J=0.748, p=0.000), 50-54 (I-J=0.732, p=0.002), 55-59 (I-J=0.670, p=0.010) and 60-64 years (I-J=0.718, p=0.006).
- Differentiation in outcomes (F=5.679, p=0.000) is valued to a greater extent by the age range 30-34 compared to those between 50-54 years (I-J=0.498, p=0.023).

- Differentiation in assessment (F=5.679, p=0.000) is perceived with greater importance by teachers aged 30-34 than those aged 45-49 (I-J=0.404, p=0.001), 50-54 (I-J=0.398, p=0.001), 55-59 (I-J=0.415, p=0.002) and 60-64 (I-J=0.363, p=0.022).
- Finally, Differentiation in classroom management (F=6.425, p=0.000) The highest values were between the ages of 30-34 years compared with 45-49 (I-J=0,287, p=0,019), 50-54 (I-J=0,332, p=0,001), 55-59 (I-J=0,296, p=0,032) and 60-64 (I-J=0,301, p=0,036). Similarly, these significant differences between ages 40-44 versus 50-54 years are presented (I-J=0.0228, p=0.027).

**Table 44**

*Results Analysis of Variance and Scheffé's post-hoc test about Strategies for teaching students with special educational needs regarding age*

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| Differentiation in content | 25-29 | 3.95 | 0.344 | 5 | 5.861 | 0.000 | 30-34 -> 50-54 / 0.302 (0.043) |
| | 30-34 | 3.95 | 0.335 | 27 | | | 30-34 -> 55-59 / 0.359 (0.018) |
| | 35-39 | 3.83 | 0.394 | 21 | | | 40-44 -> 50-54 / 0.254 (0.044) |
| | 40-44 | 3.90 | 0.367 | 44 | | | 40-44 -> 55-59 / 0.310 (0.020) |
| | 45-49 | 3.66 | 0.371 | 69 | | | |
| | 50-54 | 3.65 | 0.358 | 84 | | | |
| | 55-59 | 3.59 | 0.297 | 45 | | | |
| | 60-64 | 3.63 | 0.368 | 37 | | | |
| Differentiation in process | 25-29 | 3.67 | 0.399 | 5 | 5.020 | 0.000 | 30-34 -> 50-54 / 0.364 (0.031) |
| | 30-34 | 3.80 | 0.409 | 27 | | | 30-34 -> 55-59 / 0.398 (0.035) |
| | 35-39 | 3.71 | 0.400 | 21 | | | |
| | 40-44 | 3.70 | 0.463 | 44 | | | |
| | 45-49 | 3.48 | 0.354 | 66 | | | |
| | 50-54 | 3.44 | 0.402 | 84 | | | |
| | 55-59 | 3.41 | 0.456 | 44 | | | |
| | 60-64 | 3.42 | 0.453 | 37 | | | |
| Differentiation in teaching resource | 25-29 | 4.00 | 0.490 | 5 | 6.702 | 0.000 | 30-34 -> 45-49 / 0.748 (0.000) |
| | 30-34 | 4.30 | 0.709 | 27 | | | 30-34 -> 50-54 / 0.732 (0.000) |
| | 35-39 | 4.02 | 0.651 | 21 | | | 30-34 -> 55-59 / 0.670 (0.010) |
| | 40-44 | 3.95 | 0.601 | 44 | | | 30-34 -> 60-64 / 0.718 (0.006) |
| | 45-49 | 3.55 | 0.709 | 70 | | | |
| | 50-54 | 3.56 | 0.573 | 84 | | | |
| | 55-59 | 3.63 | 0.534 | 45 | | | |
| | 60-64 | 3.58 | 0.686 | 37 | | | |
| Differentiation in outcomes | 25-29 | 4.24 | 0.434 | 5 | 4.437 | 0.000 | 30-34 -> 50-54 / 0.498 (0.023) |
| | 30-34 | 4.47 | 0.650 | 27 | | | |
| | 35-39 | 4.46 | 0.495 | 21 | | | |
| | 40-44 | 4.23 | 0.528 | 44 | | | |
| | 45-49 | 4.12 | 0.525 | 70 | | | |
| | 50-54 | 3.98 | 0.535 | 84 | | | |
| | 55-59 | 3.99 | 0.532 | 45 | | | |

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | 60-64 | 3.99 | 0.662 | 37 | | | |
| Differentiation in assessment | 25-29 | 3.76 | 0.378 | 5 | 5.679 | 0.000 | 30-34 -> 45-49 / 0.404 (0.001) |
| | 30-34 | 3.92 | 0.396 | 27 | | | 30-34 -> 50-54 / 0.398 (0.001) |
| | 35-39 | 3.74 | 0.332 | 21 | | | 30-34 -> 55-59 / 0.415 (0.002) |
| | 40-44 | 3.65 | 0.356 | 42 | | | 30-34 -> 60-64 / 0.363 (0.022) |
| | 45-49 | 3.51 | 0.337 | 68 | | | |
| | 50-54 | 3.52 | 0.382 | 83 | | | |
| | 55-59 | 3.50 | 0.290 | 45 | | | |
| | 60-64 | 3.55 | 0.339 | 37 | | | |
| Differentiation in classroom management | 25-29 | 3.92 | 0.298 | 5 | 6.425 | 0.000 | 30-34 -> 45-49 / 0.287 (0.019) |
| | 30-34 | 4.00 | 0.296 | 27 | | | 30-34 -> 50-54 / 0.332 (0.001) |
| | 35-39 | 3.93 | 0.276 | 21 | | | 30-34 -> 55-59 / 0.296 (0.032) |
| | 40-44 | 3.90 | 0.343 | 44 | | | 30-34 -> 60-64 / 0.301 (0.036) |
| | 45-49 | 3.72 | 0.297 | 68 | | | 40-44 -> 50-54 / 0.228 (0.027) |
| | 50-54 | 3.67 | 0.294 | 85 | | | |
| | 55-59 | 3.71 | 0.300 | 43 | | | |
| | 60-64 | 3.70 | 0.328 | 37 | | | |

To check the possible differences between the subdimensions that make up the Strategies for teaching students with special educational needs according to the variable Years of Experience, a Variance Analysis was applied for one factor (n.s.=0.05), warning them in the 6 items (see Table 45). After applying the post-hoc Scheffe test, it is confirmed that the 6 are significant, the results being as follows:

- Differentiation in content (F=9.363, p=0.000) It is more valued by teachers between 1-5 years of experience compared to those who have 16-20 (I-J=0,301, p=0,026) and 21-25 (I-J=0,329, p=0,016). Similarly, it occurs in those who have between 6-10 and 16-20 (I-J=0,374, p=0,000), 21-25 (I-J=0,391, p=0,000) and 26-30 (I-J=0,330, p=0,007), as well as those who have between 11-15 compared with those of 16-20 (I-J=0,288, p=0,003) and 21-25 years of experience (I-J=0.306, p=0.002).
- Differentiation in process (F=8.188, p=0.000) It is valued higher by teachers with 6-10 years of experience than those with 16-20 (I-J=0,464, p=0,000), 21-25 (I-J=0,490, p=0,000), 26-30 (I-J=0,428, p=0,001) and more than 30 years of experience (I-J=0.468, p=0.003).
- Differentiation in teaching resource (F=5.944, p=0.000) It is more valued by teachers with 1-5 years of experience than in 16-20 (I-J=0,577, p=0,023). We also observed differences between those who had 6-10 with respect to 16-20 (I-J=0,642, p=0,001), 21-25 (I-J=0,515, p=0,034), 26-30 (I-J=0,550, p=0,025) and more than 30 years (I-J=0.611, p=0.032).

- Differentiation in outcomes (F=4.632, p=0.000) is valued to a greater extent by teachers with 6-10 years of professional experience than those with 16-20 (I-J=0.509, p=0.005), 21-25 (I-J=0.527, p=0.004) and 26-30 years of experience (I-J=0.448, p=0.049).
- Differentiation in assessment (F=6.489, p=0.000) is perceived with greater importance by teachers of 6-10 years of experience compared to 16-20 (I-J=0.356, p=0.001) and 21-25 (I-J=0.3558, p=0.001).
- Finally, Differentiation in classroom management (F=8.258, p=0.000) It is valued more among those who have 1-5 years of experience compared to 16-20 (I-J=0,262, p=0,035), as well as those who have been between 6-10 years compared to 16-20 (I-J=0,358, p=0,000), 21-25 (I-J=0,323, p=0,000) and 26-30 (I-J=0.309, p=0.000).

**Table 45**

*Results Analysis of Variance and Scheffé's post-hoc test about Strategies for teaching students with special educational needs regarding years of experience*

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| Differentiation in content | 1-5 | 3.90 | 0.322 | 28 | 9.363 | 0.000 | 1-5 -> 16-20 / 0.311 (0.026) |
| | 6-10 | 3.96 | 0.379 | 38 | | | 1-5 -> 21-25 / 0.329 (0.016) |
| | 11-15 | 3.88 | 0.379 | 57 | | | 6-10 -> 16-20 / 0.374 (0.000) |
| | 16-20 | 3.59 | 0.287 | 67 | | | 6-10 -> 21-25 / 0.391 (0.000) |
| | 21-25 | 3.57 | 0.365 | 61 | | | 6-10 -> 26-30 / 0.330 (0.007) |
| | 26-30 | 3.63 | 0.325 | 50 | | | 11-15 -> 16-20 / 0.288 (0.003) |
| | More than 30 | 3.67 | 0.358 | 30 | | | 11-15 -> 21-25 / 0.306 (0.002) |
| Differentiation in process | 1-5 | 3.69 | 0.370 | 28 | 8.188 | 0.000 | 6-10 -> 16-20 / 0.464 (0.000) |
| | 6-10 | 3.88 | 0.461 | 38 | | | 6-10 -> 21-25 / 0.490 (0.000) |
| | 11-15 | 3.65 | 0.449 | 56 | | | 6-10 -> 26-30 / 0.428 (0.001) |
| | 16-20 | 3.41 | 0.337 | 67 | | | 6-10 -> more 30 / 0.468 (0.003) |
| | 21-25 | 3.39 | 0.376 | 59 | | | |
| | 26-30 | 3.45 | 0.420 | 50 | | | |
| | More than 30 | 3.41 | 0.431 | 29 | | | |
| Differentiation in teaching resource | 1-5 | 4.09 | 0.641 | 28 | 5.944 | 0.000 | 1-5 -> 16-20 / 0.577 (0.023) |
| | 6-10 | 4.16 | 0.684 | 38 | | | 6-10 -> 16-20 / 0.642 (0.001) |
| | 11-15 | 3.76 | 0.710 | 57 | | | 6-10 -> 21-25 / 0.515 (0.034) |
| | 16-20 | 3.52 | 0.623 | 69 | | | 6-10 -> 26-30 / 0.550 (0.025) |
| | 21-25 | 3.64 | 0.555 | 60 | | | 6-10 -> more 30 / 0.611 (0.032) |
| | 26-30 | 3.61 | 0.558 | 50 | | | |
| | More than 30 | 3.55 | 0.726 | 30 | | | |
| Differentiation in outcomes | 1-5 | 4.22 | 0.612 | 28 | 4.632 | 0.000 | 6-10 -> 16-20 / 0.509 (0.005) |
| | 6-10 | 4.50 | 0.526 | 38 | | | 6-10 -> 21-25 / 0.527 (0.004) |
| | 11-15 | 4.24 | 0.535 | 57 | | | 6-10 -> 26-30 / 0.448 (0.049) |
| | 16-20 | 3.99 | 0.531 | 69 | | | |
| | 21-25 | 3.97 | 0.504 | 60 | | | |
| | 26-30 | 4.05 | 0.570 | 50 | | | |

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | More than 30 | 4.09 | 0.666 | 30 | | | |
| Differentiation in assessment | 1-5 | 3.76 | 0.375 | 27 | 6.489 | 0.000 | 6-10 -> 16-20 / 0.356 (0.001) |
| | 6-10 | 3.83 | 0.337 | 38 | | | 6-10 -> 21-25 / 0.355 (0.001) |
| | 11-15 | 3.64 | 0.394 | 56 | | | |
| | 16-20 | 3.47 | 0.330 | 67 | | | |
| | 21-25 | 3.47 | 0.376 | 59 | | | |
| | 26-30 | 3.57 | 0.290 | 50 | | | |
| | More than 30 | 3.57 | 0.323 | 30 | | | |
| Differentiation in classroom management | 1-5 | 3.91 | 0.307 | 28 | 8.258 | 0.000 | 1-5 -> 16-20 / 0.262 (0.035) |
| | 6-10 | 4.01 | 0.307 | 38 | | | 6-10 -> 16-20 / 0.358 (0.000) |
| | 11-15 | 3.84 | 0.310 | 56 | | | 6-10 -> 21-25 / 0.323 (0.000) |
| | 16-20 | 3.65 | 0.300 | 68 | | | 6-10 -> 26-30 / 0.309 (0.003) |
| | 21-25 | 3.69 | 0.288 | 61 | | | |
| | 26-30 | 3.70 | 0.286 | 48 | | | |
| | More than 30 | 3.76 | 0.307 | 30 | | | |

### 5.2.4. Important factors for teaching students with special educational needs

The next section addresses teachers' opinion on the important factors in teaching students with special educational needs (see table 46 and figure 26).

The majority of participants consider that all the aspects raised are relevant to the attention of students with special educational needs, the highest values being those related to Specialized university education (M=4.52, SD=0.588), Further Education, Vocational Training (M=4.49, SD=0.612), Patience and consciousness towards children/adolescents (M=4.50, SD=2.217), Awareness about the psychological and social problems of students (M=4.42, SD=0.534), Means and materials to achieve the objectives of the curriculum (M=4.39, SD=0.567), Importance of diversity (M=4.37, SD=0.599) and Importance of inclusivity (M=4.41, SD=0.572), being the least valued the Specialized knowledge, skills & abilities to promote student personality development (M=3.78, SD=0,659), as well as Solidarity & cooperation with colleagues (M=3.87, SD=0,670) and Awareness (M=3.87, SD=0.600).

**Table 46**

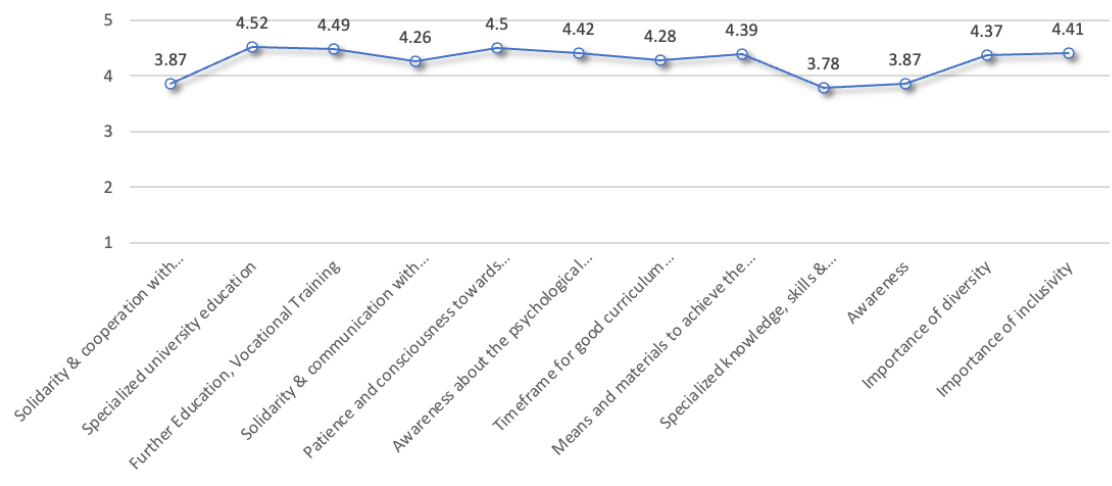
*Results about factors that are important for teaching students with special educational needs*

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| Solidarity & cooperation with colleagues | 0 | 0.0 | 0 | 0.0 | 100 | 29.5 | 182 | 53.7 | 57 | 16.8 | 3.87 | 0.670 | 339 |
| Specialized university education | 0 | 0.0 | 0 | 0.0 | 16 | 4.7 | 132 | 39.1 | 190 | 56.2 | 4.52 | 0.588 | 338 |

| | Strongly disagree | | Disagree | | Neither agree or disagree | | Agree | | Strongly agree | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| Further Education. Vocational Training | 0 | 0.0 | 0 | 0.0 | 21 | 6.2 | 132 | 38.9 | 186 | 54.9 | 4.49 | 0.612 | 339 |
| Solidarity & communication with parents | 0 | 0.0 | 2 | 0.6 | 24 | 7.1 | 197 | 58.3 | 115 | 34.0 | 4.26 | 0.608 | 338 |
| Patience and consciousness towards children / adolescents | 0 | 0.0 | 0 | 0.0 | 8 | 2.4 | 193 | 56.9 | 137 | 40.4 | 4.50 | 2.217 | 339 |
| Awareness about the psychological and social problems of students. | 0 | 0.0 | 0 | 0.0 | 7 | 2.1 | 183 | 54.1 | 148 | 43.8 | 4.42 | 0.534 | 338 |
| Timeframe for good curriculum implementation | 0 | 0.0 | 4 | 1.2 | 19 | 5.6 | 194 | 57.2 | 122 | 36.0 | 4.28 | 0.621 | 339 |
| Means and materials to achieve the objectives of the curriculum | 0 | 0.0 | 1 | 0.3 | 11 | 3.3 | 182 | 53.8 | 144 | 42.6 | 4.39 | 0.567 | 338 |
| Specialized knowledge. skills & abilities to promote student personality development. | 0 | 0.0 | 5 | 1.5 | 102 | 30.4 | 189 | 56.4 | 39 | 11.6 | 3.78 | 0.659 | 335 |
| Awareness | 0 | 0.0 | 2 | 0.6 | 79 | 23.6 | 215 | 64.2 | 39 | 11.6 | 3.87 | 0.600 | 335 |
| Importance of diversity | 0 | 0.0 | 0 | 0.0 | 21 | 6.3 | 170 | 50.7 | 144 | 43.0 | 4.37 | 0.599 | 335 |
| Importance of inclusivity | 0 | 0.0 | 1 | 0.3 | 11 | 3.3 | 172 | 51.3 | 151 | 45.1 | 4.41 | 0.572 | 335 |

**Figure 26** Mean of Important for teaching students with special educational needs scale items

*Mean of Important for teaching students with special educational needs scale items*




When trying to verify the existence of statistically significant differences between the items of this dimension and the Gender variable, these differences were evident in 4 of the 12 items, by applying the t tests for independent samples (n.s.=0.05). These are found in Solidarity & cooperation with colleagues (t=-1,888, p=0,030), Specialized knowledge, skills & abilities to promote student personality development (t=-1,886, p=0,030), Awareness (t=-1,852, p=0,032) and Importance of diversity (t=-1,903, p=0,029) in which the higher men have averages (see table 47).

**Table 47**

*Results of t-test criterion about Important factors for teaching students with special educational needs regarding Gender*

| | Gender | | | | | |
|---|---|---|---|---|---|---|
| | Male (n=161) | | Female (n=178) | | | |
| | M | SD | M | SD | t | p |
| Solidarity & cooperation with colleagues | 3.80 | 0.669 | 3.94 | 0.665 | -1.888 | 0.030 |
| Specialized university education | 4.50 | 0.560 | 4.53 | 0.613 | -0.348 | 0.364 |
| Further Education. Vocational Training | 4.45 | 0.591 | 4.52 | 0.631 | -1.131 | 0.129 |
| Solidarity & communication with parents | 4.24 | 0.618 | 4.28 | 0.600 | -0.616 | 0.269 |
| Patience and consciousness towards children / adolescents | 4.37 | 0.546 | 4.61 | 3.014 | -0.994 | 0.160 |
| Awareness about the psychological and social problems of students | 4.40 | 0.552 | 4.43 | 0.519 | -0.440 | 0.330 |
| Timeframe for good curriculum implementation | 4.28 | 0.561 | 4.28 | 0.672 | -0.021 | 0.492 |
| Means and materials to achieve the objectives of the curriculum | 4.37 | 0.557 | 4.40 | 0.577 | -0.461 | 0.323 |
| Specialized knowledge. skills & abilities to promote student personality development | 3.71 | 0.678 | 3.85 | 0.636 | -1.886 | 0.030 |
| Awareness | 3.81 | 0.611 | 3.93 | 0.586 | -1.852 | 0.032 |
| Importance of diversity | 4.30 | 0.603 | 4.43 | 0.591 | -1.903 | 0.029 |
| Importance of inclusivity | 4.38 | 0.570 | 4.44 | 0.573 | -1.053 | 0.147 |

When comparing the means between important factors for teaching students with special educational needs regarding training in special education, using the Student t tests for independent samples (n.s.=0.05), we found differences in 11 of the 12 items. In which teachers who have Training in special education have higher values than those who do not have it in the following aspects (see table 48):

- Solidarity & cooperation with colleagues (t=9.045, p=0.000)
- Specialized university education (t=5.545, p=0.000)
- Further Education, Vocational Training (t=5.831, p=0.000)
- Solidarity & communication with parents (t=4.996, p=0.000)
- Awareness about the psychological and social problems of students (t=4.815, p=0.000)
- Timeframe for good curriculum implementation (t=5.431, p=0.000)
- Means and materials to achieve the objectives of the curriculum (t=4.097, p=0.000)
- Specialized knowledge, skills & abilities to promote student personality development (t=5.213, p=0.000)
- Awareness (t=4.184, p=0.000)
- Importance of diversity (t=4.634, p=0.000)

- Importance of inclusivity (t=4.494, p=0.000).

**Table 48**

*Important factors for teaching students with special educational needs regarding Training in special education*

| | Training in Special Education | | | | t | p |
|---|---|---|---|---|---|---|
| | Yes (n=105) | | No (n=234) | | | |
| | M | SD | M | SD | | |
| Solidarity & cooperation with colleagues | 4.31 | 0.560 | 3.68 | 0.619 | 9.045 | 0.000 |
| Specialized university education | 4.75 | 0.496 | 4.41 | 0.595 | 5.545 | 0.000 |
| Further Education. Vocational Training | 4.74 | 0.501 | 4.37 | 0.624 | 5.831 | 0.000 |
| Solidarity & communication with parents | 4.50 | 0.502 | 4.15 | 0.622 | 4.996 | 0.000 |
| Patience and consciousness towards children / adolescents | 4.55 | 0.500 | 4.47 | 2.648 | 0.299 | 0.382 |
| Awareness about the psychological and social problems of students | 4.62 | 0.488 | 4.33 | 0.530 | 4.815 | 0.000 |
| Timeframe for good curriculum implementation | 4.54 | 0.519 | 4.16 | 0.628 | 5.431 | 0.000 |
| Means and materials to achieve the objectives of the curriculum | 4.57 | 0.535 | 4.30 | 0.562 | 4.097 | 0.000 |
| Specialized knowledge. skills & abilities to promote student personality development | 4.03 | 0.530 | 3.67 | 0.682 | 5.213 | 0.000 |
| Awareness | 4.05 | 0.470 | 3.79 | 0.635 | 4.184 | 0.000 |
| Importance of diversity | 4.59 | 0.533 | 4.27 | 0.602 | 4.634 | 0.000 |
| Importance of inclusivity | 4.62 | 0.508 | 4.32 | 0.576 | 4.494 | 0.000 |

When comparing the means between Important factors for teaching students with special educational needs regarding teacher position, using the Student t tests for independent samples (n.s.=0.05), the results show significant differences in 5 of the 12 items. In which Special education teachers have higher values than General education in Solidarity & cooperation with colleagues (t=-2,056, p=0,020). On the other hand, General education teachers are awarded the highest values in Specialized university education (t=3,475 p=0,003), Further Education, Vocational Training (t=2,350 p=0,021) Means and materials to achieve the objectives of the curriculum (t=2,208 p=0,014) and Importance of diversity (t=2,611 p=0,012) (see table 49).

**Table 49**

*Results of t-test criteri<on about Important factors for teaching students with special educational needs regarding Teacher position*

| | Position | | | | | |
|---|---|---|---|---|---|---|
| | General Education (n=329) | | Special Education (n=10) | | | |
| | M | SD | M | SD | t | p |
| Solidarity & cooperation with colleagues | 3.86 | 0.671 | 4.30 | 0.483 | -2.056 | 0.020 |
| Specialized university education | 4.53 | 0.579 | 3.90 | 0.568 | 3.475 | 0.003 |

| | Position | | | | | |
|---|---|---|---|---|---|---|
| | General Education (n=329) | | Special Education (n=10) | | | |
| | M | SD | M | SD | t | p |
| Further Education. Vocational Training | 4.50 | 0.605 | 4.00 | 0.667 | 2.350 | 0.021 |
| Solidarity & communication with parents | 4.26 | 0.612 | 4.30 | 0.483 | -0.225 | 0.411 |
| Patience and consciousness towards children / adolescents | 4.50 | 2.248 | 4.30 | 0.483 | 0.287 | 0.387 |
| Awareness about the psychological and social problems of students | 4.41 | 0.535 | 4.50 | 0.527 | -0.497 | 0.310 |
| Timeframe for good curriculum implementation | 4.29 | 0.623 | 4.10 | 0.568 | 0.931 | 0.176 |
| Means and materials to achieve the objectives of the curriculum | 4.40 | 0.560 | 4.00 | 0.667 | 2.208 | 0.014 |
| Specialized knowledge. skills & abilities to promote student personality development | 3.78 | 0.667 | 3.90 | 0.316 | -1.140 | 0.139 |
| Awareness | 3.87 | 0.607 | 3.90 | 0.316 | -0.167 | 0.434 |
| Importance of diversity | 4.38 | 0.604 | 4.10 | 0.316 | 2.611 | 0.012 |
| Importance of inclusivity | 4.42 | 0.575 | 4.20 | 0.422 | 1.594 | 0.071 |

To check the possible differences between the different elements according to the variable age of the teachers, a Variance Analysis was applied for one factor (n.s.=0.05), warning them in 5 of the 12 items (see table 50). After applying the post-hoc Scheffe test, it is confirmed that 4 are significant, the results being as follows:

- Specialized university education (F=3.570, p=0.001) is more valued by the age range of 30-34 years compared to 50-54 (I-J=0.561, p=0.008).
- Further Education, Vocational Training (F=3.495, p=0.001) is rated higher by teachers aged between 30-34 years than those aged 45-49 (I-J=0.526, p=0.035) and between 50-54 (I-J=0.561, p=0.012).
- Timeframe for good curriculum implementation (F=4.154, p=0.000) is more relevant for the group of teachers aged between 30-34 than for those aged 45-49 (I-J=0.621, p=0.005) and 50-54 (I-J=0.637, p=0.002).
- Means and materials to achieve the objectives of the curriculum (F=4.686, p=0.000) is perceived with greater importance by teachers aged 30-34 years than those aged between 45-49 (I-J=0.605, p=0.000) and 50-54 years (I-J=0.593, p=0.001).

**Table 50**

*Results Analysis of Variance and Scheffé's post-hoc test about Important factors for teaching students with special educational needs regarding Age*

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| Solidarity & communication with parents | 25-29 | 4.20 | 0.447 | 5 | 3.277 | 0.002 | |
| | 30-34 | 4.22 | 0.577 | 27 | | | |
| | 35-39 | 4.05 | 0.805 | 21 | | | |

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | 40-44 | 4.07 | 0.587 | 44 | | | |
| | 45-49 | 3.80 | 0.651 | 70 | | | |
| | 50-54 | 3.72 | 0.610 | 85 | | | |
| | 55-59 | 3.71 | 0.727 | 45 | | | |
| | 60-64 | 3.92 | 0.722 | 37 | | | |
| Specialized university education | 25-29 | 5.00 | 0.000 | 5 | 3.570 | 0.001 | 30-34 -> 50-54 / 0.561 (0.008) |
| | 30-34 | 4.93 | 0.267 | 27 | | | |
| | 35-39 | 4.48 | 0.602 | 21 | | | |
| | 40-44 | 4.57 | 0.661 | 44 | | | |
| | 45-49 | 4.46 | 0.584 | 69 | | | |
| | 50-54 | 4.36 | 0.633 | 85 | | | |
| | 55-59 | 4.51 | 0.506 | 45 | | | |
| | 60-64 | 4.59 | 0.551 | 37 | | | |
| Further Education. Vocational Training | 25-29 | 5.00 | 0.000 | 5 | 3.495 | 0.001 | 30-34 -> 45-49 / 0.526 (0.035) |
| | 30-34 | 4.93 | 0.267 | 27 | | | 30-34 -> 50-54 / 0.561 (0.012) |
| | 35-39 | 4.48 | 0.602 | 21 | | | |
| | 40-44 | 4.57 | 0.625 | 44 | | | |
| | 45-49 | 4.40 | 0.623 | 70 | | | |
| | 50-54 | 4.36 | 0.633 | 85 | | | |
| | 55-59 | 4.49 | 0.549 | 45 | | | |
| | 60-64 | 4.51 | 0.651 | 37 | | | |
| Solidarity & communication with parent | 25-29 | 4.60 | 0.548 | 5 | 1.116 | 0.352 | |
| | 30-34 | 4.33 | 0.555 | 27 | | | |
| | 35-39 | 4.24 | 0.625 | 21 | | | |
| | 40-44 | 4.41 | 0.542 | 44 | | | |
| | 45-49 | 4.26 | 0.530 | 70 | | | |
| | 50-54 | 4.18 | 0.731 | 84 | | | |
| | 55-59 | 4.22 | 0.517 | 45 | | | |
| | 60-64 | 4.14 | 0.631 | 37 | | | |
| Patience and consciousness towards children / adolescents | 25-29 | 4.60 | 0.548 | 5 | 0.370 | 0.919 | |
| | 30-34 | 4.48 | 0.509 | 27 | | | |
| | 35-39 | 4.38 | 0.590 | 21 | | | |
| | 40-44 | 4.50 | 0.506 | 44 | | | |
| | 45-49 | 4.34 | 0.508 | 70 | | | |
| | 50-54 | 4.81 | 4.341 | 85 | | | |
| | 55-59 | 4.31 | 0.468 | 45 | | | |
| | 60-64 | 4.32 | 0.530 | 37 | | | |
| Awareness about the psychological and social problems of students | 25-29 | 4.60 | 0.548 | 5 | 1.560 | 0.146 | |
| | 30-34 | 4.63 | 0.492 | 27 | | | |
| | 35-39 | 4.43 | 0.507 | 21 | | | |
| | 40-44 | 4.55 | 0.504 | 44 | | | |
| | 45-49 | 4.38 | 0.517 | 69 | | | |
| | 50-54 | 4.34 | 0.589 | 85 | | | |
| | 55-59 | 4.33 | 0.477 | 45 | | | |
| | 60-64 | 4.38 | 0.545 | 37 | | | |
| Timeframe for good curriculum implementation | 25-29 | 4.60 | 0.548 | 5 | 4.154 | 0.000 | 30-34 -> 45-49 / 0.621 (0.005) |
| | 30-34 | 4.78 | 0.424 | 27 | | | 30-34 -> 50-54 / 0.637 (0.002) |
| | 35-39 | 4.38 | 0.498 | 21 | | | |

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | 40-44 | 4.34 | 0.608 | 44 | | | |
| | 45-49 | 4.16 | 0.555 | 70 | | | |
| | 50-54 | 4.14 | 0.710 | 85 | | | |
| | 55-59 | 4.36 | 0.529 | 45 | | | |
| | 60-64 | 4.27 | 0.652 | 37 | | | |
| Means and materials to achieve the objectives of the curriculum | 25-29 | 4.60 | 0.548 | 5 | 4.684 | 0.000 | 30-34 -> 45-49 / 0.605 (0.000) |
| | 30-34 | 4.85 | 0.362 | 27 | | | 30-34 -> 50-54 / 0.593 (0.001) |
| | 35-39 | 4.38 | 0.590 | 21 | | | |
| | 40-44 | 4.52 | 0.505 | 44 | | | |
| | 45-49 | 4.25 | 0.497 | 69 | | | |
| | 50-54 | 4.26 | 0.657 | 85 | | | |
| | 55-59 | 4.38 | 0.490 | 45 | | | |
| | 60-64 | 4.46 | 0.558 | 37 | | | |
| Specialized knowledge. skills & abilities to promote student personality development | 25-29 | 4.00 | 0.000 | 4 | 1.840 | 0.079 | |
| | 30-34 | 4.00 | 0.555 | 27 | | | |
| | 35-39 | 3.75 | 0.550 | 20 | | | |
| | 40-44 | 3.98 | 0.628 | 44 | | | |
| | 45-49 | 3.81 | 0.621 | 70 | | | |
| | 50-54 | 3.71 | 0.690 | 83 | | | |
| | 55-59 | 3.60 | 0.720 | 45 | | | |
| | 60-64 | 3.68 | 0.747 | 37 | | | |
| Awareness | 25-29 | 4.00 | 0.000 | 4 | 1.814 | 0.084 | |
| | 30-34 | 4.00 | 0.480 | 27 | | | |
| | 35-39 | 3.80 | 0.410 | 20 | | | |
| | 40-44 | 4.07 | 0.545 | 44 | | | |
| | 45-49 | 3.91 | 0.583 | 70 | | | |
| | 50-54 | 3.83 | 0.621 | 83 | | | |
| | 55-59 | 3.69 | 0.701 | 45 | | | |
| | 60-64 | 3.76 | 0.683 | 37 | | | |
| Importance of diversity | 25-29 | 4.50 | 0.577 | 4 | 1.806 | 0.085 | |
| | 30-34 | 4.67 | 0.480 | 27 | | | |
| | 35-39 | 4.55 | 0.510 | 20 | | | |
| | 40-44 | 4.39 | 0.579 | 44 | | | |
| | 45-49 | 4.36 | 0.566 | 70 | | | |
| | 50-54 | 4.25 | 0.660 | 83 | | | |
| | 55-59 | 4.31 | 0.557 | 45 | | | |
| | 60-64 | 4.32 | 0.669 | 37 | | | |
| Importance of inclusivity | 25-29 | 4.75 | 0.500 | 4 | 1.947 | 0.062 | |
| | 30-34 | 4.70 | 0.465 | 27 | | | |
| | 35-39 | 4.60 | 0.503 | 20 | | | |
| | 40-44 | 4.43 | 0.545 | 44 | | | |
| | 45-49 | 4.40 | 0.493 | 70 | | | |
| | 50-54 | 4.34 | 0.630 | 83 | | | |
| | 55-59 | 4.31 | 0.557 | 45 | | | |
| | 60-64 | 4.41 | 0.686 | 37 | | | |

To check for possible differences between the elements of the Important factors for teaching students with special educational needs regarding years of experience, a Variance Analysis for one factor (n.s.=0.05) was applied, warning them in 9 of the 12 items (see table 51). After applying the post-hoc Scheffe test, it is confirmed that 3 are significant, the results being as follows:

- Solidarity & cooperation with colleagues (F=4.290, p=0.000) is valued to a greater extent by teachers with experience between 6-10 years of teaching compared to those who have been teaching for 21-25 years (I-J=0.519, p=0.039).
- Timeframe for good curriculum implementation (F=3.437, p=0.001) is valued higher by teachers with 1-5 years of experience than those between 16-20 years (I-J=0.527, p=0.038).
- Means and materials to achieve the objectives of the curriculum (F=2.770, p=0.008) is valued to a greater extent for the group with 1-5 years of experience than those who have been 16-20 years (I-J=0.497, p=0.029).

