Facultad de Ciencias de la Educación y Psicología

Departamento de Educación

The teacher as coach. The effect of implementing coaching tools among educational staff on middle-school students' metacognitive awareness, self-management and self-regulation skills

Doctoral Thesis

Facultad de Ciencias de la Educación y Psicología – Departamento de Educación

Thesis submitted by Talat Shatroubi

Directora:

PhD Antonia Ramírez García

Córdoba, 20 de junio de 2023

TITULO: *The teacher as coach. The effect of implementing coaching tools among educational staff on middle-school students? metacognitive awareness, self-management and self-regulation skills*

AUTOR: *Talat Shatroubi*

Campus de Rabanales
Ctra. Nacional IV, Km. 396 A
14071 Córdoba

https://www.uco.es/ucopress/index.php/es/
ucopress@uco.es

Acknowledgements

I have travelled a long, challenging and joyful journey to this important and complex research. I have met many people along the way who have helped and supported this endeavour, and more so – have intensified my experiences of happiness. I want to thank all the wonderful people who accompanied me on this journey, which started with a vision, continued with planning and hard work, and culminated in this manuscript.

To my dear parents, Abed and Suaad Shtroubi, may they rest in peace, this work is first and foremost dedicated to you with love. You have always pushed me to keep studying, and I am proud to have fulfilled your dream, and completed the requirements for my doctorate.

I owe a debt of gratitude to the participants of this research – students, teachers and parents, who offered help, support and encouragement all along the way. All of you are good people, salt of the earth.

Many thanks to Ms. Lea Dovrat for proofreading and editing this manuscript.

Special thanks to Mr. Shai Finkelstein for his help and support throughout the years of my study.

My greatest gratitude is to the one and only, Prof. Antonia Ramírez García – it is thanks to you that I am here today. I deeply appreciate your insightful and professional comments on my work. It was a great honour to have you for my thesis advisor.

Finally, I will never find the words to thank my wife, Nouha, my four wonderful children – Mahram, Marwan, Kian, and Muhammed, and my lovely granddaughter, Maria, the light of our lives, for their loving support and faith in me. Without your devotion and sacrifice, this research could not have been completed.

Resumen

Este estudio tiene como objetivo examinar el efecto de un programa de coaching en docentes árabes palestinos y su aplicación en el aula, en relación a la conciencia metacognitiva y habilidades de autogestión y autorregulación (emocional, conductual y cognitiva) de estudiantes de secundaria árabes palestinos en Israel.

Aunque los investigadores han estado explorando cada vez más la relación entre la enseñanza basada en el *coaching* y la conciencia metacognitiva de los estudiantes la autogestión y la autorregulación, se ha prestado poca atención a esta relación entre los estudiantes de secundaria, y mucho menos entre los estudiantes segregados y desfavorecidos en comunidades determinadas.

Se diseñó un estudio cuasi-experimental para probar la hipótesis de que existían diferencias en la conciencia de la metacognición, la autogestión y la autorregulación entre los estudiantes que participaron en una enseñanza basada en *coaching* docente y los que no. Seiscientos estudiantes árabes palestinos de secundaria que no habían participado previamente en entrenamiento educativo fueron invitados a participar en este estudio y fueron asignados aleatoriamente a dos grupos: un grupo experimental (n=300) y un grupo de control (n=300). Todos los participantes completaron un instrumento de prueba previa y posterior que incluía el Inventario de Conciencia Metacognitiva (MAI), el Modelo de Intervención Dual de Autocontrol/Manejo y el Inventario de Autorregulación Adolescente (ASRI). Se utilizaron ANOVA de medidas repetidas para analizar los datos. Los resultados revelaron una correlación estadísticamente significativa entre la educación basada en el *coaching* y la capacidad de los estudiantes para asumir la responsabilidad en su propio aprendizaje.

Los resultados de este estudio indicaron que el programa aumentó el uso de habilidades metacognitivas por parte de los estudiantes durante el transcurso de la intervención, que es un componente clave para participar y facilitar los procesos de autorregulación y autogestión.

Los resultados del estudio mostraron también que el *coaching* educativo puede tener un impacto directo y positivo en el uso de estrategias metacognitivas por parte de los estudiantes para aumentar la participación en varios dominios que, a menudo, están destinados a mejorar el rendimiento académico, como las habilidades de estudio y la

gestión del tiempo. Este resultado refleja la relación entre la metacognición y los aspectos cognitivos de la autorregulación, es decir, que la metacognición permite a los estudiantes elegir, emplear y monitorear estrategias cognitivas en contextos de aprendizaje. Usando un enfoque colaborativo que respeta a los estudiantes como expertos en sus propias vidas, el *coaching* educativo se alinea con la autorregulación al ayudar a los estudiantes a establecer metas, desarrollar un plan de acción para alcanzar las metas y monitorear el progreso a través de la autorreflexión y la evaluación. Este enfoque puede facilitar los procesos cognitivos y metacognitivos necesarios para generar circuitos de retroalimentación entre los estudiantes, su comportamiento y su entorno. Aunque existen intervenciones de autorregulación basadas en evidencia, estas intervenciones tienden a dirigirse a niños más pequeños o, a menudo, son prácticas basadas en el aula.

Si bien se necesita investigación empírica adicional, el *coaching* educativo ofrece potencialmente una nueva vía para apoyar el desarrollo de habilidades de autorregulación cognitivas, metacognitivas y motivacionales en entornos escolares, lo que puede conducir a un mayor rendimiento académico y una mayor confianza en sí mismo, retención y éxito del alumnado.

Los resultados de este estudio no sólo sugieren que las herramientas de entrenamiento pueden alinearse bien con las teorías de autorregulación y autogestión, sino que también respaldan la literatura que sugiere que el uso de herramientas de entrenamiento durante las interacciones con el alumnado tiene implicaciones positivas para el desarrollo metacognitivo dentro y fuera del aula.

Las futuras investigaciones han de continuar examinando las prácticas de entrenamiento educativo a medida que ganan importancia en los entornos escolares. Debido a los resultados prometedores respecto a la conciencia metacognitiva, las habilidades de autogestión y las habilidades de autorregulación de los estudiantes, se podría examinar en un futuro el vínculo que se pudiera producir entre el entrenamiento educativo y el rendimiento académico, así como también las prácticas de entrenamiento educativo y otros componentes de la conciencia metacognitiva, las habilidades de autogestión y las habilidades de autorregulación como la flexibilidad de la metacognición, la autoeficacia y la motivación.

Otras propuestas de investigación deberían considerar la recopilación de datos longitudinales sobre las habilidades de metacognición, autogestión y autorregulación de los estudiantes. La investigación sobre el *coaching* educativo se vería reforzada mediante la incorporación de otras metodologías de recopilación de datos además de las medidas de autoinforme, como la observación y los protocolos de pensamiento en voz alta. Estos métodos de investigación podrían proporcionar información valiosa sobre cómo mejorar las habilidades metacognitivas, de autogestión y autorregulación en los sistemas educativos, y qué disposiciones pueden ser necesarias para mantener el cambio a lo largo del tiempo. Además, los investigadores deberían considerar la recopilación de datos sobre varios resultados de los estudiantes, como el rendimiento académico y la retención, para comprender cómo los incrementos en la conciencia metacognitiva, la autogestión y la autorregulación a través del entrenamiento académico afectan la capacidad de los estudiantes para aprender, desarrollar y utilizar sus habilidades recién adquiridas.

El estudio recomienda que la pedagogía basada en el *coaching* se incorpore en el sistema educativo, en general, y en el sistema educativo que atiende las necesidades de las comunidades marginadas y desfavorecidas de Israel, en particular.

Palabras clave: *coaching* educativo, herramientas de coaching, conciencia metacognitiva, autorregulación de la autogestión, comunidades segregadas, árabes palestinos, teorías y enfoques educativos

Abstract

This study aims to examine the effect of assimilating coaching tools among educational staff on the cultivation of meta-cognitive awareness, and self-management and self-regulation skills (emotional, behavioral, and cognitive) among Palestinian-Arab middle-school students in Israel.

Although researchers have increasingly been exploring the relationship between coaching-based teaching and students' meta-cognitive awareness, and self-management and self-regulation, little attention has been paid to this relationship among middle school students, let alone students from segregated and disadvantaged communities around the world.

A quasi-experimental study was designed to test the hypothesis that there were differences in metacognition awareness, self-management and self-regulation between students who participated in coaching-based teaching and those who did not. Six hundred Palestinian-Arab middle-school students who had not previously participated in educational coaching were recruited to participate in this study and were randomly assigned to two groups: an experimental group (n=300) and a control group (n=300). All participants completed a pre- and post-test instrument that included the Metacognitive Awareness Inventory (MAI), the Self-Control/Management Dual Intervention Model, and the Adolescent Self-Regulatory Inventory (ASRI) and repeated measure ANOVAs were used to analyse the data. Results revealed a statistically significant correlation between coaching-based education and students' ability to take responsibility and ownership for their own learning. Findings also demonstrated coaching-based teaching reduced discipline and behavioral problems. The study recommends that coaching-based pedagogy should be incorporated in the education system, in general, and in the education system that serves the needs of marginalized and disadvantaged communities, in particular.

Results showed that students who had received educational coaching had increased their metacognition awareness, self-management skills and self-regulating skills. Overall, preliminary results suggest that educational coaching may be a promising student support intervention to help develop students' metacognitive awareness, self-management skills and self-regulating skills outside of the classroom environment.

As mentioned, this study aimed to situate an educational coaching model based on the use of coaching tools among the educational staff, when these tools are based on the principles of educational theories of humanistic psychology and the various schools of cognitive psychology, as well as behaviorist, Adlerian, existentialist and constructivist theories, and to examine educational coaching's effects on pupils' metacognitive awareness. Results from this study indicated that educational coaching increased students' use of metacognitive skills over the course of the intervention, which is a key component to engaging in and facilitating self-regulation and self-management processes. Students in the experimental group reported that they perceived the intervention to be helpful. The results of this study not only suggest that coaching tools may align well with theories of self-regulation and self-management, but they also

support literature suggesting that employing coaching tools during interactions with pupils has positive implications for metacognitive development inside and outside the classroom environment. Study results indicate that educational coaching may directly and positively impact students' use of metacognitive strategies to increase engagement in various domains that are often targeted for improving academic performance, such as study skills and time management. This outcome reflects the relationship between metacognition and cognitive aspects of self-regulation, namely that metacognition enables students to choose, employ, and monitor cognitive strategies across learning contexts. Using a collaborative approach that respects students as the experts on their own lives, educational coaching aligns with self-regulation by supporting students with setting goals, developing an action plan to attain goals, and monitoring progress through self-reflection and evaluation. This approach may facilitate cognitive and metacognitive processes necessary for generating feedback loops between the students, their behavior, and their environment. Although evidence-based self-regulation interventions exist, these interventions tend to target younger children or are often classroom-based practices. While additional empirical research is needed, educational coaching potentially offers a new avenue for supporting the development of cognitive, metacognitive, and motivational self-regulation skills in school settings, which can lead to greater academic achievement and increased student self-confidence, retention, and success. Moreover, it may provide school settings with the ability to effectively supplement classroom-based self-regulation practices by offering students more extensive access to individualized academic support services in other learning contexts.

Future research should continue to examine educational coaching practices as they gain importance in school settings. Due to the promising results with regard to students' metacognitive awareness, self-management skills and self-regulation skills, future research should more directly examine the link between educational coaching and academic achievement, as well as how educational coaching practices may relate to other components of metacognitive awareness, self-management skills and self-regulation skills such as metacognition flexibility, self-efficacy and motivation. Future research should also consider collecting longitudinal data on students' metacognition, self-management and self-regulation skills. Educational coaching research would be bolstered by incorporating other data collection methodologies in addition to self-report measures, such as observation and think-aloud protocols. These research methods could

provide valuable information on how to enhance metacognitive, self-management and self-regulation skills in education systems, and what provisions may be needed to maintain change over time. Further, researchers should consider collecting data on various student outcomes such as academic achievement and retention to understand how increases in metacognitive awareness, self-management and self-regulation through academic coaching impacts students' ability to learn, develop, and use their newly acquired skills to actively improve their situation. Researchers could also examine how educational coaching may be used in combination with other targeted interventions both internal and external to the classroom environment.

Keywords: educational coaching, coaching tools, metacognitive awareness, self-management self-regulation, segregated communities, Palestinian Arabs, Educational theories and approaches

Table of Contents

INDEX OF FIGURES

INDEX OF TABLES

SECTION I.
INTRODUCTION

Our cultural world is rapidly changing – technologically, scientifically and socially. The need to constantly re-examine the educational endeavor of both educational institutions and teachers, on one hand, and the learning environment, on the other hand, and to adapt these to the changing needs of the individual and society – is particularly noticeable. Moreover, technological developments that make knowledge both available and accessible pose challenges for teachers and students alike. Learning can be performed anywhere and anytime, and students can be learners as well as producers of knowledge. To help today's students cope with tomorrow's challenges, schools must help them develop the appropriate skills that include metacognitive, problem-solving, critical thinking, cooperation, self-regulation, and self-management abilities. Teachers are faced with the challenge of recreating their role as providers of tailored solutions, acknowledging that each and every student has his or her own 'special needs' – cognitive, emotional, and communicative. Since coaching is strengths- and goals-oriented, and looks to the future, teaching strategies based on coaching are considered the most suitable educational approach for the education system in the postmodern era (Ashkenazi, 2011; Hermel-Stanescu, 2015; Morgenstern et al., 2019; Murphy et al., 2012; Van Laar et al., 2020; Zohar & Bushrian, 2020).

Coaching has grown and developed on the foundations of humanistic psychology theories and the various schools of cognitive psychology, but was also influenced by behaviorist, Adlerian, existentialist and constructivist theories. Coaching is a "toolbox" – a unique combination of results-oriented tools that were meticulously gathered from these theoretical approaches. Behaviorism contributed concepts and tools such as supporting desired habits and eradicating unwanted behaviors, value-oriented attitudes and behaviors, and reinforcing and instilling new habits. Cognitive psychology provided tools and concepts such as metacognitive questions to oneself (What? When? Why? How?), critical thinking, logical thinking, asking questions, analyzing data, reaching conclusions, assessment of the learning process and outcomes, and self-reflection. In the social sphere, conversation and discussion skills, decision-making processes, team work, and division of roles. In the personal sphere, perseverance, motivation, initiative, personal curiosity, taking responsibility, and independence. Adlerian psychology added a sense of belonging, free choice, the student at the center, self-awareness and self-control, emphatic listening, and sharing. Existential psychology contributed discipline, strengths, listening tools, individually-adapted response, taking

responsibility, and active participation in shaping one's life. success is what the learner has defined as success. Constructivism gave concepts such as independent learner, creativity, self-direction, curiosity, motivation, and autonomy. Humanistic psychology contributed the concepts of the student at the center, self-realization, dialog, unconditional acceptance, asking critical and value-oriented questions, flexibility, internal and external criticism, and autonomy (Brock, 2008; Katz, 2005; Palmer & Whybrow, 2018; Tanami, 2022; Wang, 2013).

The research literature describes learning concepts in a system, that grades them from 'flat' to 'deep'. The flat concepts see students as 'tabula rasa', and consequently facilitate learning processes in which the learners' are required to passively absorb external information. Deep perceptions focus on a process that applies to learners' consciousness, and facilitates active learning processes in which learners are required to interpret, evaluate and create themselves, and present the knowledge from a personal point of view (Hadar, 2009; Kapasi &Pei, 2022; Katz, 2016).

Thus, coaching combines philosophical and humanistic approaches that relate to the human soul and the possibility of happiness with rational approaches that emphasize self-change and goal achievement (Pagis, 2016).

In view of the above, educational coaching has garnered increasing attention due to its connection to improved study skills and academic performance, and has become a popular form of student support across schools and college campuses (Bettinger & Baker, 2014; Capstick et al., 2019; Field et al., 2013; Franklin & Doran, 2009; Howlett et al., 2021; Losch et al., 2016; Prevatt & Yelland, 2015; Richman, Rademacher & Maitland, 2014; Robinson, 2015; Warner et al., 2018).

Based on my 33 years in the education system as teacher, principal and personal coach, I have found that many principals find it difficult to lead teachers to the Ministry of Education's vision, in general, and their school's vision, in particular, and to empower mid-level leadership at school. Many teachers express their difficulty to teach in heterogenic classrooms, and feel burned out, especially after the COVID pandemic. Many students find it hard to perform independent assignments, and demonstrate low motivation to study. All this puts the education system in a precarious position, and sets many challenges for decision-makers regarding the required improvements to management and

teaching methods at school, all the more so for the 21st century school graduate. We have gradually come to the conclusion that educational coaching may serve as a means to foster students' development of key self-regulated learning (SRL) related skills (such as metacognition) outside the classroom environment. As such, the current study sought to examine the effects of educational coaching on students' metacognition, self-regulated learning and self-management. Specifically, this study proposes the following six hypotheses:

(H1): There is a positive relationship between participants by fathers' education and the students' metacognitive awareness, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive).

(H2): There is a positive relationship between participants by mothers' education and the students' metacognitive awareness, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive).

(H3): There is a positive relationship between gender or age group and the students' metacognitive awareness, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive).

(H4): There is a positive relationship between coaching-based teaching strategies and the students' metacognitive skills. That is, students who learn with coaching-based methods will improve their metacognitive skills more than students who do not learn with these methods will.

(H5) There is a positive relationship between teachers' use of coaching tools and 13-15-year-old students' self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events); i.e., the participants in the experimental group will improve their self-management skills more than the participants in the control group will.

(H6) There is a positive relationship between teachers' coaching strategies and the students' (emotional, behavioral, and cognitive) self-regulation capacity; i.e., students in the experimental group (with coaching) will improve th9eir self-regulation capacity more than students in the control group (without coaching) will.

Based on the obvious need of a theoretical framework to which educational coaching may be aligned (Field et al., 2013; Grant, 2014; Robinson, 2015; Theeboom et al., 2014), there is also a call for research that examines SRL interventions in higher education (Bruijn-Smolders et al., 2016; Richardson et al., 2012; Schunk & Mullen, 2013). In this regard, the study results may fulfil the lack of educational research in this domain. Moreover, the results may assist in building programs that may cultivate pupils' metacognition and self-regulation to improve the pupil's ability to succeed in school contexts**.**

In this dissertation, I will explore the relationship among educational coaching, metacognition awareness, self-management and self-regulation skills in the context of Palestinian Arab education in Israel. In the first section, which will be divided into four chapters, I will conduct an extensive review of the literature on the theories and approaches on the topic and the research variables. The first chapter discusses educational theories and approaches, while the second chapter examines the teacher's profile in each of these theories. The third chapter reviews the interactions between the brain's structure and functions, teaching and learning, and the possible relationships between them. The dependent research variables – meta-cognition, self-management, and self-regulation will also be discussed in this chapter. The fourth chapter discusses coaching theories and models, and then illuminates the differences among the profiles of the teacher-educator, the teacher-mentor, and the teacher-coach. The latter part of this chapter focuses on the impact of the use of coaching strategies on the meta-cognitive, self-management and self-regulation skills of adolescent students.

In the second section of this dissertation, I will present the objectives of the study and its hypotheses. This study was designed to examine the effect of coaching on three variables namely, self-regulation, self-management and meta-cognitive awareness. Specifically, the main purpose of this study was to examine five hypotheses through the principals of the quantitative research.

In the third section, the methodology used in this study will be described. At the beginning of this section, the research design will be presented. After that, the description of sample, the study variables, techniques and instruments of the study, procedure, data analysis and finally the ethical considerations will be presented.

In the first stage of the fourth section, the descriptive findings for the items examined in the questionnaire are reported, followed by the results of the examination of the research hypotheses and the effect of coaching on the three research variables, including self-regulation, self-management and meta-cognition. The relationships among these variables are also examined. The fifth section will focus on the discussion of the results and conclusions.

SECTION II.
LITERATURE REVIEW

This section conducts a theoretical review of the research literature on the research variables, divided into four chapters: The first chapter discusses educational theories and approaches, and the second chapter examines the teacher's profile in each of these theories. The third chapter reviews the interactions between the brain's structure and functions, and teaching and learning, and the possible relationships between them, and then goes on to discuss the dependent research variables – meta-cognition, self-management, and self-regulation. The fourth chapter discusses coaching theories and models, and then illuminates the comparison between the profiles of the teacher-educator, the teacher-mentor, and the teacher-coach. The latter part of this chapter focuses on the impact of the use of coaching strategies on the meta-cognitive, self-management and self-regulation skills of adolescent students.

CHAPTER 1. Educational theories and approaches

This chapter discusses six key approaches in psychology in general, and specifically in the field of personality development and learning, which illuminate children's development from many angles. The chapter opens with a short description of the challenges faced by the education system on the whole, and teachers in particular, concerning the skills that students must acquire at school to prepare them for life in the 21st century. Then, this chapter focuses on the six psychological theories and their affinity to education, and to teaching and learning principles.

1.1 BACKGROUND

Our cultural world is rapidly changing – technologically, scientifically and socially. The need to constantly re-examine the educational endeavor of both educational institutions and teachers, on one hand, and the learning environment, on the other hand, and to adapt these to the changing needs of the individual and society – is particularly evident. Additionally, technological developments that make knowledge both available and accessible pose challenges for teachers and students alike. Learning can be performed anywhere and anytime, and students can be learners as well as producers of knowledge. To help today's students cope with tomorrow's challenges, schools must help them develop the appropriate skills that include metacognitive, problem-solving, critical thinking, cooperation, self-regulation, and self-management abilities. Teachers are faced with the challenge of recreating their role as providers of tailored solutions, acknowledging that each and every student has his or her own 'special needs' – cognitive, emotional, and communicative. Since coaching is strengths- and goals-oriented, and looks to the future, teaching strategies based on coaching are considered the most suitable educational approach for the education system in the postmodern era (Ashkenazi, 2011; Hermel-Stanescu, 2015; Morgenstern et al., 2019; Murphy et al., 2012; Van Laar et al., 2020; Zohar & Bushrian, 2020).

Coaching has, by and large, grown and developed based on the theoretical approaches of humanistic and cognitive psychology, but was also influenced by the

principles of behaviorist, Adlerian, existential, and constructivist psychology (Palmer & Whybrow, 2018; Tanami, 2022; Wang, 2013).

The research literature describes learning concepts presented in a graded sorting system, from ‘flat’ to ‘deep’ concepts. The flat concepts see students as ‘tabula rasa’, and consequently facilitate learning processes in which the learners' consciousness is relatively passive, and they are only required to absorb external information. Deep perceptions focus on a process that applies to learners' consciousness, and facilitate more active learning processes in which learners are required to interpret, evaluate and create themselves, until they are able to present the knowledge from a personal point of view (Hadar, 2009; Kapasi & Pei, 2022; Katz, 2016).

This study focuses on six main approaches in psychology, in general, and in the field of personality development and learning, in particular. Following is a review of the theoretical basis of these educational theories and approaches, as well as their expression in the coaching-based teaching and learning processes in schools, in a hierarchical order – from the ‘flat’ perceptions to the ‘deep’ perceptions:

1. The behaviorist approach.
2. The cognitive approach.
3. The Adlerian approach.
4. The existential approach.
5. The constructivist approach.
6. The humanistic approach.

1.2 THE BEHAVIORIST APPROACH

The behaviorist approach was developed in the 1930s and 1940s by the American psychologist B.F. Skinner, who saw learning as a process of acquiring desirable behaviors under the control of certain social conditions. He argued that learning is accomplished through reinforcements and conditioning that indicate appropriate behavior that occurs following some stimulus (Skinner, 1953).