**Table 51**

*Results Analysis of Variance and Scheffé's post-hoc test about Important factors for teaching students with special educational needs regarding years of experience*

| | Experience | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| Solidarity & cooperation with colleagues | 1-5 | 4.179 | 0.612 | 28 | 4.290 | 0.000 | 6-10 -> 21-25 / 0.519 (0.039) |
| | 6-10 | 4.158 | 0.679 | 38 | | | |
| | 11-15 | 4.018 | 0.694 | 57 | | | |
| | 16-20 | 3.754 | 0.553 | 69 | | | |
| | 21-25 | 3.639 | 0.606 | 61 | | | |
| | 26-30 | 3.740 | 0.723 | 50 | | | |
| | More than 30 | 3.967 | 0.718 | 30 | | | |
| Specialized university education | 1-5 | 4.786 | 0.499 | 28 | 1.951 | 0.061 | |
| | 6-10 | 4.658 | 0.582 | 38 | | | |
| | 11-15 | 4.482 | 0.660 | 56 | | | |
| | 16-20 | 4.406 | 0.602 | 69 | | | |
| | 21-25 | 4.475 | 0.566 | 61 | | | |
| | 26-30 | 4.500 | 0.544 | 50 | | | |
| | More than 30 | 4.567 | 0.568 | 30 | | | |
| Further Education. Vocational Training | 1-5 | 4.786 | 0.499 | 28 | 3.059 | 0.004 | |
| | 6-10 | 4.684 | 0.525 | 38 | | | |
| | 11-15 | 4.439 | 0.708 | 57 | | | |
| | 16-20 | 4.377 | 0.597 | 69 | | | |
| | 21-25 | 4.443 | 0.563 | 61 | | | |
| | 26-30 | 4.480 | 0.580 | 50 | | | |
| | More than 30 | 4.533 | 0.629 | 30 | | | |
| Solidarity & communication with parents | 1-5 | 4.393 | 0.567 | 28 | 1.193 | 0.306 | |
| | 6-10 | 4.316 | 0.574 | 38 | | | |
| | 11-15 | 4.333 | 0.664 | 57 | | | |
| | 16-20 | 4.246 | 0.553 | 69 | | | |
| | 21-25 | 4.183 | 0.651 | 60 | | | |

| | Experience | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | 26-30 | 4.180 | 0.596 | 50 | | | |
| | More than 30 | 4.133 | 0.629 | 30 | | | |
| Patience and consciousness towards children / adolescents | 1-5 | 4.500 | 0.509 | 28 | 0.673 | 0.695 | |
| | 6-10 | 4.395 | 0.547 | 38 | | | |
| | 11-15 | 4.544 | 0.569 | 57 | | | |
| | 16-20 | 4.319 | 0.500 | 69 | | | |
| | 21-25 | 5.000 | 5.102 | 61 | | | |
| | 26-30 | 4.240 | 0.517 | 50 | | | |
| | More than 30 | 4.300 | 0.535 | 30 | | | |
| Awareness about the psychological and social problems of students. | 1-5 | 4.643 | 0.488 | 28 | 2.751 | 0.009 | |
| | 6-10 | 4.526 | 0.506 | 38 | | | |
| | 11-15 | 4.554 | 0.537 | 56 | | | |
| | 16-20 | 4.319 | 0.528 | 69 | | | |
| | 21-25 | 4.344 | 0.513 | 61 | | | |
| | 26-30 | 4.280 | 0.536 | 50 | | | |
| | More than 30 | 4.367 | 0.556 | 30 | | | |
| Timeframe for good curriculum implementation | 1-5 | 4.643 | 0.488 | 28 | 3.437 | 0.001 | 1-5 -> 16-20 / 0.527 (0.038) |
| | 6-10 | 4.474 | 0.557 | 38 | | | |
| | 11-15 | 4.193 | 0.789 | 57 | | | |
| | 16-20 | 4.116 | 0.557 | 69 | | | |
| | 21-25 | 4.246 | 0.623 | 61 | | | |
| | 26-30 | 4.320 | 0.551 | 50 | | | |
| | More than 30 | 4.333 | 0.547 | 30 | | | |
| Means and materials to achieve the objectives of the curriculum | 1-5 | 4.714 | 0.460 | 28 | 2.770 | 0.008 | 1-5 -> 16-20 / 0.497 (0.029) |
| | 6-10 | 4.526 | 0.557 | 38 | | | |
| | 11-15 | 4.339 | 0.695 | 56 | | | |
| | 16-20 | 4.217 | 0.539 | 69 | | | |
| | 21-25 | 4.410 | 0.496 | 61 | | | |
| | 26-30 | 4.360 | 0.525 | 50 | | | |
| | More than 30 | 4.367 | 0.556 | 30 | | | |
| Specialized knowledge. skills & abilities to promote student personality development. | 1-5 | 3.963 | 0.518 | 27 | 3.092 | 0.004 | |
| | 6-10 | 3.919 | 0.640 | 37 | | | |
| | 11-15 | 4.000 | 0.655 | 57 | | | |
| | 16-20 | 3.765 | 0.649 | 68 | | | |
| | 21-25 | 3.583 | 0.591 | 60 | | | |
| | 26-30 | 3.720 | 0.701 | 50 | | | |
| | More than 30 | 3.533 | 0.730 | 30 | | | |
| Awareness | 1-5 | 3.963 | 0.437 | 27 | 2.656 | 0.011 | |
| | 6-10 | 4.027 | 0.499 | 37 | | | |
| | 11-15 | 4.070 | 0.623 | 57 | | | |
| | 16-20 | 3.824 | 0.597 | 68 | | | |
| | 21-25 | 3.750 | 0.541 | 60 | | | |
| | 26-30 | 3.800 | 0.670 | 50 | | | |
| | More than 30 | 3.633 | 0.669 | 30 | | | |
| Importance of diversity | 1-5 | 4.556 | 0.506 | 27 | 3.616 | 0.001 | |
| | 6-10 | 4.595 | 0.498 | 37 | | | |
| | 11-15 | 4.509 | 0.571 | 57 | | | |
| | 16-20 | 4.191 | 0.580 | 68 | | | |
| | 21-25 | 4.217 | 0.666 | 60 | | | |
| | 26-30 | 4.400 | 0.571 | 50 | | | |
| | More than 30 | 4.233 | 0.626 | 30 | | | |
| | 1-5 | 4.630 | 0.492 | 27 | 2.578 | 0.013 | |

| | Experience | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| Importance of inclusivity | 6-10 | 4.622 | 0.492 | 37 | | | |
| | 11-15 | 4.491 | 0.630 | 57 | | | |
| | 16-20 | 4.265 | 0.477 | 68 | | | |
| | 21-25 | 4.317 | 0.596 | 60 | | | |
| | 26-30 | 4.420 | 0.575 | 50 | | | |
| | More than 30 | 4.367 | 0.669 | 30 | | | |

### *5.3. Teachers needs in order to address the learning needs of students with Learning Difficulties*

The last of the aspects analyzed was Teachers needs in order to address the learning needs of students with Learning Difficulties (see table 52 and figure 27). The results show that, for the most part, teachers perceive special education as necessary (M=4.67, SD=0.580), followed by school psychology (M=4.32, SD=0.577) and teaching methodology (M=4.31, SD=0.572).

At a slightly lower level they consider that they need Learning theories–Motivation (M=3.87, SD=0.733), General Psychology (M=3.39, SD=0.695), Developmental Psychology (M=3.39, SD=0.782) and Pedagogical theories (M=3.31, SD=0.811), the aspects that obtain the least value Philosophy of education (M=2.80, SD=0.856) and Theories of language development (M=2.79, SD=2.79).

It should be noted that there are few teachers who thought they did not need any of the proposed training (M=1.06, SD=0.433).

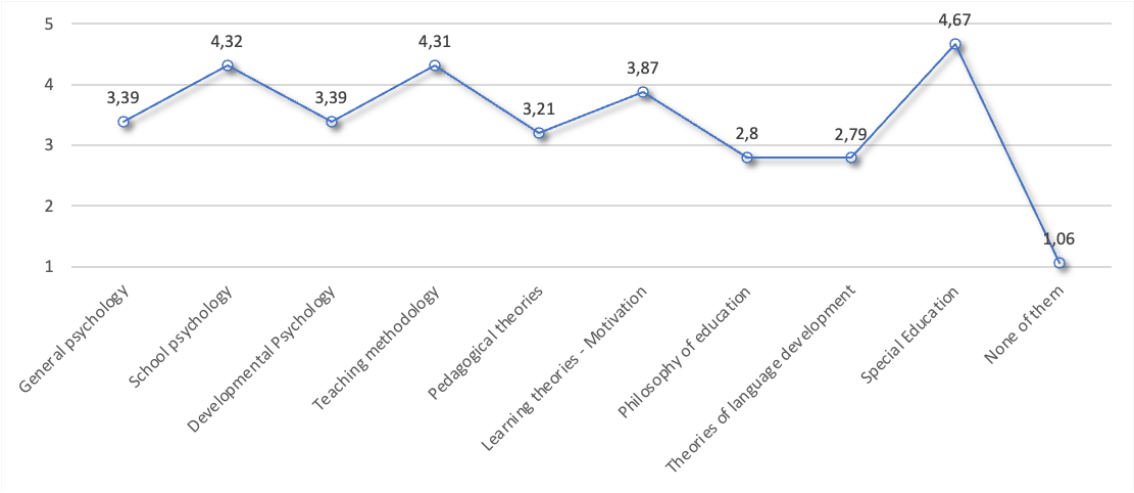
**Table 52**

*Results about Teacher training needs to address the learning of students with learning difficulties*

| | Not at all | | A little bit | | Moderate | | Very | | Very much | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | M | SD | N |
| General psychology | 1 | 0.3 | 21 | 6.3 | 177 | 52.8 | 119 | 35.5 | 17 | 5.1 | 3.39 | 0.695 | 335 |
| School psychology | 0 | 0.0 | 1 | 0.3 | 16 | 4.8 | 192 | 57.3 | 126 | 37.6 | 4.32 | 0.577 | 335 |
| Developmental Psychology | 1 | 0.3 | 28 | 8.4 | 175 | 52.2 | 100 | 29.9 | 31 | 9.3 | 3.39 | 0.782 | 335 |
| Teaching methodology | 0 | 0.0 | 2 | 0.6 | 13 | 3.9 | 199 | 59.8 | 119 | 35.7 | 4.31 | 0.572 | 333 |
| Pedagogical theories | 0 | 0.0 | 58 | 17.3 | 172 | 51.2 | 82 | 24.4 | 24 | 7.1 | 3.21 | 0.811 | 336 |
| Learning theories - Motivation | 1 | 0.3 | 9 | 2.7 | 80 | 24.0 | 185 | 55.4 | 59 | 17.7 | 3.87 | 0.733 | 334 |
| Philosophy of education | 2 | 0.6 | 143 | 42.6 | 125 | 37.2 | 52 | 15.5 | 14 | 4.2 | 2.80 | 0.856 | 336 |
| Theories of language development | 3 | 0.9 | 151 | 44.9 | 113 | 33.6 | 53 | 15.8 | 16 | 4.8 | 2.79 | 0.889 | 336 |
| Special Education | 1 | 0.3 | 2 | 0.6 | 7 | 2.1 | 87 | 26.0 | 238 | 71.0 | 4.67 | 0.580 | 335 |
| None of them | 320 | 98.2 | 1 | 0.3 | 1 | 0.3 | 1 | 0.3 | 3 | 0.9 | 1.06 | 0.433 | 326 |

**Figure 27**

*Mean of Teacher training needs to address the learning of students with learning difficulties scale items*




When trying to check for statistically significant differences about Learning needs of students with Learning Difficulties Regarding Gender, we found evidence in 4 of the 5 items, using t tests for independent samples (n.s.=0.05). We found these in General Psychology (t=-1,848 p=0,033), School Psychology (t=-2,535 p=0,006), Developmental Psychology (t=-2,935 p=0,002) and Pedagogical Theories (t=-1,931 p=0,027), whose opinion is highest among those from Special Education (see table 53).

**Table 53**

*Results of t-test criterion about Learning needs of students with Learning Difficulties regarding Gender*

| | Position | | | | | |
|---|---|---|---|---|---|---|
| | General Education (n=329) | | Special Education (n=10) | | | |
| | M | SD | M | SD | t | p |
| General psychology | 3.31 | 0.713 | 3.45 | 0.675 | -1.848 | 0.033 |
| School psychology | 4.24 | 0.568 | 4.40 | 0.576 | -2.535 | 0.006 |
| Developmental Psychology | 3.26 | 0.742 | 3.51 | 0.800 | -2.935 | 0.002 |
| Teaching methodology | 4.28 | 0.562 | 4.33 | 0.582 | -0.901 | 0.184 |
| Pedagogical theories | 3.13 | 0.799 | 3.30 | 0.816 | -1.931 | 0.027 |
| Learning theories - Motivation | 3.81 | 0.770 | 3.93 | 0.693 | -1.473 | 0.071 |
| Philosophy of education | 2.77 | 0.848 | 2.83 | 0.865 | -0.649 | 0.258 |
| Theories of language development | 2.74 | 0.887 | 2.83 | 0.891 | -0.948 | 0.172 |
| Special Education | 4.71 | 0.587 | 4.63 | 0.572 | 1.325 | 0.093 |
| None of them | 1.08 | 0.532 | 1.03 | 0.316 | 1.100 | 0.136 |

Similarly, when trying to verify the existence of statistically significant differences between Learning needs of students with Learning Difficulties Regarding Training in Special Education, we found evidence in all 12 items, using t tests for independent

samples (n.s.=0.05). Teachers with Training in Special education consider training more relevant in the following areas (see table 54):

- General psychology (t=3.826, p=0.000).
- School psychology (t=5.522, p=0.005).
- Developmental Psychology (t=2.351, p=0.010).
- Teaching methodology (t=5.289, p=0.000).
- Pedagogical theories (t=4.126, p=0.000).
- Learning theories – Motivation (t=4.123, p=0.000).
- Philosophy of education (t=3.564, p=0.000).
- Theories of language development (t=2.772, p=0.003).
- Special Education (t=2.355, p=0.010).
- None of them (t=-2.308, p=0.011).

**Table 54**

*Results of t-test criterion about Learning needs of students with Learning Difficulties regarding Training in special education*

| | **Training in Special Education** | | | | | |
|---|---|---|---|---|---|---|
| | **Yes (n=104)** | | **No (n=232)** | | | |
| | **M** | **SD** | **M** | **SD** | **t** | **p** |
| General psychology | 3.60 | 0.616 | 3.29 | 0.709 | 3.826 | 0.000 |
| School psychology | 4.57 | 0.553 | 4.21 | 0.553 | 5.522 | 0.000 |
| Developmental Psychology | 3.54 | 0.697 | 3.33 | 0.809 | 2.351 | 0.010 |
| Teaching methodology | 4.55 | 0.573 | 4.20 | 0.539 | 5.289 | 0.000 |
| Pedagogical theories | 3.48 | 0.682 | 3.09 | 0.837 | 4.126 | 0.000 |
| Learning theories - Motivation | 4.12 | 0.718 | 3.77 | 0.714 | 4.123 | 0.000 |
| Philosophy of education | 3.04 | 0.800 | 2.69 | 0.861 | 3.564 | 0.000 |
| Theories of language development | 2.97 | 0.769 | 2.70 | 0.927 | 2.772 | 0.003 |
| Special Education | 4.78 | 0.574 | 4.62 | 0.577 | 2.355 | 0.010 |
| None of them | 1.00 | 0.000 | 1.08 | 0.518 | -2.308 | 0.011 |

On the other hand, when trying to verify the existence of statistically significant differences about Learning needs of students with Learning Difficulties Regarding Teacher Position, we found evidence in 5 of the 12 items (see table 55), by applying t tests for independent samples (n.s.=0.05). Special Education teachers hold higher values than General Education teachers in the following educational aspects:

- General psychology (t=-3.058, p=0.006).
- Pedagogical theories (t=-2.739, p=0.000).
- Philosophy of education (t=-1.879, p=0.000).
- Theories of language development (t=-2.976, p=0.003).
- Special Education (t=2.052, p=0.010).

**Table 55**

*Results of t-test criterion about Learning needs of students with Learning Difficulties regarding Teacher position*

| | Position | | | | | |
|---|---|---|---|---|---|---|
| | General Education (n=325) | | Special Education (n=10) | | | |
| | M | SD | M | SD | t | p |
| General psychology | 3.38 | 0.699 | 3.80 | 0.422 | -3.058 | 0.006 |
| School psychology | 4.33 | 0.576 | 4.20 | 0.632 | 0.680 | 0.248 |
| Developmental Psychology | 3.38 | 0.784 | 3.70 | 0.675 | -1.258 | 0.105 |
| Teaching methodology | 4.30 | 0.574 | 4.40 | 0.516 | -0.525 | 0.300 |
| Pedagogical theories | 3.19 | 0.802 | 3.90 | 0.876 | -2.739 | 0.003 |
| Learning theories - Motivation | 3.87 | 0.735 | 4.00 | 0.667 | -0.551 | 0.291 |
| Philosophy of education | 2.79 | 0.850 | 3.30 | 0.949 | -1.879 | 0.031 |
| Theories of language development | 2.76 | 0.879 | 3.60 | 0.843 | -2.976 | 0.002 |
| Special Education | 4.68 | 0.574 | 4.30 | 0.675 | 2.052 | 0.020 |
| None of them | 1.06 | 0.438 | 1.00 | 0.000 | 0.340 | 0.367 |

When applying a Variance Analysis for one factor (n.s.=0.05) according to the variable age of teachers, differences were found in 4 of the 10 items (see table 56). Scheffe's post-hoc test confirms that this is significant in 1 formative aspect. School psychology (F=3,839, p=0,001) is more relevant for teachers aged 30-34 than for those aged 45-49 (I-J=0.549, p=0.011), 50-54 (I-J=0.513, p=0.020) and 55-59 years (I-J=0.619, p=0.006).

**Table 56**

*Results Analysis of Variance and Scheffé's post-hoc test about Learning needs of students with Learning Difficulties regarding Age*

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| General psychology | 25-29 | 3.40 | 0.548 | 5 | 1.982 | 0.057 | |
| | 30-34 | 3.63 | 0.629 | 27 | | | |
| | 35-39 | 3.50 | 0.688 | 20 | | | |
| | 40-44 | 3.39 | 0.655 | 44 | | | |
| | 45-49 | 3.29 | 0.745 | 70 | | | |
| | 50-54 | 3.48 | 0.705 | 83 | | | |
| | 55-59 | 3.11 | 0.579 | 44 | | | |
| | 60-64 | 3.41 | 0.762 | 37 | | | |
| School psychology | 25-29 | 4.60 | 0.548 | 5 | 3.839 | 0.001 | 30-34 -> 45-49 / 0.549 (0.011) |
| | 30-34 | 4.78 | 0.424 | 27 | | | 30-34 -> 50-54 / 0.513 (0.020) |
| | 35-39 | 4.40 | 0.681 | 20 | | | 30-34 -> 55-59 / 0.619 (0.006) |
| | 40-44 | 4.41 | 0.542 | 44 | | | |
| | 45-49 | 4.23 | 0.516 | 70 | | | |
| | 50-54 | 4.27 | 0.607 | 83 | | | |
| | 55-59 | 4.16 | 0.526 | 44 | | | |

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | 60-64 | 4.32 | 0.626 | 37 | | | |
| Developmental Psychology | 25-29 | 3.60 | 0.894 | 5 | 1.382 | 0.212 | |
| | 30-34 | 3.67 | 0.734 | 27 | | | |
| | 35-39 | 3.40 | 0.681 | 20 | | | |
| | 40-44 | 3.48 | 0.821 | 44 | | | |
| | 45-49 | 3.40 | 0.858 | 70 | | | |
| | 50-54 | 3.43 | 0.752 | 83 | | | |
| | 55-59 | 3.14 | 0.734 | 44 | | | |
| | 60-64 | 3.30 | 0.777 | 37 | | | |
| Teaching methodology | 25-29 | 4.60 | 0.548 | 5 | 3.333 | 0.002 | |
| | 30-34 | 4.67 | 0.480 | 27 | | | |
| | 35-39 | 4.60 | 0.503 | 20 | | | |
| | 40-44 | 4.35 | 0.573 | 43 | | | |
| | 45-49 | 4.25 | 0.604 | 69 | | | |
| | 50-54 | 4.26 | 0.605 | 82 | | | |
| | 55-59 | 4.16 | 0.475 | 45 | | | |
| | 60-64 | 4.24 | 0.548 | 37 | | | |
| Pedagogical theories | 25-29 | 3.20 | 0.447 | 5 | 1.667 | 0.116 | |
| | 30-34 | 3.41 | 0.501 | 27 | | | |
| | 35-39 | 3.45 | 0.826 | 20 | | | |
| | 40-44 | 3.34 | 0.745 | 44 | | | |
| | 45-49 | 3.19 | 0.822 | 70 | | | |
| | 50-54 | 3.23 | 0.941 | 83 | | | |
| | 55-59 | 2.89 | 0.682 | 45 | | | |
| | 60-64 | 3.22 | 0.886 | 37 | | | |
| Learning theories - Motivation | 25-29 | 4.00 | 0.707 | 5 | 2.002 | 0.054 | |
| | 30-34 | 4.22 | 0.577 | 27 | | | |
| | 35-39 | 4.10 | 0.641 | 20 | | | |
| | 40-44 | 4.00 | 0.756 | 43 | | | |
| | 45-49 | 3.86 | 0.804 | 70 | | | |
| | 50-54 | 3.84 | 0.693 | 82 | | | |
| | 55-59 | 3.69 | 0.668 | 45 | | | |
| | 60-64 | 3.76 | 0.723 | 37 | | | |
| Philosophy of education | 25-29 | 2.80 | 0.837 | 5 | 2.314 | 0.026 | |
| | 30-34 | 3.04 | 0.706 | 27 | | | |
| | 35-39 | 3.10 | 0.912 | 20 | | | |
| | 40-44 | 3.00 | 0.835 | 44 | | | |
| | 45-49 | 2.66 | 0.796 | 70 | | | |
| | 50-54 | 2.81 | 0.917 | 83 | | | |
| | 55-59 | 2.47 | 0.726 | 45 | | | |
| | 60-64 | 2.81 | 0.938 | 37 | | | |
| Theories of language development | 25-29 | 2.60 | 0.894 | 5 | 1.255 | 0.272 | |
| | 30-34 | 2.81 | 0.681 | 27 | | | |
| | 35-39 | 3.00 | 0.973 | 20 | | | |
| | 40-44 | 2.86 | 0.824 | 44 | | | |
| | 45-49 | 2.84 | 0.911 | 70 | | | |
| | 50-54 | 2.82 | 0.977 | 83 | | | |
| | 55-59 | 2.44 | 0.813 | 45 | | | |

| | Age | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | 60-64 | 2.76 | 0.895 | 37 | | | |
| Special Education | 25-29 | 5.00 | 0.000 | 5 | 2.882 | 0.006 | |
| | 30-34 | 4.96 | 0.192 | 27 | | | |
| | 35-39 | 4.75 | 0.444 | 20 | | | |
| | 40-44 | 4.68 | 0.561 | 44 | | | |
| | 45-49 | 4.59 | 0.712 | 70 | | | |
| | 50-54 | 4.53 | 0.669 | 83 | | | |
| | 55-59 | 4.71 | 0.458 | 45 | | | |
| | 60-64 | 4.86 | 0.351 | 36 | | | |
| None of them | 25-29 | 1.00 | 0.000 | 5 | 0.499 | 0.835 | |
| | 30-34 | 1.00 | 0.000 | 27 | | | |
| | 35-39 | 1.15 | 0.671 | 20 | | | |
| | 40-44 | 1.00 | 0.000 | 43 | | | |
| | 45-49 | 1.06 | 0.485 | 68 | | | |
| | 50-54 | 1.09 | 0.514 | 78 | | | |
| | 55-59 | 1.09 | 0.603 | 44 | | | |
| | 60-64 | 1.00 | 0.000 | 37 | | | |

To check the possible differences according to the variable years of experience of the teaching staff, a Variance Analysis was applied for one factor (n.s.=0.05), warning them in 9 of the 10 items (see table 57). After applying the post-hoc Scheffe test, it is confirmed that 3 are significant, the results being as follows:

- Teaching methodology (F=4.688, p=0.000) is better valued for teachers with 6-10 years of experience than for those with 16-20 (I-J=0.470, p=0.018).
- Pedagogical theories (F=4.343, p=0.000) obtains a higher rating by teachers with 11-15 years of experience than by those with 16-20 (I-J=0.555, p=0.032) and 21-25 (I-J=0.664, p=0.005).
- Theories of language development (F=4.149, p=0.000) is more relevant for teachers with an experience of 11-15 years compared to those who have 16-20 (I-J=0.587, p=0.048) and 21-25 (I-J=0.780, p=0.001).

**Table 57**

*Results Analysis of Variance and Scheffé's post-hoc test about Learning needs of students with Learning Difficulties regarding years of experience*

| | Experience | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| General psychology | 1-5 | 3.54 | 0.576 | 28 | 2.376 | 0.022 | |
| | 6-10 | 3.57 | 0.689 | 37 | | | |
| | 11-15 | 3.60 | 0.799 | 57 | | | |
| | 16-20 | 3.26 | 0.704 | 68 | | | |
| | 21-25 | 3.23 | 0.563 | 60 | | | |
| | 26-30 | 3.29 | 0.645 | 49 | | | |
| | More than 30 | 3.33 | 0.711 | 30 | | | |

| | Experience | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| School psychology | 1-5 | 4.57 | 0.573 | 28 | 3.566 | 0.001 | |
| | 6-10 | 4.54 | 0.605 | 37 | | | |
| | 11-15 | 4.47 | 0.538 | 57 | | | |
| | 16-20 | 4.15 | 0.526 | 68 | | | |
| | 21-25 | 4.25 | 0.600 | 60 | | | |
| | 26-30 | 4.24 | 0.522 | 49 | | | |
| | More than 30 | 4.23 | 0.626 | 30 | | | |
| Developmental Psychology | 1-5 | 3.54 | 0.693 | 28 | 2.105 | 0.043 | |
| | 6-10 | 3.54 | 0.767 | 37 | | | |
| | 11-15 | 3.67 | 0.893 | 57 | | | |
| | 16-20 | 3.31 | 0.815 | 68 | | | |
| | 21-25 | 3.25 | 0.654 | 60 | | | |
| | 26-30 | 3.31 | 0.742 | 49 | | | |
| | More than 30 | 3.23 | 0.728 | 30 | | | |
| Teaching methodology | 1-5 | 4.50 | 0.509 | 28 | 4.688 | 0.000 | 6-10 -> 16-20 / 0.470 (0.018) |
| | 6-10 | 4.62 | 0.492 | 37 | | | |
| | 11-15 | 4.48 | 0.632 | 56 | | | |
| | 16-20 | 4.15 | 0.504 | 66 | | | |
| | 21-25 | 4.20 | 0.605 | 60 | | | |
| | 26-30 | 4.18 | 0.523 | 50 | | | |
| | More than 30 | 4.20 | 0.551 | 30 | | | |
| Pedagogical theories | 1-5 | 3.39 | 0.497 | 28 | 4.343 | 0.000 | 11-15 -> 16-20 / 0.555 (0.032) |
| | 6-10 | 3.43 | 0.801 | 37 | | | 11-15 -> 21-25 / 0.664 (0.005) |
| | 11-15 | 3.61 | 0.840 | 57 | | | |
| | 16-20 | 3.06 | 0.826 | 68 | | | |
| | 21-25 | 2.95 | 0.723 | 60 | | | |
| | 26-30 | 3.12 | 0.799 | 50 | | | |
| | More than 30 | 3.07 | 0.828 | 30 | | | |
| Learning theories - Motivation | 1-5 | 4.00 | 0.609 | 28 | 2.932 | 0.005 | |
| | 6-10 | 4.16 | 0.646 | 37 | | | |
| | 11-15 | 4.09 | 0.880 | 56 | | | |
| | 16-20 | 3.85 | 0.657 | 67 | | | |
| | 21-25 | 3.70 | 0.720 | 60 | | | |
| | 26-30 | 3.72 | 0.640 | 50 | | | |
| | More than 30 | 3.73 | 0.691 | 30 | | | |
| Philosophy of education | 1-5 | 3.00 | 0.720 | 28 | 3.428 | 0.001 | |
| | 6-10 | 3.08 | 0.894 | 37 | | | |
| | 11-15 | 3.07 | 0.884 | 57 | | | |
| | 16-20 | 2.56 | 0.780 | 68 | | | |
| | 21-25 | 2.60 | 0.764 | 60 | | | |
| | 26-30 | 2.74 | 0.922 | 50 | | | |
| | More than 30 | 2.70 | 0.794 | 30 | | | |
| Theories of language development | 1-5 | 2.86 | 0.756 | 28 | 4.149 | 0.000 | 11-15 -> 16-20 / 0.587 (0.048) |
| | 6-10 | 2.86 | 0.948 | 37 | | | 11-15 -> 21-25 / 0.780 (0.001) |
| | 11-15 | 3.26 | 0.877 | 57 | | | |
| | 16-20 | 2.68 | 0.888 | 68 | | | |
| | 21-25 | 2.48 | 0.725 | 60 | | | |
| | 26-30 | 2.68 | 0.957 | 50 | | | |
| | More than 30 | 2.67 | 0.802 | 30 | | | |
| Special Education | 1-5 | 4.82 | 0.476 | 28 | 2.255 | 0.030 | |
| | 6-10 | 4.81 | 0.462 | 37 | | | |
| | 11-15 | 4.61 | 0.750 | 57 | | | |

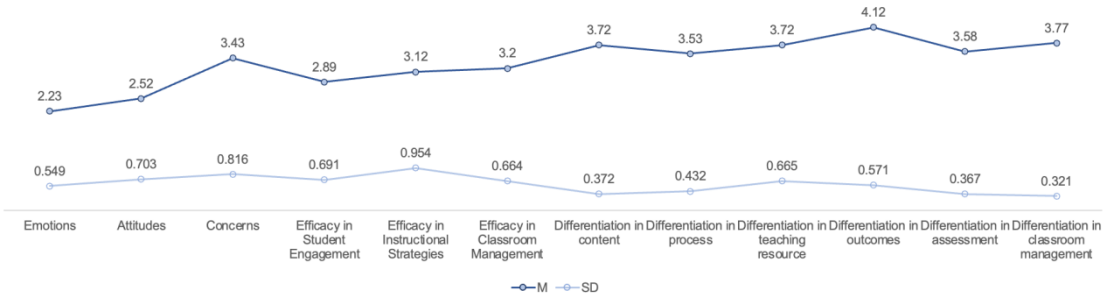
| | Experience | Means | SD | N | F | p | Groups/ I-J (p) |
|---|---|---|---|---|---|---|---|
| | 16-20 | 4.49 | 0.658 | 68 | | | |
| | 21-25 | 4.72 | 0.490 | 60 | | | |
| | 26-30 | 4.70 | 0.505 | 50 | | | |
| | More than 30 | 4.79 | 0.412 | 29 | | | |
| None of them | 1-5 | 1.12 | 0.588 | 26 | 0.324 | 0.943 | |
| | 6-10 | 1.11 | 0.667 | 36 | | | |
| | 11-15 | 1.07 | 0.539 | 55 | | | |
| | 16-20 | 1.06 | 0.496 | 65 | | | |
| | 21-25 | 1.02 | 0.130 | 59 | | | |
| | 26-30 | 1.04 | 0.286 | 49 | | | |
| | More than 30 | 1.00 | 0.000 | 30 | | | |

### *5.4. Correlational study between the dimensions*

In order to be able to deepen the knowledge of the competencies of the Greek secondary education teacher, to attend to the students with SEN in the classroom, it was wanted to check the possible relationship between the various dimensions. To this end, as discussed earlier, we worked with the variables set of the elements of each of the dimensions and subdimensions of the study to which the mean and standard deviation were calculated (see figure 28).

**Figure 28**

*Mean and standard deviation of the summations of dimensions and subdimensions*




Next, the possible relationships between variables Emotions, Attitudes, and Concerns with Inclusive Education and teachers' skills to manage students with special educational needs and strategies to teach students with special educational needs were analyzed. By calculating the Pearson correlation index and its respective significance level.

The results of the correlation between Emotions, Attitudes, and Concerns on Inclusive Education and Teachers' abilities to manage students with special educational needs show that the effectiveness of student participation, Instructional strategies and Classroom Management are significantly and negatively correlated with emotions, with moderate intensity, and with concerns, with intensity being high. On the other hand, they

are significantly and positively correlated with attitudes, with intensity being low. These results mean that positive feelings, positive attitudes, and fewer concerns lead to greater effectiveness (see table 58).

In turn, the results of the correlation between emotions, attitudes, and concerns about Inclusive Education and strategies for teaching students with special educational needs show that strategies for teaching students with special educational needs are significantly and negatively correlated with emotions. Being their intensity moderate-low and concerns, with a moderate-high intensity. On the other hand, they are significantly and positively correlated with attitudes, with a low intensity. These results mean that positive feelings, positive attitudes, and fewer concerns lead to greater use of differentiation strategies.

**Table 58**

*Correlation between Emotions, Attitudes, and Concerns about Inclusive Education, Teachers' abilities to manage students with special educational needs and Strategies of the teaching-learning process to create an environment of inclusion in the classroom*

| | Emotions | Attitudes | Concerns |
|---|---|---|---|
| Efficacy in Student Engagement | -0.420** | 0.417** | -0.721** |
| Efficacy in Instructional Strategies | -0.505** | 0.336** | -0.744** |
| Efficacy in Classroom Management | -0.488** | 0.329** | -0.719** |
| Differentiation in content | -0.374** | 0.322** | -0.598** |
| Differentiation in process | -0.347** | 0.305** | -0.646** |
| Differentiation in teaching resource | -0.400** | 0.208** | -0.472** |
| Differentiation in outcomes | -0.414** | 0.232** | -0.486** |
| Differentiation in assessment | -0.383** | 0.239** | -0.515** |
| Differentiation in classroom management | -0.393** | 0.139* | -0.524** |

*Note.* Correlation is significant at the 0.01 level (2-tailed).**

In addition, the relationship between teachers' abilities to manage students with special educational needs and strategies to teach students with special educational needs was sought (see table 59).

The results show that strategies for teaching students with special educational needs are significantly and positively correlated with teachers' abilities to manage students with special educational needs, with moderate intensity. These results mean that teachers who are more efficient in student participation, instructional strategies, and classroom management use differentiation strategies to a greater extent.

**Table 59**

*Correlation between Teachers' abilities to manage students with special educational needs and Strategies for teaching students with special educational needs*

| | Efficacy in Student Engagement | Efficacy in Instructional Strategies | Efficacy in Classroom Management |
|---|---|---|---|
| Differentiation in content | 0.639** | 0.692** | 0.661** |
| Differentiation in process | 0.707** | 0.710** | 0.683** |
| Differentiation in teaching resource | 0.442** | 0.562** | 0.527** |
| Differentiation in outcomes | 0.431** | 0.558** | 0.491** |
| Differentiation in assessment | 0.512** | 0.570** | 0.494** |
| Differentiation in classroom management | 0.477** | 0.614** | 0.546** |

*Note.* Correlation is significant at the 0.01 level (2-tailed).**

Based on the relationship of interdependence described, a linear regression study of a multiple nature was applied with the aim of establishing, independently, an effective measure to determine the behavior of emotions, attitudes and concerns based on the following predictors: $X_1$=Efficacy in Student Engagement, $X_2$=Efficacy in Instructional Strategies, $X_3$=Efficacy in Classroom Management, $X_4$=Differentiation in content, $X_5$=Differentiation in process, $X_6$=Differentiation in teaching resource, $X_7$=Differentiation in outcomes, $X_8$=Differentiation in assessment and $X_9$=Differentiation in classroom management.

With respect to emotions (see table 60), the results obtained indicate that 2 of the 9 built-in predictive variables have been selected, with an explanation of the variance of 28.7%. The order of incorporation of these into the model and their specific weight has been:

- Effectiveness in instructional strategies ($X_2$), with an explanation of the variability of the criterion of 26.3%.
- Differentiation in learning outcomes ($X_7$), with an explanation of 2.8% criterion variability.

**Table 60**

*Multiple regression model of the elements involved in Emotions*

| Steps | Criteria Variable | Predictor variables | R | $R^2$ | Delta R | F | p |
|---|---|---|---|---|---|---|---|
| 1 | Y | $X_2$ | .513 | .261 | .263 | 109.720 | .001 |
| 2 | Y | $X_2$, $X_7$ | .540 | .287 | .028 | 12.018 | .001 |
| $Y=3.749+-.227X_2+-.149X_7$ | | | | | | | |

Regarding the Attitudes of the teaching staff (see table 61), the results revealed that 1 of the 9 predictor variables introduced was selected, with an explanation of the variability of the criterion of 16.9%. The variable was the Effectiveness of student participation ($X_1$).

**Table 61**

*Multiple regression model of the elements involved in Attitudes*

| Steps | Criteria Variable | Predictor variables | R | $R^2$ | Delta R | F | p |
|---|---|---|---|---|---|---|---|
| 1 | Y | $X_1$ | .414 | .169 | .172 | 63.565 | .000 |
| $Y=1.298+.418X_1$ | | | | | | | |

On the other hand, the analysis of the Teacher's Concern (see table 62) showed the incorporation of 4 of the 9 predictor variables incorporated, with an explanation of the variance of 60.7%. The order of incorporation of these to the model and their specific weight has been:

- Effectiveness of student participation ($X_1$), with an explanation of the variability of the criterion of 56.8%.
- Effectiveness in instructional strategies ($X_2$), with an explanation of the variability of the criterion of 2.4%.
- Differentiation in process ($X_5$), with an explanation of the variability of the criterion of 1.3%.
- Differentiation in learning outcomes ($X_7$), with an explanation of the variability of the criterion of 0.7%.

**Table 62**

*Multiple regression model of the elements involved in Concerns*

| Steps | Criteria Variable | Predictor variables | R | $R^2$ | Delta R | F | p |
|---|---|---|---|---|---|---|---|
| 1 | Y | $X_2$ | .754 | .567 | .568 | 403.617 | .000 |
| 2 | Y | $X_2$, $X_5$ | .770 | .590 | .024 | 18.147 | .000 |
| 3 | Y | $X_2$, $X_5$, $X_1$ | .778 | .601 | .013 | 10.082 | .002 |
| 4 | Y | $X_2$, $X_5$, $X_1$, $X_7$ | .782 | .607 | .007 | 5.089 | .025 |
| $Y=6.876+-.328X_2+-.269X_5+-.298X_1+-.147X_7$ | | | | | | | |

Finally, we wanted to know the relationship of dependence of the Needs of teachers to address the learning needs of students with learning difficulties based on the following predictors: $X_1$=Efficacy in Student Engagement, $X_2$=Efficacy in Instructional Strategies, $X_3$=Efficacy in Classroom Management, $X_4$=Differentiation in content, $X_5$=Differentiation in process, $X_6$=Differentiation in teaching resource, $X_7$=Differentiation

in outcomes, $X_8$=Differentiation in assessment and $X_9$=Differentiation in classroom management.

The results reveal that the incorporation of 4 of the 9 predictor variables incorporated, with an explanation of the variance of 41.1%, being their incorporation into the model and their specific weight the following (see table 63):

- Efficacy in Student Engagement ($X_1$), with an explanation of the variability of the criterion of 32.7%.
- Differentiation in classroom management ($X_9$), with an explanation of the variability of the criterion of 3.4%.
- Differentiation in teaching resource ($X_6$), with an explanation of the variability of the criterion of 2%.
- Differentiation in assessment ($X_8$), with an explanation of the variability of the criterion of 2,9%.

**Table 63**

*Multiple regression model of the elements involved in Needs of teachers to address the learning needs of students with learning difficulties*

| Steps | Criteria Variable | Predictor variables | R | $R^2$ | Delta R | F | p |
|---|---|---|---|---|---|---|---|
| 1 | Y | $X_1$ | .572 | .327 | .327 | 144.452 | .000 |
| 2 | Y | $X_1$, $X_9$ | .601 | .362 | .034 | 15.997 | .000 |
| 3 | Y | $X_1$, $X_9$, $X_6$ | .618 | .381 | .020 | 9.362 | .002 |
| 4 | Y | $X_1$, $X_9$, $X_6$, $X_8$ | .641 | .411 | .029 | 14.676 | .000 |
| $Y=.679+.312X_1+.368X_9+-.216X_6+-.342X_8$ | | | | | | | |

## Conclusions and Proposal

This chapter presents the conclusions of this thesis, based on the objectives that modulate the research.

### 6.1. Conclusion

The general objective of the research is to determine the access and the use of specific methods, tools and skills that Greek educators in general Secondary Educational System have, in order to facilitate the process of teaching of SEN students.

From it the first specific objective was describe the current state of educational schools in the Secondary Educational System regarding the attention of SEN students. Based on our results, most of the teachers have no training in special education, although every classroom has an amount of students with SEN, which are in of most of the cases, were learning difficulties, followed by behavioral problems and a small percentage of mental dysfunction or other casuistries less representative. Additionally, it was found that most of the teachers don't have adequate information about students with SEN and they receive this information mostly by KESY reports, followed by special education teachers while a small amount get informed by the curriculum. Regarding the frequency of meetings between the principal and the General and Special Education Councillors or between the principal and parents of students with SEN, they occur rarely. Regarding the resources, alternative technologies, reading and writing programs, audiovisual systems, Braille writing system, etc. provided its school for students with SEN it was found that most of the schools have no specific resources and only one person said they had audiovisual media, while it was definitely mentioned the need for training of teachers in regard to SEN students, but the majority of schools do not offer this training. Regarding institutional support, it comes mostly from KESY which is the body that helps in the training of students with SEN, but schools themselves in many cases help students with SEN. Finally, regarding the assistance provided by the Ministry of Education to the school with respect to special education issues, it is very rare and the funds are very low and were invested mostly in parallel support and in hiring special assistant teachers and special education teachers and less in Special Books and equipment.

According to Koutrouba et al. (2008) most teachers are positive towards the inclusion of students with SEN. in the general school as this is how the integration of students into society is achieved. Teachers' positive attitude towards the inclusion of

students with SEN. in general school is also reflected in other studies (Laina & Papadopoulou, 2016). However, there is a considerable group of teachers who will consider the special school to be a more appropriate learning environment for students with SEN. Coinciding with the study by Tsakiridou & Polyzopoulou (2014), which demonstrates the negative attitude of teachers toward the inclusion of students with SEN in the general school.

The second objective was to know the teacher's competences of Greek Secondary Education to attend to the SEN student body in the ordinary classroom. This one was attending on four aspects: Emotions, Attitudes, and Concerns about Inclusive Education; Teachers' abilities to manage students with special educational needs; Strategies for teaching students with special educational needs and Important factors for teaching students with special educational needs.

Regarding the first aspect, it was found that secondary education teachers have neutral to positive opinions about their feelings toward inclusion, which means that they do not think disability is something "bad". These opinions were found to be somehow correlated to gender, training in special education**,** Teacher Position and age. As can be seen in other investigations such as those of Coutsocostas & Alborz (2010) and Koutrouba et al. (2008), teacher training in Special Education, as well as the teaching experience of teachers with students with SEN, are factors related to teachers' positive view of inclusion. It is also worth mentioning that the vast majority of teachers who disagree with the inclusion of students with complex learning difficulties and mental retardation do not have a master's degree (Coutsocostas & Alborz, 2010). In addition, age appeared to influence teachers' views on inclusion as younger teachers support all students attending mainstream school (Coutsocostas & Alborz, 2010).

Regarding teachers' abilities to use strategies that encourage the participation of students with special educational needs in the ordinary classroom, it was found that a large number of teachers have deficiencies, and their skills were correlated in some way with gender, special education training, experience, teacher position and age. However, although the results show higher levels in the capacities for the effective use of instructional strategies, as well as in the implementation of effective strategies for classroom management, special attention should still be paid to this as they remain worrying.

The third dimension is related to the strategies that teachers have to teach students with special educational needs and it was found that of the 6 subdimensions only three of them stand out, the differentiation in outcomes is the strategy that the

teacher uses more or pays greater attention, followed by the differentiation in classroom management and the differentiation in content. On the contrary, teachers have lower levels in terms of differentiation in process and differentiation in assessment, both being a fundamental part to achieve the normalization of learning and inclusion in the teaching processes of SEN students.

As for the important factors for teaching students with special educational needs, the majority of participants mentioned Further Education, Vocational Training, Patience and consciousness towards children/adolescents, Awareness about the psychological and social problems of students, Means and materials to achieve the objectives of the curriculum, Importance of diversity and Importance of inclusivity as the aspects mostly relevant to the attention of students with special educational needs. The opinions regarding the importance of these factors were found to be correlated to Gender, teacher position, age of the teachers and years of experience.

According to a survey by the O.EP.EK. (2008) the training needs of teachers mainly concern behavioral problems and emotional problems as well as learning and speech difficulties. The same categories are a field of interest for teachers at a rate of 39.72% regarding learning difficulties and at a rate of 38.35% regarding behavioral problems (Vorvi & Hasekidou-Markou, 2016). In addition, a study by Housou et al (2018) highlights the management of behavioral problems and the management of learning difficulties as the predominant need for training among teachers. Learning difficulties and emotional disorders are selected as a priority by teachers (Koulis & Bagaki, 2018). Other teachers state that the training should cover the wider field of Special Education, i.e. including all categories of SEN. (Agaliotis, 2008). The thematic section "Management of school life" is the main choice of the majority of teachers (Housou et al., 2018). In addition, the thematic section "Problem management in the school classroom" gathers the interest of philologists, science teachers and mathematics (Pedagogical Institute, 2010b). The interest of teachers is also manifested in the thematic unit "Pedagogy and Psychology (Vorvi & Hasekidou-Markou, 2016). According to Agaliotis (2008), the main preferences of teachers for the thematic units are the learning of social skills, the cooperation between school and family, teaching methods in special education, the co-education of students with and without SEN. as well as parent counseling (Agaliotis, 2008).

The third objective was to detect the training needs of Greek educators in the Secondary Educational System in the basic competencies, in order to serve SEN students in the ordinary class. It was found that most of the teachers perceive special education as necessary, followed by school psychology and teaching methodology.

These educational needs were found to be correlated to gender, Training in Special Education, Teacher Position, age of teachers and years of experience.

The necessity of training teachers in the field of Special Education from the undergraduate level of their studies is also evident through the open question of the questionnaire where the need to change the curricula of teaching schools is supported. This also results from a study in which the content of the study guide of University Departments for secondary education teachers is analyzed, where the insufficient preparation of future teachers and especially philology, physics and mathematics in the field of Special Education is evident, making their further training in the relevant field imperative (Safi et al., 2018). The particularly great need for training in the field of Special Education is also highlighted by the study of Lainas and Papadopoulou (2016) as the number of students with SEN increases. whereas the required support is not provided by the state. This need is also confirmed by the study by Koulis and Bagakis (2018).

The majority of teachers have not received training in the relevant field (Coutsocostas & Alborz, 2010; Koutrouba et al., 2008; Laina & Papadopoulou, 2016). It is worth mentioning that 46% of General Education teachers do not have the required knowledge to organize individualized teaching of students with SEN. In addition, particular difficulty is observed in the ability of teachers to recognize students with SEN and mainly this difficulty concerns the case of pervasive developmental disorder and learning difficulties (Agaliotis, 2008). For this reason, teachers make a personal effort in order to properly manage the classroom (Laina & Papadopoulou, 2016) emphasizing at the same time the absence of state training programs for Special Education, even though the number of students with SEN is increasing (Coutsocostas & Alborz, 2010; Laina & Papadopoulou, 2016). Those teachers who have received training in Special Education, this concerns short-hour seminars (Coutsocostas & Alborz, 2010).

### 6.2. Training plan for the attention to the SEN students of the Secondary Education Educational System, in the ordinary class

From the present research, the proposal for a training plan for the improvement of the attention to the SEN students of the Secondary Education Educational System, in the ordinary class, being this the fourth objective of the study. The starting point of this design is the detection of the deficiencies that are evident, through the results obtained, and the conclusions that are inferred from them, reinforced by the opinion obtained from the teaching staff participating in this research.

### *6.2.1. Justification*

The training of teachers and specialized scientific staff contributes significantly and substantially to the effective planning and organization of the educational process as well as the formation of appropriate conditions for the smooth study of students. The aim of the program is, on the one hand, to enrich the knowledge and experiences of the participants and on the other hand, to strengthen their skills, in order to be able to effectively manage the needs of people with disabilities and people with special learning difficulties, having the necessary theoretical basis both in pedagogical-teaching level, as well as at the level of counseling and daily practice.

Taking into account the relevant literature, the recorded opinions of teachers and school counselors, the experience of P.I. regarding the training needs of teachers in co-education, the corresponding experience of other countries, the opinion of education experts, the conditions in the field of Higher Education and, moreover, the existing structures, it is considered important to formulate a new proposal for the training of teachers , which will include innovative elements.

### *6.2.2. Objectives*

Specifically, the Annual Training Program in Special Education aims to:

- Providing knowledge and strengthening the skills of trainees, both at a theoretical and practical level, regarding the education and psychopedagogical support of their students, in the context of the school and the family.
- Understand the institutional framework of Education and Special Education in our country.
- Providing knowledge and getting to know the characteristics of people with disabilities as well as their training methods.
- Learning to plan and formulate differentiated teaching programs.
- Getting to know learning techniques and the involvement of learners in the formulation of educational interventions for people with disabilities or special learning difficulties.
- Give recognition of the contribution of information and education technology (IET) and the utilization of digital applications in Special Education and Education.
- To deepen the process of organization and implementation of teaching methods, design and implementation of didactic interventions for preschool and school age students with disabilities or special learning difficulties.

### *6.2.3. Methodology*

The proposed Special Education Training Program will allow the program to be followed exclusively remotely, from any place the participant wishes and at any time.

The training material will consist of recorded video lectures accompanied by notes edited by the authors of the training material. Furthermore, the program will include interactive materials of exercises and assignments to provide motivation for learning and successful completion, in a friendly environment based on the most innovative and sophisticated learning technologies.

The educational material of the program will be opened gradually, per teaching module, through a specially designed educational platform, which will not require prior familiarity with the processes of electronic/distance learning. In addition to the availability of educational materials, announcements, timetables and study guides, information notes as well as detailed instructions for using the platform will be posted on the platform. Also, the platform will include a discussion area (forum) for the direct communication of the trainees with the trainers, the teaching support staff and their fellow trainees. The video lectures and materials of the exercises and assignments, as well as the forum, will be available 24 hours a day, with continuous and immediate educational and technical support.

In addition to the educational material, each teaching unit will include closed-type questions (quiz) as well as short evaluation tasks (mini project). The duration for the completion of each teaching unit will be approximately one month. In the posted schedule, students will be able to see the exact start and end date of each teaching unit of the program until its completion. Within this period they will be asked, after studying the educational material (video lectures and notes), to submit the quizzes and short assignments required for their evaluation.

The final work will be supervised by experienced, specialized scientists, who will support and properly advise the trainees throughout the planning and implementation of the teaching intervention they will be asked to carry out.

### *6.2.4. Training proposal*

The didactic module that will be presented in the total duration of the 7-month seminar are the following:

 1st Module: Basic concepts – Sensory and physical disabilities

Description: In the first didactic module of the program, the basic concepts and corresponding terms regarding Special Education and Education and disability are analyzed. Also, in this section, extensive reference is made to sensory and physical disabilities, their characteristics and the way of training people with disabilities of these forms.

Contents:

1.1 Basic concepts about disability – Special Education

1.2 People with hearing impairment

1.3 People with visual impairment

1.4 People with physical disabilities

 2nd Module: Pervasive Developmental Disorders – Intellectual Disability and Teaching Teaching Techniques

Description: The second didactic module concerns Pervasive Developmental Disorders, Mental Disability, as well as Didactic training techniques. The characteristics of the specific forms of disability and the relevant terminology are analyzed, as well as the teaching of people with these forms of disability and the techniques used in it with numerous examples.

Content:

2.1 People with Pervasive Developmental Disorders

2.2 People with mental disabilities

2.3 Teaching techniques for training people with mental disabilities - Theoretical models

2.4 Teaching techniques for training people with mental disabilities – Examples

 3rd Module: Special Learning Difficulties - Evaluation and Teaching Intervention

Description: In this section, issues related to Special Learning Difficulties are analyzed: their characteristics, their psychosocial and emotional dimension, their assessment and the corresponding diagnostic process, as well as an extensive reference to teaching interventions and applications.

Content:

3.1 People with Special Learning Difficulties (SLD)

3.2 Psychosocial and emotional dimension of (E)MD

3.3 Assessment and diagnostic process in Special Education and Training

3.4 The role of the teacher in the detection and evaluation of (E)MD

3.5 Teaching interventions and Applications for people with disabilities - Special Educational Needs - Examples of intervention and practical applications for students with (E)MD

 4th Module: Reading Difficulties - Giftedness - Behavioral problems

Description: The fourth didactic module refers to reading difficulties and corresponding interventions, behavioral problems and their management, as well as giftedness.

Content:

4.1 Reading Difficulties

4.2 Individuals with Giftedness

4.3 People with behavioral problems

4.4 Management of inappropriate behaviors

 5th Module: Inclusion - Counseling and other Education issues

Description: The fifth didactic module concerns the approach to inclusion, the clarification of the relevant terms and the ways to achieve it, practical issues of disability management, in the context of school and family cooperation, the sexuality of people with disabilities, as well as alternative education models for people with disabilities.

Content:

5.1 Inclusion - A school for all

5.2 School-family cooperation

5.3 Practical issues of disability management

5.4 Managing the sexuality of people with disabilities

5.5 Alternative models of education for people with disabilities

 6th Module: ICT in Special Education and Education – Applications

Description: The sixth didactic module concerns the role of information and communication technology in Special Education and Education and their connection with various forms of disability, as well as recording and developing software, applications and games that can be used in the education of people with disabilities.

Content:

6.1 Assistive Technologies

6.2 Educational Technologies

6.3 Applications for people with Special Learning Difficulties and/or Autism Spectrum Disorders

6.4 Software for Special Learning Disabilities

6.5 Digital Applications and Games

 7th Module: Final work

Description - Content: This specific section concerns the design of teaching interventions for preschool and/or school age students with disabilities or special educational needs. The trainees are supported throughout the work by scientific collaborators of the program.

### *6.2.5. Evaluation*

Successful completion of the program requires a score greater than or equal to 50% in each module of the program (scale: 0-100%, Base: 50%, Excellent: 100%). In each teaching unit, the answers of the trainees in the Teaching Unit Quiz and the work (Mini project) of each teaching unit are evaluated. Remedial quizzes, which follow the video lectures, are not part of your grading. It is pointed out that the submission of assignments in each teaching unit is a necessary condition for the successful completion of the program.

The Training Certificate is awarded when the learner receives a Grade equal to or above 50% in the average of the evaluation tests in each teaching unit of the program (scale: 0-100%, Base: 50%, Excellent: 100%). In the event that the average of the evaluation tests in one or more modules of the program does not exceed 50%, the

learner has the possibility to re-examine only once in the module or modules in which he has not achieved a passable grade.

Re-examinations will be conducted after the completion of the evaluation of each module of the program and after the learner receives feedback on the answers he has submitted to the evaluation tests of the module. The grade that the learner will collect during the re-examination process will also be the final grade for the modules in question.

As long as the learner does not submit his answers to the evaluation tests of the repeat exams, then the score he received from the evaluation tests of the teaching unit is maintained.

Finally, in order to know the degree of satisfaction of the students with the training received, a questionnaire will be implemented on the quality and usefulness of the modules. Analysis of the information gathered will help to establish possible improvements to the training plan.

### 6.3. Research limitations and prospective

One of the greatest limitations of the present study includes the difficulty of collecting the opinion of the managers of the centers, which led to low representation. At the same time, due to the problems caused by the Covid19 pandemic, it was decided to limit the sample to teachers from the educational centers of the Prefecture of Kavala, unable to extend the study to other regions.

Despite the aforementioned limitations, the present research, through the findings from the quantitative and qualitative analysis, offers important evidence regarding the educational needs of secondary school teachers in the region of Kavala, which can be studied more extensively in future research with a larger sample of participants and including teachers from more geographical areas making the results generalizable. In addition, it is proposed to implement a corresponding research study in Vocational High Schools and the subsequent comparison of its findings with general schools. Future research could also explore how the education system responds to the new challenges in order to effectively implement the inclusion of all students in the mainstream school.

In this chapter there was a commentary and discussion of the findings of the research in relation to its research questions and the existing literature. This was followed by drawing conclusions regarding the opinions of secondary school teachers on the inclusion of students with SEN, in the general school but also their training needs in the

relevant field, elements that could be taken into account in the design of future training programs in SEN issues. Finally, the limitations of the research as well as the proposals for conducting future research were formulated.

## Resumen en español

### 1. Introducción

La escuela de la era moderna está llamada a funcionar dentro del marco de la educación inclusiva que promueva el acceso equitativo de todos los niños a la escuela general. La inclusión de estudiantes con diferentes necesidades y habilidades en la escuela general está entrelazada con la necesidad de reajustar la escuela con el objetivo de manejar eficazmente la diversidad (Aggelidis y Stylianou, 2011; Stasinos, 2018).

Por lo tanto, el profesor debe a asumir nuevas funciones multicomplejas para seguir los desarrollos educativos y contribuir a dar forma a la vida escolar (Instituto Pedagógico, 2010b; Pasias et al., 2015). En este contexto, se le pide que enriquezca sus conocimientos, que detecte las posibles diferencias de su alumnado y que modifique o adapte sus enseñanzas (Angelidis y Stylianou, 2011; Kourkoutas y Caldin, 2012). Los nuevos requerimientos de la realidad escolar resaltan el desarrollo personal y profesional del docente como un imperativo, tarea que se logra a través de la formación (Katsarou & Dedouli, 2008).

La formación es un proceso continuo, ya que las nuevas necesidades se crean constantemente debido al rápido cambio de conocimientos (Katsarou y Dedouli, 2008; Instituto Pedagógico, 2010b). El diseño de los programas de formación presupone la investigación de las características del alumnado con el fin de detectar sus necesidades educativas, elemento esencial para la ejecución satisfactoria de los programas de formación (Kokkos, 2005; Instituto Pedagógico, 2010b; Rogers, 1966). En términos más generales, la aplicación efectiva de los programas educativos requiere una planificación científica, el establecimiento de objetivos docentes claros, el uso de técnicas educativas adecuadas y la evaluación del proceso en relación con las necesidades de los docentes y la aplicación de los principios de la Educación de Adultos.

En este contexto, surge la presente investigación por la cual se recoge las opiniones y necesidades educativas de los profesores de Educación Secundaria (ES), de la prefectura de Kavala (Grecia), sobre la inclusión de estudiantes NEE en la escuela general, así como la percepción de los directivos de los centros, y que el análisis de los datos recabados facilite el diseño de un plan de formación que se ajuste a su realidad y momento profesional.

Este trabajo está estructurado en seis capítulos. Los tres primeros se dedican a la exposición teórica que vertebra el estudio. En el primero de ellos se describen las medidas para la inclusión en el aula ordinaria de los alumnos NEE en el ámbito de la

Educación Secundaria. En el segundo capítulo se analiza la inclusión de los alumnos NEE en el aula ordinaria y en el tercer capítulo se presenta la cualificación y formación del profesorado de Educación Secundaria para el trabajo con el alumnado NEE.

En el cuarto capítulo, se plantea la metodología de investigación partiendo de la definición del problema, se formulan los objetivos y las preguntas de investigación, se establecen las variables de estudio, se describen los grupos informantes, el cuestionario utilizado como herramienta de recogida de información del profesorado y la entrevista diseñada para los directivos de los centros y las estrategias de análisis de los datos obtenidos.

El quinto capítulo incluye los resultados del estudio, atendiendo a los objetivos de investigación y que dan lugar al sexto y último capítulo de conclusiones en el cual se muestran las inferencias extraídas, la discusión y el plan de formación diseñado en función del análisis de los resultados expuestos. Este culmina con las limitaciones y prospectiva de este estudio.

## 2. Marco teórico

### 2.1. Medidas de inclusión de los alumnos NEE en la normativa educativa

El sistema educativo de un país refleja su progreso y desarrollo. Lo mismo se aplica a la manera en que trata a los niños con necesidades educativas especiales. Los factores que impulsan la formación, el desarrollo y el progreso en el campo de la educación especial son las reformas sociales, económicas, políticas y legislativas, que determinan el progreso de la investigación y en las que se extenderán los nuevos resultados (Lampropoulou & Panteliadou, 2000).

En Grecia, hace unas décadas, no había ningún logro notable que demostrar en el campo de la educación para estudiantes con necesidades mentales o físicas especiales (Kardarakos, 2006), no había más que esfuerzos individuales ocasionales en esta dirección.

La Ley 1143/81, que había estado en consulta desde 1975, inaugura una serie de legislaciones. El objetivo de esta Ley era la provisión de educación especial y formación profesional a “personas anormales”, la implementación de medidas de atención social y su integración social considerando sus capacidades (Lampropulou, 2007). El artículo 3 de la misma Ley establece una definición médica para las personas con necesidades especiales. Define que la educación especial se imparte únicamente en las Escuelas Especiales y no se hace referencia a la integración de los estudiantes

con necesidades educativas especiales en la clase ordinaria. La asistencia no es obligatoria (Lampropulou y Panteliadou, 2000). Durante esta década se han establecido departamentos pedagógicos en las universidades griegas, pero el limitado número de lecciones de educación especial designadas, combinado con la baja asistencia de los estudiantes, demostró la falta de interés por el status quo educativo (Lamproppoulou, 2007). Sin embargo, esta Ley recibió críticas negativas, ya que mantenía el sistema educativo existente, excluyendo la educación especial del sistema educativo general y ordinario. No sólo no facilita la integración de los niños con necesidades especiales, sino que contribuye a su marginación (Zoniou-Sideri, 2011). Todas estas reacciones llevaron a la aprobación de la nueva Ley 1566/1985, también conocida como “anti-309” (Zoniou-Sideri, 2011).

La Ley 1566/85, que se refiere a la estructura y función de la enseñanza primaria, incorpora la educación especial en el sistema educativo general y ordinario. Al mismo tiempo aparecen y se establecen clases especiales en las escuelas ordinarias, jardines de infancia especiales y el término “persona divergente” se sustituye por el término “persona con necesidades especiales”. Desafortunadamente, no existe ningún tipo de capacitación y especialización para los educadores y la política de exclusión se mantiene en marcha, pero de maneras refinadas. La misma Ley, en sus artículos 32-36, presenta el propósito, la definición de personas con necesidades especiales y la forma del sistema de educación especial propuesto. El artículo 33 incluye a los estudiantes que tienen dificultades particulares de aprendizaje, como dislexia, trastornos del habla o mal adaptativos, mientras que también se hace referencia a la entidad de educación y formación de los estudiantes con necesidades especiales (escuelas ordinarias, escuelas especiales y clases especiales dentro y fuera de las escuelas ordinarias). Esta Ley específica se basa también en el modelo médico, ya que se mencionan el diagnóstico y la diferenciación de alumnos normales y anormales, y el establecimiento de clases y escuelas especiales. Del proceso educativo quedan excluidos los maestros, los padres y el propio estudiante y sólo los especialistas son los que identificarán y asignarán a cada estudiante en la escuela o clase correspondiente.

En un intento de llenar los espacios en blanco de la Ley anterior, en 1988 se votó una nueva, la Ley 1771/1988 que incorporó todos los ajustes necesarios para facilitar el acceso de los estudiantes con necesidades especiales al sistema de enseñanza superior y en el mismo año se votó la Ley complementaria 1924/1988, que institucionalizó la enseñanza de apoyo (Zoniou-Sideri, 2011).

Entre 1989 y 1993, dentro de la Unión Europea, se han producido avances en el ámbito de la educación especial. Grecia participa en dos programas europeos HELLIOS

I y HELLIOS II, destinados a la integración social y la incorporación de los niños con necesidades especiales (Delassoudas, 2006).

Las disposiciones de la Ley 2817/14.3.2000 redefinen el término “personas con necesidades especiales” al término “personas con necesidades educativas especiales”, determinan la educación especial gratuita a nivel estatal para estos estudiantes y la fundación del Departamento de Educación Especial en el Instituto Pedagógico. Además, en cada región administrativa del país opera una oficina de asesoramiento, KDAY (Centro de Diagnóstico, Evaluación y Apoyo). Se estima que la Ley 2817 es la primera ley que promueve la idea de “Escuela para Todos” (Soulis, 2002). De conformidad con esta Ley, se promueve la integración de los niños con necesidades especiales en la educación general y la escuela especial sólo se limita en casos muy graves. Se crean programas personalizados para cada niño y niña y se refuerza el papel de educadores y educadoras especiales. Los estudiantes con necesidades educativas especiales pueden asistir a clases de integración o tener un apoyo paralelo. Se introducen nuevas tecnologías, como las máquinas de Braille y los glosarios de lenguaje de signos. Además, se institucionalizan nuevas especializaciones, como musicoterapeutas e intérpretes de lenguaje de signos en las escuelas. Según la Ley, las personas con necesidades educativas especiales son aquellas que tienen un aprendizaje significativo difícil y adaptación debido a problemas físicos, mentales, psicológicos, emocionales y sociales. También se incluyen aquellos que tienen:

(a) Deficiencia o inmadurez mental.
(b) Problemas graves de visión o audición (ciegos, borrosos, sordos y con dificultades auditivas)
(c) Defectos neurológicos u ortopédicos graves o problemas de salud.
(d) Problemas de voz.
(e) Dificultades especiales de aprendizaje como dislexia, discalculia, disanagnosia.
(f) Dificultades cognitivas, emocionales y sociales complejas, autismo y otros trastornos del desarrollo.

Las personas con necesidades educativas especiales son también aquellas que necesitan un enfoque educativo especial durante su infancia, o infancia-adolescencia durante un período escolar corto o largo. Además, los estudiantes con bajo rendimiento escolar, por la única razón de que el griego no es su lengua materna, no son considerados personas con necesidades educativas especiales.

La mencionada Ley es importante ya que suprime palabras como “trastornos”, “declinación de lo normal”, y prevé la participación de educadores, padres y estudiantes con necesidades educativas especiales en el procedimiento educativo.

A pesar de los muchos aspectos positivos, la Ley 2817 no logró cumplir su objetivo, la “Escuela para Todos”. La razón principal era que el Sistema de Educación Especial no cumplía con el Sistema de Educación General, pero funcionaba paralelamente. Esto se podía atribuir principalmente a la centralización, ya que las oficinas de asesoramiento KDAY sólo funcionaban en las grandes ciudades y las regiones distantes no contaban con el apoyo necesario (Zoniou-Sideri, 2011).