According to this approach, in order to learn, one must memorize and practice, with reinforcements directing the learner to the correct answer, while punishment is received following a wrong answer. When you want to learn a complex skill, divide it into sub-stages: First you learn the simplest part and gradually strengthen it. Once mastery has been achieved, move on to the next stage and so on, until skill mastery is fully achieved (Skinner, 1938). Accordingly, learning depends primarily on external stimuli; therefore, a learning-promoting environment should include interactions and discourse that produce stimuli, responses, and reinforcements. For example, in the ARF (approach-response-feedback) pattern, the question functions as a stimulus, the answer as a response, and the feedback as a reinforcement or punishment. The behaviorist approach has been widely criticized, arguing in particular that it is too simple, since learning processes are too complex to be explained by a chain of stimulus and response processes (Chomsky, 1959/2013).

The premise in the personal theories based on the behaviorist approach is that behavior evolves and changes through learning. While the development of human behavior is also influenced by biological-hereditary factors, learning is the overwhelming factor in it. From the moment of birth, a human being is in a constant process of acquiring new responses or changing existing responses in order to adapt to changing environmental conditions. Thus, the treasure trove of responses in his or her possession constantly expands (Carlson, 2012; Hagger & Weed, 2019; Katz, 2016).

According to the behaviorist approach, behaviorism, human consciousness does not choose its behavior, but is influenced and shaped by factors in the environment, and therefore in the learning process, one should not be interested in processes that go through the learners' consciousness. According to the instrumental conditioning theory, behaviors can be taught through positive reinforcements –

pleasant stimuli, which increase the frequency of the desired response, and through punishment, given for a response that one wishes to eradicate (Carlson, 2012; Skinner, 1976).

The school system is based on providing positive and negative rewards, such as diplomas, excellence awards, threats, punishments and a system of grades, on the assumption that these stimuli create motivation and encourage content learning. One of the most common expressions in the world of education belonging to this conception of learning is the "stick and carrot method"; namely, rewarding desired behavior and punishing undesired behavior. Schools also run many behavior-shaping programs based on learning through instrumental conditioning. It seems that due to the lack of teacher training in the areas of teaching behavioral norms, teachers prefer an authoritarian and rigid approach based on punitive stimuli (Ziv, 2010). This was especially true in the previous century, and it has been claimed that this approach has led to the emergence of other more modern approaches to educational psychology such as neuroscience, cognitive science, and the cognitive approach (Saair, 2019).

Regarding **the affinity of the behaviorist approach to the education system**, we can say that moderate, routine behavior problems are a natural part of school life, mainly because schools generally accept children from diverse backgrounds, family frameworks, and varied personal resources – attention span, impulsivity, self-control, introversion or extroversion, various impulses and needs, and differing ability to adjust to any framework (Gal, 2004; Rodin & Ron, 2018). In their study, Blank & Shavit (2013) found differences in the levels of discipline problems between classes within the same school. They noted that the main factors that contributed to discipline problems in class were unfair attitude from teachers and discipline violations at school due to the school's discipline enforcement policy that required improvement.

Discipline problems in the classroom are an issue that occupies the education system, in general, and teacher-educators, in particular. Cohen-Azaria's (2021) research aimed to examine what the discipline problems in class were from the viewpoint of educator-teachers, and how they dealt with the lack of discipline in their classrooms. She also investigated the characteristics of the discipline problem they remembered the most from their years as teachers, and had meaning for them, and how this experience affected them as educators. A noteworthy conclusion was to implement

changes in the teachers' educational approach, providing them with lesson management and behavior management skills to deal with classroom discipline.

Thus, the expression 'discipline problems', which is a key derivative of behavior problems, depends on the observer's point of view. The concept of discipline can be understood differently from the behaviorist approach; namely, that the desired discipline is the child's behavior according to societal norms (Smilansky, 1987). Furthermore, based on an extensive review of the literature, Wubbels (2011) argued that one of the main styles of class management – external control and supervision of behavior – is rooted in behaviorist learning principles and use of positive reinforcement. In other words, the behaviorist approach uses both the operant and classic learning principles to cope with discipline problems. Accordingly, children's behavior is formed by their environment through operant conditioning. Dealing with discipline problems is based on building and reinforcing accepted habits and eradicating unwanted behaviors (Shimoni, Segal & Sharoni, 1997; Topol, 2019).

1.3 THE COGNITIVE APPROACH

This approach, also known as the information processing approach, has evolved largely in contrast to the behaviorist approach, emphasizing the internal processes that take place between the stimulus and the response. According to this approach, new information is absorbed by the sensory registrar and processed through working memory, which is able to pay attention to about seven pieces of information at any given moment. The information undergoes identification and coding processes, is linked to prior information, and stored in long-term memory for future reconstruction (Engle & Ellingson, 2020; Klatzky, 1980). These processes are affected by prior information, beliefs, memory abilities, and memory-stimulating characteristics (Murphy et al., 2012).

Implications for a learning-promoting environment are, for example, easing the cognitive load by referring to prior knowledge, building knowledge in meaningful clusters, and encouraging the transfer of what is learned to day-to-day contexts (Schneider & Sterm, 2010).

In contrast to the behavioral and cognitive approaches that emphasize the role of the learner, the approach described below emphasizes the importance of the socio-

cultural context of learning. The epistemological conception that characterizes the process of learning and development of the individual, according to the cognitive approach, is that it perceives knowledge as objective, absolute, a collection of unambiguous facts that can be acquired and does not depend on human consciousness. But compared to theories that see learning as a simple process of accumulating knowledge through imitation, this perception of learning focuses on the internal processes of information processing, thought processes and cognitive processing aimed at exposing objective knowledge. It is assumed that learning is a process of imparting meaning through critical discussion and in-depth clarification of the contents (Jonassen, 2011).

According to Katz (2016), the perception that emotion is an essential part of the learning process is developing recently, and with it the understanding that emotional arousal is an essential condition for the teaching process. Carl Rogers, who placed learning on two pillars – intellectual and emotional – argued that in order for learning to take place, a cognitive process is not enough, but an authentic emotional experiential event must occur. Emotional activity creates activity, alertness of consciousness, and thus contributes to more meaningful learning (Rogers & Freiberg, 1993). In learning based on emotional strength, in addition to the cognitive dimension, facts are enacted and meaningful insights are formed, since the brain mechanisms that process emotional memories are different from the mechanisms that process cognitive memories (Apergis-Schoute et al., 2014).

As the intensity of the emotions increases, the influence on the creation of thoughts and opinions, on the motivation, and the chance of remembering the content increases. Emotions drive attention, create deep meaning, and control the pathways of memory (Carlson, 2012). The emotional dimension has another aspect that relies on studies that have found that learning ability becomes more effective in classes where teachers create a positive emotional atmosphere, express warmth and concern for students, and create an empathic environment (Cheung et al., 2021; Katz, 2016).

In terms of **the affinity of the cognitive approach to the education system**, it was found that over the years, learning theories have contributed to understanding leaners' diversity and how to respond to it. The Cognitive Development theory (Piaget, 1972) helped us understand that at every stage of life, from infancy to adulthood, the

individual's worldview develops from factual perception to the ability to provide causal explanations, from an egocentric viewpoint to a social viewpoint, from concrete to abstract perception. The natural differences between children manifest in their learning rate and the timing of their transition from stage to stage of cognitive development. Accordingly, learning and development occur through assimilation of new knowledge and enrichment of recognition schemas – the knowledge structures by which people perceive the world, or accommodation of how the world is perceived to new knowledge – to building a new recognition schema. The learning process is individual and natural, and occurs through experience and repeated verbalization (Aloni & Bialer, 2022).

Curricula based on principles of the cognitive approach are an example of the perception that the teacher is an intermediary between specific content and the learner. It is the teacher's job to impart to the student the content included in the program, or to teach him or her to use a certain strategy to solve problems. The teacher's personal engagement is not expressed in content or by defining functions that students should learn, but by creating a learner-friendly learning environment. That is to say, teachers are, in fact, mediators between the curriculum and the student. Teachers can work with individual students or with groups. In either case, parents present to the learners the goals of the curriculum, its conceptual world, and the expectations defined for the children's achievements (Hess, 2019).

Furthermore, research has shown that learning grounded in cognitive approach principles nurtures students' self-regulation skills, and improves their problem-solving abilities (Gidelewich, 2021). These learning principles are based on metacognitive self-questions – What? When? Why? How? – during the three stages of solutions: planning, control, and assessment. These general questions are specifically targeted at the self-regulation stages, and help the learner to integrate all the available knowledge in problem-solving, by means of ideas, creating links and insights, identifying effective strategies, and development of thinking.

Cognitive principles of learning also underly the 5E Model of Instruction (Ruiz-Martín & Bybee, 2022), which relates to investigation-based learning, and is built on the following five phases:

1. **Engage**. The teacher or an assignment accesses the learners' previous knowledge, and helps them learn a new concept, through the use of short activities that promote

curiosity and draw out prior knowledge. The activity makes connections between past and present learning experiences, exposes pre-conceptions, and organizes students' thinking toward the learning outcomes of the current activity.

2. **Explore**. – Exploration provides students with a common base of activities within which new concepts, processes, and skills are identified, and conceptual change is enabled. Learners may complete lab activities that help them use prior knowledge to generate new ideas, explore questions and options, and design and conduct a preliminary search.
3. **Explain**. The explanation phase focuses students' attention on a particular aspect of their engagement and exploration experiences, and allows them to demonstrate their conceptual understanding, process skills, or behaviors. Also, teachers can use this stage to directly introduce a concept, process, or skill. Learners explain their understanding of the concept. An explanation from the teacher may guide learners toward a deeper understanding, which is a critical part of this phase.
4. **Elaborate**. Teachers challenge students' abstract understanding and skills. Through new experiences, the students develop deeper and broader understanding, more information, and adequate skills. Students can utilize their understanding of the concept by conducting other activities.
5. **Evaluate**. The evaluation stage encourages students to measure their understanding and abilities, and provides opportunities for teachers to evaluate learners' progress toward achieving educational goals.

From the cognitive approach's view, it can be said that its principles are at the basis of the 5E model. The principles of cognitive sciences on how people learn could, in theory, contribute to the model's effectiveness as a learning sequence.

1.4 THE ADLERIAN APPROACH

Alfred Adler, the founder of Individual Psychology, was one of the first theorists to point out the importance of a sense of belonging and its contribution to human well-being. Adler, who developed his theory in 1911, dealt extensively with the human need to belong and feel a sense of belonging. Consequently, he and his successor, Rudolf Dreikurs, developed education concepts with the purpose of empowering children's and adolescents' sense of belonging. Adler believed that the main educational goal of parents and educators is to establish the sense of belonging of children and adolescents to their circles of belonging, including the school and the other

educational frameworks to which they belong (Dreikurs, 1965, 1981; Gfroerer et al., 2013; La Voy et al., 2013; Orian, 2018).

Adler, unlike Freud, did not see human beings as having innate impulses that fundamentally contradict the social order, but as having an innate desire for social belonging and adaptation to the human environment, and he saw the sense of belonging as a central human goal and need. Adler believed that the human race could only exist thanks to the close contact between its members, and feared that if humans did not learn to cooperate with each other, they might eventually risk extinction or mutual destruction (Gfroerer et al., 2013; La Voy et al., 2013; Sarig, 2015).

Further to this conception, Adler saw people as inexhaustible social creatures of interactions with others and with nature as a whole, and based his psychology on the central concept of “Gemeinschaftsgefuhl". Given its central role, this term has been translated by Adlerian writers into various terms such as "social feeling", "sense of community" and "community feeling" (La Voy et al., 2013; Shifron, 2010; Shifron, 2020).

It has been argued that the concept of “social affinity” is manifested in every person on three levels: at the cognitive level, at the emotional level, and at the behavioral level (Orian, 2018).

1. **Manifestation of social affinity at the cognitive level.**

People with a developed social affinity understand well the social need for interdependence, and recognize the fact that the good of each individual in society depends on that of society as a whole. Such people adopt values like equality, human value, flexibility and human love. In contrast, people with a weak social affinity see the human community as made up of separate and distinct individuals, and themselves as distinct individuals who must act only to achieve their personal good (Benbenishty & Friedman, 2020; Sarig, 2015).

2. **Manifestation of social affinity on the emotional level.**

People with a developed social affinity feel a deep sense of belonging to the human race, and feel at their best in the company of other people. Thanks to this feeling, they can feel identification, empathy and a sense of brotherhood and shared destiny with others. In contrast, people with a weak sense of belonging do not feel a sense of belonging to the groups to which they formally belong, and do not feel deep identification and empathy with the fate of other people (La Voy et al., 2013).

3. Manifestation of social affinity at the behavioral level.

People with a developed social affinity strive for action that aims at self-development, and at the same time also strive to strengthen cooperation and a beneficiary approach towards others. They notice the needs of others and the "requirements of the situation". They are focused on actual doing that will improve the situation and not on their personal prestige and self-worth. That is, those with a high sense of social affinity develop their personal abilities while contributing to each other. In contrast, people with a loose social affinity focus on promoting their own personal good, and do not do much to contribute to the group to which they belong (Sarig, 2015; Seligman & Adler, 2018).

Although the distinction between these three layers helps to clarify the concept of "social affinity", these layers are inextricably linked. Although human beings experience life at different levels of consciousness, each person has a holistic unity in thought, emotion and action (Sarig, 2015; Yotam, 2014). Specifically, Alfred Adler claimed that a person with a developed social affinity and sense of social belonging would enjoy mental health and well-being (Gfroerer et al., 2013; Shifron, 2010; Shifron, 2020; La Voy et al., 2013).

It has been claimed that, in Adlerian theory, the connections between an individual and society are perceived as ever-expanding circles (Orian, 2018). The home is the first group in which the child's social affinity and sense of belonging develop, followed by the various education systems and community. A person can be connected to family, friends, community, humanity and the universe in ever-expanding circles. A child who is able to develop a strong social affinity, and feel a good sense of belonging to his or her belonging groups (family, class, group of friends, etc.), will learn that they must strengthen their self-worth by being contributing and helpful members of the groups to which they belong. In contrast, a child who does not find ways to positively belong to his or her belonging groups will look for negative ways to gain self-worth and belonging. In light of this assumption, Adler noted: "The way of benefit is always the result of strengthening the feeling of sharing with others, the willingness to work together and increasing interest in others" (Adler, 2008, p. 12).

About two decades ago, two facilitators at the Adler Institute in Israel (Noa Lizerovitz and the late Rumi Zilberman) developed a model that summarizes the

components of belonging and its conditions mentioned by Adler and later by Dreikurs. The model is designed to strengthen the sense of belonging of children, adolescents and adults to the groups to which they belong. The model includes five components or conditions that educators must adhere to in their work with the student-trainee: 1. personal approach; 2. sense of value and equality of value; 3. personal growth and development; 4. contribution and benefit; and 5. meaning (Orian, 2018).

1. **Personal approach.** Every person feels the need to receive a positive personal reference from the people around him. The person wants to feel that the members of his group know the routine of his life, pay attention to him, and make an effort to recognize his physiological and psychological needs. He wants to feel that his feelings, thoughts and preferences are treated with respect (Seligman & Adler, 2018).
2. **Sense of value**. Every person feels the need to be valuable and equal to those around him; valuable as a unique individual, regardless of appearance, achievements, clothes, or belongings. On top of that, a person wants to feel equal to others, who are not condescending to him, and he is not condescending to others (Adler, 1931/1998; Dreikurs, 2000).
3. **Personal growth and development**. Every person needs personal development and expansion of his or her physical, cognitive, emotional and social skills and abilities. Human growth is related to the desire for self-expression and the development of creativity. Creativity is expressed in problem solving, overcoming tasks, learning and creating. A person in stagnation, who does not develop, may feel boredom and lack of challenge. Such feelings in children and adolescents can push them into disruptive and even risky behaviors (Benbenishty & Friedman, 2020).
4. **Contribution and usefulness**. Humans are social creatures, and therefore by nature, from an early age, need a sense that their actions contribute and are beneficial to their environment. Adler believed that the contribution and usefulness ingredient was extremely important yet, in the modern age, over-indulgence, which is very common on the part of parents, blocks the children's desire to benefit and contribute to others. As a result of this deficient way of education, children learn, mistakenly, to think that they belong to their environment only when they receive a lot of attention and unnecessary services.

This situation does not prepare them for life, nor does it build a healthy future society, so it is very important to develop in children and youth a sense of usefulness and contribution. Children and adolescents learn from the environmental responses that they contribute and are useful, and thus over time they develop a sense of self-worth (Dreikurs-Ferguson, 2010).

5. **Meaning.** The Adlerian theory advocates the idea that every child and adult who feel loved, needed and have the ability to contribute to the groups to which they belong, feels that their life has meaning. the individual knows that he is significant to the group, and that if he is absent, the members of the group will notice his absence, and will not be able to easily replace him with another person. Adler, like Victor Frenkel, argued that every person needs to find personal meaning. As they develop, children and adolescents form an opinion about themselves: Am I a good person? A bad person? What is my uniqueness? When children and adolescents, like adults, contribute and are useful to their environment, they grow and feel valued and meaningful (Adler, 1931/1998; Seligman & Adler, 2018).

The five elements described above make it possible to develop in children and adolescents a sense of belonging, and therefore children who experience them, may cooperate with their social environment and remain part of the group, even when the reality is difficult and undesirable for them. In this case, they will think about how they can improve the situation for themselves and their team members, and work towards such improvement (Benbenishty & Friedman, 2020).

In contrast, in the absence of a sense of belonging based on the five components, children and adolescents, who are inherently more impulsive and have little life experience, can develop a variety of problematic behaviors and different risk behaviors. This is to receive compensation, even if temporary and partial, for their sense of non-belonging. Children and adolescents with problematic behaviors and risky behaviors get a lot of attention from their environment: although their parents and family members, friends and teachers scold them, warn them and threaten them, but for these children, the main thing is the treatment they receive. They feel valuable and meaningful because they are noticed, or others are afraid and scared of them. In addition, in order to feel a sense of belonging to a social group, young people can even

join criminal groups, in which they receive personal attention, a sense of value, and personal meaning (Adler, 1931/1998; Dreikurs, 2000).

As far as **the affinity of the Adlerian approach to the education system**, and following Adlerian principles, one of the main causes of risk behaviors and school dropout among children and youths is lack of a sense of belonging. Students who feel a sense of belonging to school develop positive attitudes to the school and to their classmates and teachers. They are more involved in learning and other school activities. Their social behavior towards peers and teachers improves, they tend to conform to school norms, their discipline problems decline, and their academic achievements increase. Therefore, the key goal of any education system, in general, and of teachers and educators, in particular, is to establish children's and adolescents' sense of belonging to their circles of belonging, including their educational framework (Orian, 2018).

Various teaching strategies based on the Adlerian approach have been suggested and examined by scholars, and have been found to be effective. These include nurturing strengths, assigning roles that contribute to the group's activity, empathetic listening, and sharing in group decision-making. Adlerian-based strategies have been found to strengthen the students' sense of self-worth and self-efficacy, as well as their sense of belonging to their peers and school, and have improved their academic achievements (Edwards & Gfroerer, 2010; Sutherland et al., 2010). Other strategies in this spirit include sharing the educator's experiences and thoughts, 'separating the deed from the doer' (not labelling a person on the basis of their behaviour, but describing behaviour or reframing it in strengths-based language), and encouragement through relating to the process rather than the final outcome (Wagner & Elliott, 2014).

The Adlerian approach is empowering, clear, effective, and applicable to the field of education. The educator and child have freedom of choice to change and make progress through optimistic thinking. The Adlerian principles allow expanding the educational toolbox: upgrading interpersonal communication skills, improving class management and coping with discipline issues, and acquiring skills of consultation-collaboration, contribution-effectiveness, examining basic assumptions, and empowerment. Guidance, reinforcement, mirroring, and help in improving educational functioning and promoting goals – based on humanistic-social principles (Orian, 2018).

1.5 EXISTENTIAL THEORIES AND APPROACHES

The starting point of existential theory is the existential philosophy (philosophy of existence), which has its roots in the 19th century in the writings of Kierkegaard, Nietzsche, Dostoevsky, and others. Modern existentialism gained strong momentum before, during, and after World War II; it is identified with the philosophers Heidegger, Sartre, Ponty, Camus, Buber, de Beauvoir, and others (Bitman et al., 2016).

Existentialism deals with the question of the meaning of human existence or life, and existential philosophers claim that the person who seeks to answer the question of meaning examines his or her life, draws conclusions, and changes their choices and actions. In the existential approach of the twentieth century, the understanding became established that objective reality does not exist, and hence that there is also no pure and orderly a priori truth. According to this approach, it is human consciousness that shapes reality, and not the opposite. Reality is experienced among subjects through one's subjective prism, so by definition it is subjective rather than objective. The objective world has no meaning in itself, but only as part of one's observation of it (Moore, 2018).

According to Sigd (1981), by the existential approach, man is confronted with reality, but at the same time also gives it a unique meaning of his own. He argued that existentialism is an approach that identifies the concept of reality with the concept of man. At its center is a unique and special individual, and the only reality that exists is that which one treats and gives meaning to.

The founders of existential psychology in Europe were the Swiss psychiatrists Ludwig Binswanger and Medard Boss. Both were psychoanalysts, but opposed the classical Freudian approach, and argued that man should be understood phenomenologically, as a phenomenon or as a whole subject (rather than as an entity composed of several structures: id, ego and superego). Psychoanalyst Rollo May went on to spread the existentialist approach throughout the United States and around the world. May based his philosophy on Heidegger, and it is therefore impossible to talk about his approach without first presenting Heidegger's ideas that served as the basis for existential philosophy, even though he himself opposed his definition as existential (Bitman et al., 2016; Marino, 2007).

1.5.1 Heidegger and Existentialism

Heidegger (1927) argued that instead of understanding the existence of the individual, one must understand the very existence, and in order to delve into the study of existence, it is necessary to understand the connections between two essences: man, and the world. Man within the world and the meaning he gives himself must be examined. He added that every man is like God, because he is the one who creates his own world, although he does not create the world out of nothing but only the meaning of existence for himself. Since man cannot live without meaning, and only he gives meaning to things, in any case he has no interest in reality per se. This statement, that there is an absolute identification between man and the world and that every individual is a world and its fullness, is the foundation for the existential approach. How does man give meaning to the world? According to Heidegger (1927), the most basic and common meaning is instrumental: man gives meaning to things according to the use he makes of them to his benefit. Reality is revealed to man as a world of "being", set and arranged for his benefit. It is a world that exists only for its Creator, and man is the Creator (Marino, 2007; Moore, 2018; Sigd, 1981).

To define man's relation to reality Heidegger coined his most familiar term: "being there" that became the key concept of existential psychology. The concept comes from the field of philosophy known as ontology: the theory of being or the theory of "what is", and it means that man is always "there" – outside himself, in the world. Man is thrown into reality without choosing to be born, and feels that existence in all its meanings is actually forced upon him. Since one is thrown into the world, there is a danger that one's existence in it will be trivial and pointless. However, if people constantly wonder about the very existence of things, they choose to live an authentic life. According to Heidegger (1927), authenticity means openness to discover the infinite possibilities of using everything that exists in the world. When a person chooses one possibility, he is actually giving up an infinity of other possibilities. As man's world of possibilities is reduced, so does his life become less authentic (Moore, 2018; Yalom, 2011).