Durante el período comprendido entre 2000 y 2004 se están creando nuevas estructuras educativas, tales como programas de coeducación y escuelas técnicas de educación especial (Lampropulou et al., 2005). Gracias al tercer marco comunitario de apoyo de la UE se formaron programas para la sensibilización de la opinión pública y para la formación de educadores en la enseñanza de alumnos con necesidades especiales. En 2002, por primera vez, el Instituto Pedagógico elaboró nuevos planes de estudio analíticos, introduciendo el concepto de intertemático[3] en la “zona flexible”, lo que prácticamente allanó el camino a la educación de estudiantes con necesidades especiales en las escuelas ordinarias (Lampropulou et al., 2005).

Durante el período 2004-2007 el Instituto Pedagógico promueve la intertemática con la publicación de nuevos libros. Se distribuye un nuevo software educativo apropiado para enseñar a los estudiantes con necesidades especiales. Entre 2007 y 2013 se intentó mejorar sustancialmente el sistema educativo y estimular la integración social de los niños con necesidades especiales gracias al programa operativo “Educación y aprendizaje permanente”, organizado por el Ministerio de Educación (Vlachos, 2008)

Los departamentos pedagógicos de la Universidad de Atenas, Patras y Tesalónica organizan maestrías en educación especial, que corresponden a las necesidades reales de los estudiantes (Lampropoulou y Panteliadou, 2011).

En 2008 se votó el marco legislativo de la Educación Especial, Ley 3699/2008 “Educación y Formación Especial de las personas con discapacidad o con necesidades educativas especiales”, que reafirma el objeto y los objetivos de la educación especial impartida hasta ahora. Esta Ley ha mejorado bastante y el término “Educación Especial”

[3] Intermatematico es la organización del conocimiento escolar a través de asignaturas y lecciones no discernibles como matemáticas, física, etc.

ahora se reemplaza por el término “Educación y Capacitación Especial”. Como diagnóstico ahora, se considera la evaluación educativa para la recolección de datos. Esto puede ayudar a diseñar y aplicar programas e intervenciones educativas, aunque se hace énfasis en el diagnóstico diferencial de las necesidades y problemas de la educación especial, mediante el cual se excluye cualquier otro padecimiento con los mismos síntomas para poder llegar al diagnóstico correcto.

La misma Ley (3699/2008) y en concreto el artículo 3, da la definición de alumnado con discapacidad y necesidades educativas especiales, tras la derogación de la Ley de 1991, que categorizaba a los niños divergentes en 12 grupos. Se considera ahora a los alumnos con discapacidad y necesidades educativas especiales a aquellos que durante un tiempo prolongado o determinado presentan importantes dificultades de aprendizaje a causa de problemas sensoriales, mentales, cognitivos y del desarrollo, de trastornos físicos y neurofísicos, que, según la evaluación interdisciplinar, afecta al procedimiento de adaptación y aprendizaje escolar. También redefine los marcos educativos en los que pueden incorporarse los niños con necesidades educativas especiales. Por esta Ley, la educación especial pertenece al Ministerio de Educación e incluye al KEDDY (Centro de Diagnóstico y Apoyo al Diagnóstico Diferencial), reemplazando al anterior KDAY existente. Se fundan Unidades Escolares de Educación Especial (SMEA) y se planifican programas de coeducación (FEK A´ 199/2.10.2008).

En el contexto de la coeducación, los alumnos con dificultades de aprendizaje no graves pueden seguir lecciones en la escuela ordinaria y, en algunos casos, aceptar el apoyo paralelo de un educador especial o seguir lecciones de integración. El equipo interdisciplinario de cada KEDDY desarrolla currículos individuales, adaptados para que coincidan con los requisitos y la particularidad de cada estudiante.

Solo en 2012, Grecia ratifica con la Ley 4074/2012, la Convención de la ONU para los derechos de las personas con necesidades especiales. Luego sigue la Ley 4115/2013 (FEK A´ 24/30.1.2013) y lo dispuesto en el artículo 39, según el cual, las Escuelas Especiales se convierten en centros de apoyo de unidades escolares. Esta última se denomina (SDEY) Red Educativa y de Apoyo Escolar, y tiene como objetivo coordinar a sus miembros escolares, sus correspondientes departamentos de integración y apoyo educativo paralelo. Posteriormente esta Ley fue modificada por la Ley 4186/2013 (FEK A´193/17.9.2013) y su artículo 28 regula temas de educación especial, los marcos de la Educación Profesional Especial Secundaria y las competencias de KEDDY. Este último tiene en adelante la responsabilidad exclusiva de la categorización, registro, transcripción y estudio de los niños con necesidades

especiales en la unidad escolar propia de educación especial y la responsabilidad del marco adecuado de apoyo en la escuela ordinaria.

La Ley 2217/2014 (FEK B´2217/13.8.2014), que regula la contratación de profesores de Educación Especial, perpetúa el problema de la integración sustancial del alumnado en la clase ordinaria y sigue existiendo la separación entre educación especial y ordinaria, desde el marco de la educación especial se reconoce como un sistema diferente y diferenciado, que corre junto con el sistema del sistema educativo regular.

Según un documento del Ministerio de Educación de 2016 (4.1.2016/protocolo n. 1636 CD4) está previsto que todos los educadores con exceso de horas puedan completar su horario didáctico ofreciendo apoyo educativo paralelo a los alumnos con necesidades educativas especiales. Además, especifica que los consultores de educación especial deberán realizar reuniones con todos los educadores para brindarles orientación científica y en colaboración con el KEDDY para organizar seminarios educativos sobre temas de educación especial. Este documento es un ejemplo que demuestra que el Ministerio de Educación no se preocupa por los conocimientos y cualificaciones requeridas que debe poseer el docente, quien está llamado a enseñar al alumnado con dificultades educativas especiales.

Los estudiantes con necesidades educativas especiales son tratados de manera inapropiada y al mismo tiempo se está cancelando toda adecuación científica (maestría o doctorado en educación especial) de los educadores, ya que el Ministerio de Educación considera que unas reuniones con consultores de educación especial pueden reemplazar años de estudios especializados. Teniendo eso en cuenta, el Ministerio de Educación adopta sin esfuerzo el enfoque de que los educadores ordinarios pueden reemplazar fácilmente a los maestros especializados.

En 2017, una nueva legislación (Ley 4452/2017) hace referencia a las clases en las que estudian los alumnos con necesidades educativas especiales y prevé la disminución del número de alumnos en estas.

La próxima Ley 4549/2018 (FEK B´5614/14.6.2018) regula el establecimiento de KESY (Centro de Apoyo Educativo y Asesoramiento) que reemplaza al KEDDY existente. Su tarea no sólo incluirá principalmente temas educativos especiales, sino también temas de asesoramiento, vocacionales y apoyo psicosocial de todos los estudiantes. Mediante esta reforma, se fusionan diferentes sectores educativos y pedagógicos en una sola oficina ahorrando recursos, personal y fondos, y de ninguna manera se atienden las necesidades educativas reales de los estudiantes.

Se puede valorar que a pesar de las Leyes votadas por cada gobierno y los esfuerzos realizados por cada ministro de Educación, en Grecia sigue existiendo el modelo separatista y no el de coeducación. Todavía no se han planificado currículos y programas apropiados que correspondan a cada estudiante que enfrenta problemas educativos. Se da más importancia al diagnóstico de los alumnos con necesidades especiales mediante la introducción de varias especialidades médicas, mientras que se minimiza el papel de la intervención educativa. Los padres de alumnos con necesidades educativas especiales y sus profesores no participan activamente en la planificación de los currículos y programas educativos de sus hijos y aceptan pasivamente las decisiones de las estructuras competentes. La educación especial en Grecia se centra en la terapia más que en la formación.

### 2.2. Educación Inclusiva en Educación Secundaria

Según Zoniou-Sideri (2011), la inclusión de alumnos con necesidades educativas especiales en el Sistema Educativo Secundario tiene una variedad de formas:

- Colocación del alumno NEE en clase ordinaria.

  El estudiante participa en la clase escolar regular y en la mayoría de las actividades. Dependiendo del caso, puede ser posible que el estudiante reciba asistencia mediante la provisión y aplicación de contramedidas para mitigar sus problemas educativos. Esta es una forma ideal de integración.

- Colocación del estudiante SEN en la clase de inclusión.

  La clase de inclusión es parte de la escuela ordinaria y pretende atender a estudiantes que pueden incorporarse a la clase ordinaria, pero se requiere asistencia educativa especial para todo el plan de estudios o en algunos cursos. El maestro de esta clase es un educador especial y tiene una idea clara de las capacidades y necesidades de sus alumnos, pero también sabe cómo aplicar los métodos y estrategias de aprendizaje apropiados.

Dependiendo de las necesidades educativas de los alumnos, la clase de inclusión se divide en dos tipos:

1. Clase de inclusión de estudio completo.

La clase de inclusión de estudios completos está destinada a estudiantes cuya integración en la clase ordinaria se ve obstaculizada por sus necesidades especiales. Los estudiantes en estas clases son estudiantes retrasados mentales diagnosticados

con IQ 50-55 a 65-70, estudiantes inmaduros escolares o estudiantes con problemas sentimentales y mentales.

2. Clase de inclusión de estudio parcial.

La clase de inclusión de estudios parciales está destinada a aquellos alumnos que no tienen necesidades especiales graves y pueden asistir a algunos cursos en el aula ordinaria y al resto de cursos en el aula de inclusión. Por lo general, tienen retraso mental leve, problemas del habla y otras discapacidades cognitivas (Polixronopoulou, 2003).

Sin embargo, la identificación y la evaluación inicial de los estudiantes NEE que pueden asistir a clases de inclusión es un procedimiento muy exigente y complicado que consta de cuatro pasos.

1$^{er}$ paso: el docente responsable de la clase, teniendo los conocimientos adecuados, identifica a los alumnos con NEE. Luego compila y presenta una lista de esos estudiantes al director de la escuela, sugiriendo su apoyo y participación en la clase de inclusión.

2º paso: el director del centro colabora con los educadores de la escuela para que las referencias de los alumnos, para asistir a la clase de inclusión, estén de acuerdo con la ley 3699/2008. Colabora con el educador especial de clase de inclusión y durante este proceso se toma en consideración: la severidad de las necesidades educativas, la necesidad de un programa educativo personalizado, la edad del estudiante y el número de estudiantes solicitantes.

3$^{er}$ paso: el educador de la clase de inclusión evalúa las referencias propuestas por el director de la escuela y luego evalúa a esos estudiantes para identificar, en primer lugar, su perfil de aprendizaje y, en segundo lugar, sus dificultades de aprendizaje. Posteriormente entrega al consejero escolar de educación especial su propia lista final con los alumnos NEE que deben asistir a clases en la clase de inclusión, una propuesta documentada, un horario y todos los datos requeridos de los alumnos.

En la clase de inclusión se pueden matricular muchos alumnos, pero se puede realizar con menos. El educador especial crea grupos y cubre el horario escolar en función no de su insuficiencia cognitiva, sino de sus trastornos y los problemas de conducta que los acompañan. En el caso de estudiantes sin problemas NEE severos, existe cooperación entre el maestro de clase y el educador especial. Este último monitorea el proceso de cada alumno en la clase ordinaria y en muchos casos brinda instrucciones y material de apoyo al docente de la clase ordinaria, con el fin de ayudar a los alumnos a superar sus discrepancias para que no tengan que asistir a la clase de

inclusión. A continuación, el docente del centro de inclusión, en colaboración con el director del centro, informa a los padres del alumno sobre el “Informe de necesidades educativas especiales” exigido por la ley, que todo alumno NEE está obligado a realizar.

4º paso: el profesor de la clase de inclusión redacta un expediente personal específico y confidencial del alumno que se mantiene seguro, y contiene el origen y el estado familiar y social del alumno, su tipo de necesidad educativa especial, su logro de aprendizaje y una evaluación descriptiva de las causas de referencia en el aula de inclusión.

En ocasiones, el procedimiento mencionado anteriormente podría cambiarse y ajustarse.

Otra forma de integración es el soporte paralelo. El educador especial ayuda a los estudiantes con necesidades especiales en la clase ordinaria. En Grecia, según la ley 3699/2008, los alumnos con necesidades especiales y NEE pueden asistir a clases en la clase ordinaria, gracias al apoyo paralelo que ofrece un educador especial cuando su tipo y la gravedad de sus necesidades lo permiten. Paralelamente, se ofrece soporte a los alumnos que con el apoyo educativo adecuado podrían asistir y seguir el currículo escolar. El apoyo paralelo y la enseñanza para estudiantes con necesidades educativas especiales graves se proporciona solo en los casos en que no existe una escuela especial o una clase de inclusión o cuando el apoyo paralelo es necesario de acuerdo con el informe de KESY, el organismo responsable que determina el procedimiento completo (calendario de apoyo paralelo). Los padres de los estudiantes SEN que tienen el informe KESY pueden solicitar apoyo paralelo al director de la escuela y obtener la aprobación del Ministerio de Educación de Grecia.

### 2.3. Habilidades de enseñanza para trabajar con estudiantes de SEN

Un enfoque inclusivo se entiende como que la educación de todos los estudiantes que cubren el espectro de la diversidad. Esta se lleva a cabo en aulas regulares, adecuadamente apoyadas en el contexto educativo que se atendería si la forma de diversidad no estuviera presente, normalmente la escuela del barrio (Jordan, 2007).

Uno de los principales temas de la ciencia de la pedagogía son las habilidades, cualidades y características que debe tener el docente para una efectiva inclusión y no solo en el ámbito de la enseñanza. Las habilidades y cualidades docentes, la personalidad y la identidad de los educadores caracterizan y determinan la ciencia de la educación. La forma en que el docente realiza su trabajo está determinada por dos

factores: por sus cualidades profesionales, habilidades, rasgos y conocimientos adquiridos, y por sus cualidades personales y su personalidad. Estas importantes tendencias juegan un papel clave en la forma de enseñar a los alumnos, pero también de trabajar con alumnos con necesidades educativas especiales, incluidos en la clase ordinaria.

Se puede decir que existen dos tipos de identidad profesional docente: los rasgos y actitudes personales y, por otro lado, la habilidad educativa de un docente, que es un aspecto importante. Una cualificación básica es la adquisición de un conjunto extenso de conocimientos que contribuye al desempeño del docente en la práctica (Birman et al., 2000). La formación de un docente se clasifica en tres sectores: estudios pedagógicos y didácticos, conocimiento de la materia y práctica docente.

Para que un maestro pueda hacer frente a los "estudios profesionales" anteriores, se requiere tener: estudios curriculares (Shulman, 1987) y conocimiento del contenido pedagógico.

Existen campos de conocimiento que constituyen un prerrequisito necesario para todo docente o al menos para gran parte de ellos (Meijer et al., 2001). Estos campos incluyen:

(a) Conocimiento de la materia. Enseñar un tema en particular requiere familiarizarse con el conocimiento científico. La eficacia del docente está fuertemente influenciada por la opinión que los docentes tienen sobre la materia de enseñanza (Newton & Newton, 1998).

(b) Conocimiento de los alumnos. Es importante el conocimiento del trasfondo social, psicológico y cognitivo de los alumnos. Los educadores deben notar si existe algún tipo de problemas de comportamiento, problemas de adaptación y dificultades de aprendizaje.

c) Metodología de la enseñanza. El maestro debe estar en constante búsqueda y renovación de los métodos de enseñanza más adecuados.

(d) Conocimiento del plan de estudios. El currículo escolar es una herramienta que ayuda a las elecciones didácticas de un docente. Por lo tanto, el maestro inclusivo debe conocer las reglas y leyes del sistema educativo y, en algún momento, adaptar el plan de estudios a las necesidades de sus alumnos.

e) Conocimientos pedagógicos generales. Integrar la organización de la clase, teorías pedagógicas y la gestión estratégica del aula.

(f) Conocimiento de los contextos. Un maestro está llamado a interpretar los contextos en los que enseña y evaluar las circunstancias que lo rodean. Ser capaz de utilizar técnicas y estrategias según la situación.

(g) Conocimiento del "yo". Según Kagan (1992), este tipo de conocimiento está relacionado con la visión del docente sobre su rol, sus responsabilidades, formación y calificaciones, derechos, condiciones de trabajo, valores y filosofía. Está conectado con su desarrollo profesional a través de la reflexión y con el aprendizaje a través de su experiencia docente.

Según Shulman (1987) el pensamiento y la acción pedagógica pasan por las siguientes etapas:

(a) Comprensión/percepción.

(b) Modificación/transformación.

(c) Enseñanza.

(d) Evaluación.

(e) Comentarios.

(f) Reflexión.

La forma en que los docentes perciben su rol define no solo sus opciones sino también la forma en que comprenden, interpretan y utilizan el conocimiento (Clandinin & Connely, 1987). Se pude decir que la capacidad del docente para organizar el proceso educativo es relevante al igual que sus rasgos personales y su conocimiento de las estrategias didácticas fundamentales de la educación en grupos heterogéneos.

Además de las habilidades pedagógicas y didácticas de los docentes que son esenciales en su trabajo, es necesaria la habilidad que les ayuda a mejorar la enseñanza de los alumnos con necesidades educativas especiales y está se basa en el conocimiento. Es saber la manera de enseñar, de utilizar formas, métodos y ejemplos apropiados. Es necesaria la capacidad de dinamizar una enseñanza grupal e individual, la planificación de actividades, la diferenciación de técnicas y el conocimiento del currículo escolar y de los libros de texto, así como el uso de material didáctico extraescolar y el uso de internet para facilitar el progreso integral para una enseñanza exitosa.

Comprender las necesidades de los estudiantes y tratar de ajustar la enseñanza y proporcionar información y ayudas didácticas es otro parámetro. Todos los educadores deben estar en constante búsqueda del método de enseñanza más

adecuado, observar a sus alumnos y tomar decisiones, planificar el proceso educativo de manera flexible y coherente, adaptar formas y estrategias de enseñanza a las necesidades individuales de los alumnos, pero al mismo tiempo ser capaces de crear actividades de aprendizaje atractivas y nuevas técnicas de enseñanza modernas y actualizadas (Siam & Al-Natour, 2016).

En el caso de que un alumno tenga dificultades para comprender y aprender o de fracaso, los educadores deben cambiar o ajustar su estilo y métodos de enseñanza a la nueva realidad. Un profesor eficaz permite que los alumnos se equivoquen, les ayuda a descubrirse a sí mismos, a elegir su campo de interés, les brinda oportunidades para expresarse y defender sus opiniones y pensamientos. Aunque los estudiantes quieren la posibilidad de sentirse independientes en el proceso de aprendizaje, también necesitan una asistencia profesional proporcionada metódicamente. Existe una clara necesidad de estilos y métodos de enseñanza que tengan en cuenta la edad, las habilidades y la experiencia de los estudiantes.

La instrucción diferenciada implica procedimientos para la reorganización de la enseñanza en el aula y estrategias de aprendizaje para brindar a los alumnos diferentes opciones de acceso a la información. Collision & Keith (2012) citaron diferentes métodos de enseñanza, diferentes formas de presentar ideas, nuevas herramientas y estrategias que pueden conducir a un mejor resultado de comprensión, por lo que como consecuencia, el aprendizaje efectivo puede tener lugar. Otra forma de afrontarlo es la enseñanza a través de varios métodos que están centrados en el estudiante, así como en sintonía con las diversidades de los alumnos. Por lo tanto, la instrucción diferenciada es un nuevo enfoque para diseñar y brindar instrucción para llegar mejor a cada estudiante (Collision & Keith, 2012).

Tomlinson (2005), define la instrucción diferenciada como una filosofía de enseñanza que se basa en la idea de que el mejor aprendizaje se lleva a cabo cuando los maestros se adaptan a las diferencias y diversidad en los niveles de preparación, perfiles de aprendizaje e intereses entre los estudiantes. La instrucción diferenciada tiene como objetivo aprovechar al máximo la capacidad de aprendizaje de cada alumno.

Según Florian y Linklater (2010), los estudiantes con discapacidades de aprendizaje pueden incluirse mejor en las aulas regulares cuando se les brindan suficientes oportunidades para participar activamente, identificar positivamente y desarrollar sus capacidades con la ayuda de maestros capacitados que crearían e implementarían lecciones que son significativamente diseñado para acomodar a todos los estudiantes y ayudar a su éxito académico

A su vez, se pueden lograr altos resultados de enseñanza a través de la cooperación de los maestros. El trabajo en equipo y la colaboración son esenciales para todos los educadores especiales al igual que la contribución de otros maestros y profesionales de la educación. De acuerdo con Salisbury & Chambers, (1994) la colaboración y la asistencia pueden involucrar interacciones entre maestros de aula y especialistas del habla, consejeros, psicólogos escolares y especialistas en educación especial. Estar abierto a ser proactivo en la "utilización" de colegas y otros profesionales como fuentes de aprendizaje e inspiración es beneficioso.

Teniendo en cuenta lo expuesto hasta ahora, valorar la diversidad de los estudiantes se considera un recurso y un activo para la educación, al igual que apoyar a todos los estudiantes y tener altas expectativas y, al mismo tiempo, promover el aprendizaje académico, práctico, social y emocional de los estudiantes y planificar su éxito. Tomlinson (2005) ve al docente como el profesional en el aula, un individuo adecuadamente capacitado que ayuda, orienta y guía a cada alumno con las técnicas apropiadas hacia su potencial dentro del contexto de aprendizaje.

Si bien las clases heterogéneas incluyen estudiantes con diferentes habilidades y niveles cognitivos, los docentes, al organizar el proceso educativo en el aula, tratan de diferenciar sus tareas de manera que cada estudiante apunte a su mejor resultado personal. De esta manera animan a los estudiantes a aprender porque la actividad de aprendizaje se vuelve más interesante. La decisión del educador, que trabaja en clases heterogéneas, debe basarse en una inclinación que apunte al éxito de cada alumno creando un entorno educativo flexible y orientado a los niños e involucrándolos en la actividad de aprendizaje.

Además, trabajar con los padres y las familias de alumnado, respetando sus antecedentes sociales y culturales y, sobre todo, escuchando sus observaciones sobre su hijo, es una herramienta poderosa para los maestros de educación especial. Es importante escuchar atentamente a los padres cuando pasan más tiempo con sus hijos, mostrar confianza y hacerlos sentir bienvenidos y no como si pertenecieran a una minoría porque su hijo tiene dificultades de aprendizaje. De forma regular, el profesor tiene que informarles sobre las dificultades de su hijo de una manera clara y sencilla, y discutir las opciones de manera conjunta. La discreción, receptividad, actitud positiva, consistencia, sensibilidad y empatía del maestro hacia los sentimientos de los padres deben caracterizar todo su trabajo.

Todo docente, y particularmente los docentes en el campo de la educación especial, saben que la enseñanza es una actividad de renovación y tienen la

responsabilidad de su propio aprendizaje permanente, de estar abiertos a nuevas habilidades, métodos, estrategias y programas ya que los cambios y mejoras son constantes y necesitan todas las habilidades necesarias para gestionar y responder a las necesidades y demandas cambiantes a lo largo de sus carreras. Los rasgos de personalidad, las actitudes y las creencias del educador contribuyen a las escuelas regulares y conducen a un entorno inclusivo. Rasgos como la flexibilidad, en cuanto a la apariencia de los alumnos, el sentido del humor, el sentido de la justicia, la paciencia, el entusiasmo, la creatividad, el cuidado y el interés por los alumnos tienen un papel importante en la eficacia del profesor (Malikow, 2005).

Las actitudes de los docentes afectan también su grado de compromiso con sus deberes, la forma en que enseñan, la forma en que tratan a sus alumnos y cómo perciben su crecimiento profesional (Darling-Hammond, 2000). El maestro, gracias a un contacto diario con sus alumnos, conoce sus habilidades y sus dificultades, puede desarrollar una relación significativa con ellos, apoyarlos psicológicamente e inspirarlos. La capacidad del docente para comprender y escuchar, respetar y aceptar a los estudiantes con NEE es muy importante para un ambiente positivo y de colaboración.

Según Rogers (1966), una cualidad personal importante del docente es la autenticidad y la capacidad de ser él mismo, comportarse correctamente, ser amable y accesible y evitar quedar atrapado solo en el papel riguroso de científico. Para que el docente se comporte con autenticidad y sin adoptar una actitud estereotipada e hipócrita hacia los alumnos, se necesita equilibrio personal. El autoconocimiento y la capacidad de autopercepción, la mejor elaboración de sus propios sentimientos hacia su alumno con necesidades educativas especiales es fundamental.

Tener una conciencia personal de sus experiencias podría ayudar a los maestros a sentir el estado sentimental y las reacciones de los estudiantes y diferenciarlos de sus propias experiencias para ayudarlos aún más. Cabe mencionar el conocimiento de sí y la contemplación, en tanto suponen una reflexión crítica y cuidadosa, por parte del docente, sobre sus acciones y sobre sí mismo (Turner-Bisset, 2001). El respeto incondicional, la aceptación, la falta de comentarios negativos y, en general, una actitud favorable por parte del docente ayuda a que los estudiantes se sientan cómodos para abrirse y participar como puedan en el proceso de enseñanza. La diversidad de los estudiantes debe ser respetada, valorada y entendida como un recurso que mejora las oportunidades de aprendizaje y agrega valor a las escuelas, las comunidades locales y la sociedad.

A su vez, otra cualidad personal positiva para el docente inclusivo es la empatía, la capacidad de reconocer y comprender cómo los alumnos con necesidades educativas especiales conciben el mundo y se ponen en su lugar. De esta manera el maestro demuestra que comprende no solo sus pensamientos, sino también sus sentimientos. Un maestro debe ser compasivo, pero no denigrar la dignidad de los estudiantes e inclinarse a simpatizar con ellos y tratar de ayudar a cada alumno a experimentar el éxito personal y alentarlos a alcanzar sus límites. La apertura del maestro al fracaso de los alumnos y su disposición no solo para ayudar, resolver los problemas que surjan, sino también para guiarlos hacia el éxito, es crucial.

La confianza de los estudiantes hacia los educadores también se logra mediante la autorrevelación cuando los maestros revelan aspectos de su personalidad o hechos personales que indican la confianza del maestro hacia ellos. Como afirma Trimakas (1997), cuanto más se entrega una persona a los demás, más se mejora a sí misma, tanto como ser humano como individuo.

McBer (2000), clasificó las características del educador en cinco grupos:

(a) Profesionalidad: compromiso, confianza, honradez, respeto.

(b) Pensamiento: pensamiento analítico y conceptual.

(c) Expectativas: disposición al logro de objetivos elevados, disposición a la comprensión permanente de la realidad y realización de iniciativas.

(d) Liderazgo: flexibilidad, responsabilidad, pasión por aprender.

(e) Relaciones con los demás: interacción fértil con los involucrados en el proceso educativo, habilidades de trabajo común, comprensión.

Los docentes deben poder experimentar el éxito y el fracaso junto con sus alumnos, sentir sus necesidades y defectos, y construir una relación de asociación con ellos. Los alumnos necesitan profesores que puedan crear y promover un microclima alegre en la clase, de buen humor, creativo y divertido. Es importante un ambiente educativo alegre, un buen sentido del humor y un estado de ánimo elevado.

Como se ha mencionado, el entorno de la educación inclusiva exige la creatividad y el ingenio de los docentes. La capacidad de comprender el comportamiento de los estudiantes y por qué reaccionan de cierta manera o poder analizar las razones de su éxito y fracaso es un factor crítico. La imagen de un buen maestro inclusivo exige un pedagogo que esté constantemente construyendo un ambiente elevado y estimulante de trabajo y creando un marco emocional favorable durante la enseñanza.

Los educadores deben hacer una clara división entre la necesidad educativa especial de un alumno y su persona, expresar una actitud igualitaria y respetuosa hacia la personalidad de estos alumnos como hacia todos los demás. Aunque es imposible supervisar e ignorar las dificultades que enfrenta un estudiante debido a su necesidad, la compasión del maestro debe ser racional y no restringir la independencia y eficiencia del alumno.

Otros términos clave son la insistencia del docente junto a la asistencia, la justicia hacia los estudiantes, la falta de favoritismo y la capacidad de tomar decisiones justas y equitativas. Los docentes de educación especial deben tener como objetivo preparar a sus alumnos para una vida independiente, enseñarles a utilizar sus posibilidades y trabajar por el mejor resultado. Observar las dificultades y los límites de las capacidades que surgen en cada estudiante, pero al mismo tiempo, el maestro debe evitar cualquier sentimiento de lástima.

El papel del docente para la eficacia de su trabajo pedagógico y docente, pero también para el empoderamiento de la confianza en sí mismo y la autoestima de los estudiantes, es crucial. La escuela es un entorno comunitario y social que afecta la confianza en sí mismos de los estudiantes. La población del aula cambia constantemente y la diversidad no puede verse como un concepto estático. Los educadores siempre deben estar atentos a ayudar a cada estudiante con o sin necesidades educativas especiales estimando y utilizando las capacidades del estudiante tratando de atenuar cualquier dificultad.

El amor por sus alumnos y por su trabajo, la imaginación, la creatividad, el sentido del humor, la determinación, la voluntad y mucho entusiasmo, la responsabilidad y el afán de trabajo continuo y superación son los elementos de un docente eficaz.

# 3. Metodología

## 3.1. Definición del problema de investigación

En el ámbito educativos, la atención de las NEE es uno de los factores más importantes que inciden en el rendimiento escolar del alumnado, llevándolos muchas

veces al fracaso escolar, pero también a la dificultad de socializar en la escuela, ya que se puede dar el fenómeno de la exclusión social de los menores. Por ello, hoy en día es imperativo que los estudiantes con NEE reciban un apoyo educativo adecuado a fin de brindarles igualdad de oportunidades educativas.

Para poder atender a esta realidad es importante aplicar una enseñanza diferenciada, teniendo en cuenta la capacidad cognitiva del alumnado, sus características emocionales, etc., además de la especificidades de las materias. Algunos de los factores que dificultan su implementación tienen que ver con los propios docentes, quienes se sienten inseguros y tienen falta de tiempo o no han recibido la formación y educación adecuada. Otros factores inhibidores tienen que ver con el contexto educativo más amplio y, más específicamente, con la actitud de la dirección, la dinámica de la escuela, el marco legal, el currículo y el perfil del conjunto de cada clase.

A partir de la revisión de la literatura, no se ha registrado ninguna investigación sobre este aspecto en Grecia que tenga en cuenta la actitud de los docentes hacia la educación inclusiva, su eficacia en la gestión de los estudiantes con necesidades educativas especiales y en resaltar las estrategias de enseñanza que los docentes utilizan más. Esto podría mejorar las condiciones en las escuelas de Educación General con respecto al manejo de estudiantes con NEE.

### 3.2 Objetivos

El objetivo general de la investigación es determinar el acceso y el uso de métodos, herramientas y habilidades específicas que tienen los educadores griegos del Sistema Educativo de Secundaria, con el fin de facilitar el proceso de enseñanza de los estudiantes NEE, de lo cual se derivan los siguientes objetivos de investigación:

1. Describir el estado actual de los centros educativos del Sistema Educativo de Secundaria en cuanto a la atención de los estudiantes NEE.

2. Conocer las competencias del profesorado de Educación Secundaria en Grecia para atender al alumnado NEE en el aula ordinaria.

3. Detectar las necesidades formativas de los educadores griegos del Sistema Educativo de Secundaria en las competencias básicas, para atender a los alumnos NEE en la clase ordinaria.

4. Proponer un plan de formación que permita mejorar la atención a los estudiantes con NEE del Sistema Educativo de Secundaria, en la clase ordinaria.

De estos objetivos derivan las siguientes preguntas de investigación:

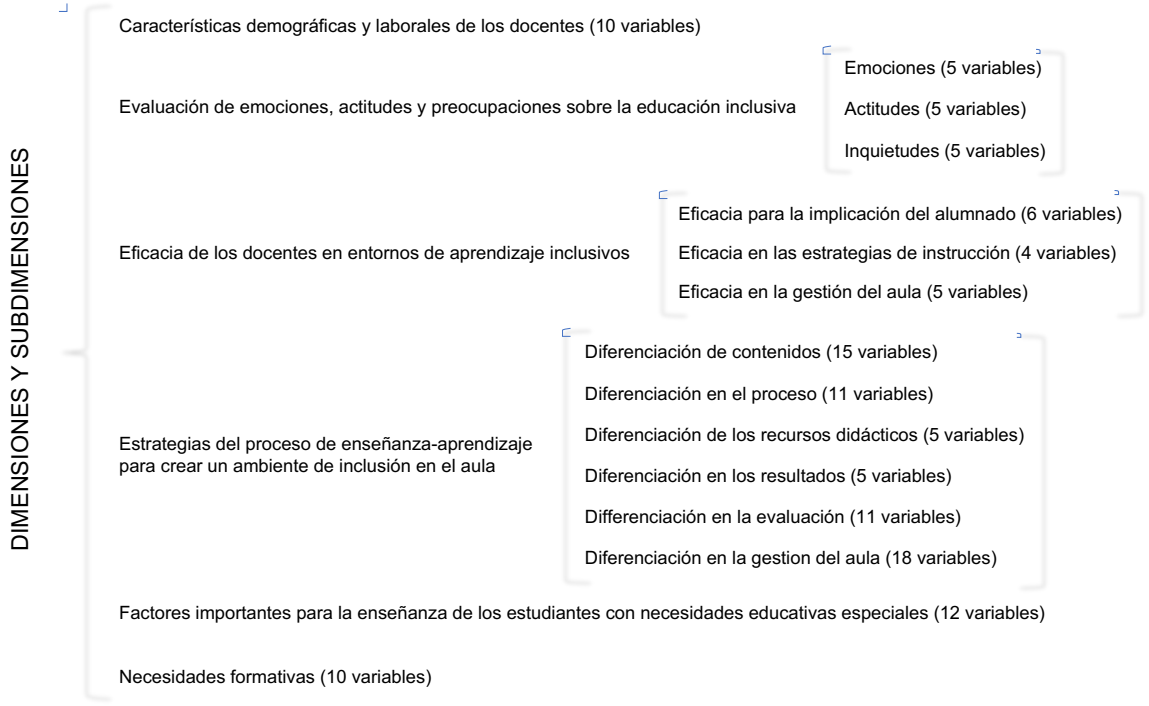
- ¿Cuál es la actitud de los educadores frente a la inclusión de los alumnos NEE en la clase ordinaria?
- ¿Los educadores del Sistema Educativo de Secundaria tienen la formación suficiente para atender a los estudiantes NEE en la clase ordinaria?
- ¿Con qué eficacia pueden implementar estrategias de enseñanza y aprendizaje inclusivas para ayudar a los estudiantes con NEE en la clase ordinaria?
- ¿Cuáles son las cualidades personales de los educadores de Secundaria que más contribuyen a atender a los estudiantes con NEE?
- ¿Cuáles son las necesidades educativas relacionadas con su rol como docente que trata con estudiantes NEE?