In existential psychology, the term "authenticity" parallels the term "truth" in its traditional meaning in philosophy. Yet truth is perceived as something general that applies to all human beings, while existentialism does not attach any meaning to the

general truth, but is interested in the truth of the single individual. The individual can be real or false only about himself, and if he has chosen the truth then he is authentic. Why would a person choose to live a false life that is not authentic? Heidegger's answer is that authentic life is scary and very difficult. The authentic person perceives the world as a world that he himself created, and therefore he can also change it. It is a world in which nothing is permanent: everything that is known and everyday-like is gone; Everything is made new and original. The authentic person faces complete loneliness and absolute responsibility for every action: he is free to create his world in whatever way he chooses and, therefore, is also responsible for this way. This perpetual responsibility causes unbearable existential fatigue (Bitman et al., 2016; Marino, 2007; Moore, 2018; Yalom, 2011).

A refuge from this exhaustion can be found in others. The other (or "they" as Heidegger defines the other as representing the values of society) offers a person a simpler reality, and in this way serves as a defense mechanism that frees one from the responsibility of free choice. He is offered a general truth – universal values that free him from question and doubt. According to Heidegger (1927), almost all communication is necessarily unauthentic, because it deals with the general realm, with meanings common to all human beings, and not with what is unique and exclusive to the individual. Exceptions are only philosophy and art: only they can make a person return to himself. Heidegger therefore argued that the lives of most ordinary human beings are not authentic. The temptation of a simple and quiet life causes a person to give up his freedom and alienate himself. The only experience that may take him out of this situation, even temporarily, is the horror that comes from his full awareness of death, of the possibility of his non-existence. The experience of horror illuminates all reality in a new light. Knowing that existence is finite, and can become void at any moment, undermines all the meanings given to it so far. Yet undermining all accepted truths and universal values does not necessarily give rise to despair and a sense of purposelessness (Bitman et al., 2016; Marino, 2007).

Heidegger (1927) believed that the fear of death, the naked confrontation with the possibility of nothingness, could shake man from his indifference, and bring him back into the world with renewed strength. The void eliminates all defined content and realities, yet just because of this, man is aware of the infinite possibilities in reality, which he forgets in daily life and converts through his choices of defined realities. A

possibility that materializes ceases to be a possibility, and every choice closes off other unselected ways. A raw material from which anything can be made ceases to be so once we have created a specific thing out of it. Therefore, the question arises: What is the answer to the experience of horror? What should a person do? Heidegger (1927) argued that there is no one solution, but every person must present himself with this question over and over again in order to maintain openness and authenticity to the being. The only way open to human insight is to get rid of any kind of dogmatism, and change one's fundamental perception as to the essence of knowing. Authentic knowledge is knowing something as a problem (i.e., asking questions over and over again). We know only through the question, since the answer has closeness to the being in it (Sigd, 1981).

1.5.2 Rollo May's Existential-Analytical Approach

Like Heidegger, May (1958) believed that people have no separate existence from the world, and he argued that in order to be an authentic part of the world, human must be open to the world and the possibilities it offers him. Therefore, He suggested replacing the word 'being' with the word 'becoming'. In doing so, he sought to emphasize that human existence is not a static state, but a process of constant change. In his opinion, people are unique from all other living beings in that they are aware of their formation, and therefore responsible for it. People are the source of change in the process of their formation since, in striving for authentic existence, they try to realize the potential inherent in them in his way (as implied by their experiences) and not be subject to general laws (Moore, 2018; Ryckman, 2013).

According to May (1958), the existential approach distinguishes between three dimensions of coming into being in the world:

1. The world around. The biological environment is the natural environment for all animals (including man). This world includes, among other things, human physiology: biological needs, impulses and instincts. This is the world of impulses that Freud explored, and its existence does not require consciousness.
2. The world with (the other). One's relationship with his/her human environment, with other human beings. This relationship of course also depends on the degree to which the person desires to be involved in the world and in relationships.

3. The world of oneself. One's relationship with oneself. It includes a person's thoughts and emotions about himself and his body, self-awareness and understanding the meaning of objects in the world for him.

The three dimensions of formation in the world are interrelated: man's relations with himself and his environment are influenced by his biological structure. The three dimensions give meaning to things by adding tier upon tier. Existential psychology tries to address all possible dimensions of human existence, that is, the three dimensions of formation in the world; thereby going against all other currents that are reduced to only one dimension and touch on only one part of the picture (Ryckman, 2013).

According to May (1983) that man is a completely free creature who can choose for himself any way of life he desires, is responsible for acting voluntarily and intentionally, and must aim for the future. All dimensions of our present existence are affected by our future intentions. For us, a will includes a wish, and in order for us to want something and act to achieve it, we need a future-oriented wish, that is, to admit that we want to change the future. He added that in the absence of will and a sense of direction man feels worthless and helpless. The helplessness may cause him to feel empty, and this in turn may lead to violence in a last desperate attempt to prove that he still has influence over something (Yalom, 2011).

May (1969) also argued that a person needs to experience all the dimensions of formation in the world including social connections, otherwise he will remain in his loneliness. This is why many people respond to helplessness resulting from non-authentic existence by adhering to others, and actually trying to compensate themselves for the emptiness and loneliness and loss of values through the sense of "togetherness" that society offers. May warned that this solution could too be problematic if exaggerated, since one who is in a relationship just to avoid a feeling of emptiness actually loses free choice and succumbs again to an unauthentic existence. He argued that the task is therefore to find the right balance between a healthy orientation to the community and a healthy individualism: a healthy person preserves the world with-without losing his own world (Ryckman, 2013).

Further, according to the existential-analytical approach a person who is in a state of emptiness and loneliness, suffers from anxiety, and that since anxiety stems from a threat to the very existence of man, it is common to all human beings and fundamentally

is an acknowledgment of the fact that our existence is finite. Therefore, the fear of existence is in fact the fear of non-existence. This truth constantly presents the non-existence within existence, and forces man to live all the time while referring to the possibility he might not exist. This constraint embodies positive possibilities, because it imposes on man more forcefully the responsibility to make the most of every moment of his existence. Knowing that every moment may be the last moment of his life requires him to try and live the moment in the fullest and most authentic way (Bland, 2020).

It should be noted that the existentialist-humanist approach to education claims that human beings have a natural ability to learn, that meaningful learning occurs when a student sees the learning material as related to his or her own purposes, and that in the modern world the most beneficial learning is independent learning and openness to life experiences (Levi-Feldman, 2020).

In conclusion, the existential thinkers believe that suffering is a dimension of existence, and there is no need to overcome it in order to turn reality from poor to rich and meaningful. Suffering is manifested in the meaning of freedom. Insecurity, detachment and arbitrariness are the real condition man is in, and there is no escape from it. One suffers because a personal and independent freedom is manifested in him that makes him responsible for himself and his world. People are free creatures who build their own world of meanings out of endless choices; the future does not stem from the past, but from one's choices (Moore, 2018).

As regards **the affinity of existentialist theories to the education system,** more than other theories, the existentialist approach developed in education. Existentialist psychology emphasizes the argument that the individual is constantly in a situation of making decisions, large and small, which determine his or her nature and personality. The key element of the discipline is the attempt to reveal the individual's efforts to find sufficient significance of his or her unique identity and ambitions to give life meaning (Kreisman, 2018).

21st century society, technology, economy, environment and politics are complex and change rapidly. This reality leads to a different and unknown future, and creates challenges and important issues for the education system. A key educational issue, which constantly occupies both educators and scholars, is the issue of the learner's functions. That is to say, the main challenge of the education system is to shape and reinforce the

relevance of education on two central dimensions: the relevance of education to the learner, and the relevance of the learner to the world (Morgenstern et al., 2019).

The learner's functions are the variety of independent behaviors and skills that are required for the individual's growth, and adapted to the 21st century learner. The education system is required to cultivate the learner in the teaching-learning process throughout the years of compulsory studies. Recognition of the learner's functions as an important value is grounded in the insight that providing skills is at least as important as providing knowledge and content. In Israel, Ministry of Education documents have set out six learner functions that the education system is required to cultivate. Each function includes information, skills and outlines (Eisenberg & Selivansky-Eden, 2019; Ministry of Education, 2014):

1. Cognitive functioning: The learner's competence to perform a variety of learning and thinking functions – from identification and memory to implementation, analysis, synthesis, and assessment.
2. Metacognitive functioning: The learner's competence to think about his thinking and navigate his learning through thinking about the significance of the knowledge, the processes and strategies that were used, while performing processes of planning, monitoring, regulating, and control that contribute to promoting awareness of learning and to constant improvement of its outcomes.
3. Self-direction and management of learning: The learner's competence to choose learning goals, and define and plan the learning process, basing it on cognitive and metacognitive thinking processes. Also, to integrate the development of high internal motivation and to adapt strategies to the goals under changing circumstances.
4. Interpersonal functioning: The learner's competence to conduct interpersonal communication that respects the other, and treats the other with sensitivity, tolerance, and consideration.
5. Intrapersonal functioning: The learners' competence to know themselves, to feel self-efficacy, to regulate behaviors and feelings, and to be fully aware of the strengths and weaknesses of their functioning. To identify how their life tasks affect their emotional world, and how their emotional world shapes how they deal with their life tasks.

6. Sensory-movement functioning: The learner's competence to conduct a healthy lifestyle, to intelligently use body language and awareness to convey ideas and emotions, to realize creativity, and to express varied learning modes that can be represented in a multisensory and motorial way.

As mentioned, these six functions should improve and deepen the learners' abilities, and help them to learn, develop and integrate in community and society life beyond the learning period. In addition, the education system is required to cultivate the learning-teaching process throughout compulsory school years. The teacher is required to identify and map the factors that promote or hinder the learning process, and to provide solutions for the learner's diverse needs, which encourage his or her self-efficacy and self-realization. The teacher is also expected to provide the students with solutions tailored to their desires and needs, and to serve as a personal mentor (Ministry of Education, 2014; Morgenstern et al., 2019).

It can be said that the learners' functions are anchored in the philosophical perception known as existentialism, according to which one's basic task is to build an authentic and personally-significant life. Namely, all opportunities are open – one has free choice and the opportunity to be actively involved and responsible for shaping one's life, continuous learning and development, and search for meaning (self-guidance and management of learning). A person realizes him- or herself in three dimensions (Frankl, 1946, 1981; Kierkegaard, 1843, 1997; Rogers, 1969):

1. Relationships with one's physical environment and biological needs;
2. Relationships with others (interpersonal);
3. One's emotions and perceptions of oneself.

In a recent study, Tanami (2022) examined the contribution of an intervention program to promote learner functions, which focused on a process of choosing and achieving learning and social-emotional goals. The main aim of the research was to promote the student's autonomy to take responsibility and be actively involved in shaping his or her learning, interpersonal and intrapersonal development, grounded in a number of existentialist principles: Students want to make progress and succeed, and express their strengths; Goals that the students set for themselves help them and the system to move forward; Success is what the individual defines as success; An engaged and collaborative student can succeed, and needs a significant adult to accompany him/her. In order to provide the above to middle-school students, an intervention

program was built, inspired by the existentialist approach. The research describes a goal-choosing process among 8th grade students, based on self-guidance and learning management, through collaborative work of teachers who serve as mediators in the process. It also presents a study that assessed the process' success, with a focus on the learner's interpersonal and intrapersonal functioning characteristics, and the learner's satisfaction with goal-setting and achieving process. It was found that the student's perception of the teacher as encouraging him/her during the process was one of the two predictors of his/her satisfaction. In fact, this perception of the teacher corresponds with the education system's perception of the 21st century teacher (Morgenstern et al., 2019) – as a provider of solutions tailored to the student's desire and needs, and a personal and guiding mentor. In addition, it corresponds with the existential approach of numerous open opportunities and free choice: The student chooses the area that he or she wants to promote, formulates and pinpoints his/her desired goal, determines with the teacher how to promote this goal, and shares with the teacher what he/she would need to do so. The teacher accompanies the student throughout the process while performing formative assessment. The teacher's mediation during the process could help the student to build an authentic and meaningful life within the learning framework, to discover his/her self-efficacy, to move out of his/her comfort zone, and to do unfamiliar things. Although the intervention program dealt with choosing and achieving school goals, its uniqueness was that it allowed the student to experience personal growth beyond the school environment, and promoted the student's resilience.

1.6 THE CONSTRUCTIVIST APPROACH

This approach developed in the 1970s and 1980s. According to the constructivist approach, the individual does not only process information and interpret it to make it meaningful (De Corte, 2010; Eshet & Hammer, 2006), but these processes depend on social mediation. According to one approach, Piaget (1952) offered learning based on the processes of assimilating new information into existing patterns, and adapting existing patterns to new information. These learning processes move across several stages in which the individual gradually improves his or her thinking abilities and awareness, and expands and structures the thinking patterns following interactions with the environment (Levi-Feldman, 2020).

According to Eshet & Hammer (2006), Yehieli (2008), and De Corte (2010), constructivism is a general term for philosophical, psychological, pedagogical, sociological, linguistic and methodological approaches that claim that knowledge is constructed rather than revealed, inherited or processed. Learning, according to this worldview, is therefore not a copy of existing knowledge, but a process of meaning creation by the learner. This approach developed in the second half of the 20th century. According to this approach, the individual not only processes information or interprets it to make it meaningful, but these processes depend on social mediation (Qinan, 2020).

The two theories that led to Constructivism are Piaget's theory of cognitive development (1972), which emphasizes the individual and the construction of knowledge, and Vygotsky's sociocultural theory of cognitive development (1962). According to Piaget, knowledge is not passed as it is from person to person; rather there is an acquisition process in which students acquire and build for themselves a personal knowledge base according to prior cognitive knowledge and the context in which the activity takes place. As a result, the brain's neural connections are built and branch out daily. The acquisition of knowledge is done in a process that requires the student to be active, to link existing knowledge and existing skills to new knowledge. In this process, the student builds his knowledge by creating a web of semantic relationships between existing knowledge and new knowledge (Ben-Zadok et al., 2006; Narayan et al., 2013).

Piaget suggested a learning approach based on assimilation processes of new information within existing schemes and adapting existing schemes to new information. These learning processes move across several stages in which the individual gradually improves his or her thinking abilities and awareness, and expands and structures the thinking schemes following interactions with the environment (Piaget, 1952). Piaget (1972) believed that knowledge is not a product that can be transferred "from head-to-head"; it is a long process of acquisition, in which the learner builds for himself his personal charges of knowledge, and a result the brain is built and branches out. These construction products are "knowledge structures", mental structures or cognitive structures, which are formed on the basis of the learner's personal experiences and preoccupation with bodies of knowledge (Qinan, 2020).

Another theory which greatly influenced social constructivism is the sociocultural theory of cognitive development (Vygotsky, 1962). The renowned developmental psychologist argued that all high-level mental functions develop from social relations, and therefore social interactions play a central role in the development of cognition. The realization of the potential for development is subject to the existence of full social interactions within the learning group. The learning unit is not an individual, but a group that holds discussions that are accompanied by thinking and considerations, providing and receiving feedback on the decision-making process and the learning process. The development of the individual can be promoted by intervening in the "zone of proximal development", one of Vygotsky 's most familiar terms, which addresses the gap between what the learner can accomplish on his own and his achievements with an adult's mediation.

Thus, according to Vygotsky (1986), learning depends largely on social interaction in which a teacher recognizes where the learner is, and offers mediation that allows the gap to be bridged. The implications of these concepts for classroom interactions include increasing ownership of learning for the learner while focusing on a limited number of topics (Zimmerman, 2002); creating a social process of discourse and cooperation while linking to the real world (Ben-Zadok et al., 2006; Brown et al., 1989); and summoning a complex set of actions performed in different ways towards achieving a meaningful goal, such as PBL (Project Based Learning) (Levi-Feldman, 2020; Narayan et al., 2013).

Regarding **the affinity of the constructivist approach to the education system**, it should be noted that the changes that have occurred, and are continuing to occur, in the education system have led to a new approach to the learning process, and to the transition from perceiving the child as passive and being fed with facts and prepared to be an adult – to a dynamic process of shared teacher-student and student-teacher activity, to a circular process of structuring knowledge. This process is grounded in the principles of the constructivist approach, according to which the teacher should be a mediator between the knowledge and the student (Shavit & Reiter, 2016).

Today, when knowledge has become accessible to all, the argument that the teacher should be a mediator between the knowledge and the student has deepened. As first suggested by Vygotsky & Cole (1978), this emphasizes the centrality of two

elements of the learning process. First, the cultural environment – the assumption is that the teacher conveys the basics of the society in which they live, and challenges the student to solve problems. the problem-solving process is considered the main learning mode. Methodologically, problem-solving is based on encouraging the learner to use his/her existing knowledge, insights and abilities, whereas the teacher instructs, guides, and provides additional relevant knowledge. During the learning process, the student builds his/her knowledge world with the help and guidance of the teacher. The second element is the group and the interactions that occur during the learning process. The argument is that each of the group members, not just the teacher, is an expert who contributes his/her understanding, knowledge and abilities to the problem-solving process. The classroom becomes a learning community, and the teacher is the factor that bridges between culture and society, and the learners. Meaningful teaching is, thus, the shared effort of teacher and learners to construct knowledge (McLeod, 2019).

Additionally, the focus of teaching and learning, based on the constructivist approach, is on real, significant problems that the learners are concerned with, and that reflect their world. Also, the teaching and learning methods stimulate the learners' motivation to employ their problem-solving abilities, encourage critical thinking, and facilitate concentration, cooperation, activating resources, and striving for excellence. Learners involved in this kind of learning structure their knowledge, organize information, consider alternatives, and conduct mini-research, and can even explain their conclusions to others. Experiencing learning as investigation was found to contribute to the ability to transfer the process to other situations, and to cope with challenges. Other significant outcomes of this form of learning can be seen in the ability to locate issues, to present arguments based on a general perception of the elements of a problem or issue, to suggest alternatives, and to plan various activities. The teacher's role is to guide the learners by presenting a model of thinking based on analysis and discretion. The teacher inspires the students to be involved in various ways such as discussions, sharing knowledge with others, and contributing insights rooted in their experiences outside the classroom. The teacher's objective is to get them to see themselves as part of a team, whose goal is to suggest a possible solution (Al-Yagun & Margalit, 2022).

It should be noted that one of the targets of 21st century education is to stimulate the learner to be creative in solving 'new' problems using 'old' knowledge. Thus, and

through teaching based on the constructivist approach, the learner achieves the metacognitive insight that allows him or her to implement transfer of knowledge from one discipline to another. Moreover, since the application of knowledge about solving the learners' practical and authentic problems is interwoven in their learning, it is a meaningful experience for them (Jou et al., 2016).

In summary, teaching methods based on constructivist principles grant learning that relates to a certain general topic, while providing space for each learner's personal expression and personal development (Reiter, 2022).

1.7 THE HUMANIST APPROACH

Humanistic psychology was developed in the United States in the second half of the 20th century. Its founders were Carl Rogers and Abraham Maslow. Its proponents believe that one is driven by the tendency to self-fulfillment, and that a person is fundamentally good, creative and healthy (Bitman et al., 2016; Talukdar, 2021).

The humanist approach sees self-fulfillment as the realization of human nature that is perceived as fundamentally good. It considers a healthy person to be someone who is trying to realize the potential inherent in him. That is why this approach is called 'humanist': one is by nature positive, creative and optimistic, and has the power to overcome despair and suffering (Friedman & Schustack, 2012).

Humanist psychology has evolved in contrary response to the psychoanalytic approach that perceives human nature as irrational, selfish, and destructive to himself and others, and to the extreme behavioral approach that sees man as a robot. The humanistic approach is full of hope and optimism as to mankind, and believes that each one has the potential for healthy growth and creativity. If the potential is not realized, the reasons for this are external: negative effects of the parents, education and other social pressures. However, a person can overcome these negative effects if he is willing to take responsibility for his life (Bitman et al., 2016).

The humanistic approach is nothing but a collection of approaches, all sharing a common view of man as constantly growing, perceive self-fulfillment as a basic need, and emphasize the mind as a significant partner to emotion and passion in shaping and regulating behavior. At the center of the humanist approaches, a person shows discretion in his function within the relationships in which he is placed, and deserves to

be respected for his right to freedom of choice and action. Out of the different humanist approaches, we have chosen to highlight two of the founders of humanist psychology who are, as mentioned, Carl Rogers and Abraham Maslow. We first present Rogers' theory because it is more comprehensive and unique, and is currently considered to be at the forefront of humanistic psychology (Bitman et al., 2016; Levi-Feldman, 2020; Shimoni et al., 1997).

1.7.1 The humanistic psychology of Carl Rogers

According to humanistic theory, the innate tendency to self-realization is the basic motive for all behavior. Rogers (1959) saw this tendency as a biological force, which realizes the potential for one's inherent genetic qualities. The tendency for self-realization drives man towards new stimuli, towards new challenges, and is stronger than any despair and urge to give up. This view contrasts with Freud's theory that man strives for relaxation, for homeostasis. The process of self-realization goes on indefinitely, because it is not a state that can be actually reached, but a driving force, and whenever a person comes to achieve a goal, he is drawn to new challenges and new ways (Ryckman, 2013).

Rogers (1973) believed, unlike Freud, that human nature is fundamentally good and devoid of destructive impulses. Thus, there is no conflict between man as an individual and society. A healthy society will lead to healthy people, those who contribute to its continuity. He emphasized that the individual's reference to reality is subjective, and does not necessarily overlap with objective reality. The child's experience is the sum of all that takes place within the phenomenal field: thoughts, emotions, aspirations, desires, needs, and so on. Only the child himself truly understands. The experience is indeed a subjective one, yet it stems from the events in the world around the child. Each event or phenomenon are interpreted by the child at the conscious and subconscious level. Rogers emphasized the concept of self, which gradually detaches itself throughout the development as part of the experiential world of the individual (Bitman et al., 2016; Shimoni, Segal & Roni, 1997).

> The self is the organized and consistent conceptual pattern, consisting of perceptions of the characteristics of the 'I' and perceptions of the relationship between the 'I' and others and different aspects of life, together with the values associated with these perceptions" (Rogers, 1959, p.200).

Hence, within the concept of the 'self' are included the child's perceptions of himself as he is and as he would like to see himself, that is the 'ideal self'. Within the self-perception, the child's perceptions are intertwined with the relationship between him and significant others, such as parents, friends and teachers. Within the child's subjective world, the values are associated with each relationship and perceived trait (Ryckman, 2013).

In order for the child to reach a both positive and realistic self-perception, it is very important to accept, love and positively appreciate him within the environment in which he grows up, including the school system in which the child spends many hours in the process of his growth. The teacher should understand that it is important for the child that he and the class accept him, and that this acceptance ensures growth in the positive way, which will allow the child self-fulfillment. If acceptance is conditional on a "meeting expectations" basis, and does not recognize the child's authenticity and uniqueness, then the child will learn that confidence in the love of his teachers and friends is conditioned by his behaving as expected. He will therefore adjust his behavior, his feelings and thoughts to what is expected of him, and give up some of his self to the point of self-cancellation (Shimoni et al., 1997; Frias, 2019).

1.7.2 Abraham Maslow's theory of self-fulfillment

> ...we will never understand human life if we do not take into account man's most sublime aspirations. Growth, self-fulfillment, striving for health, seeking identity and autonomy, the longing for excellence – all these aspirations must be accepted today without a doubt as a very common human tendency that is possibly universal" (Maslow, 1970, p. 17).

Abraham Maslow is considered the founder of the humanistic psychology movement, which saw itself as a third approach in psychology, and as an alternative to psychoanalysis, on the one hand, and behaviorism, on the other. Maslow (1968) argued that psychology tends to research people who are sick and mentally damaged, so it ignores positive human traits such as creativity, happiness, fulfillment and peace. Like Rogers, Maslow (1970) assumed that the person is not born tabula rasa but rather with certain tendencies, some of which are common to all mankind, and some are unique to each individual. These tendencies are always positive or, at most, neutral but never negative. This assumption goes against the behaviorist approach that human nature is

nothing but a product of learning, and against the psychoanalytic concept that man is endowed with birth with aggressive instincts (Bitman et al., 2016).

Maslow formulated the essence of his theory in a 1943 article. He believed that a person's innate nature includes the potential for personal growth and the ability to develop interpersonal relationships characterized by sincerity, generosity, and love. However, he warned against over-optimism, as man's innate positive nature is not the dominant factor in determining his behavior, and the environment may have far-reaching influences. A pathological environment, for example, may delay the realization of positive potentials and arouse in the individual hatred for others or a tendency to self-destruction. A person who is not aggressive by nature might react aggressively when he encounters frustrations that prevent him from fulfilling his innate tendencies (Maslow, 1943).

Rogers and Maslow both assumed that man was endowed with a positive basic nature, but the environment might prevent him from realizing it. Rogers' theory mainly details how the environment may encourage or hold back the fulfillment of innate tendencies, but hardly describes the tendencies themselves. Maslow, on the other hand, concentrated on describing the tendencies, and not on describing the effects of the environment, despite the great importance he attached to it. Maslow's choice probably stemmed from his decision to dedicate his life to exploring the healthy aspects of human existence. Although he did not deny the existence of pathological aspects, he claimed that psychology, and especially psychoanalysis, had until his day dealt only with the description of the sick aspect of man, and it was time to complete the picture (Maslow, 1968).

Maslow (1943) presented a theory mainly of motivation; that is, a person's innate tendencies are formulated as needs that motivate his behavior. Compared to Rogers ' theory that claims there is only one innate motive – the tendency to fulfillment – Maslow describes a variety of motives. He distinguished between two main types of needs or motives: deprivation motives and growth motives. The motives for deprivation, as their name suggests, work to fill deprivations with a need that is essential to a person's physical ,psychic ,and logical existence such as food, love and belonging. The motives for deprivation work to reduce unpleasant stress and return the person to a state of relaxation and homeostasis (Bitman et al., 2016; Ewen, 1988).

In contrast to the motives for deprivation, the motives for growth (also called motives for existence) do not reduce or break down unpleasant stress, but rather cause us pleasant tension, such as when we experience beauty, express creativity, learn new things, or give love to others. They are not essential to our very existence but give meaning to our lives. Because growth motives do not work on the principle of impulse reduction, their satisfaction does not lead to a reduction in behavior but, on the contrary, to an increase in it. Maslow believed that the motives for growth express people's need for self-fulfillment (Bitman et al., 2016; Ewen, 1988).

Ewen (1988) added, that the motives for deprivation are common to all human beings, and involve satisfying the missing need with the help of external sources. Growth motives, on the other hand, differ from person to person because they involve the realization of the unique nature of each individual. To satisfy them, man draws from his inner powers, and does not depend on external sources. Maslow classified human needs or motives into five groups arranged in a hierarchical order: 1) Physiological needs; 2) Security needs; 3). Needs of love, love of deprivation, and existential love; 4) Self-esteem; and 5) Need for self-fulfillment.

Four types of needs mentioned above (except existential love) belong to the category of deprivation motives. They all stem from unpleasant tensions, and motivate the person to try to unload them. All are important for one's physical and psychological survival, but do not contribute to real enjoyment and satisfaction from life. The need for self-fulfillment that is at the top of the hierarchy is the only need defined as motive of growth. Among them are cognitive needs such as the need to know, understand and explore, aesthetic needs such as the need for symmetry, order and beauty, and the need for self-fulfillment: "to express more and more my true self." One who has achieved the highest level aspires to fulfill his full potential: he seeks to achieve cognitive values from such knowledge and truth, and aesthetic values like beauty and perfection. At this level, dependence on basic needs decreases. He needs less help from other people and is less dependent on reactions of those around him, and he becomes more independent. Self-fulfillment is not static; it is characterized by movement and change resulting from an internal impetus for growth and expansion rather than external pressures of society. Maslow argued that in order to satisfy a person' s self-fulfillment needs he must meet several conditions: 1) Be free from the limitations of society; 2) Be free from distraction by earlier and lower needs in the hierarchy (motives of

deprivation); 3) Have a stable self-image and secure relationships with others, be able to love and be loved; 4) Recognize his/her strengths and weaknesses, its advantages and disadvantages (Schultz & Schultz, 2013).

1.7.3 Self-theories: Self-gaps and self-guidance

According to Higgins' theory of self-gaps (1987), the self is made up of three layers: 1) The real self which expresses how a person perceives his characteristics in the present; 2)The ideal self represents his hopes, desires and aspirations; and 3) The required self is the person he believes he should be including qualities related to duty, commitment and responsibility. Higgins (1987) focused on the possible gaps between the three layers of the self, and the implications of these gaps on mental health: a considerable gap between the real self and the ideal self leads to chronic dissatisfaction and disappointment. A gap between the actual self and the required self, breeds a sense of guilt and anxiety about failure. Higgins (1987) argued that if these gaps are not too great, they are not necessarily negative, as they spur the person and motivate him to change and progress. Researchers have argued that the ability of people to imagine themselves approaching their ideal self-motivates them to achieve their goals in the direction they want (Friedman & Schustack, 2012).

The theory of self-guidance was also inspired by Maslow's concept of self-fulfillment and the humanistic approach to the question of human motivation (as expressed in the hierarchy of needs). Deci & Ryan (1985) attributed to humans an innate intrinsic motivation that motivates them to express their abilities and interests: Internal motivation reflects the positive potential in human nature more than any other single phenomenon. It is the essential tendency for him to seek innovation and challenges, expand and activate his abilities, explore and learn. Developmental psychologists recognize the fact that children at their best are active, inquisitive, curious and love to play even in the absence of rewards (Levi-Feldman, 2020).

In addition, Ryan & Deci (2020) believed that internal motivation is innate, and discussed the question of its preservation. Preserving inner motivation is related, in their opinion, to three basic human needs: 1. Ability – a person needs to believe that he can overcome challenging tasks; 2. Autonomy – a person needs the freedom to act according to his interests and values; and 3. Affinity – a person needs a connection and closeness to other people. Hence, in order to fulfill oneself, one must believe that he is

the one who determines and directs his way freely and in relation to the other. However, at any stage in life, a person can be at some point on the sequence between absolute internal motivation and complete lack of motivation (inner motivation, is joined by external motivation, and encourages people to do things to gain rewards from the external environment as claimed by the behaviorist approach). A person with little motivation does not progress towards goals, and perceives himself as lacking in ability, autonomy and affinity. Ryan & Deci (2000) argued that there are four degrees of external motivation according to the degree of self-guidance:

1. External behavioral regulation. Behavior is intended solely to satisfy external demands and please others, or to achieve external reward. It will therefore be affected only by rewards and punishments.
2. Interjected regulation. The person internalizes the external requirements but does not fully accept them. Behavior is intended to avoid guilt and anxiety or give him a sense of pride. He is characterized by self-control, and gives himself rewards and punishment.
3. Identifying regulation. The focus of motivation is already more internal than external, and the person receives an idea or behavior because he recognizes their importance and value for him.
4. Integrative regulation. The motivation matches the person's being completely. The behavior stems from within, and the external and internal motives are compatible with each other.

According to Ryan & Deci (2020), internal motivation is the ideal situation, and the advancement towards high self-guidance is not a developmental issue (people do not develop greater internal motivation as they get older). However, the internal regulation certainly depends on cognitive abilities, and these do develop with age.

1.7.4 Positive Psychology

Maslow believed that man is fundamentally good and creative. Positive psychology began as a new domain of psychology in 1998 when Martin Seligman chose it as the theme for his term as president of the American Psychological Association Positive psychology deals with creativity, hope and spirituality that motivate the individual (Platt et al., 2020; Seligman & Csikszentmihaly, 2000; White, 2016).

Positive Psychology has been integrated as a branch in the humanistic approach. It is based on the understanding that in addition to dealing with questions concerning risk factors for the development of mental disorders, it is worth examining what in the person's personality protects him from those problems. Positive psychology focuses on the person's strengths instead of his weaknesses (Zimmerman, 2010).

> Positive Psychology has a number of levels. There is a subjective level, which includes valued subjective experiences like well-being, contentment and satisfaction (past focus), hope and optimism (future focus) and flow and happiness (in the present focus). There is also an individual level, describing positive characteristics that individuals might have or develop – capacities for love, courage, forgiveness, high talent and wisdom to name a few. Finally, there is also a group level or broader community level if you like, which involves how we conduct and operate within wider contexts. At the group level, we may observe civic virtues, citizenship, responsibility, tolerance and work ethic. (Seligman & Csikszentmihaly, 2000, p. 5).

In their article "What is (and Why) Positive Psychology", Gable & Haidt (2005) justified the movement of Positive Psychology (as it has no equivalent – i.e., there is no Negative Psychology). They argued that the science of psychology had progressed thanks to the investigation of "what is wrong" with the individual, family, group and institutions at the expense of understanding "what is right" in all of these. Understanding human strengths in parallel with understanding their weaknesses can help prevent illness, strain and psychopathology. Progress in prejudice ignores the process of acceptance of the other, focus on conflict ignores achieving compromises, and focus on biases does not seek evidence for accuracy in human judgment.

It is argued that Positive Psychology is relevant mostly in times and places that experience economic and social prosperity. However, the pioneers of Positive Psychology oppose this claim, and argue that precisely in times of crisis there is justification for focusing on the positive aspects of a person, and establishing his strengths and his abilities to deal with the crisis. As an example, they cite the attack on the World Trade Center that took place in the United States in 2001, following which there was an increase in sympathy and demand for Positive Psychology among the public (Seligman & Peterson, 2003).

According to Bitman et al. (2016), positive psychology has three objectives:

1. Focus on the subjective experience of the individual (a goal that stems from the phenomenological worldviews common to all humanistic theories).
2. Investigate an individual's strengths and optimal functioning and develop effective interventions to reinforce positive processes.
3. Research positive communities and institutions.

One of the subjective experiences studied is called the flow experience. When one is immersed in an activity that rewards and also pleases him, and feels oneness and harmony with that activity, he enjoys both the way (the experience) and the result (the achievement it brings). Consequently, he feels at his best: focused on activities without distractions, utilizes his full potential, and feels he is learning and getting better. In order to experience flow, it is not enough to enjoy the activity itself, but it should have a clear purpose that that person is committed to. Flow is achieved when we do something we are committed to and enjoy at the same time (Ben-Shahar, 2007).

As for the study of the individual's strengths and optimal functioning, one must first understand what is meant by the word "strength" or virtue. Seligman & Peterson (2003) defined some characteristics of strengths:

1. Strength is generalized beyond situations, is stable over time, and thus is similar to personal traits. This is not a lack of distress or trouble but more than that.
2. When a person has strength he enjoys it, and when lacking he regrets its absence. Even if the strength does not give him any benefit, it is still blessed in his eyes.
3. Parents try to develop strengths in their children. Most parents wish their child to be kind, honest and considerate, not to suffer from a mental disorder, and to have a good job.
4. Society establishes institutions and ceremonies to develop strengths.
5. Culture sets role models to develop strengths .The models can be living people, people who have lived in the past, or biblical-mythological figures.
6. There are the geniuses that stand out with a certain strength from a young age, and in contrast there are children who do not have a defined strength. One can learn that strengths are the result of interactions between psychological and biological factors.

7. Finally, strength is acknowledged and appreciated in almost every culture, which means it has universal value.

Examples of strengths or virtues according to these characteristics are: curiosity, interest, thinking, criticism, creativity, integrity, authenticity, intimacy, kindness, loyalty, compassion, self-control, gratitude, optimism, acting talent, and spirituality. Seligman & Patterson (2003) argued that strengths (like honesty or hope) differ from traits or abilities (e.g., facial symmetry or intelligence) since traits are innate, whereas strengths can be developed more flexibly. They added that understanding strengths had implications for the attitude of the pioneers of positive psychology toward therapy. According to them, the therapist's first goal is not to repair damage, but to help people identify and build their strengths.

Positive psychology researchers have focused on the positive factors that contribute to the mental and physical health of human beings instead of the factors that harm them. One group of researchers, Kobasa et al. (1981), developed the resilience approach. These researchers were initially influenced by existential theories and the idea of human freedom of choice, yet the theory they conceived is more in line with humanistic ideas because it focuses on the positive aspect of human behavior and human strengths .

The questions examined were how it was possible to improve the functioning of human beings while maintaining their health. Instead of asking which people were vulnerable to stress and strain, the two asked which people were immune to them and why. For this purpose, they accompanied a group of managers in a successful telephone company for twelve years. The managers experienced a period of crisis during which the staff was divided into two. The researchers discovered several human beliefs that halted the damaging effects of that oppressive period on the executives. Namely, belief in commitment :the tendency to be involved with people and things (and not detached or isolated); belief in control: the tendency to struggle to influence the outcome of things (instead of sinking into passiveness and helplessness); and belief in challenge : the desire to constantly learn from both the negative and positive experience (not to avoid potential risks and threats) (Kobasa et al., 1981).

In another study, Pereira et al. (2017) examined pressure regulation in a random group of 102 high-school principals, using the cognitive-behavioral approach, and

found a significant increase in task performance, emotions regulation, and coping with various distractions. Participants reported that the discussions with the mentor and the other participants had a positive effect on these measures. The authors suggested using mentoring in companies and organizations as well.

Added to these is the process itself, which is characterized by coping styles that included searching for a perspective point, and understanding and using everything learned. These traits make up the concept of resilience, and serve as "brakes" against the effects of stress on the body and mind. Further, there may also be protective environmental variables such as social support and regular physical activity (Joelson, 2017; Maddi, 2002).

Concerning **the affinity of the humanistic approach to the education system**, and as described, humanism sees the individual's welfare and respect as its prime goal. Accordingly, humanistic education is based on a worldview that advocates learners' development and welfare as the ultimate objective. The beginnings of humanistic education were in classic Athens. This culture placed human excellence as a supreme value, and identified it with proportional and harmonic development of one's skills. The humanistic movement continued to develop during the Renaissance, led by Juan Luis Vives, Erasmus, and others. Vives asserted that education, in both sciences and arts, affects one's comprehensive definition. One's ability to accept education creates the potential to achieve many things: commitment to helping others, ascendence due to excellence, and the capacity to accept the humanism as omnipotent. Humanist pedagogues view education as running towards a destination. Theoretically, one can identify four main approaches in humanistic education, which can be implemented by those who experience personal coaching (Fauzan & Akrim, 2017: Gilat, 2007; Harpaz & Horowitz, 2020; Moore, 2018; Rogers, 1969: Timur, 2011):

1. Classic cultural approach, which strives to develop the supreme abilities of wisdom, moral character and refined taste, which add values and honor to one's personality. This approach has a perfectionist and universal nature, and demands that each person develops and expands his or her humanity in affinity to the best of cultural thought and creation.

2. Romantic naturalist approach, which places the child at the center in belief in its good nature and trust in its ability to find fulfillment through a free and spontaneous process of self-regulation and direction.
3. Existential approach that denies the existence of permanent truths, whether external or subjective.
4. Critical radical approach regarding classes, interest groups and power struggles. This approach aims to free people from false and depressive thought patterns that restrict their development, to enhance their power, to critically read their life's realty, and to join together to form a multicultural, enlightened, just and solidaric democracy.

Alongside the shared principles of humanistic philosophy, and beyond the different educational approaches, one can find wide consensus on the following points (Kreisman, 2018):

1. Cultivating the students' personality must be general (the curriculum aspect) and multilateral (the student's personality aspect).
2. The students' educational progress must be inclusive and balanced, aiming at self-realization.
3. The pedagogic encounter must be meticulously open-minded.
4. The physical environment provides personal security, and a pleasant and friendly atmosphere.
5. A social climate characterized by sensitivity.
6. Rational thinking must be nurtured.
7. Bodies of knowledge are not goals but means.

Besides being based on a philosophy that is increasingly popular in many circles, which see it as an expression of universal justice, the humanistic-educational worldview is a perception that cultivates education methods and applications in the various sectors of regular and special education. In recent years, proponents of this approach advocate it as an educational perception for students, in general, and children with disabilities, in particular. The teaching-learning process is intended to reduce the gap between the students – and their abilities, interests, desires, and limitations – and the 'external' conditions, all according to the student's own perception. The humanistic-educational approach directs towards "inclusive education", i.e., including all children in education that aspires to cultivate an autonomous person, with the ability and

confidence to make decisions about his/her wishes and how to fulfill them (Neuman, 2020; Shogren et al., 2018).

In order to realize humanistic principles in the education system, in general, and schools, in particular, we require professionals and teachers who are both lovers of mankind and world reformers: Teachers who uphold these humanization challenges – to help each and every student to be more human, and to empower their students with lingual, critical and political literacy alongside developing their sense of self-worth and efficacy in autonomously leading their lives. In other words, we need teachers whose mission it is to assure the children freedom of harmonious development of all their faculties (Hess, 2019).

In addition, humanistic principles in the school system highlight the teacher as an autonomous personality – maximal personal involvement in teaching and learning processes and in social and emotional processes. The teacher's role is extremely complex – between direct teaching, group facilitation, personal model of the very same characteristics s/he wishes to impart such as listening, respect for all, punctuality, responsibility, keeping promises, etc. – while setting boundaries, strengthening group cohesion, and supporting each individual (Fauzan & Akrim, 2017: Gilat, 2007; Harpaz & Horowitz, 2020; Moore, 2018; Rogers, 1969: Timur, 2011).

The students themselves are perceived as having a key role in the curriculum, not just as learners, but as a source of content and topics for discussion, clarification, learning, application, and operation. The goal of teaching is internalization of the material. The teacher's involvement is to reflect the perception that the learner is a whole, valuable personality with human needs that are identical to those of the teacher or anyone else. The teacher's personal involvement is to respect the student as a human being with abilities, loves and hates, inclinations and weaknesses. The teacher emphasizes the importance not only of what he or she teaches, but of the student's social tapestry and interpersonal relationships as a central factor of his or her quality of life. Therefore, the teacher represents a certain content world but, at the same time and in every lesson, is attentive to the students, and how they cope with the problems they face. Even when studying, the child is not isolated in a bubble; on the contrary, significant learning that is internalized is done in a group. The teacher's basic work unit

is the group; namely, according to humanistic principles, the teacher is an integral part of the learning process (Hess, 2019; Reiter, 2022).

Alongside the significant change required of teachers' professional awareness and pedagogic presence, it is important to assure a safe and hospitable physical infrastructure, so that the school is prepared to promote teaching and learning based on the principles of the humanistic and constructivist approaches (Aloni, 2011). The literature that deals with teaching-learning processes in the education system has shown that flexible, technology-intensive learning spaces improve students' learning compared to traditional classrooms, and have a great potential to encourage higher motivation and a sense of shared responsibility for learning (Yondler & Weiss, 2021).

In a constantly changing, dynamic reality, learning spaces should be designed with a futuristic orientation to prepare the education system's graduates for the 21st century world (Hennessy et al., 2019). Future learning spaces (FLS) are defined as spaces where the design invites interactions between the learners, and encourages them to structure their knowledge through social interactions. From a wider perspective of innovative concepts and theoretical approaches to future learning, FLS design is based on interactions of the space with collective knowledge-building processes of learning communities. FLSs help to shape interactions and to participate in technology-based learning communities, and even affect the learners' learning experience. As noted, this topic has been widely researched, which emphasizes the need to implement it in the education system (Ellis & Goodyear, 2016; Lui & Slotta, 2014; Sutherland & Fischer, 2014).

In Yondler & Weiss' (2021) study, these spaces were planned in congruence with the pedagogy of two approaches: **constructivism**, which relates to learning as a relationship between the learning space and other learning mediators (Vygotsky, 2004), and the **humanistic**, in the context of the learner's active involvement according to his or her nature (led by Kibbutzim College of Education, Technology and the Arts). The authors suggest a theoretic framework that combines these two approaches, and emphasizes two central ideas that feed each other and can exist only in tandem. First, in the spirit of humanistic education, the learner is placed at the center during the learning process, is seen as a whole in his/her own right, and is responsible for his/her fate. This idea emphasizes personal empowerment, focuses on the individual's

development, and encourages him/her to fulfil his/her inclinations and tendencies through investigation, interpretation, criticism, and creativity. The second idea, in the spirit of a knowledge-building community, highlights the importance of a community's culture – but not just a literal community; rather, a knowledge-building community that values the individual's input and commitment to creating the community's collective knowledge. This idea emphasizes the shared responsibility of all learners, and the personal responsibility of each learner. Each member of the community adapts his or her specializations to the community's needs, and thus – in various social configurations such as group work or interaction between groups – the members build useful knowledge together for the entire community. To summarize, these two approaches correspond with each other by placing the learner at the center as an active participant in building the personal and social knowledge. The combination of the two underlines the perception of the learner as a creator of knowledge rather than a consumer of knowledge.

It has been shown that perceiving the learner as a creator of knowledge characterizes the use of technology, which dissuades the learner from being a passive consumer of the quantities of available knowledge; that is, a learner who is digitally-literate and critically-literate, who builds his knowledge by posing new ideas, suggests ideas of applications in various contexts, proposes solutions, responds, asks critical questions, creates, initiates, communicates, and respects the other. Furthermore, this review of FLS learning processes indicates use of technology during social interactions that facilitates the interpretation of information from many cultural and social contexts, allows to respond to them and communicate them to others, to build meaning in new and original ways – both personally and through exchanging ideas with one another, as part of building knowledge in the community (Eberle et al., 2019).

Figure 1 presents a summary of the six main theories in psychology, in general, and in personal development and learning, in particular, and summarizes the relevant learning-related principles of each theory.

Figure 1.

Summary of educational theories and approaches

Approach	Founder and/or theorists	Period	Learning
Behaviorist	Skinner	1930s-1940s	Learning occurs through rewards and punishment; it depends mainly on external stimuli. A learning environment must include interactions and discourse that create stimuli, reactions, and reinforcements.
Cognitive	Bandura	1950s	Learning is an internal process that takes place between the stimulus and the response.
Adlerian	Adler	Early 20th century	Learning through free choice and the possibility to change and make progress.
Existential	Kierkegaard, Nietzsche, Dostoyevsky, Heidegger	19th century	Learning occurs when the student is at the center.
Constructivist	Piaget, Vygotsky	1970s-1980s	Learning is a process of creating meaning by the learner.
Humanistic	Rogers, Maslow	Second half of 20th century	Learning is performed by teacher and student, not only as a process of transferring information.

Source: Own elaboration. Bitman, et al., 2016; Chomsky, 1959/2013; Engle & Ellingson, 2020; Garrett, 2008; Hagger & Weed, 2019; Harpaz & Horowitz, 2020; Levi-Feldman, 2020; Timur, 2011.

The following chapter discusses the teacher's profile according to the principles of each of the above approaches, and its contribution to the learner's skills and progress.