### 3.3. Variables del estudio

En función de los objetivos formulados y del problema de investigación planteado, se establecieron las variables, agrupadas en seis dimensiones (ver figura 29), siendo un total de 127 variables de estudio.

**Figura 29**

*Dimensiones y Subdimensiones de estudio*



### 3.4 Diseño de la investigación

Esta investigación es de tipo descriptiva ex post facto, ya que pretende registrar y presentar las percepciones y las actitudes de los docentes de educación secundaria griegos. En otras palabras, el objetivo de la investigación fue definir las principales dimensiones del problema de investigación con la finalidad de dar posibles respuesta al fenómeno estudiado. La modalidad descriptiva seguida es común en investigaciones que tratan temas para los que no existe una literatura rica, como en este caso, y tiene la ventaja de poder estudiar múltiples variables buscando miradas multifacéticas de los problemas.

En cuanto al tipo de datos empíricos, la investigación se caracteriza como cuantitativa. Según Creswell (2014), el principio básico del uso del enfoque cuantitativo es que produce datos cuantitativos que pueden procesarse estadísticamente. Por otro lado, un aspecto del enfoque cuantitativo ayuda a resumir la información descriptiva. Además, las respuestas a algunas preguntas "abiertas" se analizan y codifican en categorías, de modo que nuevamente los hallazgos se pueden expresar en porcentaje por categorías de respuesta (Creswell, 2014).

La misma atendió a las siguientes fases de investigación:

- Fase 1. Identificación del problema de investigación
- Fase 2. Planificación de la investigación
- Fase 3. Trabajo de campo
- Fase 4. Procesamiento y análisis de datos
- Fase 5. Elaboración de conclusiones y elaboración del informe de investigación

### 3.5 Población y Muestra

Atendiendo de los objetivos de la investigación, hubo dos grupos de informantes. El primer grupo estaba constituido por los profesores de Educación Secundaria de los centros educativos de la prefectura de Kavala (Grecia) y el segundo estaba constituido por los directores de estas escuelas de secundaria.

Con respecto al profesorado, se contó con la participación de los 339 docentes de las 39 escuelas de Educación Secundaria de la prefectura de Kavala (Grecia). Del total de la población, el 53.4% eran mujeres y el 46.6% hombres, cuyas edades oscilaron entre 25 y 64 años.

En cuanto al área de trabajo, la mayoría enseñan en escuelas secundarias suburbanas (48.10%) o en entornos rurales (37.20%), siendo un grupo reducido los que trabajan en la comunidad (13.90%) o el casco urbano (9%).

Al distribuir la muestra en función de los años de servicio, en conjunto tenían un promedio de 18,9 (DT= 8.7) años de servicio. El grupo predominante son los que tienen entre 16 y 20 años (20.10%), siendo el grupo más pequeño los que tienen menos tiempo de experiencia, entre 1 y 5 años (8.40%). A su vez, la mayoría del profesorado estaba poseía título de licenciatura (60.10%), seguido de los que había cursado estudios de posgrado (27.4%). Un porcentaje menor de docentes eran Licenciados en Escuela Técnica Superior (2.4%), de segundo grado (8%) o de doctorado (2.1%).

Por último, del total de docentes participantes habían recibido formación en educación especial (31%), mientras que la mayoría indicaron no tener formación en educación especial (69%).

En cuanto a los directores de las escuelas solo se contó con la colaboración de 14 de ellos, de los cuales el 85.7% fueron mujeres y el 14.3% hombres, siendo las edades comprendidas entre 33 y 63 años, con años de experiencia como docentes muy diversos.

En cuanto a la ubicación del centro en el que realizan su función de dirección el 50% eran de zona semiurbana, el 21.43% trabajan en zona rural, así como otro 21.43% en municipio, siendo solo el 7.4% el que trabaja en el caso urbano.

Finalmente, la mayoría de los directores no cuentan con una formación que los habilite para atender a alumnos con necesidades educativas especiales (85.7%), siendo una minoría (14.3%) la que sí cuenta con esta formación.

### 3.4 Herramienta de recopilación de información

Para cumplir con el propósito de la investigación, se utilizó la técnica de la encuesta para la recolección de información. La investigación por encuesta se define como "la recopilación de información de una muestra de individuos a través de sus respuestas a preguntas" (Check & Schutt, 2012, p. 160). Este tipo de investigación permite una variedad de métodos para reclutar participantes, recopilar datos y utilizar varios métodos de instrumentación.

Dependiendo de la información a recopilar, se utilizaron diferentes instrumentos para cada uno de los grupos informantes. El cuestionario se utilizó con los docentes de las escuelas y para los directores de las escuelas se recurrió a la entrevista.

### *3.4.1 Cuestionario*

La construcción del cuestionario para docentes atendió a varias fases:

- Fase 1. Revisión de instrumentos que se adecuarán al propósito de la investigación, de los cuales se identificaron tres cuestionarios. El primero, sobre sentimientos, actitudes e inquietudes sobre la Educación Inclusiva, elaborado por Forlin et al. (2011), Apéndice A. El segundo, el Cuestionario de Sentido de Efectividad de los Docentes de Tschannen-Moran & Woolfolk (2001), Apéndice A. Finalmente, la herramienta Estrategia Herramientas para Enseñar a Estudiantes con Necesidades Educativas Especiales, de Siam & Al-Natour (2016), Apéndice A.
- Fase 2. Delimitación de los aspectos que ayudarán a dar respuesta a los objetivos de la investigación respecto a los factores que los docentes consideran importantes para la enseñanza de los alumnos con necesidades educativas especiales y las necesidades formativas para atender a los alumnos con NEE en el aula ordinaria (concreción de las dos últimas dimensiones de estudio).
- Fase 3. Validación del instrumento. Comprobación de la fiabilidad del instrumento, con la implementación del instrumento a una muestra representativa de docentes de educación secundaria en la Prefectura de Kavala, Grecia (ver Anexo I).
- Fase 4. Construcción definitiva del instrumento atendiendo a los resultados obtenidos.

El cuestionario final quedó compuesto por un total de 127 elementos distribuidos en seis dimensiones que recogen las variables objeto de estudio. La primera parte del cuestionario tenía como objetivo registrar las características demográficas de los docentes. Para ello, en la dimensión 1 se registraron 9 cuestiones: sexo, edad, lugar de trabajo, cargo, años de servicio, número de alumnos en los departamentos que imparten, nivel educativo, formación en Educación Especial y número de alumnos con educación especial. necesidades que acuden al departamento a impartir clases.

La segunda dimensión incluía un total de 15 preguntas relacionadas con la evaluación de Emociones, Actitudes e Inquietudes sobre la Educación Inclusiva y, más concretamente, con la inclusión de alumnos NEE. Las preguntas se basaron en los Sentimientos, Actitudes e Inquietudes sobre la Educación Inclusiva (SACIE-R) (Forlin et al., 2011, Apéndice A). El SACIE-R utiliza una escala tipo Likert con opciones de

respuesta que oscilan del 1 (Muy en desacuerdo), 2 (En desacuerdo), 3 (Ni de acuerdo ni en desacuerdo), 4 (De acuerdo) al 5 (Muy de acuerdo).

La tercera dimensión incluyó un total de 15 preguntas relacionadas con los niveles de eficacia docente en cuanto las estrategias de enseñanza. Las preguntas se basaron en la Escala de Sentido de Efectividad de los Maestros (TSES) (Tschannen - Moran & Woolfolk, 2001; Apéndice A). TSES incluye tres factores separados, relacionados con tres áreas de enseñanza educativa: Gestión del aula, Participación de los estudiantes y Estrategias de instrucción. En su forma abreviada, el TSES incluye 15 preguntas con una escala de 1 (nada), 2 (Muy poco), 3 (Moderado), 4 (Bastante) y 5 (Mucho).

La cuarta dimensión incluyó 62 preguntas relacionadas con estrategias para enseñar a estudiantes con necesidades educativas especiales. Las preguntas se basaron en la “Herramienta de estrategias para enseñar a estudiantes con necesidades educativas especiales” (Siam & Al-Natour, 2016; Apéndice A). Los ítems de la herramienta distribuidos en seis dominios: Diferenciación en el contenido, Diferenciación en el proceso, Diferenciación en los recursos didácticos, Diferenciación en los resultados, Diferenciación en la evaluación y Diferenciación en la gestión del aula, con una escala de valoración del 1 (Muy en desacuerdo), 2 (En desacuerdo), 3 (Ni de acuerdo ni en desacuerdo), 4 (De acuerdo) al 5 (Muy de acuerdo).

La quinta dimensión incluyó un total de 12 preguntas sobre factores considerados por los docentes como importantes para la enseñanza de los estudiantes con necesidades educativas especiales, con opciones de respuesta escalares con valores del 1 (Nada), 2 (Un poco), 3 (Moderado), 4 (Quita un poco) al 5 (Mucho).

Finalmente, la sexta dimensión del cuestionario incluía un total de 10 preguntas sobre las necesidades de formación del profesorado para atender al alumnado con necesidades educativas especiales en el aula ordinaria. Las opciones de respuesta fueron oscilaron del 1 (nada), 2 (un poco), 3 (moderado), 4 (un poco) al 5 (mucho).

Para su implementación se realizó traducción del mismo al griego para que todos los profesores de las escuelas secundarias pudieran comprender las cuestiones planteadas. Este se implementó en soporte papel, de manera autoadministrada con la presencia del investigador.

### *3.4.2 Entrevistas*

Para poder dar respuesta al primer de objetivo formulado, se diseñó una entrevista mediante la cual los directores de los colegios secundarios, de la Prefectura de Kavala, pudieran brindar la información necesaria sobre la atención de los estudiantes con necesidades educativas especiales en sus respectivas instituciones.

La entrevista constó de 23 preguntas. Las primeras 6 preguntas hacían referencia a las características demográficas de los participantes. Las 4 cuestiones siguientes abordaban las características de la escuela en la desempeñaban su labor de dirección y las 13 preguntas restantes de la entrevista trataban sobre la educación inclusiva (centrada en el alumnado NEE), la capacitación de los docentes y los recursos con los que cuenta el centro.

La entrevista se implementó en soporte papel en el que se recogían las preguntas a responder. Por estar inmersos en la fase de postpandemia (Covid-19), esta fue enviada por correo electrónico, haciendo un seguimiento de su recepción y posterior envío.

## 3.5 Estrategias de análisis de datos

Para el análisis de los datos se tuvo en cuenta la naturaleza de la información recopilada, la opinión de los docentes recabada a través del cuestionario (cuantitativo) y los aportes de los directores de las escuelas a través de la entrevista (cualitativo). El tratamiento y análisis de los datos cualitativos se realizó con el volcado de los datos en una matriz del programa estadístico SPSS, versión 27, y para los datos cualitativos se utilizó el programa NVivo, versión 12.

El estudio paramétrico del cuestionario se realizó mediante un análisis de consistencia interna, con el cálculo del coeficiente alfa de Cronbach y el análisis de la capacidad discriminante de los elementos, utilizando la prueba t de Student entre las medias de los grupos establecidos (grupos con puntuación alta y baja).

En cuanto a las pruebas que se aplicaron a los datos recogidos por el cuestionario, para dar respuesta a los objetivos del estudio se procedió al análisis de los estadísticos básicas de los elementos por dimensiones, específicamente, frecuencias, porcentajes, medias y desviación estándar.

Por otro lado, con la finalidad de comprobar la posible existencia de diferencias significativas entre los distintos grupos y en las variables de cada una de las dimensiones se aplicó la prueba t de Student para muestras independientes según las variables Género, Formación en Educación Especial y Tipo de docente (General o

Especialista), así como el análisis de varianza, ANOVA según las variables Edad y Años de experiencia como docente, con confirmación por prueba post hoc de Scheffé.

Luego, teniendo el número elevado de variables que componen las dimensiones y subdimensiones del análisis, se realizó el sumatorio de los ítems que conforman cada una de ellas, calculando nuevas variables del conjunto. Estas se denominaron: Emociones, Actitudes, Inquietudes, Efectividad en la participación de los estudiantes, Efectividad en las estrategias de instrucción, Efectividad en el manejo del aula, Diferenciación en el contenido, Diferenciación en el proceso, Diferenciación en los recursos didácticos, Diferenciación en los resultados, Diferenciación en la evaluación y Diferenciación en el manejo del aula.

A estas se les aplicaron pruebas de correlación para ayudar a determinar los factores que inciden en las Emociones, Actitudes e Inquietudes de los docentes para atender la diversidad del alumnado en el aula ordinaria y de regresión múltiple para establecer la relación entre las distintas variables y el grado de interdependencia.

En cuanto al análisis de las entrevistas, se optó por el análisis temático, con el fin de identificar los tópicos que surgieron de las respuestas.

## 4. Resultados

### 4.1. El estado actual de las escuelas educativas en el Sistema Educativo Secundario en cuanto a la atención de los estudiantes SEN.

Una primera aproximación al estado actual de las escuelas griegas, como se comenta en el apartado de descripción de la muestra, revela que el 31% de los docentes de las escuelas tiene formación en la atención de los alumnos con NEE y el 69% de ellos declara que no tienen formación en educación especial. Además, el promedio de alumnos por grupo de aula fue de 22.6 (DT=7.940), con una media de 3.7 alumnos con NEE (DT=4.219). Con respecto a las casuísticas presentadas por los alumnos de la NEE, el 92.6% de los alumnos presentaba dificultades de aprendizaje, el 58.7% problemas de conducta y el 15.3% de la muestra tenían alumnos con disfunción mental, siendo otras casuísticas menos representativas.

Por otra parte, de las entrevistas realizadas a los directores de los centros, los resultados indican el escaso número de docentes con formación en educación especial, coincidiendo con los resultados obtenidos del profesorado. En cuanto a la cantidad de alumnos en cada escuela, el 61.5% de los participantes dijeron que sus escuelas tenían

de 201 a 300 alumnos, el 23.1% tenían de 101 a 200 alumnos, muy pocos indicaron tener de 0 a 100 alumnos, de 201 a 300 alumnos y más de 300 alumnos (7.7% respectivamente). Entre estos estudiantes, el 53.8% de los encuestados dijo que en su centro hay de 1 a 10 estudiantes con NEE, el 30.8% indicó de 11 a 20 estudiantes con NEE, el 15.4% dijo tener más de 20 estudiantes con NEE. Estas necesidades educativas especiales son, en todos los casos, dificultades de aprendizaje.

Pasando a la siguiente parte de la entrevista, primero se preguntó a los participantes si los docentes tienen información adecuada sobre los estudiantes con NEE y el 53.86% de los encuestados respondió negativamente, siendo el 38.38% los que indicaron que sí. En cuanto a las fuentes de información que tienen sobre los estudiantes con NEE, el 53.92% de los directores dijo tener informes KESY, el 38.38% comentó tener información de los maestros de educación especial y el 7.7% dijo estar informado por el currículo.

En cuanto a la frecuencia de las reuniones entre el director y el equipo de educación general y los especialistas de educación especial, el 53.86% dijo que rara vez se dan, el 15.38% dijo que se dan una vez al mes y un mínimo, el 7,7% respectivamente, alegaron que se dan una vez al semana o una vez al año. En cuanto a la frecuencia de las reuniones entre el director y los padres de los estudiantes con NEE, el 61.56% de los directores dijeron que se dan al final del semestre, el 23.08% que se mantienen una vez al mes y el 15.38% dijeron que realizan cada 3 meses.

Por otro lado, se preguntó sobre los recursos, tecnologías alternativas, programas de lectura y escritura, sistemas audiovisuales, sistema de escritura braille, etc. que brinda su escuela para alumnos con NEE y todos afirmaron no contar con recursos específicos a excepción de una persona que indicó tener medios audiovisuales.

Al preguntarles su opinión sobre la necesidad de formación de los docentes de sus centros en atención a los estudiantes NEE, el 100% dijo que sí, de igual forma comentaron que la institución no brinda esta capacitación, considerando este importante aspecto. Además, el 23.08% respectivamente, indicó como necesaria la formación en gestión de aula con alumnos con NEE y en la creación de recursos didácticos específicos, siendo el 15.38% el que vio necesaria la formación en adaptación de contenidos didácticos.

En la misma línea de la pregunta anterior, se preguntó sobre la oportunidad que ofrece la escuela de organizar seminarios, programas o actividades educativas para aquellos docentes que deseen informarse sobre la atención de los estudiantes NEE.

Los resultados evidencia que el 38.38% (respectivamente) de los centros no atienden este aspecto o que lo hacen al final del semestre. Solo el 15.38% indica que lo hace cada tres meses, y son pocos los que afirman que se llevan a cabo en contadas ocasiones o una vez al mes (7.7% respectivamente).

Sobre el apoyo institucional, el 84.62% de los directores indican que KESY es el organismo que ayuda en la formación de los estudiantes con NEE. Para el resto la ayuda procede de las estructuras de formación o de la asociación de padres (7.7% respectivamente). Por otro lado, la mayoría de los directores indican que informan sobre el alumnado con NEE (61.5%) frente a un pequeño número que no lo hace (23.1%). Además, uno de los directores aclaró que esta información se da a los profesores de los grupos aula a través del Comité de Evaluación y Apoyo al Diagnóstico Educativo y otro lo hace a través de la psicóloga y la trabajadora social.

En cuanto al tiempo que el Ministerio de Educación ha estado brindando asistencia a la escuela con respecto a temas de educación especial, el 53.9% dijo que esta existe desde hace 6 a 10 años, el 30.8% indicó que existe desde 1 a 5 años y el 23.0% de los directores no sabían nada sobre este aspecto. Además, el nivel de satisfacción de los directores de los centros entrevistados, con los fondos destinados por el Ministerio de Educación para la atención al alumnado NEE en general es bajo (92.3%), siendo sólo uno que afirma que es suficiente.

Finalmente, con respecto a los sectores en los que se invierten estos fondos, el 53.9 % de los directores dijo que se invierte en apoyos paralelos, el 23.0 % indica que destinan a la contratación de auxiliares docentes especiales y docentes de educación especial, el 7.7 % manifestó que en libros especiales, el 7.7% indicó que en compra de equipos y otro 23.0% de directores dijo saber nada sobre este tema.

## 4.2. Las competencias del profesor para atender al alumnado nee en el aula ordinaria.

### *4.2.1. Emociones, actitudes e inquietudes sobre la Educación Inclusiva*

En primer lugar, se analiza la escala SACIE-R, que hace referencia a los Sentimientos, Actitudes e Inquietudes de los docentes de educación secundaria sobre la educación inclusiva. Los participantes tienen opiniones neutrales a positivas sobre sus sentimientos hacia la inclusión.

Los ítems con valores más bajos son Tengo miedo de mirar directamente a una persona con discapacidad (M=1.67). Me cuesta superar mi impresión inicial al encontrarme con personas con discapacidad física severa (M=1.70) y Tiendo a que los contactos con personas con discapacidad sean breves y los finalizo lo más rápido posible (M=1.78), destacando que su mayor temor es tener alumnos con necesidades educativas especiales en el aula (M= 3.02).

En cuanto a las Actitudes del profesorado hacia la inclusión, el elemento con mayor consideración es el que indica que los alumnos que necesitan un programa académico individualizado deben estar en clases regulares (M=2.61), seguido de los ítems que aluden a que los estudiantes que tienen dificultades para expresar sus pensamientos verbalmente y/o requieren tecnologías comunicativas (por ejemplo, Braille/lenguaje de señas) deben estar en clases regulares (M=2.60) y los estudiantes que tienen dificultades para expresar sus pensamientos verbalmente deben estar en clases regulares (M=2.60). Por el contrario, el ítem con la valoración más baja es el que señala que los estudiantes que no prestan atención deben estar en clases regulares (M=2.30).

Finalmente, en cuanto a sus Inquietudes, los aspectos que más preocupan a los docentes son aquellos que manifiestan que los alumnos con necesidades educativas especiales no son aceptados por el resto de la clase (M=3.72) y que es difícil darle la atención adecuada al alumnado en un aula inclusiva (M=3.65), siendo el que ostenta menor valor el hecho del estrés que puede causar tener alumnos con discapacidad en su clase (M=3,05).

Al aplicar las pruebas t para muestras independientes (n.s.=0.05) de la dimensión Emociones en función de la variable Género, se evidenciaron diferencias significativas en 2 de los 5 ítems. Estos se encuentran en el ítem me sentiría muy mal si tuviera una discapacidad/necesidad educativa especial (t=2.020, p=0.022) y en el ítem tengo miedo de mirar directamente a una persona con discapacidad (t=2.187, p=0.015), en el que los hombres tienen medias más altas que las mujeres. La comparación de los valores medios de la dimensión Actitudes según la misma variable Género, muestra diferencias estadísticamente significativas en 4 de los 5 ítems. Estas diferencias ocurren en los ítems Los estudiantes que tienen dificultad para expresar sus pensamientos verbalmente deben estar en clases regulares (t=-2.810, p=0.005), Los estudiantes que requieren tecnologías comunicativas (ej. Braille/lenguaje de señas) deben estar en clases regulares (t= -2.746, p=0.006), los estudiantes que reprueben con frecuencia deben estar en clases regulares (t=-2.037, p=0.042) y los estudiantes que necesitan un programa académico individualizado deben estar en clases regulares (t=-2.050,

p=0.041), en este caso son las mujeres quienes ostentan los valores más altos. Finalmente, en los elementos de la dimensión Inquietudes solo encontramos diferencias estadísticamente significativas en 1 de los 5 ítems. Estos se dan en el ítem Me preocupa el estar más estresado si tengo alumnos con discapacidad en mi clase (t=2.232, p=0.026), donde los hombres se sienten más preocupados.

Al intentar establecer diferencias estadísticamente significativas entre los elementos de la dimensión Emociones y la variable Formación en educación especial, encontramos evidencia en los 5 ítems. Esta evidencia se puede encontrar en Temo la idea de que eventualmente pueda tener alumnado con necesidades educativas especiales (t=-6.112, p=0.000), Tiendo a que los contactos con personas con discapacidad sean breves y los finalizo lo más rápido posible (t=-5.471, p=0.000), Me sentiría mal si tuviera una discapacidad/necesidad educativa especial (t=-7.814, p=0.000), Tengo miedo de mirar directamente a una persona con discapacidad (t=-5.875, p=0.000) y Me cuesta superar mi impresión inicial al encontrarme con personas con discapacidad física severa (t=-6.911, p=0.000), en las que los docentes que no tienen Formación en educación especial tienen los valores más altos.

En los elementos de la dimensión Actitudes, con respecto a la misma variable Formación en educación especial, las diferencias estadísticamente significativas se encuentran en 3 de los 5 ítems. La evidencia se encuentra en el ítem que alude a que los estudiantes con déficit de atención deben estar en clases regulares (t=-2.114, p=0.018), en el que los docentes que no cuentan con esta formación tienen una media más alta en comparación con los que sí la tienen. En el caso de los ítems Los estudiantes que requieren tecnologías comunicativas (e.g. Braille/lenguaje de señas) deben estar en clases regulares (t=4.597, p=0.000) y Los estudiantes que necesitan un programa académico individualizado deben estar en clases regulares (t=3.564, p =0,000), son los profesores con Formación en educación especial los que tienen una mayor consideración por estos aspectos.

Finalmente, en los elementos de la dimensión Inquietudes encontramos evidencia en 4 de los 5 ítems. Esta evidencia se puede encontrar en Me preocupa que sea difícil dar la atención adecuada a todos los estudiantes en un aula inclusiva (t=-11.075, p=0.000), Me preocupa que mi carga de trabajo aumente si tengo estudiantes con discapacidad en mi clase (t=-9.415, p=0.000), Me preocupa estar más estresado si tengo estudiantes con discapacidades en mi clase (t=-9.588, p=0.000) y Me preocupa que no tiener los conocimientos y habilidades necesarios para enseñar a los estudiantes con discapacidad (t=-22.158, p=0.000), siendo los docentes sin formación los que tienen el promedio más alto.

Por otro lado, al comprobar la existencia de diferencias estadísticamente significativas entre los elementos de la dimensión Sentimiento y la variable Tipo de docente, no encontramos evidencia en ninguno de los 5 ítems. En los elementos de la dimensión Actitudes y la misma variable, tampoco observamos diferencias estadísticamente significativas en ninguno de los 5 ítems. Finalmente, en los elementos de la dimensión Inquietudes encontramos evidencia en 4 de los 5 ítems. Esta evidencia se puede encontrar en Me preocupa que sea difícil dar la atención adecuada a todos los estudiantes en un aula inclusiva (t=2.443, p=0.008), Me preocupa que mi carga de trabajo aumente si tengo estudiantes con discapacidad en mi clase (t=2.545, p=0.006), Me preocupa estar más estresado si tengo alumnos con discapacidad en mi clase (t=2.945, p=0.008) y Me preocupa no tener los conocimientos y habilidades necesarias para enseñar a estudiantes con discapacidades. (t=2.001, p=0.023), cuya máxima opinión la tienen quienes son de Educación General.

Para comprobar las posibles diferencias entre los elementos de las subdimensiones en función de la variable Edad de los docentes, se aplicó un Análisis de Varianza para un Factor (n.s.=0,05) advirtiéndolas en 11 de los 15 ítems. Tras aplicar la prueba post-hoc de Scheffé, se confirma que 7 son significativos:

- Tiendo a hacer contactos breves con personas con discapacidad y los termino lo más rápido posible (F=3,474, p=0,001), se valora más en el rango de edad 50-54 que en el rango 30-34 años (I-J=0,754, p=0,002).
- Me cuesta superar mi impresión inicial al encontrarme con personas con discapacidad física severa (F=2.802, p=0.008), se percibe con mayor importancia para el rango de edad 50-54 que en el rango 30-34 (I-J=0.551, p=0,042).
- Los estudiantes que requieren tecnologías comunicativas (e.g. braille/lenguaje de señas) deben estar en clases regulares (F=4.117, p=0.001), obtiene mayor calificación para el rango de edad 30-34 años que para los de 45-49 años (I-J =0,979, p=0,006), 50-54 (I-J=0,890, p=0,015) y 60-64 años (I-J=1,056, p=0,009).
- Los estudiantes que necesitan un programa académico individualizado deben estar en clases regulares (F=3.466, p=0.001), es más valorado para el rango de edad 30-34 en comparación con los docentes entre 60-64 años (I-J=1.093, p=0.015).
- Me preocupa que sea difícil dar una atención adecuada a todo el alumnado en un aula inclusiva (F=6,82, p=0,001), obtiene una valoración más baja para la edad entre 30-34, respecto a los rangos 45-49 (I-J=1,074, p=0,001), 50-54

(I-J=1,059, p=0,001), 55-59 (I-J=1,259, p=0,001) y 60-64 años (I-J=1,070, p=0,006).

- De la misma manera ocurre con Me preocupa que aumente mi carga de trabajo si tengo alumnos con discapacidad en mi clase (F=4,957, p=0,001), la valoración en el rango de edad 30-34 años es inferior a la de los rangos 45-49 (I-J=0,908, p=0,025), 50-54 (I-J=0,893, p=0,023), 55-59 (I-J=1,000, p=0,019) y 60-64 años (I-J=0,952 p =0,049).
- Me preocupa no tener los conocimientos y habilidades necesarias para enseñar a alumnos con discapacidad (F=8,932, p=0,001), está peor valorada la franja de edad entre 30-34 años respecto a la de 45-49 (I-J=1,617, p=0,001), 50-54 (I-J=1,508, p=0,001), 55-59 (I-J=1,615, p=0,001) y 60-64 años (I-J=1,578, p=0,001). De igual manera se da entre el rango de edad 35-39 con respecto a los docentes de 45-49 años (I-J=1.119; p=0.037).

Al comparar las medias atendiendo a la variable Años de experiencia como docente se reveló diferencias en 14 de los 15 ítems, siendo significativa en 5 de ellos:

- Los alumnos con déficit de atención deberían estar en clases regulares (F=4,243, p=0,001), se valora más en el rango de años de experiencia como docentes 11-15 años, más que entre 6-10 (I-J=0,675, p= 0,012) y 21-25 (I-J=0,538, p=0,038).
- El ítem Me preocupa que sea difícil dar la atención adecuada a todos los alumnos en un aula inclusiva (F=7.376, p=0,001) docentes con un rango de experiencia profesional de 16-20 (I-J=0,977, p=0,003), 21-25 (I-J=1,042, p=0,001), 26-30 años (I-J=0,987, p=0,006) y más de 30 (I-J=0,940, p=0,041) se preocupan más que los que tienen entre 1 y 5 años de experiencia. Lo mismo sucede con los docentes que tienen 16-20 (I-J=0.870, p=0.004), 21-25 (I-J=0.934, p=0.002), 26-30 años (I-J=0.880, p=0.008) en comparación con los que tener entre 6-10 años de experiencia docente.
- En el ítem Me preocupa estar más estresado si tengo estudiantes con discapacidades en mi clase (F=7.232, p=0.001), está peor valorado por el rango de experiencia laboral de 1-5 años, con respecto a los docentes entre 16-20 (I-J=0.869, p=0.028) y 21-25 años (I-J=0.858, p=0.038). Lo mismo se evidencia con los grupos de 21-25 (I-J=1.034, p=0.001), entre 26-30 (I-J=0.937, p=0.006) y más de 30 años (I-J=1.004, p=0.014) frente a los que tienen entre 6 y 10 años.
- Me preocupa que aumente mi carga de trabajo si tengo alumnos con discapacidad en mi clase (F=4,651, p=0,001), obtiene una valoración más

baja por parte de los profesores con un rango de antigüedad de 6-10 años en comparación con los de 16-20 años (I-J=0,869, p=0,017) y 21-25 años (I-J=0,940, p=0,008).

- Por último, en el ítem Me preocupa no tener los conocimientos y habilidades necesarias para enseñar a alumnos con discapacidad (F=10,069, p=0,001), se valora en menor medida en el rango de experiencia docente de 6-10 años, en comparación con aquellos entre 11-15 (I-J=1.026, p=0.026), a 16-20 (I-J=1.601, p=0.001) y 21-25 (I-J=1.629, p=0.001). La misma prueba revela del mismo modo, en cuanto al rango de antigüedad 21-25 mayor a 1-5 (I-J=1.227, p=0.008).

### *4.2.2. Habilidades del profesorado para gestionar alumnos con necesidades educativas especiales*

La segunda escala del cuestionario mide las capacidades de los docentes para gestionar alumnos con necesidades educativas especiales.

Tras realizar el análisis de las respuestas de los participantes, se puede observar que las medias obtenidas son relativamente bajas. Los ítems más valorados son ¿Cuánto puedes ayudar a los alumnos con necesidades educativas especiales a creer que pueden progresar en las tareas escolares (M=3.05) y ¿Cuánto se puede motivar a los alumnos con necesidades educativas especiales que están menos interesados en la lección? (M=2.98), siendo el ítem con menor valor ¿Cuánto puedes ayudar a las familias de alumnos con necesidades educativas especiales para que sus hijos progresen en la escuela? (M=2.62).

Con respecto a la Eficacia en las Estrategias de Instrucción, observamos cómo la posibilidad de dar un ejemplo diferente de algo a un niño con necesidades educativas especiales para aprender se valora más alto (M=3.54), así como así como su capacidad para adaptar las preguntas a sus alumnos con necesidades (M=3.49), con los valores más bajos en el ítem ¿En qué medida puede utilizar una variedad de estrategias de evaluación para niños con necesidades educativas especiales? (M=2.68) y en el ítem ¿En qué medida puede implementar estrategias alternativas de aprendizaje para niños con necesidades educativas especiales? (M=2.72).

Finalmente, en cuanto a la eficacia en la gestión del aula, la capacidad del profesor para mantener la calma ante un alumno que molesta (M=3.49) o que puede ser desafiante (M=3.50) ostentan los valores más altos, siendo los de menor puntaje el

relativo a la implementación de estrategias alternativas de aprendizaje para niños con necesidades educativas especiales (M=2.72).

Al revisar los elementos de la subdimensión Eficacia para la implicación del alumnado con respecto a la variable Género, existen diferencias significativas en 3 de los 4 elementos. Estos se dan en los ítems ¿Cuánto puede motivar a los estudiantes con necesidades educativas especiales que están menos interesados en la lección? (t=-3.072, p=0.001), ¿Cuánto puedes ayudar a los estudiantes con necesidades educativas especiales a creer que pueden progresar en el trabajo escolar? (t=-3.433, p=0.000) y ¿Cuánto se puede ayudar a las familias de alumnos con necesidades educativas especiales para que sus hijos progresen en la escuela? (t=-2.838, p=0.002), las mujeres tienen mayor percepción de eficacia que los hombres. Sin embargo, al analizar el conjunto de elementos de las dimensiones Efectividad en las Estrategias de Instrucción y Efectividad en la Gestión del Aula con género, no existen diferencias significativas.