CHAPTER 2. The teacher's profile – Theory and educational approach

Educational work in schools is done mainly by teachers. Thus, it is important to know the teacher's character as it is referenced in each theory and educational approach mentioned in the previous chapter (Tomer, 2019). The following are the main characteristics of the teacher's persona according to several educational theories and approaches:

2.1 TEACHER'S PROFILE ACCORDING TO THE BEHAVIORIST APPROACH

The behaviorist model for teacher training is inspired by behavioral psychology (Watson, 1913), which sees overt behavior as the object of psychological research, rather than the perception of consciousness as the object of research. After all, consciousness is an internal state, and therefore cannot be observed and measured (Moore, 2018).

In this model, the good teacher is presented as a teacher who is able to teach well the material set for him in the curriculum. This teacher uses many didactic tools with emphasis on fit and very specific abilities, and compiles the contents of his lessons according to his teaching goals: intellectual skills (such as reading and reading comprehension), information learning and information structures (such as knowledge of historical periods), and teaching value attitudes and behaviors (helping others or treating the challenged). The behavioral teacher often examines the quality of his teaching with the help of tests and assignments for his students that are tools for measuring the teacher's output and effectiveness. The terms "output", "material", "reporting", "achievement", "supervision" form the measurements for the teacher (Gilat, 2007).

In the behavioral model, teaching is perceived as a profession, and it is possible to determine what is "correct teaching". It reflects a curricular approach in its narrow sense, with a team of experts planning the curriculum and clearly determining what should be taught and what should not be taught, since the teacher is an "operation" that focuses on "how" rather than "what". This curriculum is presented as an objective truth

and refers to the "official" knowledge and cultural assets as defined by the "hegemonic elite" of society (similar to the habitus of the French sociologist Bourdieu, 1977). Accordingly, it expresses agreement with the existing social order, and strives for the reproduction of this order. Education must serve this purpose in its training of students to integrate into the existing society and its value (Apple, 2014; Budiman, 2017).

Behavioral teacher training deals with the process of effective learning, ways of measuring achievement and teaching methods (lecture, guided learning), and "minor teaching" (how to open a lesson, compose a test, etc.). In addition to the content knowledge in the field of the profession, the teacher must acquire general pedagogical knowledge, and especially pedagogical behaviors and teaching methods, of the discipline he must teach. The teaching mechanism has a prominent hierarchical and centralist structure (pedagogical instructor, coaching teacher), and postpones the practical experience phase to after the theoretical study. This model is known as the "technical model", which is the most common model in the United States and Europe, and became widespread in the State of Israel in the late 1980s (Kahneman, 2011).

The behaviorist approach in psychology focused on describing the processes of learning and the acquisition of behavior patterns. This approach sees the individual as an almost exclusive product of the learning processes that occur during his interaction with the environment. Behaviorists described different processes of learning, and formulated the principles of acquiring new habits. The principles of the behavioral approach are designed to explain a person's behavior in all areas of psychology, including education. Its contribution to the field of education, however, is mainly expressed in the application of the general principles in the acquisition of behaviors and in the processes of learning in school. Behaviorism has contributed greatly in areas such as curriculum development and student discipline management. The teacher-student relationship offered by the behaviorist approach is instrumental in nature, meaning that the teacher is the means to an end - the acquisition of knowledge by the student. The emotional component of the teacher-student relationship is not addressed in the behavioral approach, and therefore does not explicitly address the therapeutic significance of the teacher's role. However, some behaviorists argued that a therapeutic relationship between a teacher and a student may interfere with a teacher fulfilling his or her role to impart knowledge, because in that role he or she must exercise authority over the student (Bitman et al., 2016; Budiman, 2017; Gilat, 2007).

2.2 TEACHER'S PROFILE ACCORDING TO THE COGNITIVE APPROACH

According to the cognitive approach, teachers, educators and teacher-training educators should be presented with up-to-date and reliable information regarding anatomy, physiology and the central nervous system, emphasizing the possible connections between brain research findings, and learning and memory processes, emotions and attention (Friedman et al., 2016). Some knowledge about neuroscience, i.e., the study of how the brain operates, can help teachers understand the complexity of how the brain develops and matures when learning occurs. In other words, this could help teachers improve their teaching (Lawrence et al., 2020).

In addition to this line of thought, Roediger et al. (2012) argued that the cognitive teacher should address human behavior, especially thinking, learning, memory, decision making and performance, in his or her work with students, and noted five key issues that teachers should address in their work with students. First, retrieving information with the help of tests - the tests require the examinees to re-memorize the material learned, clarify it for themselves, thus deepening their knowledge, and strengthening the memory regarding the information learned. Second, the duration of study time - it was found that a certain study material, when divided into study units, which are studied at intervals, is absorbed more efficiently than the same material that is studied intensively without the interval of time. The profit effect has also been found to be one of the most effective findings in promoting long-term learning, for many years. Third, teacher-student interactions and different learning topics, and the integration between different learning topics, in a way that combines different information units, enables effective and meaningful learning. Fourth, transfer and generalization - transitions from one sub-topic to another in the same field of study, or in different fields of study. The skills acquired in each of the techniques described above will not be of much benefit unless their application is also used to transfer them to different fields of study. Transfer and generalization represent a central goal of learning in school, which is to enable effective functioning in situations outside of school, and this is, of course, in addition to the academic achievements in school according to the existing curriculum. Fifth, meta-cognition - people evaluate and measure their own learning ability and progress in studies, and use the findings of this assessment to guide the course of their studies.

From the teachers' perspective, Hook & Fara (2013) suggested that teaching according to the cognitive approach provides: 1. A sense of security and professional control and authority, in that they can place their work processes and functioning within a broad scientific framework; 2. A sense of perspective, great patience and empathy towards challenging students, who do not cooperate or interfere, by understanding some of the unique processes in the minds of such students; 3. High professional satisfaction and self-esteem, due to the feeling that since teachers' preoccupation is with cultivating the consciousness and minds of their students, it is important that they learn about neuroscience, even if no direct and complete application of the information to their daily work is seen. Hook & Fara (2013) concluded that teachers use information from brain research to increase patience, a sense of optimism and professionalism towards their students and themselves, to strengthen their professional status in the eyes of their peers and parents, and to reaffirm the teaching professionalism as a practice related to developing their students' minds and knowledge.

Significantly, Brown & Daly (2016) argued that teachers and educators should recognize that their students' minds are different from each other, and that differences between students should be the guiding line in teaching and learning. Schools should therefore increase choice, allow a different pace of progress for each student, and recognize that different students learn differently. They added that without occasionally refreshing memory, students will not remember the material they have learned, and will not successfully pass tests. Teachers would do well to work on upgrading students' abilities in terms of their memory ability, by occasionally repeating the study material (the principle of repetition). Motor or cognitive skills and abilities are learned by rehearsing materials and practice. With practice and rehearsals, performance becomes faster and more accurate, and these improvements are integrated into the skills of learning new information. The skills learning process shifts from the cognitive stage, where knowledge is openly represented in the brain, and where the learner needs to pay much attention to his performance, to the autonomous stage, where the skill can be performed without significant and visible sedimentation. That is, a process of assimilation takes place here. This assimilation is made possible thanks to practice and repetition, or more generally - due to the principle of repetition and its contribution to memory consolidation. The more factors there are, and especially - the more diverse the process of absorbing new information is, the better "memory" is created. Activation

of many senses promotes information storage in more areas of memory. Many mechanisms operate in the human brain to preserve existing memory, including reuse of memorization information, familiarity, and termination. Memorization products are the memory that students need most at different age stages in their school years.

The practical implications of the above are on two levels. On one level - situations of emotion, respect, patience, forgiveness and empathy (as life skills) must be taught, so that emotions can be treated in a conscious and controlled way. On the second level - it is important to practice emotions and social skills in every class. The more developed social skills are, the higher the academic achievement. Students who learn patience, attention, empathy and cooperation will be better students. It is also important for teachers to reduce the perceived sense of threat of punishment or embarrassment in the classroom due to failure to prepare lessons, or anxiety that the student will show ignorance or make mistakes. A stressful classroom atmosphere damages the school atmosphere. School behavior is fundamentally social, and it is absorbed into the brain with the help of a sense of reward, acceptance, pain, pleasure, cohesion, closeness and stress. The conditions and social environment in the school therefore affect the mind. Hence, schools should promote diverse social activities. Teacher-student relationships are important, but no less so are student-student relationships (Friedman et al., 2016; Elias & Haynes, 2008).

2.3 TEACHER'S PROFILE ACCORDING TO THE ADLERIAN APPROACH

Adlerian theory recommends that teachers and educators in schools and informal education counselors strengthen children's and adolescents' sense of belonging to the different groups to which they belong through several educational practices:

1. Focusing on strengths and encouraging positive behavior. The Adlerian theory, similar to the positive psychology approach (Seligman, 2005), holds that children and adolescents, like adults, are encouraged when discovering, nurturing and recognizing their special talents and strengths (Dreikurs & Saltz, 1994; Yotam, 2014). Educators should be equipped with a virtual magnifying glass, which reinforces any proper behavior of their students and apprentices (Rosenbaum, 2016), so it is worth noting small donations from those teens as well, to make them feel useful and valuable (Dreikurs & Saltz, 1994; Harari,

2009). Encouragement is given through specific reference to the positive action taken. Effective encouragement should focus on the process and investment, and not on the successful end product, and in addition should avoid the use of superlatives and praise (Rosenbaum, 2016; Yotam, 2014).

2. Assignment. Permanent positions decided upon in advance along with children and teens reinforce their sense of usefulness and contribution. The contribution to the needs of the community also reinforces the sense of value and meaning (Dreikurs & Saltz, 1994).

3. Group entertainment. Joint fun activities for all group members reinforce the sense of group harmony and equality of value to its members (Dreikurs & Saltz, 1994; Yotam, 2014).

4. Empathic listening to the thoughts, desires, and feelings of children and adolescents creates respectful communication (Dreikurs & Saltz, 1994; Yotam, 2014). When educators listen to points of view, thoughts, and emotions in a respectful, non-judgmental, and uncritical manner, students and trainees feel a sense of meaning and value (Dreikurs & Saltz, 1994; Rosenbaum, 2016; Yotam, 2014).

5. Sharing the educator's feelings, experiences and thoughts. In order for children and adolescents to feel belonging and empathy towards the educator and other people, and understand that others also experience moments of joy and sometimes moments of sadness and frustration, it is important that educators share their thoughts, feelings and experiences (Yotam, 2014). The sharing should be tailored to the age of the students and their emotional capacity, and it should be done when the children are interested in listening. This is so as not to burden them, but to evoke in them a feeling that they are valuable and equivalent, and that people have confidence in them and feel emotional closeness towards them (Rosenbaum, 2016).

6. Consultation with children and youths on various issues. Consulting how to handle a particular situation, similar to sharing, can strengthen children’s sense of worth, as we tend to consult with a person whom we trust. It should be noted that before embarking on a decision-making process, educators should determine in advance which topics they would be willing to accept the students'

advice on. It is not advisable to develop a discussion with students on issues on which they would prefer to make their own decision. Consultation on decision-making expands to issues that are more significant as the children age, and as students' cognitive and emotional abilities improve (Rosenbaum, 2016; Yotam, 2014).

7. Request help from children and teens. Similar to sharing and consulting, a one-time help request can give children and teens a sense of worth because they are trusted and valued. Educators need to identify opportunities where children can help, and we should allow each child to help in his or her favorite areas so that his or her experience is positive. Requesting help, other than as pre-defined permanent roles, can be done in any occasional matter related to the day-to-day activities of the group, such as arranging chairs, bringing equipment, helping a friend, and the like. Help must be tailored to the physical, emotional and cognitive abilities of the students and trainees. However, it should be noted that it is advisable to seek help only if the relationship between the educator and his students is good. If the relationship between them is not good, the youth will feel that asking for help is manipulative, and will refuse to cooperate and extend help (Rosenbaum, 2016; Yotam, 2014).

8. Group decision making. One of the main ways to strengthen children’s and adolescents’ sense of belonging to their group is to make joint decisions through "group conversation". In this conversation, which takes place as part of a weekly meeting at a regular place and time, the students or trainees solve common problems, and make decisions regarding joint activities. In the first stage, the students or trainees find out the purpose of the action they want to perform together, or explain how each of them sees the common problem, while maintaining respectful communication that gives space to each participant. Each participant then offers a suggestion or solution. After brainstorming and examining each proposal, the most effective proposal or solution is selected together. In any "group conversation", it is important to allow all students or trainees to make their voices heard, because in this way they reinforce feelings of belonging, mutual responsibility, brotherhood, and self-worth (Orian, 2018).

In conclusion, Adlerian education methods require educators who apply them to employ high awareness and self-control, and they can become routine only through daily practice (Wagner & Elliott, 2014).

2.4 TEACHER'S PROFILE ACCORDING TO THE EXISTENTIAL APPROACH

The educational position based on the existential conception maintains that there is no room for absolute truth arising from a scientific method, but for a truth that emerges from a large number of perspectives. This approach emphasizes the centrality of the learning person and his personal truth, and it requires the environment to strive and discover this truth, which is not always accessible even to the person himself, to help him exercise his powers. According to this approach, the goal of education is to impart to students an *a priori* value system, which determines what is failure and what is success, what are worthy achievements and what are unworthy achievements, who is the successful teacher or student and who fails (Moore, 2018).

Existential philosophy holds that learning is also related to the way humans subjectively experience and perceive the world, the learning of reality, not in an attempt to accumulate and build "objective" knowledge, so the teacher's role is to understand that learning is not "from the neck up". Learning occurs only when the learner is in a constant process of self-change directed from within. Teaching that contributes to this type of learning requires the teacher to change his or her perception of their role: no longer a teacher who imparts knowledge to his students as an absolute truth given to him by some external authority, but a teacher who strives to have an internal decision as a standard for evaluating external knowledge (Moore, 2018; Rogers, 1973).

According to Shkolnikov et al. (1995), the character of the teacher according to the existential approach is an:

> "…autonomous teacher, able to be reflective of his work, set didactic goals, examine his teaching and learn from it, be autonomous towards the curricula and teaching methods and the spirit of the time, and perceive his work in affinity to human and social issues, and realizing himself (p.4).

In consonance with this concept, the teacher must understand that each student has a subjective school experience that can be recognized, and treated in an appropriate way. That is, the teacher's ability to understand the student as a whole is made possible

by the attempt to grasp more and more of his characteristics, and encompass more and more spaces in his mind, by including all of his points of view, over time, and in a variety of situations. Any attempt to define the student in purely accurate empirical terms distances us from the possibility of understanding and advancing him. The teacher should stay away from “objective” teaching for most students, and especially underachieving students, as it is difficult for them to connect to “objective” learning because it is worthless from their personal point of view (Moore, 2018).

Significantly, Harpaz & Horowitz (2020) argued that the image of the teacher plays a very important role in the child's self-realization and development, from a situation in which he clings to his actual experience to the development of the altruistic ability that allows him to see the other as a whole person. The student's ability to stand on his own two feet, without the need for external authority, and without handing over his life to others, depends on having an adult (teacher) who provided for his needs until he developed into a "full" person capable of bearing criticism. In other words, the teacher bears a great responsibility for the optimal self-realization of the child, and as a result he must create the optimal conditions for his development. This development can only take place in a field of connection, through the one-time human encounter between human beings. Every development takes place in an interpersonal human sphere, whose nature is a person-to-person encounter with tools of listening, sight, discourse, and touch.

2.5 TEACHER’S PROFILE ACCORDING TO THE CONSTRUCTIVIST APPROACH

According to the constructivist approach, one of the overarching goals of the education system is to train an independent, thinking, and self-directed learner. Training such a learner requires a fundamental change in the perception of teaching and the role of the teacher in the learning process. At the heart of the approach is the student, and he should be allowed a pace of learning and development tailored to him, and given educational, social and personal goals appropriate to his ability, inclinations and ways of learning. In this process, the teacher becomes a facilitator who accompanies his students' learning processes, by creating opportunities and activities tailored to their level of readiness. The role of the teacher is to accompany his students in the learning processes. and create for them learning opportunities that help them reach

understanding on their own (Bishara, 2016). Therefore, the teacher must develop a learning environment that invites the development of cognitive skills including critical thinking, logical thinking, asking questions, efficient use of information by analyzing data, and drawing conclusions. Among other things, the learner develops skills of evaluation - evaluation of the learning process and evaluation of the product - and self-reflection. In the social field, skills of conversation and discussion management, persuasion and decision-making procedures, teamwork and division of roles emerge. In the personal realm, the student acquires skills of perseverance, motivation, initiative, personal curiosity, acceptance of responsibility, and independence (Brooks & Brooks, 1999).

It is clear, therefore, that in this approach the learner does not only store and recycle knowledge. He is involved, confronted and strives for meaning, examines knowledge based on his experience and in light of his goals, and perfects his interpretation and structure of his knowledge. He thinks, is curious, looks for links between ideas and concepts, and accepts responsibility for his learning. He becomes a problem solver, and locates problems with a constant desire to explore and be exposed again (Harpaz & Horowitz, 2020; Yehieli, 2008).

The teacher who adopts this approach cultivates the students' natural curiosity through the use of the learning circle model (discovery, conceptual introduction, and application of concepts), while emphasizing the important role of self-regulation in the learning process (Bishara, 2016). He encourages learners to be autonomous, think and be curious, using primary sources, raw data and physical, interactive and activating materials. The teacher formulates tasks that promote higher order thinking that requires analysis, interpretation, prediction, linking details and searching for connections. He allows learners to answer questions, which drives lessons forward, tries to understand how learners understand relevant concepts before they present their own understandings about the same concepts, encourages learner dialogue with colleagues and teachers with the intention of leading to deeper understanding of the topic in question, encourages learners' research actions by asking open and thought-provoking questions, waits a little after presenting questions and listens, and allows time to build relationships and create metaphors. Thus, the teacher and students create new understandings through their reflective abstractions (Apatow, 1999; Brooks & Brooks, 1997; Keiny, 1994; Bishara, 2016).

Further, Bishara (2016) held that a learning system based on the application of constructivist theory requires giving the student freedom to choose the topic he is interested in - a topic derived from a central theme, as well as freedom and creativity in the organization of material and choice of learning strategies and processes. Teaching / learning in this way will ensure the promotion of the student as an individual and as a member of the group, and will contribute to developing the student as an independent learner. The role of the teacher is to mediate the “new” perception through complex methods and by creating opportunities and activities tailored to the student’s level of readiness.

2.6 TEACHER’S PROFILE ACCORDING TO THE HUMANISTIC APPROACH

The humanistic approach to teaching puts the student at the center, and it attaches great importance to the therapeutic component of the teacher's role. The purpose of this approach is to foster an environment for the student that encourages him to achieve his goals in his own way, rather than imposing on him tasks that originate outside of him (Rogers, 1969). The emphasis, according to the humanistic approach, is on the bond formed between the teacher and the student, and on the student's emotional involvement in the learning process. This means that it is a dialogical pedagogy, which creates an equal process between teacher and student. The goal is to grow a value-oriented personality that is satisfied with itself and its action, open to others and to the environment, ready to engage in the ongoing humanization of society (Gilat, 2007; Moore, 2018).

Humanistic psychology sees one of the central roles of the teacher as developing key processes of growth in the student, which will be reflected in the fuller realization of his or her personal abilities (Levi-Feldman, 2008). Carl Rogers (1969), one of the leading psychologists of the humanist approach, argued that we are born with inner abilities that allow us to develop a healthy, properly functioning and happy personality. For those capabilities to be reflected, we need a supportive environment. The support of the environment can be obtained through an approach he called "unconditional acceptance". If the environment accepts the individual for all his shortcomings and limitations, without judgment and criticism, without demanding that he fulfill expectations, he will be accepted as himself, which will cause him to feel real

confidence in his abilities and skills. He will achieve the same abilities and be able to reach a state that Rogers (1969) called ‘a person who functions to his full capacity’. He explicitly referred to the importance of the humanistic approach to the system. He, however, involved the learning process in the development of the teacher-student interpersonal relationship, and argued that the teacher's support and acceptance towards the student, which is a kind of therapeutic connection, will bring about a change in the learning experience and its results. In more detail, Rogers noted the following conditions as encouraging the development of a therapeutic relationship: 1. Honesty - the teacher must be genuine in his relationships with his students, behave naturally, without pretense and masks; 2. Empathy - the teacher must be emotionally involved in the student's inner world, and have the ability to see things from the student's point of view; 3. Warm and accepting treatment - the teacher must accept the student unconditionally, as he is, and respect him as a person (Rogers, 1969). An honest and open relationship between teacher and student will allow the application of additional principles of the humanistic approach in the educational process, such as activating students in the learning process, providing choice of learning components, and student participation in curriculum design and implementation (Fauzan & Akrim, 2017; Garrett, 2008; Gilat, 2007; Harpaz & Horowitz, 2020).

Giving an historical account, Levi-Feldman (2008) showed that in the 1990s, and especially in the 2000s, the figure of the humanistic teacher began to be emphasized, adapting itself to differences between students in the classroom and to changes. The teacher is able in his teaching to deal with the differences between students at different levels, as well as with changes in the classroom and in society. Accordingly, the teacher must explore his work by constant reflection, on the one hand, and professional development, on the other hand, to develop his internal and external ability to critique. In addition to one of his important roles as a teacher under this approach, he has to work collaboratively with his peers, with the school administration, and with the parents, and thus to be a member in learning communities.

Arguing that adaptability is crucial, Darling-Hammond (2007) emphasized the teacher’s ability to conform to changing situations, in the classroom, at school, and in the education system. The humanist teacher needs the ability to be flexible and adaptable to students, should know how to deal with change, contribute to it, and learn from it, and should have internal and external critical ability to help learners be like that

as well. It follows that a good teacher is first and foremost a moral teacher, who intervenes in the many and significant areas of the student's life. However, the teacher does not force the student to accept his positions, nor does he use his authority to instill his world view in the younger generation. The teacher is open to discussion, instills a democratic atmosphere, and reveals his views to the criticism of his students. Unlike the "neutral" rationalist teacher, the teacher in this model deals with the dialectical tension between the educator's basic values, intention, and desire to influence, and the students' right to develop their own world of values while engaging in dialogue with the educator's world of values.

According to the humanistic approach, the teacher is called to awaken in his students an interest and awareness of everything related to the person being a person in order to bring about change in the individual and from there to society as a whole. Humanistic educators fight the social-capitalist order and the consequences of postmodern perceptions. From this perspective, teaching is perceived not as a performance-practical or academic-theoretical sphere, but as a "mission" that stems from a moral ethos that shares a constant transformation of pedagogical practice, and aids new social and moral occurrences. It is, therefore, an intellect-changing reality" that creates an effective and meaningful connection between the teacher's activity and concrete ideals and humanistic values, as it generates an integration between knowledge, sensitivity, and action (Fauzan & Akrim, 2017; Timur, 2011).

In terms of teaching, the 'student at the center' approach focuses on constructing meaning, exploration, and authentic activities. All this is done by creating a learning environment, where the construction of knowledge is done by the teacher and the students, and not just by transferring knowledge from the teacher. Students strive to connect the newly acquired knowledge to prior knowledge through discussion and the creation of learning acceptance. According to the humanistic approach, the teacher who strives to understand knowledge, emphasizes problem-solving abilities, the development of critical thinking, research, joint discussions, simulations, and role-play. Additional characteristics of the teacher's role according to this approach are relying on internal motivation rather than external rewards, adapting activities to the student's interests, and practicing autonomy and decision making (Garrett, 2008; Harpaz & Horowitz, 2020; Timur, 2011).

Figure 2 presents a summary of the teacher's profile according to the various approaches that were reviewed above. The focus is on the teacher's characteristics and consequent role as dictated by the principles of the theory.

Figure 2.

Teacher's profile by each educational theory and approach.

Approach	Teacher's characteristics	Teacher's role
Behavioristic	Can teach the predefined curriculum material well (executor).	Imparting knowledge, values and behaviors, and instilling new habits.
Cognitive	Relates to human behavior, especially thinking, learning, memory, decision-making, and their performance.	Reproducing knowledge through exams, producing study units at intervals, allowing an individual pace for each student, acknowledging that different students learn differently, and upgrading students' memory abilities.
Adlerian	High awareness and self-control, which become routine through daily practice.	Reinforcing children's and adolescents' sense of belonging to their various groups.
Existential	Autonomous, able to be reflective of his work, set didactic goals, examine his learning and learn from it, be autonomous towards the curricula and teaching methods, and the spirit of the time, and perceive his work in affinity to human and social issues.	Creating the optimal conditions for self-realization and the student's development through meetings with other with tools of listening, seeing, discourse, and touch.
Constructivist	A mentor, who accompanies his or her students' learning, by creating opportunities and activities fitted to their level of preparedness.	Accompanying the students' learning processes, and creating for them learning opportunities that help them to reach understanding on their own. Developing the student as an independent learner.
Humanistic	Dialogic pedagogue, who adjusts to the diversity among students, able to develop internal and external critique. Able to cooperate effectively with colleagues, school management, and parents, and a member of learning communities. Able to generate internal motivation rather than external rewards.	Cultivating a learning environment that allows each student to achieve his or her goals, a value-oriented personality open to others and the environment, prepared to work for ongoing humanization of society. Developing students' growth processes, expressed in fuller realization of their personal strengths. Encouraging problem-solving abilities, critical thought, research, shared discussion, simulations, and role play. Adjusting activities to students' areas of interest, practicing autonomy and decision-making.

Source: Bishara, 2016; Bitman et al., 2016; Budiman, 2017; Fauzan & Akrim, 2017; Gilat, 2007; Moore, 2018; Roedinger et al., 2012; Shkolnikov et al.,

1995; Wagner & Elliott, 2014.

CHAPTER 3. Interaction between education, metacognition and self-regulation and self-management skills

The previous chapters reviewed a variety of behaviors and independent skills that are required for the growth of learners, suited to the profile of 21st century school graduates. These skills include, among others, critical thinking, creativity, problem-solving abilities, cooperation, personal and interpersonal communication, self-guidance, decision-making, reflection, curiosity, independent learner, responsibility, self-regulation, time management, impulse control, and cognitive skills. As mentioned, all these are anchored in the educational theories that were reviewed, and are intended to benefit and help the learner, and increase his or her ability to develop and integrate in social and community life also beyond school years.

Three of the skills mentioned above are at the core of this study, with an affinity to cognitive science and cognitive psychology: meta-cognitive abilities, self-regulation skills, and self-management skills.

3.1 HISTORICAL BACKGROUND

In the early 20th century, the behavioral approach dominated psychological research. The basic premise of behavioral psychology is that all behavior, and human behavior in particular, is the result of a coupling between response and reinforcement. Radical behavioral psychologists like Skinner and Watson argued that only overt behavior should be investigated, because only it can be observed. Behavioral researchers and psychologists, even if they did not rule out the existence of mental procedures and their impact on behavior, thought they were irrelevant to research because they could not be observed and measured accurately (Bitman et al., 2016; Sternberg & Sternberg, 2012).

However, from the 1950s onwards, other voices began to be heard. Far-reaching developments in the field of computing have aroused interest in human thinking. Researchers from various fields - neuroscience, computer science, linguistics, and psychology - have begun to ask and investigate how it occurs, and hypothesized that mental processes mediated external stimulations and human behavior, from different

and complementary perspectives. Cognitive psychology is the field of psychology that deals with cognitive processes that are unique to humans and important for their behavior. The most important premise of cognitive psychology is that mental processes are the foundation for a person's behavior, in contrast to behavioral psychology, which perceived these processes as being inside a "black box" whose content could not be explored. Now researchers have begun to think that it is justified and possible to investigate the internal processes that direct external behavior (Eysenck & Keane, 2015).

Many principles of cognitive psychology are also common to behavioral psychology. Cognitive psychology shares behavioral psychology's preference for observational-based and reproducible scientific research. The fact that cognitive sciences study mental procedures does not mean that cognitive research is vague. Cognitive researchers have developed sophisticated ways to study various mental procedures accurately and meticulously by translating them into quantitative concepts. Response time measurement, for example, is used for inference on mental procedures in the areas of memory and problem solving. If so, a second principle of the cognitive approach is that mental procedures can be studied scientifically (Kristjánsson & Egeth, 2019; Sternberg & Sternberg, 2012).

Another principle of cognitive psychology is based on the idea of constructivism or the construction of knowledge. According to this idea, the acquisition of knowledge is not a passive process, but an active process of information processing. In contrast to behavioral psychology, cognitive psychology believes that the mental processes that take place in human consciousness play a central role in the acquisition and processing of information. A third principle in cognitive psychology is, therefore, that the individual plays an active role in the procedures of information acquisition and processing (Kristjánsson & Egeth, 2019; Sternberg & Sternberg, 2012).

Cognitive psychology is currently included in a broader field known as cognitive science, and collaborates ideologically and methodologically with life sciences, computer science, linguistics, mathematics and psychology. Two prominent sub-disciplines in the science of cognition are social cognition, which studies social psychology by cognitive means, and developmental cognition, which studies

development from a cognitive point of view (Bitman et al., 2016; Corral et al., 2019; Sternberg & Sternberg, 2012).

It should be noted that it is not easy to describe the development of the cognitive approach in an orderly and concise manner. When it comes to behavioral psychology, it is possible to mark personalities and ideas that were milestones in its development. However, cognitive psychology consists of a collection of ideas, personalities and fields that did not develop from each other; but all have the common assumption that mental processes do exist and mediate external stimulation and human behavior. However, the information processing approach can be considered as a starting point for the development of the first theories in cognitive psychology, so this is the place to dedicate a few words to it (Bitman et al., 2016).

The Information Processing Approach is rooted in the field of computer science, and its founders claimed that the human cognitive system performs processing procedures similar to the computer. It picks up signs from the environment, stores them for a short (short-term memory) or long (long-term memory) period, introduces changes in them, and sends a message designed to act on the environment. According to the information processing approach, there are three stages in the process. First, a perceptual stage in which the information is absorbed by the sense organs. Second, a mental stage in which the information is processed by mental manipulations and an action plan is formed (for this stage the information is stored in short-term or working memory). Third, the execution phase in which the action plan is proposed (if there is no execution phase, the information is transferred to long-term memory storage) (Corral et al., 2020; Sternberg & Sternberg, 2012).

Why is it important for us to know the basic information processing model? Because all the cognitive personality theories discussed below are based on similar assumptions: when a person perceives a message from the environment (or is in a certain state) they do not act as a passive creature that responds to stimulation automatically, but use their "black box" abilities (i.e., their mind) to decide how to respond to stimulation. These abilities include what they have learned from their experience and their decision-making strategies. The state or input from the environment triggers internal mental processes in them, and only after a question is

completed will they respond (Sternberg & Sternberg, 2012). Other researchers called these abilities brain flexibility (Cañas et al., 2006).

3.2 BRAIN SCIENCE, TEACHING AND LEARNING, AND THEIR POSSIBLE CONNECTION

Research in the fields of general psychology and cognitive psychology has for many years referred to human biological systems as a "black box", and argued that one should concentrate on observing what enters and exits a person's behavioral systems, but not the content (the main approach that represents this perception is the SR - Stimulus-Response approach). However, with the deepening and expansion of knowledge about brain function, it seems that the way has been opened to observe what is happening inside the "black box" in order to better understand human behavior. Since human behavior is a product of the nervous system and the brain, observing the core of the "black box" goes through an in-depth study of the brain, through a field of research and learning called neuroscience. This science seeks to understand the anatomical structure of the brain, to document and analyze the processes that take place in it, to reveal its patterns of function, its abilities and weaknesses, and all this in order to deepen the understanding of human behavior. This science deals with understanding the biological basis of cognition and awareness, and focuses on the brain's procedures, through which we feel, act, learn and remember. It encompasses a wide range of sub-areas, topics, and questions, about how human and other animal nervous systems are organized, and how they work to create behavior (Kandel & Hudspeth, 2013).

3.2.1 The plasticity of the nervous system

The central nervous system (CNS) in the human body controls all our body systems and also, of course, thinking and cognition. This system is located in the brain and spinal cord. The main-brain is located entirely inside the skull and consists of three parts common to all mammals: the cerebrum, the cerebellum, and the brainstem. The CNS can be thought of as the control center of the nervous system (Bear et al., 2007). The brain has three main functions: receiving information, processing information, and giving commands to execute it. The outer shell of the brain, the cerebral cortex, is responsible for the unique and complex functions of humans, and focuses on the cognitive realm, i.e., learning, language, thinking, and remembering (Kaniel, 2001). Other parts of the brain also play a role in high cognitive functions. The hippocampus,

for example, located in the limbic system, between the cortex and lower structures, plays a critical role in human memory. The basal ganglia also play a role in controlling complex cognitive functions (Anderson, 2005).

Until recently, many scientists believed that the brain does not change after childhood, and that it is already wired and fixed in adulthood. But developments in the last decade are now showing us that this is simply not true; the mind can change and develop throughout our lives. It can be processed like plastic, which is why neuroscientists call this phenomenon neuroplasticity (Landau, 2011).

The brain is an extraordinary organ in its ability to change in response to any experience we go through, including direct learning of knowledge or skills in an explicit state like lecture or workshop, or indirect learning that occurs through non-learning experiences like watching others, conducting a conversation, listening to a discussion, and the like. This ability is called the plasticity of the brain, or neuroplasticity. It exists throughout our lives, so it is always possible to learn. While there are critical periods in brain development, especially in the early years of life, during which the plasticity of the brain is greater, the brain's ability to change is maintained throughout life (Zhang et al., 2021).

Neuroscience research literature suggests that early experiences have a lasting impact, over the years of life, on personal and social behavior, and human cognitive activity (Jessel & Sanes, 2013). The effects on brain development go even further. Researchers use the term "plasticity" to describe the brain's ability to change in response to a stimulus. The brain's degree of plasticity depends on the stage of development or the relevant area of the brain (Child Welfare Information Gateway, 2015). That is, early childhood brain development is plastic, and is greatly influenced by the environment, because the child's brain adapts to the environment in which he lives. Family, school and residential neighborhood create a collection of environmental experiences that are absorbed into the child's brain. All developmental processes pass through the brain, and therefore it is not possible to understand a child's development without understanding his or her brain development (Nelson & Sheridan, 2011; Shavit et al., 2018).

In addition, the exposure to environmental experiences was found to be critical in the normal development of the brain and central nervous system. Deficiency of this exposure and stressful situations, especially chronic ones, inhibit the normal

development of cognitive, social and physical abilities. Low socioeconomic status and stressful situations may result in a lack of exposure to enriching experiences, and as a result - insufficient development of the brain and the central nervous system. This can be the beginning of a process of cognitive inequality and inequality in academic achievement (Cherry, 2021).

Brain researchers emphasize that the size of the brain does not influence a person's mental abilities or factors that inhibit or support his or her functioning. These are determined in the maturation process of the nervous system which, as mentioned, depends to a large extent on personal and environmental experiences. This process is made possible by the miraculous flexibility feature of the central nervous system, which is expressed at different levels throughout life. In periods known as "Sensitive Periods ", it is more sensitive to changes and adjustments. If the person is not exposed to certain vital stimuli during these sensitive periods, at different age stages, then it is extremely difficult, if not impossible, to compensate for the deficiencies created by missing out on experiences. These periods are defined as "Critical Periods", but because new studies have shown that the boundaries between the "sensitive" and "critical" periods are unclear, brain researchers tend to refer to all sensitive periods as critical periods. It is, therefore, correct to say that early childhood intervention is critical in brain development at an age when brain flexibility (plasticity) is at its best (Zhang et al., 2021; Eysenck & Keane, 2015).

These studies have further suggested that the connections between the different nerve cells in mammalian brains are formed from two different developmental elements: one - the genetically fixed patterns of neural activity; the other - a collection of signals that direct the growth of the connections between the various nerve cells, in a process that is naturally embedded in the nerve cells. Changes in these relationships occur as a result of sensory activities and experiences (exposure to situations, information, and interpersonal interactions), and they allow the nervous system to adapt to the environment, on the one hand, and maintain individuality, on the other. The miraculous flexibility of the nervous system allows to some extent "correction" and late adjustment of the inter-neural connections in a way that creates cognitive, emotional and motor abilities even after the critical periods (Jessel & Sanes, 2013).

Also, Kandel & Hudspeth (2013) added that neuronal subgroups are neuronal constituents, which are basic components of the nervous system, and process different types of information. They form three main neuronal systems used to achieve three different and unique goals: Sensory systems, which represent information about the organism and its environment; Motor systems that create and organize actions; and Associational systems, which form the basis for higher-order brain functions, such as perception, cognition, emotions, language, and rational thinking. These wondrous abilities of the brain are at the core of our understanding of human beings, their behavior and abilities. The three systems, in combined and coordinated action, form the basis of the mind, defined as a group of activities, understandings, and processes, performed by the brain (Purves et al., 2013).

3.2.2 Mind theory and managerial functions of the forebrain

The mind theory is the element or human capacity that allows a person to think, feel and be aware of both one's personal experience and external environment. The mind refers to human will as well as to the collection of higher cognitive functions of the brain. The term "mind" refers to a "theory" of consciousness because humans do not have direct access to other people's conscious experience. Thus, any attempt to attribute knowledge or intention to another person - or even to determine that another person has some mental consciousness or content - is a theoretical model that we build for ourselves. This model helps us understand and predict the behavior of others, assuming that their cognitive and emotional structure is similar to ours (Elitzur et al., 2016).

The mind theory is the ability to understand the mental states that underlie human behavior and social interactions between human beings. The main motives are beliefs, intentions, desires and emotions. Understanding these motives allows the individual to explain, predict, and give meaning to his and others' behavior (Elitzur et al., 2016; Ziv et al., 2013).

In addition, Ziv & Frye (2004) argued that there are two key aspects to mind theory: first, the ability to distinguish and link the visible (behavioral or physical) layer in human behavior to the mental layer; And second, the ability to understand that human beings may have different points of view, and even conflicting beliefs about the same result.

Studies show that the development of Mind Theory is related to socialization processes, and it is expressed in early childhood in the ability to form friendships, negotiate in order to cooperate or resolve conflicts, and take part in peer teaching (Elitzur et al., 2016; Ziv et al., 2013). Other findings suggested that the development of Mind Theory is essential for children to adapt to school and understand teachers' instructions, intentions, and expectations (Liddle & Nettke, 2006).

The forebrain is the most anterior part of the three main embryonic divisions of the brain. The two main components of the forebrain are the cerebrum and the midbrain, and it includes the high centers involved in controlling sensorimotor, autonomic, and hormonal functions for emotional behavior, and cognitive abilities such as learning and memory (Carlson, 2013). Managerial functions are high integrative capacities of the forebrain, which are involved in more than one brain area, gene or nerve material. That is, the frontal lobe is responsible for managerial functions, and the prefrontal cortex is the most essential part of the functioning of managerial functions and cognitive control (Brown, 2005). Ott & Nieder (2019) emphasized that managerial functions are a person's high cognitive control processes, responsible for the ability to initiate, persevere, inhibit and change. Managerial functions are in charge of social-emotional learning skills, and allow people to manage and direct their actions according to their goals.

The term "Executive Cognitive Function" (ECF) is used to further narrow the meaning of those abilities required to perform a mental action that requires attention and concentration. Managerial functions perform tasks that instinct and intuition - operating quickly and automatically - cannot complete. In contrast, the use of ECF requires mental effort: it is easier for the human brain to persevere in a particular action than to change it, to succumb to a distraction than to ignore it, and to continue to operate through the "autopilot" that does not require effort. The ECF has three basic functions: inhibition, working memory, and cognitive flexibility (the ability to draw conclusions and solve problems). Based on these basic functions, high-level managerial functions are constructed, including reasoning, problem solving, and planning. Conclusion and problem-solving functions are collectively called ‘fluid intelligence’, which refers to the ability to draw conclusions and solve problems by identifying patterns and relationships between items. This intelligence encompasses both deductive and inductive capabilities (Diamond, 2013; Rueda, 2020).

In addition, Shabbat-Simon et al. (2019) and Brown (2005) argued that managerial functions refer to a wide collection of brain functions, and are therefore not represented by an individual behavior. Managerial functions are also responsible, among other things, for concentrating on the task and dealing with distractions, and are essential for planning and decision-making, finding and correcting mistakes, learning dangerous or complicated situations, overcoming negative habits, or resisting temptation. They also allow a person to develop self-control, the ability to self-regulate, and to reject immediate gratifications for the fulfillment of long-term goals.

As mentioned, managerial functions enable flexible behavior that is reflected in the ability to choose an action appropriate to the existing situation, and are responsible for the ability to plan and solve problems, control processes, inhibition and regulation, planning and organizing, cognitive flexibility, abstract thinking, rules acquisition, action initiation, inhibition of actions, and attention and concentration. In addition, managerial functions are of great importance to the individual's academic success and professional development (Field et al. 2013; Luzzatto, 2021; Ranganath & Jacob, 2016).

In conclusion, growing interest in the neurosciences and the functioning of the human brain has arisen among educators and psychologists, with the aim of improving teaching and learning. This interest is expressed, among others, in the rich and diverse research and industry that has been going on for several decades in many places in the world, and in Israel, about the connection between the brain, the mind, and education (Hinton & Fischer, 2008; Zull, 2012). Studies of the function of the human brain and the nervous system aim to deepen the knowledge of the "healthy" aspects of brain function, such as thinking, memory, learning, emotions, and so on, processes which activate and sustain our lives. This is in addition to the research into pathological processes, which originate in defects or brain lesions. The importance of the findings of brain research for the improvement of education and teaching is emphasized in many publications, the frequency of which has been increasing in recent years. These publications suggest that the findings of brain research can deepen our understanding of learning and memory processes, assist in everything related to teaching and classroom management, and illuminate the pathways to meaningful learning (Tokuhama-Espinosa, 2011; Luzzatto, 2021).

3.3 THE RELATIONSHIP BETWEEN META-COGNITION AND REFLECTION

Reflection is rooted in the field of education and teaching, and meta-cognition is rooted in cognitive psychology (Sternberg, 1999). These disciplines exist as if within another "directory" and within it, it has a wide and undefined semantic field. The multiplicity of domains, the ambiguity of the concepts and their being in different areas of the mind makes it very difficult for the people in the field who are in great need of integrative information. The analysis of the concepts of reflection and meta-cognition depends on clear language; processing while integrating with different theories (Anderson, 1993; Cohen & Dori, 2021; Estes, 1999).

In order to understand the terms reflection and meta-cognition, we must first refer to a number of preliminary concepts:

1. Cognition. Indicates the mental processes through which we acquire knowledge and process it (sometimes it also refers to the content of the acquired knowledge and not just the process of its acquisition). Cognitive processes include human intelligence, perception, attention, memory, language, intelligence, imagination, thinking and problem solving. It is easy to explain the concept of cognition against the background of what it does not include: emotions, motivation, and other areas in psychophysics such as sensitivity threshold, drug effects, and more. Today even the proponents of the cognitive approach do not ignore the non-cognitive domains, and there are many attempts to merge and combine these domains in order to get a comprehensive and complete view of a person. Analysis of reality shows that components of emotions, cognition, motivation and behavior are mixed and difficult to isolate. The components penetrate each other, activate each other, and even magnify each other. As a result, the concept of cognition has expanded, and today encompasses most areas of psychology, from thinking, attention, memory, emotions, motivation to complex processes of interpersonal relationships, groups, and organizations. The science of cognition studies the cognitive processes and examines what knowledge human beings acquire, how they acquire it, and how they use it to function in the world. In other words, the science of cognition is interested in both content and process. Cognitive science combines knowledge and research

from different fields; Neuroscience, Computer Science, Linguistics and Psychology, and offers researchers from different fields the option to explore the same subject from different and complementary perspectives (Bitman et al., 2016; O`Rourke et al., 2020).

2. Consciousness. Since the 1970s, there has been a gradual revolution in philosophy and science regarding the nature of consciousness and states of mind. With the rise of the cognitive sciences new research questions, old questions took on a new guise. In the first decades of the twenty-first century, consciousness studies in psychology, biology and neuroscience have been thriving. In recent decades, special emphasis was placed in psychology, philosophy, and neuroscience on the question of the nature of the subjective aspects of the psychic experience and their characteristics. But the poignant questions still linger: What is the meaning of the word 'consciousness'? Is there a consciousness? Is consciousness an illusion? Is it possible to develop without it? If we deprive a person of consciousness, will there be any psychic experiences left? If so, what is the nature of subjective mental qualities (Qualia)? Can robots reach a state of consciousness? What is the relationship between consciousness and the psycho-physical question? What is the relationship between consciousness and cognition? What is the relationship between consciousness and language? What is the connection between consciousness and the brain? What is the relationship between consciousness and the world? What is the difference between consciousness and others? What is the place of consciousness in the great religions, and in spiritual and mystical approaches? (Tair, 2020).

3. Consciousness is the set of insights that an individual or group of individuals has about the reality around them, and the way they want to shape it, as a derivative of the set of values and beliefs through which they examine their environment, interpret it, and work to address and even challenge it (Institute for the Study of the Methodology of Intelligence, 2019). Working memory and the stream of consciousness-active memory refers to that part of the mind that "holds" the relevant information and processes it. The processing of information is expressed in various actions that flow continuously in the working memory, and create a continuous stream of consciousness. For processing to take place,

messages (stimuli) coming from the sensory record must meet with stimuli coming from the memory pool. The moving contents in the stream of consciousness are involved in the components of the input to the system (the senses) and in various languages that humanity has developed for the purposes of information processing (Baddeley & Logie, 1999; Frigato, 2021).

3.3.1 What is reflection?

The concept of reflection has occupied many thinkers since ancient times, from Aristotle and Plato in Greece to Confucius in China. The term originates in Latin, and means "turning back", meaning a retrospective observation of the action, occurrence, or event that occurred. Reflection is a thought, idea, opinion or comment that is the result of a thought process to achieve a goal. This definition refers to both the process itself and the product of the process. Etymologically, it is a meta-cognitive process or, in other words, thinking about thinking (Chittooran, 2015).

Reflection is the ability to connect the different experiences of the person and examine them, in order to promote complex mental schemas that are related to each other. This is an important human activity, in which the person reconsiders his experience, appreciates it, and learns from it. Dewey (1910) was one of the first scholars to engage in reflective practice, and noted that reflective thinking (as opposed to other actions we take in the name of thinking) is primarily related to a state of doubt, hesitation, confusion, or mental difficulty in which thinking occurs. It is also an act of searching, appealing and investigating to find a solution, and designed to settle and resolve the confusion (Kramer, 2016).

There are a few definitions of the concept of reflection that have been reviewed:

- A meaningful way of thinking that can be applied to a complex or unstructured event or theme (Dewey, 1933).
- A thought, idea, opinion or comment that are the result of a thinking process to achieve a goal (Zilberstein, 1988).
- A process in which the individual is involved in interactions of listening, criticism, research and iteration of his/her own thoughts and actions, within the

framework of the principles that determine them, in an attempt to change them and change him/herself (Nguyen et al., 2014).