Con respecto a las diferencias en la Eficacia para la implicación del alumnado y la variable Formación en educación especial, se encuentran diferencias significativas en los 4 ítems que la componen. Estas evidencias están en los ítems ¿Cuánto se puede motivar a los alumnos con necesidades educativas especiales que están menos interesados en la lección? (t=12.304, p=0.000), ¿Cuánto puedes ayudar a los estudiantes con necesidades educativas especiales a creer que pueden progresar en el trabajo escolar? (t=12.566, p=0.000), ¿Cuánto puedes ayudar a los alumnos con necesidades educativas especiales a apreciar el valor del aprendizaje? (t=10.926, p=0.000) y ¿Cuánto puedes ayudar a las familias de alumnos con necesidades educativas especiales para que sus hijos progresen en la escuela? (t=11.646, p=0.000), en el que los docentes que tienen formación tienen valores más altos que los que no la tienen.

En los elementos de la dimensión Eficacia en las Estrategias de Instrucción frente a la misma variable, también se encuentran diferencias estadísticamente significativas en los 5 elementos. Estas evidencias se dan en los ítems ¿En qué medida puede adaptar las preguntas que realiza a los alumnos con necesidades educativas especiales? (t=16.831, p=0.000), ¿En qué medida puede utilizar una variedad de estrategias de evaluación para niños con necesidades educativas especiales? (t=17.878, p=0.000), ¿En qué medida puedes explicar mejor o poner un ejemplo diferente de algo que a un niño con necesidades educativas especiales le cuesta entender? (t=19.286, p=0.000), ¿En qué medida puedes implementar estrategias alternativas de aprendizaje para niños con necesidades educativas especiales? (t=19.484, p=0.000) y ¿Cuánto puede hacer para fomentar la creatividad de los

estudiantes? (t=14.738, p=0.000), siendo los docentes con formación los que tienen valores más altos frente a los que no.

Finalmente, al comparar las medias de los elementos de la dimensión Eficacia en las Estrategias de Instrucción con la misma variable, se encuentran diferencias estadísticas en los 6 ítems. La evidencia se encuentra en ¿Qué tan bien puede manejar el comportamiento inapropiado en el aula con niños con necesidades educativas especiales? (t=13.074, p=0.000), ¿Cuánto se puede hacer para que los alumnos con necesidades educativas especiales sigan las reglas del aula? (t=13.294, p=0.000), ¿En qué medida los alumnos con necesidades educativas especiales pueden seguir las normas de su aula? (t=12.256, p=0.000), ¿En qué medida se puede implementar un sistema de gestión del aula para niños con necesidades educativas especiales? (t=19.240, p=0.000), ¿Cuánto puedes hacer para calmar a un estudiante que es disruptivo o ruidoso? (t=9.012, p=0.000) y ¿Qué tan bien puede responder a los estudiantes desafiantes? (t=7.529, p=0.000), siendo los docentes con formación los que tienen valores más altos frente a los que no.

En lo relativo a las variables de la escala Eficacia para la Implicación del Alumnado con la variable Tipo de docente, se han hallado diferencias significativas en los 4 ítems. ¿Cuánto se puede motivar a los alumnos con necesidades educativas especiales que están menos interesados en la lección? (t=-3.222, p=0.001), ¿Cuánto puedes ayudar a los estudiantes con necesidades educativas especiales a creer que pueden progresar en el trabajo escolar? (t=-6.297, p=0.000), ¿Cuánto puedes ayudar a los alumnos con necesidades educativas especiales a apreciar el valor del aprendizaje? (t=-4,826, p=0,000) y ¿Cuánto se puede ayudar a las familias de alumnos con necesidades educativas especiales para que sus hijos progresen en la escuela? (t=-3.581, p=0.000), en la que los docentes de Educación Especial tienen los valores más altos.

Con respecto a los elementos de la dimensión Eficacia en las Estrategias de Instrucción y la misma variable, se encontraron diferencias estadísticamente significativas en 3 de los 5 elementos. En concreto los ítems: ¿En qué medida puede utilizar una variedad de estrategias de evaluación para niños con necesidades educativas especiales? (t=-1.146, p=0.126), ¿En qué medida puede implementar estrategias alternativas de aprendizaje para niños con necesidades educativas especiales? (t=-5.899, p=0.000) y ¿Cuánto puede hacer para fomentar la creatividad de los estudiantes? (t=-1.808, p=0.036), siendo los docentes con formación los que tienen valores más altos frente a los que no.

Finalmente, los elementos de la dimensión Eficacia en la Gestión del Aula y la misma variable, las diferencias estadísticamente significativas encontradas están en los 6 ítems, ¿Qué tan bien puede manejar el comportamiento inapropiado en el aula con niños con necesidades educativas especiales? (t=-1.908, p=0.029), ¿Cuánto se puede hacer para que los alumnos con necesidades educativas especiales sigan las reglas del aula? (t=-2.706, p=0.004), ¿En qué medida los alumnos con necesidades educativas especiales pueden seguir las normas de su aula? (t=-2.280, p=0.012), ¿En qué medida se puede implementar un sistema de gestión de aula para niños con necesidades educativas especiales? (t=-4.085, p=0.001), ¿Cuánto puedes hacer para calmar a un estudiante que es disruptivo o ruidoso? (t=-3.288, p=0.001) y ¿Qué tan bien puede responder a los estudiantes desafiantes? (t=-2.099, p=0.018), siendo los docentes con formación los que tienen mayor promedio.

Para comprobar las posibles diferencias entre los elementos de las subdimensiones según la variable Edad de los docentes, se aplicó un Análisis de Varianza para un Factor (n.s.=0.05) advirtiéndolos en 14 de los 15 ítems. Tras aplicar la prueba post-hoc de Scheffé, se confirma que 8 son significativos, siendo los resultados los siguientes:

- ¿En qué medida puedes adaptar las preguntas que haces a los alumnos con necesidades educativas especiales? (F=7.758, p=0.000) está más valorado por el profesorado de un rango de edad 30-34 años frente a los de 45-49 (I-J=0.948, p=0.001), 50-54 (I-J=1.075, p=0.00), 55 -59 (I-J=1.000, p=0.001) y 60-64 años (I-J=1.117, p=0.000).
- ¿En qué medida puede utilizar una variedad de estrategias de evaluación para niños con necesidades educativas especiales? (F=10.239, p=0.000) obtiene mayor calificación en el rango de edad de 30-34 años frente a 45-49 (I-J=1.731, p=0.000), 50-54 (I-J=1.646, p=0.000), 55 -59 (I-J=1.830, p=0.000) y 60-64 (I-J=1.777, p=0.000). De igual forma se observa en el profesorado de 40-44 respecto a 45-49 (I-J=0,930, p=0,035) y 55-59 años (I-J=1,028 p=0,034).
- ¿En qué medida puedes explicar mejor o poner un ejemplo diferente de algo que a un niño con necesidades educativas especiales le cuesta entender? (F=9.214, p=0.000) es valorado más alto por los docentes de 30-34 años en comparación con los de 45-49 (I-J=1.087, p=0.000), 50-54 (I-J=1.139, p=0.000), 55- 59 (I-J=1,133, p=0,000) y 60-64 (I-J=1,012, p=0,001).
- ¿Hasta qué punto se pueden implementar estrategias alternativas de aprendizaje para niños con necesidades educativas especiales? (F=9.291,

p=0.000) los docentes de edades entre los 30-34 también le dan mayor valor en comparación con los que tienen entre 45-49 (I-J=1.643, p=0.000), 50-54 (I-J=1.543, p=0.000), 55-59 (I-J=1.667, p=0.000) y 60-64 años (I-J=1.676, p=0.000, al igual que los profesores de 40 a 44 años con respecto al rango de edad de 45 a 49 años (I-J=0.967, p=0.030).

- ¿Cuánto puede hacer para fomentar la creatividad de los estudiantes? (F=5.127, p=0.000) lo valoran más el docente de edad entre 30-34 frente a los de 45-49 (I-J=0.718, p=0.008) y 55-59 años (I-J=0.659, p=0.049).
- ¿Qué tan bien puede manejar el comportamiento inapropiado en el aula con niños con necesidades educativas especiales? (F=7.667, p=0.000), también los docentes de 30-34 años lo valoran más en relación a los grupos de edad 45-49 (I-J=0.954, p=0.000), 50-54 (I-J=0.855, p=0.000), 55-59 (I-J=0,726, p=0,017) y 60-64 años (I-J=0,737, p=0,022).
- ¿En qué medida los alumnos con necesidades educativas especiales pueden seguir las normas de su aula? (F=4.766, p=0.000) se estima en mayor medida entre los docentes de 30-34 años frente a los que se encuentran en los rangos 45-49 (I-J=0.658, p=0.011), 50-54 (I-J=0.594, p=0.028) y 55-59 (I-J=0,741, p=0,006).
- Finalmente, ¿En qué medida se puede implantar un sistema de gestión de aula para niños con necesidades educativas especiales? (F=10.295, p=0.000) tiene mayor valor para los docentes de 30-34 años que para los de 45-49 (I-J=1.708, p=0.000), 50-54 (I-J=1.602, p=0.000), 55- 59 (I-J=1.770, p=0.000) y 60-64 años (I-J=1.713, p=0.000). Del mismo modo podemos apreciar estas diferencias entre las edades 40-44 años con respecto a 45-49 (I-J=0.944, p=0.025) y 55-59 (I-J=1.006, p=0.036).

Para comprobar las posibles diferencias entre los elementos de las subdimensiones según la variable Experiencia, se aplicó un Análisis de Varianza para un Factor (n.s.=0,05) anotándolas en los 15 ítems. Tras aplicar la prueba post-hoc de Scheffé, se confirma que 13 son significativas, siendo los resultados los siguientes:

- ¿Cuánto puedes motivar a los alumnos con necesidades educativas especiales que están menos interesados en la lección? (F=4,902, p=0,001) ostenta mayor valor para el rango de años de experiencia entre 6-10 con respecto a 16-20 (I-J=0,621, p=0,042) y 21-25 (I-J=0,726, p= 0,009).
- ¿Cuánto puedes ayudar a los estudiantes con necesidades educativas especiales a creer que pueden progresar en el trabajo escolar? (F=5.102,

p=0.001) tiene mayor valor para los docentes con 1-5 años de experiencia (I-J=0.691, p=0.036) y entre 6-10 (I-J=0.762, p=0.002) que los de 21-25 años.

- ¿Cuánto puedes ayudar a los alumnos con necesidades educativas especiales a apreciar el valor del aprendizaje? (F=5.658, p=0.001) obtiene valores más altos por parte de los docentes con 6-10 años de experiencia en comparación con los de 16-20 (I-J=0.675, p=0.010), 21-25 (I-J=0.804, p=0.001) y 26-30 años de antigüedad (I-J=0,683, p=0,018).
- ¿Cuánto puedes ayudar a las familias de alumnos con necesidades educativas especiales para que sus hijos progresen en la escuela? (F=6.815, p=0.001) se valora con mayor puntuación por los docentes de entre 6-10 años de experiencia frente a quienes tienen 16-20 (I-J=0.711, p=0.004), 21-25 (I-J=0.820, p=0,00) y 26-30 (I-J=0,692, p=0,014). Lo mismo ocurre con los docentes con experiencia comprendida entre 11-15 años frente a 21-25 (I-J=0,566, p=0,024).
- ¿En qué medida puedes adaptar las preguntas que haces a los alumnos con necesidades educativas especiales? (F=10.057, p=0.001) tiene mayor valor para el docente de experiencia 1-5 años de experiencia con respecto al docente de 16-20 (I-J=0.811, p=0.006), 21-25 (I-J=0.907, p=0.001) y 26-30 (I-J=0.001). 0,811, p=0,013). A su vez, ostenta una media más alta los docentes de entre 6-10 que los de 16-20 (I-J=0.923, p=0.000), 21-25 (I-J=1.020, p=0.000), 26-30 (I-J=0.924, p=0,000) y más de 30 años de experiencia (I-J=0,818, p=0,018).
- ¿En qué medida puede utilizar una variedad de estrategias de evaluación para niños con necesidades educativas especiales? (F=10.666, p=0.001) se valora más alto para los docentes con experiencia entre 1-5 años en comparación con 16-20 (I-J=1.374, p=0.001), 21-25 (I-J=1.498, p=0.000), 26 -30 (I-J=1.319, p=0.005) y más 30 (I-J=1.445, p=0.006). De igual forma, se observa entre el valor más elevado de los docentes con 6-10 con respecto a 16-20 (I-J=1.406, p=0.000), 21-25 (I-J=1.530, p=0.000), 26-30 (I-J=1,351, p=0,001) y más de 30 de experiencia docente (I-J=1,477, p=0,001).
- ¿En qué medida puedes explicar mejor o poner un ejemplo diferente de algo que a un niño con necesidades educativas especiales le cuesta entender? (F=11.005, p=0.001) también lo estiman los docentes con mayor valor entre los años de experiencia 1-5 en comparación con 16-20 (I-J=0.817, p=0.004), 21-25 (I-J=0.861, p =0,002) y 26-30 (I-J=0,807, p=0,010), así como los que tienen entre 6-10 con respecto a 16-20 (I-J=1,000, p=0,000), 21-25 (I-

J=1,044, p=0,000), 26-30 (I-J=0,989, p=0,000) y más de 30 (I-J=0,856, p=0,007).

- ¿En qué medida se pueden implementar estrategias alternativas de aprendizaje para niños con necesidades educativas especiales? lo valoran más los profesores con 1-5 años de experiencia frente a los de 16-20 (I-J=1.337, p=0.002), 21-25 (I-J=1.550, p=0.000), 26-30 (I-J=1.314, p=0,006) y más de 30 (I-J=0,856, p=0,007). De igual forma, se observa una diferencia significativa a favor del rango 6-10 con respecto a 16-20 (I-J=1.386, p=0.000), 21-25 (I-J=1.599, p=0.000), 26-30 (I-J= 1.363, p=0.001) y más de 30 años de experiencia (I-J=1.563, p=0.000), así como los que tienen 11-15 con respecto a los que tienen entre 21-25 (I-J=0.924, p=0.023).
- ¿Cuánto puede hacer para fomentar la creatividad de los estudiantes? (F=4.738, p=0.001) lo valoran más los profesores con 6-10 años de experiencia frente a los de 16-20 años (I-J=0.621, p=0.042) y 21-25 años (I-J=0.585, p= 0,031).
- ¿Qué tan bien puede manejar el comportamiento inapropiado en el aula con niños con necesidades educativas especiales? (F=9.021, p=0.001) es más relevante para docentes con 1-5 años de experiencia que para aquellos con 16-20 (I-J=0.729, p=0.004) y 21-25 (I-J=0.714, p=0.0008). De igual forma, se aprecia una diferencia significativa a favor del rango 6-10 con respecto a 11-15 (I-J=0.667, p=0.006), 16-20 (I-J=0.909, p=0.000), 21-25 (I-J=0,898, p=0,000) y 26-30 (I-J=0,675, p=0,007).
- ¿Cuánto puede hacer para que los estudiantes con necesidades educativas especiales sigan las reglas del aula? (F=8.042, p=0.001) se estima mayor por docentes experimentados entre 6-10 frente a los que llevan de 16-20 (I-J=0.647, p=0.000), 21-25 (I-J=0.713, p=0.000) y 26-30 años (I-J=0,563, p=0,005). Esta misma diferencia se aprecia entre 11-15 y 21-25 (I-J=0,406, p=0,044).
- ¿En qué medida los alumnos con necesidades educativas especiales pueden seguir las normas de su aula? (F=6.718, p=0.001), los docentes con 1-5 años de experiencia lo estiman más alto que los de 21-25 (I-J=0.664, p=0.009), al igual que los de 6-10 frente a los de 16 -20 (I-J=0,593, p=0,008), 21-25 (I-J=0,743, p=0,000) y 26-30 años de experiencia (I-J=0,659, p=0,004).
- Finalmente, ¿En qué medida se puede implantar un sistema de gestión de aula para niños con necesidades educativas especiales? (F=10.667, p=0.001) es más valorado por docentes con una experiencia entre 1-5 años frente a 16-20 (I-J=1.345, p=0.000), 21-25 (I-J=1.515, p=0.000), 26-30 (I-

J=1.319, p=0.004) y más 30 (I-J=1.412, p=0.007). Se observan valores más altos para aquellos en el rango de 6-10 frente a 16-20 (I-J=1.351, p=0.000), 21-25 (I-J=1.520, p=0.000), 26-30 (I-J=1.324, p= 0,001) y más de 30 (I-J=1,418, p=0,002). El docente con 11-15 años lo valora más que el de 21-25 (I-J=0,871, p=0,034).

### *4.2.3. Estrategias del proceso de enseñanza-aprendizaje para crear un ambiente de inclusión en el aula*

La siguiente dimensión Estrategias del proceso de enseñanza-aprendizaje para crear un ambiente de inclusión en el aula está compuesta por 6 subdimensiones. En base a los elementos del primero de ellos, Diferenciación en contenido, las medias indican que el nivel es elevado en la mayoría de los elementos. Los valores más altos se encuentran en los ítems Brindo apoyo a los estudiantes y los animo a sumergirse en las habilidades de resolución de problemas (M=4.24), Planifico las lecciones mucho antes de cada clase (M=4.22), Establezco objetivos de clase claros y específicos (M=4.14), Preciso el intervalo de tiempo adecuado por objetivo de aprendizaje (M=4.06), Selección de contenidos: considero la identificación de los idea(s) principal(es) del tema o unidad (M=4.13) y aprovecho la oportunidad para que los estudiantes se sumerjan en diferentes actividades que motiven su mente y aumenten su atención (M=4.07). En cambio, los valores más bajos están en los elementos No me desvío del nivel estándar que todo estudiante debe alcanzar (M=2.58) y Presento el contenido a los estudiantes en diferentes velocidades; no comprometo a todos los alumnos al mismo tiempo (M=2.90).

En la subdimensión Diferenciación en proceso, los ítems con mayor puntuación son Fomento a los alumnos a interactuar y participar; busco incorporarlos en el tema en cuestión (M=4.24), Utilizo actividades compatibles y adecuadas a las habilidades que tienen los estudiantes (M=4.06) y Ajusto el intervalo de tiempo que los estudiantes pueden necesitar para realizar ciertas tareas (M=4.04). Por otro lado, el ítem menos valorado es Suelo formar pequeños grupos para explicar las ideas y habilidades (M=2.74).

En la subdimensión Diferenciación en recursos didácticos, el ítem con el valor más alto es Aprovecho diferentes tipos de recursos de aprendizaje que sirven al entorno de una manera amena que atrae a los alumnos (video, ordenadores y sitios web) (M=4.07), aunque no existen grandes diferencias con respecto al resto de variables, el

ítem que menor valor obtiene es el relativo al uso de sistemas audiovisuales que permiten leer textos en voz alta (M=3.46).

Con respecto a la subdimensión Diferenciación en los resultados, se puede apreciar que todos los elementos se valoran por encima de los 4 puntos, siendo el ítem Permito que los alumnos presenten sus producciones de forma verbal (M=4.13) lo que destaca ligeramente del resto.

En la subdimensión Diferenciación en la evaluación, entre los ítems más valorados se hallan Leo las preguntas a los alumnos (M=4.19) y Doy a algunos alumnos tiempo extra para responder preguntas (M=4.16). Sin embargo, el ítem con menor valor es Imprimo los exámenes en letra grande y adecuada a las necesidades de los alumnos (M=2.85).

Por último, en la subdimensión Diferenciación en la gestión del aula, se observa que los ítems más valorados son Observo el desempeño de los alumnos y los dirijo (M=4.22), Distribuyo las instrucciones de diferentes maneras para evitar el caos (preparativos de tarjetas de tareas, papeles de trabajo) (M=4.21), Aclaro a los estudiantes los límites de movilidad permitidos (M=4.20) y Expongo reglas básicas para los estudiantes en base a las cuales comenzarán y terminar al principio y al final de la lección, respectivamente (M=4.20). En cambio, el ítem con la calificación más baja es Distribuyo a los estudiantes en grupos homogéneos en cuanto a capacidades (M=2.24).

Como se ha comentado, esta dimensión se subdivide en 6 subdimensiones, con un total de 65 elementos, aspecto que dificulta la exposición de los resultados obtenidos del proceso de análisis estadístico. Por esta razón, se decide trabajar con la variable conjunto de cada una de las subdimensiones de las que se compone la dimensión mencionada, siendo estas Diferenciación de contenidos, Diferenciación en el proceso, Diferenciación de los recursos didácticos, Diferenciación en los resultados, Diferenciación en la evaluación y Diferenciación en la gestión del aula.

La comparación de las medias de las diversas Estrategias del proceso de enseñanza-aprendizaje con el Género de los docentes indica que existen diferencias significativas en 5 de los 6 ítems. Estos se encuentran en Diferenciación de contenidos (t=-2.472, p=0.007), Diferenciación en el proceso (t=-1.807, p=0.036), Diferenciación en los resultados (t=-2.061, p=0.020), Diferenciación en la evaluación (t=-2.891, p=0.002) y Diferenciación en la gestión del aula (t=-1.953, p=0.026), en las que las mujeres utilizan más estrategias de diferenciación que los hombres.

Al realizar la misma prueba atendiendo a la variable Formación en educación especial, se puede observar que existen diferencias significativas en todos ellos, siendo

los profesores con formación los que tienen los valores más altos frente a los que no la tienen (ver tabla X, página X).

Al comprobar las medias según la variable Tipo de docente, se puede observar que existen diferencias significativas en 2 de las 6 subdimensiones. El profesorado de Educación Especial tiene valores superiores a los de Educación General en Diferenciación de contenidos (t=-2.401, p=0,008) y Diferenciación en el proceso (t=-3.205, p=0,004).

Para comprobar las posibles diferencias entre los elementos de las subdimensiones según la variable Edad del docente hallando estas en los 6 ítems (ver tabla X, página X). Tras aplicar la prueba de Scheffé post-hoc, se confirma que los 6 son significativos, siendo los resultados los siguientes:

- En Diferenciación en contenidos (F=5.861, p=0.000) ostenta valores mayores el profesorado de edad comprendidas entre 30-34 años con respecto a los de 50-54 (I-J=0.302, p=0.043) y 55-59 (I-J=0.359, p= 0,018). De igual manera ocurre entre los de 40-44 frente a 50-54 (I-J=0.254, p=0.044) y 55-59 años (I-J=0.310, p=0.020).
- En Diferenciación en el proceso (F=5.020, p=0.000) tienen valores más altos los docentes de 30-34 años que para los de 50-54 (I-J=0.364, p=0.031) y 55-59 años (I-J=0.398, p =0,035).
- En Diferenciación de los recursos didácticos (F=6.702, p=0.000) obtienen valores más altos los docentes de edad entre 30-34 años que por los de 45-49 (I-J=0.748, p=0.000), 50-54 (I-J=0.732, p =0,002), 55-59 (I-J=0,670, p=0,010) y 60-64 años (I-J=0,718, p=0,006).
- En Diferenciación en los resultados (F=5,679, p=0,000) se valora en mayor medida por el profesorado de edad de 30-34 años frente a los de 50-54 años (I-J=0,498, p=0,023).
- En Diferenciación en la evaluación (F=5.679, p=0.000) se obtiene valores más altos en el profesorado de 30-34 años que de 45-49 (I-J=0.404, p=0.001), 50-54 (I-J=0.398, p= 0,001), 55-59 (I-J=0,415, p=0,002) y 60-64 años (I-J=0,363, p=0,022).
- Finalmente, en Diferenciación en el gestión del aula (F=6.425, p=0.000) los valores más altos se dieron en los docentes de edades entre 30-34 años en comparación con 45-49 (I-J=0,287, p=0,019), 50-54 (I-J=0,332, p=0,001), 55-59 (I-J=0,296, p=0,032) y 60-64 (I-J=0,301, p=0,036). De igual forma, se presentan estas diferencias significativas entre las edades de 40-44 frente a los de 50-54 años (I-J=0.0228, p=0.027).

Al comprobar las posibles diferencias atendiendo a la variable Años de Experiencia, estas se advirtieron en los 6 ítems, confirmadas las 6 por la prueba post-hoc de Scheffé, siendo los resultados los siguientes:

- En Diferenciación en contenidos (F=9.363, p=0.000) las medias más altas las tienen los docentes entre 1-5 años de experiencia frente a los que llevan entre 16-20 (I-J=0,301, p=0,026) y 21-25 (I-J= 0,329, p=0,016). De igual forma ocurre en quienes tienen entre 6-10 y 16-20 (I-J=0,374, p=0,000), 21-25 (I-J=0,391, p=0,000) y 26-30 (I-J=0,330, p=0,007), así como los que tienen entre 11-15 años frente a los de 16-20 (I-J=0,288, p=0,003) y 21-25 años de experiencia (I-J=0,306, p=0,002).
- En Diferenciación en el proceso (F=8,188, p=0,000) la valoración más alta la ostentan los profesores con 6-10 años de experiencia frente a los que tienen 16-20 (I-J=0,464, p=0,000), 21-25 (I-J=0,490, p=0,000), 26-30 (I-J=0,428, p=0,001) y más de 30 años de antigüedad (I-J=0,468, p=0,003).
- En Diferenciación de los recursos didácticos (F=5.944, p=0.000) las medias más altas la tienen los docentes con 1-5 años de experiencia en comparación con los de 16-20 (I-J=0,577, p=0,023). También se hallan diferencias entre los que tienen de 6-10 con respecto a 16-20 (I-J=0,642, p=0,001), 21-25 (I-J=0,515, p=0,034), 26-30 (I-J=0,550, p= 0,025) y más de 30 años de experiencia como docente (I-J=0,611, p=0,032).
- En Diferenciación en los resultados (F=4.632, p=0.000) presenta la media más alta el profesorado con 6-10 años de experiencia profesional que aquellos con 16-20 (I-J=0.509, p=0.005), 21-25 (I-J =0,527, p=0,004) y 26-30 años de experiencia (I-J=0,448, p=0,049).
- En Diferenciación en la evaluación (F=6.489, p=0.000) son los docentes de 6-10 años de experiencia los que tiene los valores más altos frente a los de 16-20 (I-J=0.356, p=0.001) y 21-25 (I-J=0.3558, p=0,001).
- Por último, En Diferenciación en la gestión del aula (F=8,258, p=0,000) el dato más alto lo ostentan quienes tienen de 1-5 años de experiencia frente a 16-20 (I-J=0,262, p=0,035), así como quienes han estado entre 6-10 años frente a 16-20 (I-J=0,358, p=0,000), 21-25 (I-J=0,323, p=0,000) y 26-30 (I-J=0,309, p=0,000).

### *4.2.4. Factores importantes para la enseñanza de alumnos con necesidades educativas especiales*

En el siguiente apartado se exponen los resultados de la opinión de los docentes sobre los factores importantes en la enseñanza de los estudiantes NEE. En este aspecto, se puede decir que de manera general los participantes consideran que todos las cuestiones planteadas son relevantes para atender al alumnado NEE en el aula ordinara. Los valores más altos son los relacionados con Enseñanzas universitarias especializadas (M=4.52), Estudios Superiores/Formación Profesional (M=4.49), Paciencia y conciencia hacia los niños/adolescentes (M=4.50), Conciencia sobre los problemas psicológicos y sociales de los estudiantes (M=4.42), Medios y materiales para lograr los objetivos del currículo (M=4.39), Importancia de la diversidad (M=4.37) e Importancia de la inclusión (M=4.41), siendo las menos valoradas los Conocimientos, destrezas y habilidades especializados promover el desarrollo de la personalidad de los alumnos (M=3.78), así como la Solidaridad y cooperación con los compañeros (M=3.87) y la Concienciación (M=3.87).

Al intentar verificar la existencia de diferencias estadísticamente significativas entre los ítems de esta dimensión y la variable Género, estas diferencias se evidenciaron en 4 de los 12 ítems: Solidaridad y cooperación con colegas (t=-1.888, p=0.030), Conocimientos especializados, destrezas y habilidades para promover el desarrollo de la personalidad de los estudiantes (t=-1.886, p=0.030), Conciencia (t=-1.852, p =0.032) e Importancia de la diversidad (t=-1.903, p=0.029) en la que los hombres tienen medias superiores.

Al comparar las medias entre los Factores importantes para enseñar a los alumnos NEE en función a la variable Formación en educación especial, se hallan diferencias en 11 de los 12 ítems, en los cuales los docentes que tienen Formación en educación especial otorgan valores superiores a los que no la tienen en los siguientes aspectos:

- Solidaridad y cooperación con los compañeros (t=9.045, p=0.000)
- Educación universitaria especializada (t=5.545, p=0.000)
- Estudios Superiores/Formación Profesional (t=5.831, p=0.000)
- Solidaridad y comunicación con los padres (t=4.996, p=0.000)
- Conciencia sobre los problemas psicológicos y sociales de los estudiantes (t=4.815, p=0.000)
- Tiempo para una buena implementación curricular (t=5.431, p=0.000)

- Medios y materiales para alcanzar los objetivos del currículo (t=4.097, p=0.000)
- Conocimientos, destrezas y habilidades especializados para promover el desarrollo de la personalidad de los estudiantes (t=5.213, p=0.000)
- Conciencia sobre la educación del alumnado NEE (t=4.184, p=0.000)
- Importancia de la diversidad (t=4.634, p=0.000)
- Importancia de la inclusión (t=4.494, p=0.000).

Al comparar las medias entre los elementos de esta dimensión con la variable Tipo de docencia, los resultados muestran diferencias significativas en 5 de los 12 ítems. Los docentes de Educación Especial consideran con mayor importancia, que los de Educación General, la Solidaridad y cooperación con los compañeros (t=-2.056, p=0.020). Por su parte, el profesorado de Educación General considera con más relevancia la Educación Universitaria Especializada (t=3.475 p=0.003), Educación Superior, Formación Profesional (t=2.350 p=0.021), Medios y materiales para lograr los objetivos del plan de estudios (t=2.208 p=0.014) y la Importancia de la diversidad (t=2.611 p=0.012).

Al comprobar las posibles diferencias entre los distintos elementos según la variable Edad, estas se advirtieron en 5 de los 12 ítems. La prueba de post-hoc Scheffé, confirma que 4 son significativas, siendo los resultados los siguientes:

- La Formación universitaria especializada (F=3.570, p=0.001) es más valorada por la franja de edad de 30-34 años frente a la de 50-54 (I-J=0.561, p=0.008).
- La Educación Superior/Formación Profesional (F=3.495, p=0.001) tiene más relevancia para los docentes de 30-34 años frente a los de 45-49 (I-J=0.526, p=0.035) y los de 50-54 (I-J=0.561, p=0.012).
- El tiempo para una buena implementación curricular (F=4.154, p=0.000) es más relevante para el grupo de docentes de 30-34 años que para los de 45-49 (I-J=0.621, p=0.005) y 50-54 (I-J =0,637, p=0,002).
- Los medios y materiales para alcanzar los objetivos del currículo (F=4.686, p=0.000) son percibidos con mayor importancia por los docentes de 30-34 años que los de 45-49 (I-J=0.605, p=0.000) y 50 -54 años (I-J=0,593, p=0,001).

Para comprobar posibles diferencias entre los elementos de los Factores importantes para la enseñanza de alumnos con necesidades educativas especiales en cuanto a años de experiencia, se aplicó un Análisis de Varianza para un factor

(n.s.=0,05), advirtiéndolos en 9 de los 12 ítems. Después de aplicar la prueba de Scheffé post-hoc, se confirma que 3 son significativos, siendo los resultados los siguientes:

- La Solidaridad y cooperación con los compañeros (F=4.290, p=0.000) es valorada en mayor medida por los profesores con una experiencia de entre 6-10 años en la docencia en comparación con los que llevan 21-25 años enseñando (I-J=0.519, p =0,039).
- El Tiempo para una buena implementación curricular (F=3.437, p=0.001) es más importante para los docentes de 1-5 años de experiencia que para los de 16-20 años (I-J=0.527, p=0.038).
- Los Medios y materiales para alcanzar los objetivos del currículo (F=2.770, p=0.008) se valoran en mayor medida para el grupo con 1-5 años de experiencia que para los que llevan 16-20 años (I-J=0.497, p=0,029).

### 4.3. Necesidades Formativas de los docentes para atender al alumnado NEE

El último de los aspectos analizados fueron las Necesidades de formación de los docentes para atender al alumnado NEE en el aula ordinaria. Los resultados muestran que, en su mayoría, los docentes perciben como necesaria la Educación especial (M=4,67), seguida de Psicología escolar (M=4.32) y Metodología de la enseñanza (M=4.31). En un nivel un poco más bajo consideran que necesitan Teorías del aprendizaje: Motivación (M=3.87), Psicología general (M=3.39), Psicología del desarrollo (M=3.39) y Teorías pedagógicas (M=3.31). Los aspectos que menor valor tienen para ellos son los conocimientos de Filosofía de la educación (M=2.80) y Teorías del desarrollo del lenguaje (M=2.79). Cabe señalar que son pocos los docentes que pensaron que no necesitaban ninguna de las capacitaciones propuestas (M=1.06).

Al comprobar si existen diferencias estadísticamente significativas sobre las Necesidades formativas del profesorado en función de la variable Formación en educación especial, se hallaron evidencia en 4 de los 5 ítems. Estos se encuentran en conocimientos de Psicología General (t=-1.848 p=0.033), Psicología Escolar (t=-2.535 p=0.006), Psicología del Desarrollo (t=-2.935 p=0.002) y Teorías Pedagógicas (t=-1.931 p=0.027), las cuales son de mayor relevancia para los docentes de Educación Especial.

De igual forma, al tratar de verificar la existencia de diferencias estadísticamente significativas entre las Necesidades de formación atendiendo a la variable Formación en Educación Especial, estas se evidencian en los 12 ítems. Los docentes con Formación en Educación Especial consideran más relevante la formación en las siguientes áreas que los docentes que no la tienen:

- Psicología general (t=3.826, p=0,000).
- Psicología escolar (t=5.522, p=0.005).
- Psicología del desarrollo (t=2.351, p=0.010).
- Metodología de la enseñanza (t=5.289, p=0.000).
- Teorías pedagógicas (t=4.126, p=0.000).
- Teorías del aprendizaje – Motivación (t=4.123, p=0.000).
- Filosofía de la educación (t=3.564, p=0.000).
- Teorías del desarrollo del lenguaje (t=2.772, p=0.003).
- Educación Especial (t=2.355, p=0.010).
- Ninguno (t=-2.308, p=0.011).