- An approach to producing meaning from an experience that will lead to new insights (Ker, 2015).
- A process of reflective thinking (Ran, 2016).

A distinction can be made between technical reflection, in which the effectiveness of the means for achieving goals is examined, practical reflection in which the goals are also examined, and critical reflection, in which moral-social aspects are activated in judicial and evaluation processes, relating to moral and ethical thinking. In addition to activities performed to achieve the same goals, it is worth noting that reflection is a technical, practical and instrumental activity, which also includes critical, ethical, moral and political elements, and contains another element that includes the world of emotions and social interactions of the individual (Ran, 2016).

Despite the importance of reflection, there is no uniform model or clear definition for this term. There are many meanings to reflection, and it is therefore difficult to formulate operatively. It should be noted that a uniform definition and a defined model are essential to enhance the development of the practical application of reflection. At the same time, reflection is a process in which the individual is involved in the interactions of listening, criticism, research and iteration with his thoughts and actions, within the framework of the principles that determine them, and in order to change himself (Nguyen et al., 2014).

It is important to note that reflection and thinking are not necessarily the same thing. Reflection is a particular type of thinking, different from other thought processes: it includes five essential components, which enable the reflective thought process: thoughts and actions, research, critical and deep reflection processes within the framework of vision principles of change, and the individual (Ran, 2016).

In conclusion, reflection can be defined as a process in which the individual is involved in deep, critical, experimental interactions and processes of courtship with his thoughts and actions, with the system of guiding principles, in order to change them and relate to change itself. This definition provides a basis for applying reflection more effectively and richly, with an emphasis on the world of education, by clearly

distinguishing between reflection and other forms of thinking or general meta-cognitive thinking (Chang, 2019; Nguyen et al., 2014).

3.3.2 Meta-cognition abilities and skills

In recent years, the term "meta-cognition" has been widely used, it is a fruitful field of research in the research of education and cognitive psychology (Ozturk, 2017; Perry et al., 2019; Veenman, 2011). Meta-cognition refers to a person's knowledge, as well as the regulation and control of the processes and products of his or her cognitive system (Flavell, 1976). In meta-cognitive thinking, one thinks about various aspects of epistemological processes. That is, the thinking revolves around the knowledge that a person has, and the processes of knowledge acquisition. The knowledge generated as a result of meta-cognitive thought processes is referred to in the literature as "second-order knowledge" (Nickerson et al., 1985). Raising thought processes to awareness involves reflective thinking, in which the thought process itself becomes the object of observation and analysis; in other words, thinking about thinking. Under this broad definition of the concept of "meta-cognition" first coined by Flavell (Flavell, 1976), various meta-cognitive concepts and components have evolved over the years, such as (to be precise, the concepts are worded as follows): Meta-cognitive knowledge, Meta-cognitive awareness, Self-regulation, Meta-cognitive skills, Executive skills, Meta-memory, Meta-Knowing, Meta-perception, Meta-language, Learning strategies, Heuristic strategies, Theory of mind, Epistemological understanding, Higher-order skills, and Comprehension monitoring (Papaleontiou-Louca, 2008; Veenman et al., 2006).

The term meta-cognition denotes the individual's ability to reflect, understand, and critique his or her own thought processes (Flavell, 1979). The term originated in cognitive psychology, but over the years has also spread to the field of education and, in this context, indicates the student's ability to reflect, understand, and critique learning processes (Schraw & Gutierrez, 2015).

Meta-cognition is sometimes defined as "thinking about thinking" or " a person’s thinking about his own thinking." This review will build on the definition of Flavell et al. (2002), which distinguished between three key components of meta-cognition: meta-cognitive knowledge (MK), self-regulation, and monitoring, which is often called meta-cognitive skills (MS) or meta-cognitive experience (ME).

Also, over the years, various researchers have expanded the use of the term, and included in it reference to effective (emotional) components of learning processes rather than just to cognitive components; for example, meta-cognitive experiences, meta-cognitive beliefs, feeling of knowing, judgment of learning, epistemological monitoring, and judgment. The theoretical and research "prosperity" of the concept of "meta-cognition" has led to ambiguity and confusion in the distinction between the various components of meta-cognition, and the relationship between them (Veenman et al., 2006). This issue is a result of different researchers using similar terms, but a close examination of the components of the meta-cognitive "treatment" they present in their research reveals that these are different components of meta-cognitive thinking. On the other hand, different researchers use different terms, but actually mean the same component of meta-cognition (Schuster et al., 2020; Veenman et al., 2006; Zohar, 2016).

One of the factors that has led to the ambiguity and confusion regarding the term “meta-cognition” is the difference between the view of cognitive psychology and the view of social psychology. While cognitive psychologists focus primarily on the cognitive components of meta-cognitive thinking, social psychologists expand their reference to the effective (emotional) field, and include components of motivation for learning (motivation) and various social-emotional processes such as feelings of proficiency, success, knowledge, confidence, satisfaction and more, as well as judgments/assessments of learning, of information, of time, of effort, and more (Efklides, 2006).

However, there is a broad consensus among researchers (Brown, 1987; Flavell, 1979; Schraw & Moshman, 1995) on a basic distinction between some components of meta-cognition:

1. Meta-cognitive Skills (MS). These are the skills and processes active in the planning and evaluation of thinking and learning (Veenman, 2011). These skills are classified into three categories: planning, monitoring, and assessment. Planning includes setting goals, selecting appropriate strategies, determining the order of use of strategies, and allocating resources to perform a cognitive task. Monitoring includes an examination of the thought processes used while performing the task, and awareness of them. Assessment includes an examination of the products and the

effectiveness of the thought and learning processes performed, for example, through self-examination and reflection. Assessment may lead to operational recommendations regarding further thinking, and thus guides future thought processes. Hence, some call the components of meta-cognitive skills "control and regulation". It is common to say that the planning is carried out according to the work process, monitoring is carried out during the work, while assessment is carried out retrospectively, after the end of the work process (Schuster et al., 2020; Veenman, 2016; Zohar, 2016).

2. Meta-cognitive Knowledge (MK). Activation of meta-cognitive skills involves reflective processes; that is, a reflection of the thought processes. The product of these reflective processes is meta-cognitive knowledge (Gidelewich, 2021). Meta-cognitive knowledge (MK) refers to the world of acquired knowledge related to cognitive issues. The definition of this sub-concept includes knowledge, art, ideas, and theories about human thinking and actions, and about the diverse interactions of human beings with cognitive tasks and strategies (Flavell, et al., 2002). Meta-cognitive knowledge includes three sub-components:
    a. Knowledge about people, which refers to knowledge about the variables that affect the cognitive activity of the thinking person, knowledge about other people's cognitive processes, and knowledge about universal aspects of cognition.
    b. Knowledge of tasks, which refers to the understanding of how the conditions, requirements and goals of tasks affect cognitive activity.
    c. Knowledge of strategies, which refers to knowledge of learning, thinking and problem-solving strategies that people may use to achieve different goals.

According to Flavell (1979), meta-cognitive knowledge is declarative knowledge about the interaction between human characteristics, mission and strategy. The research literature suggests that meta-cognitive knowledge is divided into three types of meta-cognitive awareness (Brown, 1987; Flavell, 1979; Schraw & Moshman, 1995; Schuster et al., 2020):

- Declarative Knowledge: refers to the knowledge "about" cognition and includes knowledge about yourself as a learner and the factors that influence your performance. The ability to articulate knowledge is an important component of declarative knowledge.

- Procedural Knowledge: refers to the knowledge of the use of cognitive procedures, and means to know "how" to use thinking strategies.

- Conditional Knowledge: refers to the knowledge of "when" and "why" to use different thinking strategies. Conditional knowledge allows one to learn to choose strategies and adapt them to the changing requirements of the tasks.

For purposes of categorization, Kuhn (2000) distinguished between three components of meta-cognition (in Kuhn's terms: Meta-knowing).

- Meta-cognitive knowing: knowledge of declarative knowledge (knowledge as a product of thinking).

- Meta-strategic knowing: knowledge of procedural knowledge (knowledge as a thought process). Meta-strategic knowing includes knowledge about thinking strategies – generalities and rules about thinking strategies, knowing when, why and how to use the strategy, and when not to use it, the downsides of using the strategy incorrectly, and what characterizes tasks that foster the use of this particular strategy.

- Epistemological meta-knowing: A more abstract level of perceptions about human knowledge.

3. Meta-cognitive Experiences (ME). This component of meta-cognition, which has been defined by Flavell et al. (2002, p. 154) as "a cognitive or emotional experience that belongs to cognitive activity", has received less research attention (Efklides, 2006). Meta-cognitive experiences address three aspects:
   a. Feelings;
   b. Judgments/assessments that arise in the learner during a cognitive experience (an ongoing cognitive endeavor), i.e., during a thinking process;
   c. Online task-specific knowledge (referring to cognitive and ineffective elements), including knowledge of the characteristics of the task and the procedures required to perform it. It is actually knowledge that penetrates consciousness while performing a specific thinking task. That is, it is knowledge that is conscious knowledge, as opposed to the first two components of meta-cognitive experiences, feelings and judgments/assessments, which can be unconscious or subconscious processes.

The reference to the effective components of meta-cognitive thinking is not new. Even in the early stages, Flavell (1981) referred to a type of meta-cognitive awareness, which includes, in addition to the cognitive component, effective components, and coined the concept of meta-cognitive experiences. However, most studies and the professional literature have focused on the cognitive components of meta-cognitive experiences, and little attention has been paid to its effective components. There is a solid theoretical framework and many studies that have consistently demonstrated the strong positive impact that meta-cognitive thinking has on cognitive ability and the advancement of learning processes. At the same time, there is a great deal of theoretical and research support for the significant impact of effective components on improving learning processes. To date, however, most studies have focused on either meta-cognition or effective components, and their individual impact on thought and learning processes. Only in recent years has there been a significant development in the field of research that combines the two, i.e.: thinking about (meta-cognition) the effective components of learning.

3.3.3 Meta-cognition in teaching and learning processes – from the field of research

Meta-cognitive abilities can be developed through teaching and coaching (Kolb & Kolb, 2009; Sato & Lamb, 2021). These abilities are a key component in the development of a learner with independent learning ability, and directly and positively affect student achievement in a variety of fields. Because developing high achieving students is among the key roles of the education system, many researchers and educators encourage a combination of pedagogies to develop meta-cognitive abilities among students in teaching and learning processes in the classroom. The question arises - How can meta-cognitive abilities be encouraged and developed among students? Well, in the past it was widely believed that meta-cognitive abilities are general and independent in a particular content area; hence the recommendation to develop meta-cognitive abilities detached from a specific content area, based on students' abilities to acquire them in diverse content areas. Today, the prevailing view is that meta-cognitive abilities first develop as specific abilities in specific content areas, and become general abilities that can be applied to diverse tasks and content areas in further stages. Pedagogically, four ways to develop meta-cognitive abilities were outlined:

1. Increasing students' awareness of the importance of meta-cognition; for example, through explicit instruction of the concept of meta-cognition, and devoting time to discussing and practicing meta-cognitive processes.
2. Support and development of students' meta-cognitive knowledge; for example, through explicit teaching of learning strategies.
3. Support and development of students' meta-cognitive control processes; for example, through questions that encourage reflection, observation, and examination of learning processes embedded in teaching and learning processes.
4. Creating a learning environment that encourages the existence of meta-cognitive processes; for example, through peer learning (Adler et al., 2015; Schraw, 1998; Tanner, 2012).

Numerous studies dealing with teaching show that meta-cognitive teaching improves both the meta-cognitive thinking itself, and the achievement of students in diverse areas of knowledge such as reading, math and science (Baten, et al., 2017; Hart & Memnun, 2015; Schraw & Gutierrez, 2015; Veenman, 2011).

In terms of teaching instruction, meta-cognition is a key part of effective learning. It allows students to be aware of and regulate their thinking, control how decisions are made, and critique their learning. Training in meta-cognitive strategies increases the planning, monitoring and control processes of the thinking strategies they internalize, helps them to pay better attention to the thought processes as well as be aware of the task, and thus gather information about it and deal with it accordingly (Adler et al., 2017; Hart & Memnun, 2015; Schraw & Gutierrez, 2015).

Implications of meta-cognitive teaching on thinking strategies can be found in the study of Adler et al., (2017), which examined the effect of supporting students' meta-cognitive abilities as part of an open-ended research process. It was found that the meta-cognitive support provided the students with the tools to deal with the open research process, get the most out of it for their research, and even for their further studies. According to the students, the meta-cognitive support allowed them to resolve disagreements, face difficulties, make good use of time, and cope with changes in plans. This was done by providing the tools for planning how to implement the strategy, increasing awareness, thinking about diverse solutions, and understanding how to use different thinking strategies, as well as why and when to use them.

Similarly, meta-cognitive teaching affects performance in different areas of knowledge. In the technical aspect, the activation of meta-cognitive thinking contributes to improving the understanding of learning contents. Knowledge of myself as a learner, as well as knowledge of learning strategies and meta-cognitive processes, may promote learning planning as well as monitoring and controlling my understanding of the learning material (Zohar, 2016). In mathematics, for example, there has been an improvement in mathematical knowledge and inference following cognitive meta-training (Schneider & Artelt, 2010). In this type of training students asked themselves meta-cognitive questions while solving math problems. Questions of this kind are related to understanding the nature of the problems, linking them to prior knowledge, and aiming at planning steps, solving them, and evaluating the results. Another study found the impact of a program that focuses on explicit and regular practice on understanding math even at young kindergarten ages (Mevarech et al., 2018). A recent study (Antonio & Prudent, 2022) showed similar findings in dealing with learning sciences such as biology, physics, or chemistry. Also, in these studies, students who received meta-cognitive support were more engaged in acts of thinking and self-examination, and showed better control and deeper understanding of the study material compared to groups who did not receive such support (Baten et al., 2017).

Meta-cognition was found to have a positive effect both on reading level and reading comprehension for English speaking students, for students who have difficulty reading, and also for students learning English as a second language (Ahmadi et al., 2013; Soodla et al., 2017). Similar to meta-cognitive support in other learning areas, teachers explicitly taught thinking strategies, linking prior knowledge to new knowledge, monitoring comprehension through asking questions, dealing with problems while reading, and examining comprehension at the end of reading.

It is interesting to note that although meta-cognitive teaching has been found to be effective for the general student population, it has been found to have particularly strong effects on low-achieving students. The explanation for this finding lies in the fact that low-achieving students, in contrast to high-achieving students, often fail to understand the components of meta-cognitive knowledge on their own, and therefore benefit particularly from teaching-focused intervention of this knowledge (Zohar, 2016).

In light of the importance and benefits of meta-cognitive teaching to students, the importance of teachers' practice of meta-cognitive teaching in the classroom is derived. In order for teaching to be optimal and indeed achieve its goals, it is important to understand in depth the issue of meta-cognitive teaching for teacher training and teaching apprentices, who have not received this type of support (Perry et al., 2019).

3.4 SELF-MANAGEMENT SKILLS

The diverse, global, multicultural and pluralistic world nowadays continues to evolve and change hectically. Due to massive migration from Third World countries to First World countries, the West is turning more multicultural and heterogeneous. Traditional philosophies in education, that aimed to transmit knowledge for the purpose of cultural advancement or the sake of society, do not reflect the educational needs in today's Western society, nor the cultural and social backgrounds of many of the students. At the same time, modern educational philosophies, which promote the individual's self-fulfillment, must also be updated and processed in order to better adapt to the new reality, characterized by technological revolutions, the expansion of globalization, social change, and the challenging status of knowledge. The main pedagogical challenge the education system is facing in the postmodern era is the development of self-management and problem-solving skills (especially problems related to this complex and changing world), some of which were already known in earlier periods, and focusing on transmitting skills and abilities such as creativity, innovation, conceptualization, communication, collaboration, information skills, technological skills, and critical thinking (Levi-Feldman, 2020).

3.4.1 Definition and conceptualization of the concept of self-management skills

Self-management is a person's ability to regulate their feelings, thoughts and behavior in different situations. Effective stress management includes impulse control, self-motivation ability, and the capacity to set personal and academic goals, and to work to achieve them. The ability to self-manage includes control of aggression and destructive and anti-social conduct, behavior adjustment according to feedback, positive self-motivation, aspiration to realize potential, and optimistic perception (The Collaborative for Academic, 2017).

Therefore, self-management is a skill that belongs to the group of intrapersonal skills, and includes understanding of the self, and implementing effective strategies to

deal with different situations, to solve problems and to strive towards achieving goals. High intrapersonal skills are positively associated with health, income, learning ability and satisfaction, and are negatively associated with adverse practices such as violence, addictions, dangerous behavior, and poverty (Agolla & Ongori, 2009: Kadiyono & Hafiar, 2017; Moffitt et al., 2011; Zhoc et al., 2020).

Intrapersonal skills usually include two main components: the cognitive-perceptual component, and the behavioral component. The cognitive-perceptual component is self-awareness, and the behavioral component is self-management. Self-management includes self-direction, self-control and self-motivation. Self-awareness allows us to better understand ourselves, to model our unique identity, and to identify our strengths and the areas in which we need to invest effort in order to enhance. Self-awareness serves as the basis for self-management. For instance, in order to regulate our emotions, we should first identify our feeling so we can understand the effect of these emotions on our behavior. On the other hand, self-management refers to the individual's ability to foster desirable behaviors, and avoid unwanted attitudes in the short and long term. In the context of the adult character's skills, it underlies the ability of students to behave intentionally and achieve their goals in studies, hobbies and personal relationships, and also in adulthood – the achievement of professional goals (Ministry of Education, 2020). The strong association between variables related to self-management, such as self-regulation, self-motivation, coping with stress and various aspects of success in life, was confirmed in a study by Mischel et al. (2011) in both children and adults.

Self-management is a general term that refers to a variety of components that are designed to outline an internal control center (Chafouleas et al., 2011).

Self-management also express the influence people have on events and situations around them and their consequences, distinguishing when they should work on themselves, on their environment, or both at the same time, as well as taking responsibility for their actions and consequences (Kaniel, 2013). Self-management includes control and personal stress management, self-motivation, discipline, and setting organizational goals and skills (Zins et al., 2004), which are key to relationships and responsible decision-making, and can lead to prosperity, flow, and satisfaction during life (Tolan et al., 2016).

As such, self-management requires skills and attitudes that facilitate the ability to regulate behavior and emotions, including rejection of gratification, stress management, impulse control, and self-preservation, in order to realize educational and personal goals (Weissberg et al. 2015).

3.4.2 Advantages and importance of self-management skills

Some of the existing literature about self-management has addressed the medical definition of self-management, often described as patient self-care (Catarino et al., 2021; Kennedy et al., 2005). We must get the right result for our lives. In addition, we have to understand the intentions, objectives and goals of our lives. It is extremely important to understand the wider meaning of self-management, because proper understanding could help people make the best decisions to achieve the best results to improve their lives.

Every person in this world needs to identify their life's main goals. This is the most important or critical part of self-management. Self- management refers to the behavior that a person must adopt in order to observe the desired change in their life and in their workplace. Botha & Musengi (2012) explained self-management as an activity that complements personal qualities such as honesty, reliability and trustworthiness. On the other hand, self-management means people managing their behavior by setting personal standards, evaluating their performance in terms of those standards, and self-managing the consequences based on their self-appraisal (Alsemgeest et al., 2017).

It is worth highlighting that self-management skills allow to maximize the individual's productivity, improve their workplace performance effectively, and achieve professional goals. In addition, self-management skills can help increase our employability, and improve our career path management. In general, self-management includes self-discipline, self-promotion, personal financial management, self-career management, self-quality management, self-control, and self-care. All these parts make up the whole of our lives. If we get to manage these areas of our lives properly, it means that we are completely successful. The importance of self-management can be identified in different ways. Most importantly, almost all employees suffer serious stress and, as pointed out, self-management supports self-awareness. This resolves our goals and objectives. Only when we know how to manage our self, can we recognize

the effect of emotions and thoughts on a given action. This will help us to be more responsible and well-equipped in order to evaluate our work and decide how to move forward (Alvernaz, 2019).

In addition, self-management skills allow people to control thoughts, feelings and actions. That is to say, strong self-management skills allow a person to set goals by themselves, and to take the initiative to achieve them. Many self-management skills have been listed, including stress management skills, time management skills, organizing skills, problem solving skills, decision making skills, self-confidence and self-control skills (Dembo & Seli, 2013).

Another concept associated with self-management skills is self-motivation – this is the ability to take initiative and pursue goals. Although highly individual, in general, when we are self-motivated, we anticipate and plan potential tasks needed in order to carry out more meaningful tasks or solve current problems. Self-motivation is the part of self-management that ensures leading progress with arranged projects and activities (Levi-Feldman, 2020).

The impact of stress on self-management skills, especially in decision making, was addressed in the early literature (Thomason & Pond III, 1995). Stress can alter our balanced logical thinking, which is very necessary for the decision-making process. Initiated management of stressors in the workplace can help us stay calm at work. Stress management, before it becomes an issue, allows us to focus on our emotions and goals, maintaining professional behavior in the workplace (Acharyya, 2017; Umeh et al., 2021).

Time management is another relevant component of self-management skills. Fast and dramatic changes taking place in our world force us to have different needs, so time management skills become quite meaningful. By means of improving time management skills, people can implement better organization skills, physical space, energy and mental abilities, and establish order. In addition, we would be able to plan, prioritize and perform important activities that help us shape our personality and social connections, and strengthen our sense of capability and self-confidence, as well as many other elements that affect our future (Kapur, 2020).

Life is replete with problems that need to be managed; therefore, the ability to solve problems is a very critical success factor in self-management. Self-management

skills help us analyze diverse situations, and come up with fair solutions. Problem-solving skills are common in personal and professional lives. In all settings, resolute and pertinent decisions are necessary, thus making these skills requisite for proper self-management. Furthermore, self-confidence and the accompanying ability to support the achievement of our goals and objectives is another very important skill in terms of self-management. Responsibility is the act of taking personal ownership of thoughts and actions. Therefore, responsibility is also a very important skill for self-management (Acharyya, 2017; Umeh et al., 2021).

3.4.3 Self-management, students' self-management, and what is in between

Self-management is comparable to the management of any system. The main idea is that in any industrial, economic or technological system (relating to the human being as a complex system), there is a need for a unit that centralizes all feedback systems and execution planning. This unit should create complex coordination, so the pieces of the system move to the goals set for it, as a whole. Cognitive and meta-cognitive components are a must for the correct use of self-management factors, and allow a person to perform effectively. We can categorize a number of self-management components that move based on a sequence of tasks (Kaniel, 2013):

1. Objectives: Setting goals, and justifying and defining them in terms of product.
2. Planning: The subject selects and sorts components of knowledge about themselves, tasks, time to perform them, and the strategy, and then integrates these elements allowing to plan the solution of the task.
3. Monitoring and control: Monitoring involves watching and collecting data that create a specific image that results in a two-stage process:
   c.1 Making decisions about the action required.

   c.2 Actual execution of the decision.

This is an ongoing and simultaneous process, and any change requires a control level response. Monitoring and control can be about processes that are taking place outside the person or within the person (reflection), over the stream of consciousness (meta-consciousness).

The combination of monitoring and meta-cognitive control is expressed in an internal dialogue, between the "observing self" and the "decisive and executive self".

Such a dialogue should take place simultaneously and in close interaction. Constant monitoring of one's performance can suggest a number of questions while performing, such as: "Am I really okay?" "Am I executing the strategy correctly?" "Am I running at the right pace?" "Do I understand what I am doing?"