Por otro lado, al tratar de verificar la existencia de diferencias estadísticamente significativas sobre las Necesidades de formación en función de la variable Tipo de docente, se hallaron evidencia en 5 de los 12 ítems. Los docentes de Educación Especial otorgan valores más altos que los docentes de Educación General en los siguientes aspectos:

- Psicología general (t=-3.058, p=0.006).
- Teorías pedagógicas (t=-2.739, p=0.000).
- Filosofía de la educación (t=-1.879, p=0.000).
- Teorías del desarrollo del lenguaje (t=-2.976, p=0.003).
- Educación Especial (t=2.052, p=0.010).

Por otro lado, se analizaron los elementos de la dimensión atendiendo a la variable Edad del docente encontrando diferencias en 4 de los 10 ítems. La prueba post-hoc de Scheffé confirma que es significativo en uno de los aspectos. La formación en Psicología escolar (F=3.839, p=0.001) es considera más necesaria para los docentes de 30-34 años que para los de 45-49 (I-J=0,549, p=0,011), 50-54 (I-J=0,513, p=0,020) y 55-59 años (I-J=0,619, p=0,006).

Para finalizar, al comprobar las posibles diferencias según la variable Años de experiencia del profesorado estas se evidenciaron en 9 de los 10 ítems, siendo confirmadas mediante la prueba de Scheffé post-hoc, 3 de ellas como significativas:

- Metodología de la enseñanza (F=4.688, p=0.000) es más valorada por el profesorado con 6-10 años de experiencia que los que llevan de 16-20 (I-J=0.470, p=0.018).

- Teorías pedagógicas (F=4.343, p=0.000) obtiene una valoración más alta por parte de los profesores con 11-15 años de experiencia que por aquellos con 16-20 (I-J=0.555, p=0.032) y 21-25 (I-J=0.664, p=0.005).
- Teorías del desarrollo del lenguaje (F=4.149, p=0.000) tiene mayor relevancia para los docentes con 11-15 años de experiencia en comparación con los que tienen de 16-20 (I-J=0.587, p=0.048) y 21-25 años de antigüedad (I-J=0.780, p=0.001).
- Metodología de la enseñanza (F=4.688, p=0.000) es mejor valorada por profesores con 6-10 años de experiencia que por 16-20 (I-J=0.470, p=0.018).
- Teorías pedagógicas (F=4.343, p=0.000) obtiene mayor importancia para los docentes con 11-15 años de experiencia que para aquellos con 16-20 (I-J=0.555, p=0.032) y 21-25 (I-J=0.664, p=0,005).
- Teorías del desarrollo del lenguaje (F=4.149, p=0.000) es más relevante para docentes con una experiencia de 11-15 años en comparación con aquellos que tienen 16-20 (I-J=0.587, p=0.048) y 21-25 (I-J =0.780, p=0.001).

### 4.4. Estudio correlacional entre las dimensiones

Para poder profundizar en el conocimiento de las competencias del docente de Educación Secundaria griego para atender a los alumnos con NEE en el aula ordinaria, se quiso comprobar la posible relación entre las diversas dimensiones. Para ello, como se ha comentado anteriormente, se trabajó con las variables conjunto de los elementos de cada una de las dimensiones y subdimensiones del estudio a las que se les calculó la media y la desviación típica con la finalidad de tener una primera visión general de ellas (ver figura 28, página 183).

A continuación, se analizaron las posibles relaciones entre las variables Emociones, Actitudes e Inquietudes con la Educación Inclusiva, la Eficacia de los docentes para manejar a los alumnos NEE y las Estrategias para enseñar a los alumnos NEE, mediante el cálculo del índice de correlación de Pearson y su respectivo nivel de significación (ver tabla 58, página 184).

Los resultados de la correlación entre Emociones, Actitudes e Inquietudes sobre la Educación Inclusiva y la Eficacia de los docentes para manejar a los alumnos NEE muestran que la Eficacia para implicar al alumnado, la Eficacia en las estrategias de Instrucción y el Manejo del Aula se correlacionan significativa y negativamente con las Emociones, con intensidad moderada, y con las Inquietudes, siendo la intensidad alta. Por otro lado, son significativa y positivamente correlacionada con las Actitudes, siendo

la intensidad baja. Estos resultados significan que sentimientos positivos, actitudes positivas y menos inquietudes conducen a una mayor eficacia.

A su vez, los resultados muestran que las Estrategias para enseñar a estudiantes con necesidades educativas especiales se correlacionan significativa y negativamente con las Emociones, siendo su intensidad moderada-baja y con la Inquietudes, con una intensidad moderada-alta. Por otro lado, se correlacionan significativa y positivamente con las Actitudes, con una intensidad baja. Estos resultados significan que los sentimientos positivos, las actitudes positivas y menos inquietudes conducen a un mayor uso de estrategias de diferenciación.

Además, se buscó la relación entre la Eficacia de los docentes para manejar a los alumnos NEE y las Estrategias para enseñar a los alumnos NEE (ver tabla 59, página 185). Los resultados muestran que las Estrategias para enseñar a los estudiantes NEE se correlacionan significativa y positivamente con Eficacia de los docentes para manejar a los alumnos NEE, con una intensidad moderada. Estos resultados significan que los maestros que son más eficientes en la participación de los estudiantes, las estrategias de instrucción y el manejo del aula utilizan estrategias de diferenciación en mayor medida.

En base a la relación de interdependencia descrita, se aplicó un estudio de regresión lineal de carácter múltiple con la finalidad de establecer, de manera independiente, una medida eficaz que determinase el comportamiento de las Emociones, las Actitudes y las Inquietudes en base a los siguientes predictores: $X_1$=Eficacia para implicar al alumnado, $X_2$=Eficacia en las estrategias de instrucción, $X_3$=Eficacia en la gestión del aula, $X_4$=Diferenciación de contenidos, $X_5$=Diferenciación en el proceso, $X_6$=Diferenciación en los recursos didácticos, $X_7$=Diferenciación en los resultados, $X_8$=Diferenciación en la evaluación y $X_9$=Diferenciación en la gestión del aula.

Con respecto a las Emociones (ver tabla 65), los resultados obtenidos indican que han sido seleccionadas 2 de la 9 variables predictoras incorporadas, con una explicación de la varianza de 28.7%. El orden de incorporación de estas al modelo y su peso específico ha sido:

- Eficacia en las estrategias de instrucción ($X^2$), con una explicación de la variabilidad del criterio del 26.3%.
- Diferenciación en los resultados de aprendizaje ($X^7$), con una explicación de la variabilidad del criterio del 2.8%.

En lo relativo a las Actitudes del profesorado (ver tabla 66), los resultados revelaron que fue seleccionada 1 de las 9 variables predictoras introducidas, con una explicación de la variabilidad del criterio de 16.9%. La variable fue la Eficacia de participación del estudiante ($X_1$).

Por su parte, el análisis de la Inquietud del docente (ver tabla 67) mostró la incorporación de 4 de las 9 variables predictoras incorporadas, con una explicación de la varianza de 60.7%. El orden de incorporación de estas al modelo y su peso específico ha sido:

- Eficacia para implicar al alumnado ($X_1$), con una explicación de la variabilidad del criterio de 56.8%.
- Eficacia en las estrategias de instrucción ($X_2$), con una explicación de la variabilidad del criterio de 2.4%.
- Diferenciación en el proceso ($X_5$), con una explicación de la variabilidad del criterio de 1.3%.
- Diferenciación en los resultados de aprendizaje ($X_7$), con una explicación de la variabilidad del criterio de 0.7%.

Finalmente, se quiso conocer la relación de dependencia de las Necesidades de los profesores para abordar las necesidades de aprendizaje de los estudiantes con dificultades de aprendizaje en base a los siguientes predictores: $X_1$=Eficacia de participación del estudiante, $X_2$=Eficacia en las estrategias de instrucción, $X_3$=Eficacia en la gestión del aula, $X_4$=Diferenciación en contenido, $X_5$=Diferenciación en el proceso, $X_6$=Diferenciación en los recursos docentes, $X_7$=Diferenciación en los resultados de aprendizaje, $X_8$=Diferenciación en la evaluación y $X_9$=Diferenciación en la gestión del aula.

Los resultados revelan que la incorporación de 4 de las 9 variables predictoras incorporadas, con una explicación de la varianza de 41.1%, siendo su incorporación al modelo y su peso específico el siguiente (ver tabla 63):

- Eficacia de participación del estudiante, con una explicación de la variabilidad del criterio de 32.7%.
- Diferenciación en la gestión del aula, con una explicación de la variabilidad del criterio de 3.4%.
- Diferenciación en los recursos docentes, con una explicación de la variabilidad del criterio de 2%.
- Diferenciación en la evaluación, con una explicación de la variabilidad del criterio de 2,9%.

## 5. Conclusiones

El objetivo general de la investigación es determinar el acceso y el uso de métodos, herramientas y habilidades específicas que tienen los educadores griegos en general del Sistema Educativo Secundario, con el fin de facilitar el proceso de enseñanza de los estudiantes NEE.

El primer objetivo específico fue describir el estado actual de los centros educativos del Sistema Educativo Secundario en cuanto a la atención de los estudiantes NEE:

- La mayoría del profesorado no tiene formación en educación especial, aunque cada aula tiene una cantidad de alumnos con NEE, que en la mayoría de los casos son dificultades de aprendizaje, seguidas de problemas de conducta y un pequeño porcentaje de disfunción mental u otras casuísticas. menos representativo
- Adicionalmente, se encontró que la mayoría de los docentes no cuentan con información adecuada sobre los estudiantes con NEE y reciben esta información por los informes KESY o por los docentes de educación especial, aunque se dan casos en los que se informan por el currículo.
- En cuanto a la frecuencia de las reuniones entre el director y los consejeros de Educación General y Especial o entre el director y los padres de los alumnos con NEE, se dan en contadas ocasiones.
- En cuanto a los recursos, tecnologías alternativas, programas de lectoescritura, sistemas audiovisuales, sistema de escritura Braille, etc. que brinda su escuela para los alumnos con NEE, se encontró que la mayoría de las escuelas no cuentan con recursos específicos, si bien se mencionó definitivamente la necesidad de formación de los docentes en lo que se refiere a los alumnos NEE, aunque las escuelas no suelen ofrecer esta formación.
- En cuanto al apoyo institucional, proviene en su mayoría de KESY que es el organismo que ayuda en la formación de los alumnos con NEE, pero las propias escuelas en muchos casos ayudan a los alumnos con NEE.
- Finalmente, en cuanto a la asistencia brindada por el Ministerio de Educación a la escuela con respecto a temas de educación especial, es muy rara y los fondos son muy bajos y se invirtieron en su mayoría en apoyo paralelo y en la contratación de maestros asistentes especiales y maestros de educación especial y menos en Libros Especiales y equipos.

El segundo objetivo fue conocer las competencias del profesorado de Educación Secundaria Griega para atender al alumnado NEE en el aula ordinaria:

- Los profesores de educación secundaria tienen opiniones neutrales a positivas sobre sus sentimientos hacia la inclusión, lo que significa que no piensan que la discapacidad sea algo “malo”. Estas opiniones estaban de alguna manera correlacionadas con el género, la formación en educación especial, el tipo de docente y la edad.
- En cuanto a las habilidades de los maestros para manejar a los estudiantes con necesidades educativas especiales, están por debajo del promedio en la capacidad de manejar a estos estudiantes y sus habilidades estaban de alguna manera correlacionadas con el género, la formación en educación especial, la experiencia, el tipo de docente y la edad.
- En cuanto a las estrategias de los docentes para enseñar a los estudiantes con NEE, se encontró que de las 6 subdimensiones, la diferenciación en el contenido es la estrategia más utilizada, mientras que el uso de las estrategias se correlacionó con el género, tipo de docente, la edad y los años de experiencia.
- En cuanto a los factores importantes para la enseñanza de los alumnos NEE se puede decir que influyen numerosos aspectos, siendo de especial relevancia la Educación Superior/la Formación Profesional, la Paciencia y conciencia hacia el alumnado, la Conciencia sobre los problemas psicológicos y sociales de los alumnos, los medios y materiales para lograr los objetivos del currículo, la importancia que el docente conceda a la diversidad, así como a de la inclusión. Estas opiniones están relacionadas con el género, el tipo de docente, la edad y los años de experiencia.

El tercer objetivo fue detectar las necesidades formativas de los educadores griegos del Sistema Educativo Secundario en las competencias básicas, para atender a los alumnos con NEE en la clase ordinaria. A este respecto, la mayoría de los docentes perciben como necesaria contar con formación en educación especial, seguida de conocimientos sobre psicología escolar y metodologías de enseñanza, estando relacionada dicha demanda por el género, la formación en Educación Especial, el tipo de docente, la edad y los años de experiencia.

El cuarto objetivo del presente estudio fue una propuesta de Plan de formación para el profesorado que ayude a mejorar la atención a los estudiantes NEE del Sistema Educativo de Educación Secundaria griegos, en la clase ordinaria. Este tiene dos objetivos claramente definidos, por un lado, enriquecer los conocimientos y experiencias

de los participantes y, por otro lado, fortalecer sus habilidades con el fin de poder gestionar eficazmente el proceso de enseñanza-aprendizaje del alumnado NEE, teniendo la base teórica necesaria tanto a nivel pedagógico-docente, así como a nivel de práctica diaria.

El esquema propuesto como Plan de formación incluye siete módulo (ver tabla 64).

**Table 64**

*Módulo y descripción de su contenido*

| Módulos | Conceptos básicos | Descripción |
|---|---|---|
| 1er Módulo | Discapacidades sensoriales y físicas | Se analizan los conceptos básicos y términos correspondientes en materia de Educación Especial y Educación y discapacidad |
| 2º Módulo | Trastornos generalizados del desarrollo: discapacidad intelectual y técnicas de enseñanza | Se refiere a los trastornos generalizados del desarrollo, la discapacidad mental, así como las técnicas de entrenamiento didáctico. Se analizan las características de las formas específicas de discapacidad y la terminología pertinente, así como la enseñanza de las personas con estas formas de discapacidad y las técnicas utilizadas en ella con numerosos ejemplos. |
| 3er Módulo | Dificultades especiales de aprendizaje - Evaluación e intervención docente | Se analizan cuestiones relacionadas con las Dificultades Especiales de Aprendizaje: sus características, su dimensión psicosocial y emocional, su valoración y el correspondiente proceso diagnóstico, así como una extensa referencia a las intervenciones y aplicaciones docentes. |
| 4º Módulo | Dificultades de lectura- Superdotación - Problemas de conducta | Se refiere a las dificultades de lectura y las intervenciones correspondientes, los problemas de comportamiento y su manejo, así como la superdotación. |
| 5º Módulo | Inclusión - Consejería y otros temas de educación | Se refiere al enfoque de la inclusión, la aclaración de los términos pertinentes y las formas de lograrlo, las cuestiones prácticas de la gestión de la discapacidad, en el contexto de la cooperación escolar y familiar, la sexualidad de las personas con |

| Módulos | Conceptos básicos | Descripción |
|---|---|---|
| | | discapacidad, así como los modelos de educación alternativos para las personas con discapacidad. |
| 6º Módulo | Las TIC en Educación Especial y Educación – Aplicaciones | Se refiere al papel de la tecnología de la información y la comunicación en la educación especial y la educación y su conexión con diversas formas de discapacidad, así como al registro y desarrollo de software, aplicaciones y juegos que pueden utilizarse en la educación de las personas con discapacidades. |
| 7º Módulo | Trabajo final | Se refiere al diseño de intervenciones de enseñanza para estudiantes de preescolar y / o edad escolar con discapacidades o necesidades educativas especiales. Los aprendices son apoyados durante todo el trabajo por colaboradores científicos del programa. |

La evaluación prevista conlleva que para la finalización exitosa del programa se debe lograr una puntuación mayor o igual al 50% en cada módulo del programa (escala: 0-100%, Básico: 50%, Excelente: 100%). En el caso de que el promedio de las pruebas de evaluación, en uno o más módulos del programa, no supere el 50%, el alumno tiene la posibilidad de volver a examinarse en el módulo o módulos en los que no haya logrado la calificación mínima.

Por último, con el fin de conocer el grado de satisfacción de los alumnos con la formación recibida, se implementará un cuestionario sobre la calidad y utilidad de los módulos. El análisis de la información recogida ayudará a establecer posibles mejoras en el plan de formación.

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# Appendix

## Appendix I.

### Parametric study of the questionnaire

The study of the validity and reliability of a questionnaire makes it possible to assess the consistency and accuracy of what is intended to be measured and to detect those questions that may be confusing or present some difficulty in their comprehension. To do this, the following analyses should be considered:

- Internal Consistency Analysis, which allows to check the significance of the test items, while each one of them measure a portion of the trait or characteristic that is desired to study, a test that is performed using Cronbach's Alpha coefficient (Del Rincon et al., 1995, p. 54).
- Analysis of the capacity of discrimination of the elements, using the Student t test among the means of the established groups, so as to reinforce the one-dimensional character of the test (Garcia, Gil and Rodriguez, 1995, p. 24).

To carry out the validation of the questionnaire, a representative sample of 35 secondary education teachers from various schools in the Prefecture of Kavala (Greece) was implemented: 42.9% of schools in Suburban areas, 40% of Rural area and 17.1% of Community area.

Of the teachers, 37.1% were men and 62.9% were women, aged between 32 to 62 years old and between 4 and 30 years of professional experience. Most teachers (57.1%) had a Bachelor's degree, 37.1% Postgraduate degree and 2.9% claimed to have Second Degree University and Doctoral title (respectively). Of the sample, 91.4% were teachers of General Education and 8.6% of Special Education, of which 48.6% claimed to have training in the attention of the SEN students and 51.4% did not have it.

Cronbach's Alpha statistical measure was used to check the reliability of the scales in the questionnaire, setting the measurement value above 0.7 as the criterion of high reliability (Nunally, 1978). The results showed a high level of reliability in all of them, with an alpha coefficient of the total of the scale elements of 0.962. In addition, the coefficient value was calculated for each of the dimensions and their corresponding subdimensions, obtaining values above 0.7 (see table 65).

**Table 65**

*Alpha coefficient of the questionnaire and according to its dimensions and subdimensions*

| Dimension | Cronbach's Alpha |
|---|---|
| Evaluation of the emotions, attitudes and concerns of teachers about inclusive education | 0.833 |
| Emotions | 0.924 |
| Attitudes | 0.867 |
| Concerns | 0.768 |
| Teacher effectiveness in inclusive learning environments | 0.969 |
| Effectiveness for instructional strategies | 0.919 |
| Effectiveness for classroom management | 0.958 |
| Effectiveness for students engagement | 0.895 |
| Strategies of the teaching-learning process to create an environment of inclusion in the classroom | 0.967 |
| Differentiation in content | 0.863 |
| Differentiation in the process | 0.871 |
| Differentiation in teaching resources | 0.912 |
| Differentiation in products | 0.962 |
| Differentiation in the assessments | 0.819 |
| Differentiation in the classroom management | 0.882 |
| Important factors for teaching with an inclusive approach | 0.885 |
| Educational needs to serve students with SEN | 0.865 |
| Total | 0.962 |

In turn, the behavior of each of the scalar items in the questionnaire was analyzed. The results indicated that 10 of the 117 elements have alpha coefficients greater than 0,962, so these should be reviewed. The items are (see table 66):

- B2. I dread the thought that I could eventually end up with special educational needs ($\alpha$=0.963)
- B4. I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom ($\alpha$=0.964)
- B5. I tend to make contacts with people with disabilities brief and I finish them as quickly as possible ($\alpha$=0.964)
- B7. I am concerned that my workload will increase if I have students with disabilities in my class ($\alpha$=0.964)
- B9. I would feel terrible if I had a disability/ special educational need (a=0.963)
- B10. I am concerned that I will be more stressed if I have students with disabilities in my class ($\alpha$=0.964)

- B11. I am afraid to look directly at a person with a disability ($\alpha$=0.963); B13. I find it difficult to overcome my initial shock when meeting people with severe physical disabilities ($\alpha$=0.963)
- B14. I am concerned that I do not have the knowledge and skills required to teach students with disabilities ($\alpha$=0.965)
- D6.2. I distribute students in homogeneous groups in terms of capabilities ($\alpha$=0.963).

**Table 66**

*Behavior of the scalar items of the instrument*

| | Scale average if the item has been deleted | Scale variance if the element has been deleted | Total element correlation corrected | Cronbach's alpha if the element has been deleted |
|---|---|---|---|---|
| B1. I am concerned that students with special educational needs will not be accepted by the rest of the class. | 408.37 | 1509.858 | 0.160 | 0.962 |
| B2. I dread the thought that I could eventually end up with special educational needs. | 409.19 | 1559.849 | -0.606 | 0.963 |
| B3. Students who have difficulty expressing their thoughts verbally should be in regular classes. | 409.19 | 1507.387 | 0.194 | 0.962 |
| B4. I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | 408.81 | 1564.387 | -0.449 | 0.964 |
| B5. I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | 409.85 | 1571.131 | -0.606 | 0.964 |
| B6. Students who are inattentive should be in regular classes. | 409.63 | 1532.858 | -0.182 | 0.962 |
| B7. I am concerned that my workload will increase if I have students with disabilities in my class. | 409.04 | 1569.037 | -0.548 | 0.964 |
| B8. Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. | 409.59 | 1490.635 | 0.417 | 0.961 |
| B9. I would feel terrible if I had a disability/ special educational need. | 409.15 | 1564.285 | -0.589 | 0.963 |
| B10. I am concerned that I will be more stressed if I have students with disabilities in my class. | 409.11 | 1588.103 | -0.724 | 0.964 |
| B11. I am afraid to look directly at a person with a disability. | 410.33 | 1550.769 | -0.492 | 0.963 |
| B12. Students who frequently fail exams should be in regular classes. | 409.44 | 1516.718 | 0.088 | 0.962 |
| B13. I find it difficult to overcome my initial shock when meeting people with severe physical disabilities. | 410.26 | 1553.046 | -0.482 | 0.963 |
| B14. I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | 409.11 | 1597.949 | -0.690 | 0.965 |
| B15. Students who need an individualized academic program should be in regular classes. | 409.41 | 1500.174 | 0.277 | 0.962 |
| C1. How well can you handle inappropriate behaviour in the classroom with children with special educational needs? | 408.59 | 1484.635 | 0.654 | 0.961 |

| | Scale average if the item has been deleted | Scale variance if the element has been deleted | Total element correlation corrected | Cronbach's alpha if the element has been deleted |
|---|---|---|---|---|
| C2. How much can you motivate students with special educational needs who are less interested in the lesson? | 408.89 | 1476.641 | 0.740 | 0.961 |
| C3. How much can you help students with special educational needs believe that they can make progress in school work? | 408.96 | 1482.037 | 0.646 | 0.961 |
| C4. How much can you do to get students special educational needs to follow classroom rules? | 408.70 | 1494.755 | 0.775 | 0.961 |
| C5. How much can you help students with special educational needs to appreciate the value of learning? | 409.26 | 1489.661 | 0.594 | 0.961 |
| C6. To what extent can you tailor the questions you ask to students with special educational needs? | 408.33 | 1463.308 | 0.736 | 0.960 |
| C7. To what extent can students with special educational needs follow the rules of your classroom? | 408.78 | 1499.564 | 0.391 | 0.961 |
| C8. To what extent can you implement a classroom management system for children with special educational needs? | 408.89 | 1437.641 | 0.803 | 0.960 |
| C9. To what extent can you use a variety of assessment strategies for children with special educational needs? | 408.93 | 1427.302 | 0.860 | 0.960 |
| C10. To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | 408.41 | 1457.251 | 0.807 | 0.960 |
| C11. How much can you help families of students with special educational needs to help their children make progress at school? | 409.19 | 1467.926 | 0.766 | 0.960 |
| C12. To what extent can you implement alternative learning strategies for children with special educational needs? | 408.89 | 1426.641 | 0.843 | 0.960 |
| C13. How much can you do to foster student creativity? | 408.89 | 1470.410 | 0.844 | 0.960 |
| C14. How much can you do to calm a student who is disruptive or noisy? | 408.67 | 1488.231 | 0.715 | 0.961 |
| C15. How well can you respond to defiant students? | 408.52 | 1495.259 | 0.547 | 0.961 |
| D1.1. I plan the lessons well before each class. | 407.93 | 1496.302 | 0.499 | 0.961 |
| D1.2. I incorporate differentiated instruction processes when I am planning for teaching. | 408.44 | 1498.179 | 0.544 | 0.961 |
| D1.3. I set clear and specific lesson goals. | 407.93 | 1503.917 | 0.437 | 0.961 |
| D1.4. I specify the suitable time interval per learning goal. | 408.15 | 1503.823 | 0.453 | 0.961 |
| D1.5. I consider individual differences and variations among students given the important impact this creates on the students? | 408.41 | 1487.020 | 0.612 | 0.961 |
| D1.6. I adjust the educational content to suit the educational needs e.g. tying the content with concepts and skills that a student desires to learn. | 408.37 | 1495.934 | 0.497 | 0.961 |
| D1.7. I provide support to students and encourage them to immerse themselves in problem-solving skills. | 407.85 | 1508.593 | 0.337 | 0.961 |
| D1.8. Selection of content: I give consideration to the identification of the main idea(s) of the topic or unit. | 408.04 | 1507.422 | 0.298 | 0.961 |

| | Scale average if the item has been deleted | Scale variance if the element has been deleted | Total element correlation corrected | Cronbach's alpha if the element has been deleted |
|---|---|---|---|---|
| D1.9. I give consideration to scoping to be in line with the capabilities and the needs of different students. | 408.19 | 1510.311 | 0.327 | 0.961 |
| D1.10. I do not deviate from the standard level that every student should reach to. | 409.56 | 1528.718 | -0.104 | 0.962 |
| D1.11. I present the content to the students in different speeds; I do not commit all students to the same timing. | 409.11 | 1495.641 | 0.365 | 0.961 |
| D1.12. Consideration of cognitive levels among students: I present the content in different 15 levels in line with the needs of the students (different reading levels, recorded texts, presentation and clarification of ideas using audio-visual media). | 408.63 | 1497.473 | 0.513 | 0.961 |
| D1.13. I avail the opportunity to students to immerse themselves into different activities that motivate their minds and increase their attentiveness. | 407.96 | 1483.575 | 0.586 | 0.961 |
| D1.14. Presenting the content in different ways: I diversify my pedagogy and the way I present the content in consideration of the levels and capabilities of the students (discussions audio-visual media and projects). | 408.44 | 1497.179 | 0.648 | 0.961 |
| D1.15. Pressure or impact of content: I summarize some of the existing information within the content provided, I do not compromise the main idea(s) that are to be taught within this topic. | 408.48 | 1495.413 | 0.690 | 0.961 |
| D2.1. I use activities that are compatible and suitable to the skills that students have. | 407.85 | 1502.362 | 0.488 | 0.961 |
| D2.2. I implement special plans to students (regular classroom activities and supplementary activities for the students with learning Disabilities). | 408.81 | 1488.695 | 0.592 | 0.961 |
| D2.3. I prepare special assignments for the students. | 409.00 | 1484.154 | 0.675 | 0.961 |
| D2.4. I provide additional support to students with learning Disabilities. | 408.81 | 1496.464 | 0.540 | 0.961 |
| D2.5. I adjust the time interval that students may need to carry out certain assignments. | 408.26 | 1501.815 | 0.449 | 0.961 |
| D2.6. I set different levels of expectations to conclude an assignment. | 408.30 | 1504.217 | 0.510 | 0.961 |
| D2.7. I encourage students to interact and participate; I seek to incorporate them in the topic at hand. | 407.74 | 1500.199 | 0.549 | 0.961 |
| D2.8. I use technology-based learning that decreases the span of losing attention disabilities in memorizing and low incentives that some students with learning Disabilities may have. | 408.44 | 1503.641 | 0.421 | 0.961 |
| D2.9. I normally form small groups to explain needed ideas and skills. | 409.26 | 1504.430 | 0.392 | 0.961 |
| D2.10. I use diversified learning strategies that suit different pedagogies and meet the aspired goals. | 408.63 | 1494.550 | 0.573 | 0.961 |
| D2.11. I provide resources and information to motivate initiatives among students for learning | 408.15 | 1493.208 | 0.570 | 0.961 |

| | Scale average if the item has been deleted | Scale variance if the element has been deleted | Total element correlation corrected | Cronbach's alpha if the element has been deleted |
|---|---|---|---|---|
| D3.1. Avail and employ technology resources to help increase motivations and incentives among students: reading and writing programs, word processors, spelling and grammar. | 408.26 | 1485.046 | 0.679 | 0.961 |
| D3.2. Writing and text programs (Word processors), spelling and grammar. Media that helps in reading, like recorders. | 408.37 | 1475.319 | 0.689 | 0.961 |
| D3.3. Audio-visual systems that allow reading texts aloud. | 408.41 | 1471.481 | 0.742 | 0.961 |
| D3.4. Avail different learning resources that serve the environment in an enjoyable way that attracts the learners (books, magazines, photographs/images). | 407.81 | 1485.541 | 0.769 | 0.961 |
| D3.5 I avail different types of learning resources that serve the environment in an enjoyable way that attracts the learners (video, computers, and websites). | 407.81 | 1485.541 | 0.769 | 0.961 |
| D4.1. I give students the opportunity to participate in activities as individuals or in groups or in a cooperative manner. | 407.93 | 1476.610 | 0.815 | 0.961 |
| D4.2. I allow students to present their productions verbally. | 407.96 | 1479.575 | 0.732 | 0.961 |
| D4.3. I allow students to present their productions verbally (oral presentation, singing, poetry recitation). | 407.93 | 1473.533 | 0.871 | 0.960 |
| D4.4. I allow students to present their productions in a written manner. | 407.89 | 1477.641 | 0.833 | 0.961 |
| D4.5. I allow students to present their productions in performance style (acting). | 407.89 | 1474.103 | 0.900 | 0.960 |
| D5.1. I rely on continuous and varied assessments of students: Pre- and Post-assessments | 407.89 | 1492.103 | 0.613 | 0.961 |
| D5.2. I adopt assessments of teachers and peers. | 408.70 | 1538.678 | -0.339 | 0.962 |
| D5.3. I use a rating scale (rubrics) to assess the students. | 409.11 | 1478.179 | 0.715 | 0.961 |
| D5.4. I print out test papers using a big / large font that is suitable to the needs of the students. | 409.15 | 1498.977 | 0.457 | 0.961 |
| D5.5. I read the questions to the students. | 407.96 | 1487.037 | 0.564 | 0.961 |
| D5.6. I give a break in the middle of the assessment interval. | 408.44 | 1484.103 | 0.618 | 0.961 |
| D5.7. I add some illustrative images or drawings to help the students understand the questions. | 408.85 | 1481.900 | 0.681 | 0.961 |
| D5.8. I assess students according to pivotal and referenced indicators. | 408.41 | 1484.943 | 0.700 | 0.961 |
| D5.9. I adopt individual and group assessments. | 408.37 | 1491.088 | 0.454 | 0.961 |
| D5.10. I give some students extra time to answer questions. | 407.74 | 1498.430 | 0.700 | 0.961 |
| D5.11. I take into consideration the homework and testing paragraphs in classifying via Bloom's classic Taxonomy of educational (remembering, understanding and applying). | 408.44 | 1482.103 | 0.695 | 0.961 |
| D6.1. I distribute the instructions in different ways to avoid chaos (pre-preparations of assignment cards, working papers). | 407.81 | 1486.234 | 0.636 | 0.961 |
| D6.2. I distribute students in homogeneous groups in terms of capabilities. | 409.89 | 1559.103 | -0.526 | 0.963 |

| | Scale average if the item has been deleted | Scale variance if the element has been deleted | Total element correlation corrected | Cronbach's alpha if the element has been deleted |
|---|---|---|---|---|
| D6.3. I distribute students in heterogeneous groups in terms of capabilities. | 408.04 | 1478.037 | 0.671 | 0.961 |
| D6.4. I monitor the achievements and progress of students within the cognitive portfolio of the student. | 408.70 | 1521.986 | 0.010 | 0.962 |
| D6.5. I prepare a plan for the students who need longer time than their peers to accomplish assignments. | 408.59 | 1494.481 | 0.569 | 0.961 |
| D6.6. I observe the performance of students and direct them. | 407.93 | 1482.456 | 0.709 | 0.961 |
| D6.7. I identify the special skills and capabilities of each student in order to try to answer the two questions: what does each student know? What does each student need? | 408.48 | 1485.644 | 0.825 | 0.961 |
| D6.8. I clarify to students the allowed mobility limits. | 407.93 | 1500.687 | 0.513 | 0.961 |
| D6.9. I train students on taking responsibility for their learning by doing their schoolwork and homework. | 408.26 | 1489.969 | 0.709 | 0.961 |
| D6.10. I train students on reorganizing the furniture of the classroom after performing activities. | 408.26 | 1493.430 | 0.717 | 0.961 |
| D6.11. I train students on activities, monitoring those activities and learning their outcomes. | 408.33 | 1492.385 | 0.704 | 0.961 |
| D6.12. I specify a time to carry out primary concepts and design suitable activities per learner. | 408.15 | 1498.362 | 0.469 | 0.961 |
| D6.13. I plan how the student submits accomplished work. | 408.48 | 1480.182 | 0.783 | 0.961 |
| D6.14. I specify the rules and instructions to carry out an activity. | 407.85 | 1483.362 | 0.765 | 0.961 |
| D6.15. I focus on a limited number of concepts to ensure students grasped the concepts. | 407.96 | 1492.575 | 0.595 | 0.961 |
| D6.16. I avail opportunities for group or binary or individual work. | 408.15 | 1477.131 | 0.763 | 0.961 |
| D6.17. I put forth basic ground rules for the students based on which they will get started and finish at the beginning and at the end of the lesson, respectively. | 408.00 | 1490.538 | 0.607 | 0.961 |
| D6.18. I work on building the teaching material according to the needs of the students. | 408.37 | 1490.088 | 0.666 | 0.961 |
| E1. Solidarity & cooperation with colleagues | 407.93 | 1481.225 | 0.731 | 0.961 |
| E2. Specialized university education | 407.56 | 1492.410 | 0.410 | 0.961 |
| E3. Further Education. Vocational Training | 407.63 | 1481.934 | 0.496 | 0.961 |
| E4. Solidarity & communication with parents | 407.78 | 1498.718 | 0.478 | 0.961 |
| E5. Patience and consciousness towards children / adolescents | 407.59 | 1508.328 | 0.319 | 0.961 |
| E6. Awareness about the psychological and social problems of students. | 407.52 | 1499.336 | 0.516 | 0.961 |
| E7. Timeframe for good curriculum implementation | 407.56 | 1481.795 | 0.824 | 0.961 |
| E8. Means and materials to achieve the objectives of the curriculum | 407.52 | 1485.798 | 0.821 | 0.961 |
| E9. Specialized knowledge. skills & abilities to promote student personality development. | 408.37 | 1496.242 | 0.399 | 0.961 |
| E10. Awareness. | 408.11 | 1497.872 | 0.495 | 0.961 |

| | Scale average if the item has been deleted | Scale variance if the element has been deleted | Total element correlation corrected | Cronbach's alpha if the element has been deleted |
|---|---|---|---|---|
| E11. Importance of diversity. | 407.74 | 1488.046 | 0.580 | 0.961 |
| E12. Importance of inclusivity. | 407.52 | 1496.490 | 0.522 | 0.961 |
| F1. General psychology. | 408.63 | 1487.781 | 0.603 | 0.961 |
| F2. School psychology. | 407.81 | 1489.234 | 0.692 | 0.961 |
| F3. Developmental Psychology. | 408.44 | 1487.103 | 0.536 | 0.961 |
| F4. Teaching methodology. | 407.74 | 1505.815 | 0.411 | 0.961 |
| F5. Pedagogical theories. | 408.63 | 1488.627 | 0.467 | 0.961 |
| F6. Learning theories – Motivation. | 408.07 | 1504.071 | 0.322 | 0.961 |
| F7. Philosophy of education. | 409.04 | 1496.345 | 0.414 | 0.961 |
| F8. Theories of language development. | 409.04 | 1491.652 | 0.438 | 0.961 |
| F9. Special Education. | 407.48 | 1500.182 | 0.409 | 0.961 |
| F10. None of them. | 410.67 | 1520.077 | 0.025 | 0.962 |

In order to verify the discriminatory power of each element, a study was applied that allows to differentiate between those subjects who score high on the test and those who score low (Garcia, Gil and Rodriguez, 1995).

To perform the analysis, scalar items with variations from 1 to 5 were selected, and the total sum was recoded into three groups (Low, Medium and High):

1 = Low group (minimum value, 33rd percentile): (350, 388)

2 = Middle group (34th percentile, 66th percentile): (389, 446)

3 = High group (67th percentile, maximum value): (447, 470)

The Student's t test for independent samples allowed to establish the existence or not of statistical differences (n.s.=.05) between the groups that score low and high in the items, obtaining the results that are contemplated in table 67.

As can be seen, of the 117 scalar questions analysed, 103 of them obtain p values lower than 0.05, which represents a high power of discrimination on the part of the item. However, 14 show p values equal to or greater than 0.05, which does not allow the null hypothesis of equal discrimination to be rejected and therefore the item discriminates. This implies that these items must be reviewed according to their behavior in all the tests performed.

**Table 67**

*Power of discrimination of the items of the dimension Evaluation of the Emotions, Attitudes and Concerns of teachers about inclusive education*

| | Medium low | Medium high | t | p | Discriminate |
|---|---|---|---|---|---|
| B1. I am concerned that students with special educational needs will not be accepted by the rest of the class. | 3.56 | 3.89 | -0.849 | 0.204 | **No** |
| B2. I dread the thought that I could eventually end up with special educational needs. | 3.33 | 2.11 | 4.69 | 0.000 | Yes |
| B3. Students who have difficulty expressing their thoughts verbally should be in regular classes. | 2.44 | 2.89 | -0.97 | 0.173 | **No** |
| B4. I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | 3.56 | 2.33 | 2.306 | 0.017 | Yes |
| B5. I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | 2.67 | 1.11 | 5.029 | 0.000 | Yes |
| B6. Students who are inattentive should be in regular classes. | 2.44 | 2.00 | 1.835 | 0.052 | **No** |
| B7. I am concerned that my workload will increase if I have students with disabilities in my class. | 3.56 | 2.11 | 3.385 | 0.002 | Yes |
| B8. Students who require communicative technologies (e.g., Braille/sign language) should be in regular classes. | 2.11 | 2.78 | -1.488 | 0.081 | **No** |
| B9. I would feel terrible if I had a disability/ special educational need. | 3.33 | 2.00 | 4.619 | 0.000 | Yes |
| B10. I am concerned that I will be more stressed if I have students with disabilities in my class. | 3.89 | 1.78 | 7.056 | 0.000 | Yes |
| B11. I am afraid to look directly at a person with a disability. | 2.00 | 1.00 | 6 | 0.000 | Yes |
| B12. Students who frequently fail exams should be in regular classes. | 2.33 | 2.44 | -0.295 | 0.386 | **No** |
| B13. I find it difficult to overcome my initial shock when meeting people with severe physical disabilities. | 2.11 | 1.00 | 5.547 | 0.000 | Yes |
| B14. I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | 3.67 | 1.22 | 8.8 | 0.000 | Yes |
| B15. Students who need an individualized academic program should be in regular classes. | 2.33 | 2.89 | -1.085 | 0.150 | **No** |
| C1. How well can you handle inappropriate behavior in the classroom with children with special educational needs? | 2.89 | 4.22 | -5.367 | 0.000 | Yes |
| C2. How much can you motivate students with special educational needs who are less interested in the lesson? | 2.44 | 4.00 | -6.424 | 0.000 | Yes |
| C3. How much can you help students with special educational needs believe that they can make progress in school work? | 2.44 | 3.78 | -5.821 | 0.000 | Yes |
| C4. How much can you do to get students special educational needs to follow classroom rules? | 3.00 | 3.89 | -8.000 | 0.000 | Yes |
| C5. How much can you help students with special educational needs to appreciate the value of learning? | 2.33 | 3.33 | -3.464 | 0.002 | Yes |
| C6. To what extent can you tailor the questions you ask to students with special educational needs? | 2.89 | 4.89 | -8.731 | 0.000 | Yes |
| C7. To what extent can students with special educational needs follow the rules of your classroom? | 2.89 | 3.78 | -2.971 | 0.005 | Yes |

| | Medium low | Medium high | t | p | Discriminate |
|---|---|---|---|---|---|
| C8. To what extent can you implement a classroom management system for children with special educational needs? | 2.00 | 4.67 | -6.532 | 0.000 | Yes |
| C9. To what extent can you use a variety of assessment strategies for children with special educational needs? | 1.78 | 4.78 | -11.260 | 0.000 | Yes |
| C10. To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | 2.78 | 4.89 | -11.457 | 0.000 | Yes |
| C11. How much can you help families of students with special educational needs to help their children make progress at school? | 2.11 | 3.78 | -5.571 | 0.000 | Yes |
| C12. To what extent can you implement alternative learning strategies for children with special educational needs? | 1.89 | 4.89 | -9.128 | 0.000 | Yes |
| C13. How much can you do to foster student creativity? | 2.33 | 4.00 | -10.000 | 0.000 | Yes |
| C14. How much can you do to calm a student who is disruptive or noisy? | 3.00 | 4.00 | -4.243 | 0.000 | Yes |
| C15. How well can you respond to defiant students? | 3.11 | 4.00 | -3.411 | 0.002 | Yes |
| D1.1. I plan the lessons well before each class. | 3.89 | 4.67 | -3.883 | 0.000 | Yes |
| D1.2. I incorporate differentiated instruction processes when I am planning for teaching. | 3.22 | 4.00 | -3.500 | 0.004 | Yes |
| D1.3. I set clear and specific lesson goals. | 3.89 | 4.44 | -2.673 | 0.009 | Yes |
| D1.4. I specify the suitable time interval per learning goal. | 3.67 | 4.11 | -1.706 | 0.054 | **No** |
| D1.5. I consider individual differences and variations among students given the important impact this creates on the students? | 3.11 | 4.22 | -4.472 | 0.000 | Yes |
| D1.6. I adjust the educational content to suit the educational needs, e.g. tying the content with concepts and skills that a student desires to learn. | 3.44 | 4.11 | -2.502 | 0.015 | Yes |
| D1.7. I provide support to students and encourage them to immerse themselves in problem-solving skills. | 4.00 | 4.44 | -1.835 | 0.043 | Yes |
| D1.8. Selection of content: I give consideration to the identification of the main idea(s) of the topic or unit. | 3.78 | 4.44 | -2.910 | 0.005 | Yes |
| D1.9. I give consideration to scoping to be in line with the capabilities and the needs of different students. | 3.67 | 4.11 | -2.219 | 0.022 | Yes |
| D1.10. I do not deviate from the standard level that every student should reach to. | 2.22 | 2.00 | 1.000 | 0.166 | **No** |
| D1.11. I present the content to the students in different speeds; I do not commit all students to the same timing. | 2.22 | 3.22 | -2.546 | 0.012 | Yes |
| D1.12. Consideration of cognitive levels among students: I present the content in different 15 levels in line with the needs of the students (different reading levels, recorded texts, presentation and clarification of ideas using audio-visual media). | 3.00 | 3.89 | -4.438 | 0.000 | Yes |
| D1.13. I avail the opportunity to students to immerse themselves into different activities that motivate their minds and increase their attentiveness. | 3.44 | 4.67 | -4.158 | 0.000 | Yes |
| D1.14. Presenting the content in different ways: I diversify my pedagogy and the way I present the content in consideration of the levels and capabilities of the students (discussions, audio-visual media and projects). | 3.22 | 4.00 | -5.292 | 0.000 | Yes |
| D1.15. Pressure or impact of content: I summarize some of the existing information within the content provided, I do not compromise the main idea(s) that are to be taught within this topic. | 3.11 | 3.89 | -4.950 | 0.000 | Yes |
| D2.1. I use activities that are compatible and suitable to the skills that students have. | 3.89 | 4.56 | -3.207 | 0.003 | Yes |

| | Medium low | Medium high | t | p | Discriminate |
|---|---|---|---|---|---|
| D2.2. I implement special plans to students (regular classroom activities and supplementary activities for the students with learning Disabilities). | 2.67 | 3.67 | -3.464 | 0.002 | Yes |
| D2.3. I prepare special assignments for the students. | 2.44 | 3.56 | -4.472 | 0.000 | Yes |
| D2.4. I provide additional support to students with learning Disabilities. | 2.78 | 3.56 | -2.746 | 0.007 | Yes |
| D2.5. I adjust the time interval that students may need to carry out certain assignments. | 3.44 | 4.11 | -3.207 | 0.003 | Yes |
| D2.6. I set different levels of expectations to conclude an assignment. | 3.33 | 4.00 | -4.000 | 0.002 | Yes |
| D2.7. I encourage students to interact and participate; I seek to incorporate them in the topic at hand. | 3.89 | 4.67 | -3.883 | 0.000 | Yes |
| D2.8. I use technology-based learning that decreases the span of losing attention, disabilities in memorizing and low incentives that some students with learning Disabilities may have. | 3.22 | 3.89 | -2.683 | 0.008 | Yes |
| D2.9. I normally form small groups to explain needed ideas and skills. | 2.44 | 2.89 | -2.138 | 0.026 | Yes |
| D2.10. I use diversified learning strategies that suit different pedagogies and meet the aspired goals. | 3.00 | 3.89 | -4.438 | 0.000 | Yes |
| D2.11. I provide resources and information to motivate initiatives among students for learning | 3.33 | 4.33 | -4.243 | 0.000 | Yes |
| D3.1. Avail and employ technology resources to help increase motivations and incentives among students: reading and writing programs, word processors, spelling and grammar. | 3.44 | 4.44 | -4.025 | 0.000 | Yes |
| D3.2. Writing and text programs (Word processors), spelling and grammar. Media that helps in reading, like recorders. | 3.22 | 4.44 | -4.315 | 0.000 | Yes |
| D3.3. Audio-visual systems that allow reading texts aloud. | 3.00 | 4.44 | -5.965 | 0.000 | Yes |
| D3.4. Avail different learning resources that serve the environment in an enjoyable way that attracts the learners (books, magazines, photographs/images). | 3.67 | 4.78 | -5.000 | 0.000 | Yes |
| D3.5 I avail different types of learning resources that serve the environment in an enjoyable way that attracts the learners (video, computers, and websites). | 3.67 | 4.78 | -5.000 | 0.000 | Yes |
| D4.1. I give students the opportunity to participate in activities as individuals or in groups or in a cooperative manner. | 3.44 | 4.89 | -6.949 | 0.000 | Yes |
| D4.2. I allow students to present their productions verbally. | 3.56 | 4.89 | -6.414 | 0.000 | Yes |
| D4.3. I allow students to present their productions verbally (oral presentation, singing, poetry recitation). | 3.44 | 4.89 | -6.949 | 0.000 | Yes |
| D4.4. I allow students to present their productions in a written manner. | 3.56 | 4.89 | -6.414 | 0.000 | Yes |
| D4.5. I allow students to present their productions in performance style (acting). | 3.44 | 4.89 | -6.949 | 0.000 | Yes |
| D5.1. I rely on continuous and varied assessments of students: Pre- and Post-assessments | 3.89 | 4.78 | -4.824 | 0.000 | Yes |
| D5.2. I adopt assessments of teachers and peers. | 3.33 | 2.89 | 1.706 | 0.058 | **No** |
| D5.3. I use a rating scale (rubrics) to assess the students. | 2.33 | 3.56 | -5.047 | 0.000 | Yes |
| D5.4. I print out test papers using a big / large font that is suitable to the needs of the students. | 2.33 | 3.00 | -2.828 | 0.011 | Yes |
| D5.5. I read the questions to the students. | 3.56 | 4.78 | -4.315 | 0.000 | Yes |
| D5.6. I give a break in the middle of the assessment interval. | 2.89 | 4.11 | -3.719 | 0.000 | Yes |
| D5.7. I add some illustrative images or drawings to help the students understand the questions. | 2.44 | 3.78 | -4.707 | 0.000 | Yes |
| D5.8. I assess students according to pivotal and referenced indicators. | 3.00 | 4.11 | -4.264 | 0.000 | Yes |

| | Medium low | Medium high | t | p | Discriminate |
|---|---|---|---|---|---|
| D5.9. I adopt individual and group assessments. | 3.33 | 4.22 | -2.219 | 0.021 | Yes |
| D5.10. I give some students extra time to answer questions. | 4.00 | 4.78 | -5.292 | 0.000 | Yes |
| D5.11. I take into consideration the homework and testing paragraphs in classifying via Bloom's classic Taxonomy of educational (remembering, understanding and applying). | 3.11 | 4.22 | -4.472 | 0.000 | Yes |
| D6.1. I distribute the instructions in different ways to avoid chaos (pre-preparations of assignment cards, working papers). | 3.78 | 4.89 | -6.030 | 0.000 | Yes |
| D6.2. I distribute students in homogeneous groups in terms of capabilities. | 2.67 | 1.33 | 4.619 | 0.000 | Yes |
| D6.3. I distribute students in heterogeneous groups in terms of capabilities. | 3.33 | 4.78 | -5.200 | 0.000 | Yes |
| D6.4. I monitor the achievements and progress of students within the cognitive portfolio of the student. | 3.11 | 3.11 | 0.000 | 0.500 | **No** |
| D6.5. I prepare a plan for the students who need longer time than their peers to accomplish assignments. | 3.11 | 3.89 | -3.395 | 0.002 | Yes |
| D6.6. I observe the performance of students and direct them. | 3.56 | 4.78 | -4.315 | 0.000 | Yes |
| D6.7. I identify the special skills and capabilities of each student in order to try to answer the two questions: what does each student know? What does each student need? | 2.89 | 4.00 | -10.000 | 0.000 | Yes |
| D6.8. I clarify to students the allowed mobility limits. | 3.78 | 4.44 | -2.910 | 0.005 | Yes |
| D6.9. I train students on taking responsibility for their learning by doing their schoolwork and homework. | 3.11 | 4.11 | -4.366 | 0.000 | Yes |
| D6.10. I train students on reorganizing the furniture of the classroom after performing activities. | 3.22 | 4.11 | -4.824 | 0.000 | Yes |
| D6.11. I train students on activities, monitoring those activities and learning their outcomes. | 3.11 | 4.00 | -4.438 | 0.001 | Yes |
| D6.12. I specify a time to carry out primary concepts and design suitable activities per learner. | 3.44 | 4.22 | -2.366 | 0.018 | Yes |
| D6.13. I plan how the student submits accomplished work. | 2.78 | 4.11 | -7.236 | 0.000 | Yes |
| D6.14. I specify the rules and instructions to carry out an activity. | 3.67 | 4.89 | -6.102 | 0.000 | Yes |
| D6.15. I focus on a limited number of concepts to ensure students grasped the concepts. | 3.56 | 4.56 | -3.343 | 0.002 | Yes |
| D6.16. I avail opportunities for group or binary or individual work. | 3.11 | 4.56 | -5.421 | 0.000 | Yes |
| D6.17. I put forth basic ground rules for the students based on which they will get started and finish at the beginning and at the end of the lesson, respectively. | 3.56 | 4.56 | -3.343 | 0.002 | Yes |
| D6.18. I work on building the teaching material according to the needs of the students. | 3.11 | 4.11 | -6.364 | 0.000 | Yes |
| E1. Solidarity & cooperation with colleagues | 3.44 | 4.67 | -5.047 | 0.000 | Yes |
| E2. Specialized university education | 4.11 | 4.89 | -2.746 | 0.010 | Yes |
| E3. Further Education. Vocational Training | 4.00 | 5.00 | -3.000 | 0.009 | Yes |
| E4. Solidarity & communication with parents | 3.78 | 4.44 | -2.353 | 0.016 | Yes |
| E5. Patience and consciousness towards children / adolescents | 4.22 | 4.56 | -1.177 | 0.128 | **No** |
| E6. Awareness about the psychological and social problems of students. | 4.22 | 4.78 | -2.085 | 0.027 | Yes |
| E7. Timeframe for good curriculum implementation | 3.89 | 5.00 | -5.547 | 0.000 | Yes |
| E8. Means and materials to achieve the objectives of the curriculum | 4.00 | 5.00 | -6.000 | 0.000 | Yes |
| E9. Specialized knowledge. skills & abilities to promote student personality development. | 3.11 | 4.00 | -3.411 | 0.002 | Yes |

| | Medium low | Medium high | t | p | Discriminate |
|---|---|---|---|---|---|
| E10. Awareness | 3.33 | 4.22 | -3.200 | 0.003 | Yes |
| E11. Importance of diversity | 3.56 | 4.78 | -4.315 | 0.000 | Yes |
| E12. Importance of inclusivity | 4.11 | 4.89 | -2.746 | 0.010 | Yes |
| F1. General psychology | 2.78 | 3.78 | -3.182 | 0.003 | Yes |
| F2. School psychology | 3.78 | 4.78 | -4.811 | 0.000 | Yes |
| F3. Developmental Psychology | 2.89 | 4.00 | -3.162 | 0.003 | Yes |
| F4. Teaching methodology | 4.00 | 4.56 | -2.294 | 0.018 | Yes |
| F5. Pedagogical theories | 2.78 | 3.78 | -2.546 | 0.011 | Yes |
| F6. Learning theories - Motivation | 3.67 | 4.22 | -1.715 | 0.053 | **No** |
| F7. Philosophy of education | 2.33 | 3.11 | -2.985 | 0.004 | Yes |
| F8. Theories of language development | 2.33 | 3.22 | -2.744 | 0.007 | Yes |
| F9. Special Education | 4.33 | 4.89 | -1.796 | 0.051 | **No** |
| F10. None of them | 1.00 | 2.13 | -0.849 | 0.204 | **No** |

In view of the tests performed, the questions that were reviewed are shown in table 68. Considering the importance of each of the elements for the study, it was decided to keep them and to modify their wording in those elements that could be improved, when translating the instrument into the Greek language, with the exception of the elements of the last two dimensions that were maintained.

**Table 68**

*List items that need to be reviewed*

| Dimension | Elements |
|---|---|
| Evaluation of the emotions, attitudes and concerns of teachers about inclusive education | B1. I am concerned that students with special educational needs will not be accepted by the rest of the class.<br>B3. Students who have difficulty expressing their thoughts verbally should be in regular classes |
| | B6. Students who are inattentive should be in regular classes. |
| | B8. Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. |
| | B12. Students who frequently fail exams should be in regular classes. |
| | B15. Students who need an individualized academic program should be in regular classes. |
| Strategies of the teaching-learning process to create an environment of inclusion in the classroom | D1.4. I specify the suitable time interval per learning goal. |
| | D5.2. I adopt assessments of teachers and peers. |
| | D1.10. I do not deviate from the standard level that every student should reach to.<br>D6.4. I monitor the achievements and progress of students within the cognitive portfolio of the student. |
| Important factors for teaching with an inclusive approach | E5. Patience and consciousness towards children / adolescents |
| Educational needs to serve students with SEN | F4. Teaching methodology |
| | F9. Special Education |
| | F10. None of them |

**Appendix II.**

## QUESTIONNAIRE FOR SECONDARY EDUCATION TEACHERS

Indication:

This questionnaire is part of a doctoral study, from the University of Córdoba (Spain), whose purpose is to determine the access and use of specific methods, tools and skills that general educators of Greek Secondary Education have to facilitate the teaching-learning process of students with special educational needs. This consists of six sections with a variety of questions. Participation is anonymous and voluntary.

Thank you very much for your collaboration!

### Section A. Demographics and job characteristics

**1. Gender:** Male ☐ Female ☐

**2. Age:** _____

**3. Note the answer that best describes the area you are serving as a teacher this year:**

- Urban (over 100,000) ☐
- Subversive (30,000 - 99,000) ☐
- Community (5,000 - 29,000) ☐
- Rural (less than 5,000) ☐

**4. Please note the answer describing the position you are serving as a teacher:**

- General Education ☐
- Special Education ☐

**5. Please note the number of years of your work experience:** _____

**6. Note the answer that best describes how many students on average the departments you teach:** _____

**7. Please note the highest degree you have obtained:**

- Degree in Technical College ☐
- Bachelor's degree ☐
- Second Degree University ☐
- Postgraduate degree ☐
- Doctoral title ☐

**8. You have been trained in special education:** Yes ☐ No ☐

**9. Please note how many students with special needs are currently studying in the departments you are taught and recognized as special education students:** _____

**10. Note the answer that best describes the specific needs of the students mentioned above:**

- Learning difficulties ☐
- Behavioral problems ☐
- Disabilities ☐
- Mental dysfunction ☐
- Deafness and/or Hearing Blindness ☐
- None of the above ☐
- All the above ☐

## Section B. SACIE-R scale: A Scale for Evaluating Emotions, Attitudes, and Concerns about Inclusive Education (Forlin et al., 2011)

The following statements pertain to inclusive education which involves students from a wide range of diverse backgrounds and abilities learning with their peers in regular schools that adapt and change the way they work in order to meet the needs of all.
Please circle the response which best applies to you.

| SD | D | NA/ND | A | SA |
|---|---|---|---|---|
| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |

| | Elements | SD | D | NA/ND | A | SA |
|---|---|---|---|---|---|---|
| 1. | I am concerned that students with special educational needs will not be accepted by the rest of the class. | | | | | |
| 2. | I dread the thought that I could eventually end up with special educational needs. | | | | | |
| 3. | Students who have difficulty expressing their thoughts verbally should be in regular classes. | | | | | |
| 4. | I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | | | | | |
| 5. | I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. | | | | | |
| 6. | Students who are inattentive should be in regular classes. | | | | | |
| 7. | I am concerned that my workload will increase if I have students with disabilities in my class. | | | | | |
| 8. | Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. | | | | | |
| 9. | I would feel terrible if I had a disability/ special educational needs. | | | | | |
| 10. | I am concerned that I will be more stressed if I have students with disabilities in my class. | | | | | |
| 11. | I am afraid to look directly at a person with a disability. | | | | | |
| 12. | Students who frequently fail exams should be in regular classes. | | | | | |
| 13. | I find it difficult to overcome my initial shock when meeting people with severe physical disabilities. | | | | | |
| 14. | I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | | | | | |
| 15. | Students who need an individualized academic program should be in regular classes. | | | | | |

## Section C. Teachers' views on their abilities (Teacher Sense of Efficacy Scale (TSES), has been customized)

This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion on each of the statements below. Your answers are confidential.
Please circle the response which best applies to you.

| Not at all | Very Little | Moderte | Quite a bit | Very much |
|---|---|---|---|---|
| NA | LB | M | QB | VM |

| | Elements | NA | LB | M | QB | VM |
|---|---|---|---|---|---|---|
| | How well can you handle inappropriate behavior in the classroom with children with special educational needs? | | | | | |
| | How much can you motivate students with special educational needs who are less interested in the lesson? | | | | | |
| | How much can you help students with special educational needs believe that they can make progress in school work? | | | | | |
| | How much can you do to get students special educational needs to follow classroom rules? | | | | | |
| | How much can you help students with special educational needs to appreciate the value of learning? | | | | | |
| | To what extent can you tailor the questions you ask to students with special educational needs? | | | | | |
| | To what extent can students with special educational needs follow the rules of your classroom? | | | | | |
| | To what extent can you implement a classroom management system for children with special educational needs? | | | | | |
| | To what extent can you use a variety of assessment strategies for children with special educational needs? | | | | | |
| | To what extent can you better explain or set a different example of something that a child with special educational needs has difficulty to understand? | | | | | |
| | How much can you help families of students with special educational needs to help their children make progress at school? | | | | | |
| | To what extent can you implement alternative learning strategies for children with special educational needs? | | | | | |
| | How much can you do to foster student creativity? | | | | | |
| | How much can you do to calm a student who is disruptive or noisy? | | | | | |
| | How well can you respond to defiant students? | | | | | |

## Section D. Strategies for teaching students with special educational needs (Karam Siam & Mayada Al-Natour, 2016)

To which extent do Teachers Practice Differentiation When Teaching Students with Learning Disabilities in each domain of the following: content, process, resources, product, assessment, and learning environment)? Please circle the response which best applies to you.

| SD | D | NA/ND | A | SA |
|---|---|---|---|---|
| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |

| | Differentiation in Content | SD | D | NA/ ND | A | SA |
|---|---|---|---|---|---|---|
| | I plan the lessons well before each class. | | | | | |
| | I incorporate differentiated instruction processes when I am planning for teaching. | | | | | |
| | I set clear and specific lesson goals. | | | | | |
| | I specify the suitable time interval per learning goal. | | | | | |
| | I consider individual differences and variations among students given the important impact this creates on the students' behavior inside the classroom. | | | | | |
| | I adjust the educational content to suit the educational needs, e.g. tying the content with concepts and skills that a student desires to learn. | | | | | |
| | I provide support to students and encourage them to immerse themselves in problem-solving skills. | | | | | |
| | Selection of content: I give consideration to the identification of the main idea(s) of the topic or unit. | | | | | |
| | I give consideration to scoping to be in line with the capabilities and the needs of different students. | | | | | |
| | I do not deviate from the standard level that every student should reach to. | | | | | |
| | I present the content to the students in different speeds; I do not commit all students to the same timing. | | | | | |
| | Consideration of cognitive levels among students: I present the content in different 15 levels in line with the needs of the students (different reading levels, recorded texts, presentation and clarification of ideas using audio-visual media). | | | | | |
| | I avail the opportunity to students to immerse themselves into different activities that motivate their minds and increase their attentiveness. | | | | | |
| | Presenting the content in different ways: I diversify my pedagogy and the way I present the content in consideration of the levels and capabilities of the students (discussions, audio-visual media and projects). | | | | | |
| | Pressure or impact of content: I summarize some of the existing information within the content provided, I do not compromise the main idea(s) that are to be taught within this topic. | | | | | |

| | Differentiation in process | SD | D | NA/ ND | A | SA |
|---|---|---|---|---|---|---|
| | I use activities that are compatible and suitable to the skills that students have. | | | | | |
| | I implement special plans to students (regular classroom activities and supplementary activities for the students with learning Disabilities). | | | | | |
| | I prepare special assignments for the students. | | | | | |
| | I provide additional support to students with learning Disabilities. | | | | | |
| | I adjust the time interval that students may need to carry out certain assignments. | | | | | |
| | I set different levels of expectations to conclude an assignment. | | | | | |
| | I encourage students to interact and participate; I seek to incorporate them in the topic at hand. | | | | | |
| | I use technology-based learning that decreases the span of losing attention, disabilities in memorizing and low incentives that some students with learning Disabilities may have. | | | | | |
| | I normally form small groups to explain needed ideas and skills. | | | | | |
| | I use diversified learning strategies that suit different pedagogies and meet the aspired goals. | | | | | |
| | I provide resources and information to motivate initiatives among students for learning | | | | | |

| | Differentiation in teaching resources | SD | D | NA/ ND | A | SA |
|---|---|---|---|---|---|---|
| | Avail and employ technology resources to help increase motivations and incentives among students: reading and writing programs, word processors, spelling and grammar. | | | | | |
| | Writing and text programs (Word processors), spelling and grammar. Media that helps in reading, like recorders. | | | | | |
| | Audio-visual systems that allow reading texts aloud. | | | | | |
| | Avail different learning resources that serve the environment in an enjoyable way that attracts the learners (books, magazines, photographs/images). | | | | | |
| | I avail different types of learning resources that serve the environment in an enjoyable way that attracts the learners (video, computers, and websites). | | | | | |

| | Differentiation in products (outcomes) | SD | D | NA/ ND | A | SA |
|---|---|---|---|---|---|---|
| | I give students the opportunity to participate in activities as individuals or in groups or in a cooperative manner. | | | | | |
| | I allow students to present their productions verbally. | | | | | |
| | I allow students to present their productions verbally (oral presentation, singing, poetry recitation). | | | | | |
| | I allow students to present their productions in a written manner. | | | | | |
| | I allow students to present their productions in performance style (acting). | | | | | |

| | Differentiation in the assessment | SD | D | NA/ ND | A | SA |
|---|---|---|---|---|---|---|
| | I rely on continuous and varied assessments of students: Pre- and Post-assessments | | | | | |
| | I adopt assessments of teachers and peers. | | | | | |
| | I use a rating scale (rubrics) to assess the students. | | | | | |
| | I print out test papers using a big / large font that is suitable to the needs of the students. | | | | | |
| | I read the questions to the students. | | | | | |
| | I give a break in the middle of the assessment interval. | | | | | |
| | I add some illustrative images or drawings to help the students understand the questions. | | | | | |
| | I assess students according to pivotal and referenced indicators. | | | | | |
| | I adopt individual and group assessments. | | | | | |
| | I give some students extra time to answer questions. | | | | | |
| | I take into consideration the homework and testing paragraphs in classifying via Bloom's classic Taxonomy of educational (remembering, understanding and applying). | | | | | |

| | Differentiation in classroom management | SD | D | NA/N D | A | SA |
|---|---|---|---|---|---|---|
| | I distribute the instructions in different ways to avoid chaos (pre-preparations of assignment cards, working papers). | | | | | |
| | I distribute students in homogeneous groups in terms of capabilities. | | | | | |
| | I distribute students in heterogeneous groups in terms of capabilities. | | | | | |
| | I monitor the achievements and progress of students within the cognitive portfolio of the student. | | | | | |
| | I prepare a plan for the students who need longer time than their peers to accomplish assignments. | | | | | |
| | I observe the performance of students and direct them. | | | | | |
| | I identify the special skills and capabilities of each student in order to try to answer the two questions: what does each student know? What does each student need? | | | | | |
| | I clarify to students the allowed mobility limits. | | | | | |
| | I train students on taking responsibility for their learning by doing their schoolwork and homework. | | | | | |
| | I train students on reorganizing the furniture of the classroom after performing activities. | | | | | |
| | I train students on activities, monitoring those activities and learning their outcomes. | | | | | |
| | I specify a time to carry out primary concepts and design suitable activities per learner. | | | | | |
| | I plan how the student submits accomplished work. | | | | | |

| | Differentiation in classroom management | SD | D | NA/ND | A | SA |
|---|---|---|---|---|---|---|
| | I specify the rules and instructions to carry out an activity. | | | | | |
| | I focus on a limited number of concepts to ensure students grasped the concepts. | | | | | |
| | I avail opportunities for group or binary or individual work. | | | | | |
| | I put forth basic ground rules for the students based on which they will get started and finish at the beginning and at the end of the lesson, respectively. | | | | | |
| | I work on building the teaching material according to the needs of the students. | | | | | |

## Section E. Important factors for teaching students with special educational needs

What do you think you need as an educator to respond satisfactorily to the requirements of your role when facing a student with special educational needs?

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Not at all | A little bit | Moderate | Very | Very much |

| | Differentiation in Content | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| . | Solidarity & cooperation with colleagues | | | | | |
| . | Specialized university education | | | | | |
| . | Further Education, Vocational Training | | | | | |
| . | Solidarity & communication with parents | | | | | |
| . | Patience and consciousness towards children / adolescents | | | | | |
| . | Awareness about the psychological and social problems of students. | | | | | |
| . | Timeframe for good curriculum implementation | | | | | |
| . | Means and materials to achieve the objectives of the curriculum | | | | | |
| . | Specialized knowledge, skills & abilities to promote student personality development. | | | | | |
| . | Awareness | | | | | |
| . | Importance of diversity | | | | | |
| . | Importance of inclusivity | | | | | |

## Section F. Education needs

What subjects do you think teacher education should include so that they have sufficient knowledge, skills and abilities to address the learning needs of students with Learning Difficulties?

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Not at all** | **A little bit** | **Moderate** | **Very** | **Very much** |

| | **Elements** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| | General psychology | | | | | |
| | School psychology | | | | | |
| | Developmental Psychology | | | | | |
| | Teaching methodology | | | | | |
| | Pedagogical theories | | | | | |
| | Learning theories - Motivation | | | | | |
| | Philosophy of education | | | | | |
| | Theories of language development | | | | | |
| | Special Education | | | | | |
| | None of them | | | | | |