For instance, a teacher estimates that, in order to prepare a lesson plan, he must perform a number of actions (collect information, set goals, etc.) Through monitoring, he discovers that some of the material is familiar to him, so he won´t require a number of actions, thus reducing the number of actions he had planned (control) or the time it might have taken.

d. Feedback and knowledge: Drawing conclusions from self-management in order to incorporate them into the solution of the next task. Effective feedback must answer three main questions:

d.1 Effective and right practices should be built-in.

d.2 List of wrong practices should be stopped or changed.

d.3 How can we fix the wrong practices from the mentioned list ?When teaching, answers will be reflected at the end of each lesson, at the end of each teaching unit and, of course, at the end of the school year. Practice refers to formative and concluding assignments, with a constant accumulation of conclusions and lessons that make the teacher an independent learner, who develops and changes throughout the act of teaching.

At the same time, learner self-management (LSM) refers to the ability to deploy procedures, knowledge and beliefs, in order to achieve learning objectives in a dynamic changing environment .Self-management learners are distinguished by their awareness of their ability to use their knowledge, beliefs, motivation and cognitive processing in a flexible way. Experienced self- management learners possess many qualities. They hold sufficient knowledge and well-developed beliefs about themselves, the learning process, possible strategies, the nature of the tasks, and prior knowledge. In addition, they can access their knowledge and beliefs to describe their use of procedures (Rubin, 2001; Huang & Yu, 2019).

LSM procedures include five meta-cognitive strategies: planning, monitoring, evaluation, problem solving, and implementation. Of these five strategies, monitoring

and evaluation are considered essential to self-management because they include actuation and activation of other processes, as a function of online evaluation thought processes while they occur, and products of thought in its creation (Rubin, 2005; Danan, 2016; Gidelewich, 2021), the five meta-cognitive strategies of LSM are:

1. Planning: Indicates a comprehensive and systematic set of steps in self-managed planning. Steps include:
    - Setting goals
    - Setting criteria to measure goal achievement
    - Analyzing tasks
    - Establishing a timeline.

First, in setting a goal, learners specifically determine what they want to achieve in a pre-determined period of time. Second, they set measures to evaluate their goal achievement. Third, task analysis includes three components :Task purpose, task classification, and task requirements. This is how learners plan to approach the task . The purpose of the assignment is the pedagogical goals, or real-life goals, that learners want to achieve by completing the assignment (e.g., passing an exam, surviving in a foreign country) .Task classification is the identification of the task characteristics, that help learners decide on task requirements. (i.e., the knowledge, skills and strategies they need to complete the task) .Finally, self-management learners set a realistic timeline to complete the task (Lichtinger, 2018; Zhu, 2021).

2. Monitoring: According to Rubin (2005), in the process of monitoring, the learner observes and points out problems such as attention, lack of comprehension or expression (taken as a whole or as a part), emotional discomfort or inconsistency of one or more cognitive or socio-emotional strategies.

In monitoring students, Danan (2016) noticed problems they may have. These problems may include: Lack of attention, emotional suffering, comprehension or expression difficulties, and ineffective implementation of one or more cognitive or socially-effective strategies.

In his research, Nguyen (2011) emphasized that learners with high self-management abilities constantly monitor their performance and understanding, to indicate the source of the problems and their development. He added that while monitoring students with high self-management ability, it can be noticed that they may

encounter some difficulties; for example, they may find it difficult to focus on a task, or think of proper language tools to use. They constantly monitor their understanding and outcome, and indicate the causes of their difficulties.

3. Assessment: Learners with self-management skills determine if they are progressing properly. They do so by applying established criteria to determine if they had met some or all of the goals. Afterwards, learners consider whether they are satisfied with their performance, or if they need to solve problems in order to achieve their objectives (Sajeevanie & Lecturer, 2020).

According to Rubin's model (2005) Self-management learners evaluate achievement of their objectives based on the criteria they set during the planning stage. Then they decide if they had performed properly, and if they need to solve any problem to meet their goals.

4. Problem identification and solution: Based on the problems noticed during the follow-up and evaluation stages, learners consider the causes of their difficulties and failures. They then consider what they can do to solve the problems and accomplish their objectives. Problem solving may include going back to earlier stages in their learning process, such as setting goals or setting criteria, and adjusting some of them (Gidelewich, 2021).

At the problem identification and solution stage, learners consider what the source of their problems is, and which could be potential solutions. Rubin (2005) argued that learners with high self-management skills begin to consider what else can they do to reach these solutions, after determining that they have not met their goals .Nguyen (2011) argued that expert learners would identify some possible causes for their failure, and may include :Use of an inappropriate set of strategies; Deficient knowledge of the language, subject or the culture; Lack of attention; Unrealistic targets for the allotted time period, or insufficient task analysis. Once they have determined what the problem may be, expert learners consider several possible solutions that include: Use or create a more effective set of strategies; Acquire the necessary knowledge; Find ways to improve their attention; Reformulate the objectives or timing; and improve the task analysis.

5. Application: In this phase, students adapt everything they have determined that could be the source of their problem (their cognitive or socio-active strategies, the task

itself, the source of their lack of attention, etc.), or they may begin to acquire the knowledge they need to achieve their objectives. Expert learners test their solutions by applying them, so they can determine if they yield a better result. This may cause them to re-perform a number of procedures: Monitoring, evaluating, changing their design (i.e., criteria, timeline, objectives, task analysis) in order to perform the task . In addition, self-managed learners implement possible solutions to check if it works for them. They may need to make changes in other procedures, if needed, in order to fulfill the task (Huang & Yu, 2019; Rubin, 2001).

To sum up, self-management skills have a very broad meaning, and are very beneficial. However, most people do not recognize the importance those skills. They frequently try to manage others, whereas the most important element is that we must first manage ourselves, and then try to manage others (Sajeevanie & Lecturer, 2020) . The learner's self-management requires constant interaction between meta-cognitive strategies and the learner's knowledge and beliefs. This last component embraces: Knowledge of the person's learning styles, belief in the importance of the task, general beliefs about language learning, use of background knowledge and know-how, which enables expert learners to effectively use an extensive list of strategies .Meta-cognitive strategies include planning, setting goals, monitoring, identifying sources of difficulty, and evaluating the effectiveness of the strategies used. Self-management skills can be considered as a personal application of strategies that produce a desirable change in behavior .Self-management skills are beneficial to students, ensuring that they function as independently as possible. Accordingly, when students can set their own goals and monitor their behavior, they can generalize many and varied skills to a wide range of definitions and situations (Danan, 2016; Haegele, 2015; Zhu, 2021).

3.5 SELF-REGULATION SKILLS

3.5.1 Background and settings

Studying the psychological well-being of students is currently becoming more of a focus, as will be described. The level of psychological well-being of school students is considered an indicator of social well-being, and the education system now also uses it as a measure of efficiency (Matteucci & Soncini, 2021; Storrie et al., 2010). Self-regulation is associated with student self-management, and is also one of the psychological components that influence the learning process (Fomina et al., 2020;

Natvig et al., 2003). It is considered an essential factor that affects the consistency of a person's learning activities, and focus on achieving the learning objectives. Self-regulation is a multidimensional cognitive and emotional skill (Maksum et al., 2021).

The construct "self-regulation" has received various definitions, and lately there is a deep interest in writing around this subject. Also, self-regulation is considered to be a very broad term, denoting any regulation of the self by the individual. Thus, when using any psychological ability (such as positive self-talk, or goal setting, or other mental tools), whether behavioral, motivational or attentive, when brought to the desired state, is called self-regulation (Fomina et al., 2020).

The definition of self-regulation has evolved over time (Braund & Timmons, 2021), the earliest definition being the ability to control behaviors and emotions (Bandura, 1982). The idea of controlling behaviors, emotions and cognition in order to accomplish a set goal, from its formulation to its execution and evaluation of the results, was later proposed by Zimmerman (2000) and by Bauer & Baumeister (2011). Pintrich (2000) viewed self-regulation as a mental course based on meta-cognitive strategies and knowledge to realize a person's goals, such as achievement, personal aspirations, objectives, and aspirations in interpersonal relationships.

Focusing on obstacles to self-regulation, Shonkoff & Phillips (2000) described the capacity to learn to manage intense emotions, and focus and maintain attention over time, while Hoffman et al. (2012) discussed self-regulatory techniques to control undesirable behaviors, such as addictions and impulses. Concentrating on psychological monitoring, Shanker (2017) discussed the role of parents, educators and friends to help calm and decrease stress levels to help others regulate their behavior, and to teach them how to regulate themselves.

Based on an extensive, academic and professional literature review, the Ministry of Education (2020) has chosen to define self-regulation as follows:

1. Adjust reactions and behavior to the situation: act in a way that suits the circumstances, avoid unwanted behaviors, and evade dangerous practices.
2. Regulate emotions properly: the ability to identify emotions, understand their impact on the body. Think and act to regulate them according to the situation in the most effective way.

3. Choose positions that allow the desirable behavior: embrace situations and design the environment in a way that promotes desirable performance, avoiding situations in advance that will require self-regulation.
4. Manage time efficiently and prioritize tasks: maintain concentration and ignore irrelevant stimulation and distractions. Develop future strategies to deal with possible interruptions.

Common to all these definitions, regardless of the focus given by various researchers, is the need to be able to dynamically regulate one's behavioral processes and actions in order to achieve a desired outcome, be it educational, medical, social, or otherwise.

It follows that emotional regulation is considered a sub-field of self-regulation that refers to processes that address the timing and intensity of the experience of emotions, and related physiological states, and of behavioral expressions of emotions, and changes them. This is a focal research area, especially in the attention and concentration difficulties context, learning disabilities, and behavioral disorders in children and teenagers. There is a theoretical debate as to whether the term "emotional regulation" refers only to internal performance, or whether it can also include situations in which external factors, or situational factors, influence an outcome. The difference in approach is one of range, with external factors plus internal factors influencing emotional regulation incorporating a larger range of skills than those focusing chiefly or solely on internal skills. For a review of these different approaches, see Kobylińska & Kusev (2019). For a discussion of these views in education, see Margalit (2014). Both represent different and separate research approaches. In the area of self-management and functioning, emotions are treated as a problem or "disorder." They claim that in order to reduce the problem, for instance the "disorder" or the effect of emotions, internal inhibition mechanisms must be used and intensified. On the other hand, researchers in the field of self-regulation did not treat emotions as a disorder that should be discarded, but instead emphasized the importance of emotional processes (e.g., hope, motivation, and coherence) that may support goals and sometimes delay them (Diamond, 2013).

3.5.2 Pedagogy of self-regulation and motivation

Self-regulation and motivation pedagogy (generating positive classroom behavior through motivational strategies (such as rewards leading later to intrinsic motivation), is designed to promote students' achievements, as well as to improve their emotional and social status. In educational techniques based on this approach, teachers allow their students to set objectives for themselves and track their own progress. This way they are trained in the execution of diverse strategies and strengthen their control practices. This teaching stream focuses on strengthening the learner's self-efficacy and belief in his capacity to succeed in academic and social tasks. The goal is to shift the problem-solving responsibility to the student. Self-regulation is determined by the learning environment (created by the teacher), by the interactions (among teachers and classmates), and by the structure and ideas of the content being taught (Sprinthall & Sprinthall, 1981; Schuster et al., 2020).

There is a mutual relationship between the processes of self-regulation and motivation. Motivation is a desire to change, either internally or with regard to certain external situations, such as the environment or community, and the adaptive and problem-solving strategies used to affect change.

The theory of self-direction, which is a fundamental humanistic theory, argues that the basis of human behavior hinges on three basic needs:

1. The need for autonomy
2. The need for a sense of ability
3. The need for connection and belonging.

Satisfying these three needs will lead the person to have quality involvement in the activities they engage in, while suppressing or preventing them, reduces motivation. According to this approach, students aim to feel control and convince themselves they act by choice. In addition, students demand a sense of self-worth when dealing with academic and social tasks and, also, want to love others and be loved, so that they feel part of a community. That is to say, students' motivational orientation and the means of self-regulation that depend on it, are pivotal in promoting effective, efficient and meaningful learning. It should be noted that the mechanisms of regulation and

motivation are influenced by the student's personal characteristics (Lichtinger, 2018; Muijs & Bokhove, 2020).

The basic principle of the pedagogy of self-regulation is students' participation in the educational processes in the classroom. Consequently, teaching according to this approach must begin with setting goals together with the students, while sensitively listening to their needs and supporting their planning, supervision and evaluation steps to help them. A study that tested the impact of the mentioned courses of action on the educators who operated (Lichtinger, 2018) improvement was found in their sense of self-efficacy, as well as in the formation of the teachers' professional identity. A key factor that shaped the teachers' experience was their active partnership with the students, and the fact that the students owned the responsibility for the success of the process. The study described how sharing with students changed their awareness of the classroom relationship, and they stopped perceiving students as passive and oppositional. They also described how they began to perceive themselves as working together with their students, rather than against them. The central perspective that emerges from Lichtinger's (2018) research as well as from ongoing experience is that listening to students at risk and working together to obtain their ambitions, are key tools to really meeting them in the classroom (Schuster et al., 2020).

3.5.3 Self-regulation in learning

Self-regulated learning (SRL) refers to the way learners - at any age and in any learning situation - handle and participate in the learning practice, aiming to accomplish the learning objectives. Several models of learning regulation processes can be found in the research literature, although they all propose the same general assumptions and characteristics:

- In accordance with the premise on which theories of self-regulation in learning are based, learning is not something that happens to learners but something that happens by the learners. In other words, learners are not just passive consumers of information received from teachers or parents; they are dynamic, and actively build meanings and interpretations throughout the process (Zimmerman, 1986).
- Another common assumption is that all learners can dominate, control, and monitor their own thinking, motivation, and behavior, as well as characteristics of their external environment (Pintrich, 2000).

- A third common assumption to the various SRL models is that learners can check their learning progress by comparing the existing situation to the desired one (or any target they had set at the beginning of the practice) to assess whether to continue on the path already taken, or make some changes in order to achieve their goals (Hoover, 2018; Shapira et al., 2017).

Pintrich (2000) proposed a self-regulation in learning model that includes four interrelated stages, which represent the actions that learners will take when performing a task:

1. Think and plan goals based on prior knowledge and time management, effort and how to self-observe the behavior.
2. Monitoring meta-cognitive awareness of awareness, motivation, effort investment, and the need for self-observation.
3. Focus efforts to control and regulate various aspects of the self, the task, and the context.
4. Feedback and cognitive judgment, choice and evaluation of the task.

These steps are not necessarily hierarchical, and are sometimes performed simultaneously or in a different order. Regulation areas refer to the different spaces in which students may perform the follow-up routines, control and regulation: cognition, motivation, behavior, and context (Maksum et al., 2021).

The field of context refers to the physical and cultural environment of the learning. In a "traditional" classroom, the atmosphere of the class is usually controlled by teachers, and does not allow students to carry out regulation and control processes. However, there are classrooms that are characterized as "student-focused" where they are allowed to make decisions and control factors, such as environment or context. For example, a scenario where students plan a project and/or experiment themselves, and decide who they are going to work with, when and how. In addition, some of the knowledge takes place outside the classroom walls. In these situations, learners have great autonomy to make decisions about their learning conditions - a noisy or quiet atmosphere, in front of the TV or in their bedroom, and other different areas and phases of learning regulation, including students' actions for each of them (Shapira et al., 2017).

In every learning routine, the students go through numerous stages of regulation, even without noticing. Students that approach work while setting goals, objectives, and division of tasks, are the ones who reveal high SRL competence. This type of student understands how to set goals and objectives, plan a schedule, apply appropriate strategies and skills to accomplish the task, and to supervise the efficiency and progress of their performance (Jansen et al., 2019).
On top of that, these students know how to give themselves and others feedback during their learning process, and make the required changes to improve their chances of success in the task, if required (for instance, change the roles of group members, redefine the research question, etc.). These students are highly motivated to successfully complete the task, and put in the effort needed to complete it, even when it is difficult. Alternatively, students whose self-regulation techniques are underdeveloped, become embarrassed and even frustrated while reading the assignment. They have a hard time knowing how to get started, how to complete the task, or have the strength to deal with the difficulties along the way. They are unlikely to complete the task, or its execution will not be particularly successful (Newton, 2021).

The research literature points to a positive relationship between self-regulation ability in learning and academic achievement (Doostian et al., 2014; Trias et al., 2021). Namely, students with developed learning regulation tools are more successful at performing academic tasks, and have higher academic success than students whose learning regulation skills are underdeveloped.

However, learners with high SRL capacity are not necessarily more intelligent than students whose self-regulation competences are not developed, taking into account that for the former group, a high level of self-regulation routine in learning is key to academic success. It is important to underline that self-regulation in learning is not a general trait that some learners have and others do not (Berglas-Shapiro, 2016). A related point to consider in this matter is that a setting that promotes self-regulation is also an environment that allows students to choose their way of working, as well as a safe atmosphere with a collaborative and warm climate. Under these circumstances, the child can dare to develop and express his or her world (Lichtinger, 2018).

It is important to develop and cultivate the strength to self-regulate learning among all learners, in any environment, and at any age. It can be said that the growing

awareness in recent years of the need to develop this ability, stems somehow from the nature of the labor market and knowledge in the 21st century. Nowadays the labor market is dynamic, with constant and rapid changes. Employees are expected to learn continuously, and have great flexibility. Knowledge improves and advances constantly, and every day we hear about new discoveries. All of these may also affect the education system.

In a world where you can access immeasurable knowledge with a click of a computer mouse, or read about any new information in Wikipedia, where textbooks and the academic curriculum become obsolete even before we can learn about it in class, at any age and from almost anywhere in the world, it is fair to say that the educational approach must be changed. The role of teachers and textbooks, as the main source of knowledge in the classroom, is no longer relevant. To deal with this reality, we should reduce students' dependence on the educator, while empowering learners to be more active and responsible in the learning process, and acquire the must-have competencies they would eventually need in the job market.

Now, more than ever, it is of paramount importance to develop independent learners, who know how to set goals for themselves, plan the strategy to achieve those goals, implement convenient methodologies, monitor them, and make changes if necessary. In other words, we argue that one of the most important roles of teachers today is to promote self-regulation skills among their students (Newton, 2021; Zepeda et al., 2019).

According to Bandura’s (1977) learning theory, people learn from each other through observation, imitation and modeling. Also, people tend to perform tasks that they believe they can handle, and are less likely to take on tasks that they feel less competent to perform. People's beliefs about their ability in a given field affect how they choose the effort they invest, their perseverance, and their resistance to obstacles or failure. Therefore, self-efficacy contributes to the motivation to carry out achievements, and has the potential to cause change. This concept is related to the individual's belief in his strength to cope with a task in his daily life (Bandura, 1986).

It should be noted that the principle of self-regulation expresses a person's capacity to adapt to circumstances in order to learn and develop, to learn from his

interaction with the environment, strengthen himself, and focus his behavior to the objectives he set for himself. For example, developing self-efficacy takes belief and confidence in inner personal abilities. Self-efficacy arises from the talent to appreciate, organize and achieve the required actions to control different situations, and belief in one's potential to nurture the motivation, cognitive and appropriate actions to control task requirements (Bandura, 1990).

To sum up, self-regulation in learning is a procedure in which the learner sets goals for himself and supervises his cognition, motivation and behavior according to these objectives and feedback from the surroundings. The process of self-regulation includes three stages:

a. Learning plan
b. Supervision during the learning plan
c. Assessment

This process contributes to academic achievement by motivating students to learn advanced learning patterns. At the same time, the practice of self-regulation contributes to the students' emotional state, social adaptation, and their quality of life in general (Kirschner & Stoyanov, 2020).

Similarly, Lichtinger (2018) argued that self-regulation is an active and dynamic performance, in which students set goals for themselves and try to monitor their cognition, motivation and behavior in order to accomplish those. Self-regulation has several stages: Before the action the learner practices planning that includes collecting data, setting milestones, and building a work plan. As he learns, he monitors his success and changes the strategies he employs, relative to the feedback he receives. At the end of the procedure, he evaluates the work he has done, and draws conclusions from it for the future (Lichtinger, 2018).

In addition, several researchers (Bittner et al., 2022; Panadero, 2017; Stephen et al., 2021) showed that a high level of self-regulation skills in learning is key to academic success, self-efficacy, quality of life, and advancement of emotional and social abilities. This is true for students in general, and particularly for students from underprivileged populations (Pedagogy folder for Guide in Marom Schools. 2019).

CHAPTER 4. Coaching in the education system – The teacher as a coach

This chapter discusses the general topic of coaching, and presents various theories and models of coaching. Then, the chapter focuses on comparison between the roles and characteristics of the educator-teacher, the mentor-teacher and the coach-teacher, followed by a review of the impact of teachers' use of coaching tools on students' meta-cognitive abilities and self-regulation skills.

4.1 WHAT IS COACHING?

In order to discuss the concept of "teacher as a coach", one must first examine the term "coaching", which has different and multiple definitions that vary depending on the period, place and culture in which it is located .The following are various definitions that describe the term "coaching".

The International Training Federation (International Coach Federation, 2009) defines coaching as collaborating with trainees in a creative and thought-provoking process that inspires them to maximize their personal and professional potential ICF (International Coach Federation, 2016). According to the philosophy and principles of training, as formulated by the ICF, coaching refers to the trainee according to a holistic perception, as an expert on his life and work, as a resourceful and creative 'whole' . Thus, in personal coaching, the coachee's "expertise" is the coach's main tool (Ashkenazi, 2011. p. 123) .

Coaching is a deliberate process that helps an individual clarify values, strengths, and priorities, and realize his potential in order to lead him to achieve desired and effective results and goals he has set for himself .Through the tools and skills that the training provides, the person can remain motivated and overcome obstacles on the way to achieving his goals and a sense of happiness (Hermel-Stanescu, 2015).

However, from a different perspective, Iordanou et al, (2015) defined coaching as a non-intentional professional process that helps people clarify values, strengths and priorities. Coaches help clients understand what they want (in every area of life), choose goals to get there, and help them overcome the obstacles that hinder them.

According to Fielden (2005), the coach is required to ask questions, research and explore, and to enable the client to find solutions to problems. This means that “effective coaching" allows people to move beyond their previous boundaries.

Discussing the main role of the coach, Katz (2008) emphasized the need to lead the trainee to discover the expertise within him, and to translate it into a strategy that is as effective as possible, consistent with his personal values and true abilities. The key is to dive into his vision and ask questions whose answers will help him formulate a course of action that leads to the realization of his vision. The coach does not tell the trainee what to do, but guides him or her how to be active and to activate.

Coaching, as a person-centered approach, supports the idea of learning as personalized and challenging. It provides a perspective on learning as a personal engagement with change (van Nieuwerburgh, 2012).

Coaching has proven to be a critical method of development and learning used to bring about change, develop efficiency, raise awareness, and change attitudes and behaviors in organizations of all kinds, and involves interrelationships between external factors, internal capabilities and practices related to the development of coaching-mentoring practices and their competency (Al Hilali et al., 2020).

Despite the different definitions and perceptions of coaching, the basic premise of coaching is that people have an innate ability to learn and develop while focusing on achieving agreed goals (Biswas-Diener, 2009).

Previous studies (Green et al., 2005 ;Spence & Grant, 2007) have shown that coaching can reduce feelings of stress, increase goal achievement, strengthen a sense of control, and increase life satisfaction. That is, coaching can improve cognitive-behavioral and social-emotional skills, and learning.

4.2 THEORIES AND MODELS OF COACHING

The process of coaching requires a great deal of planning, thought and constant evaluation of the situation (Osher et al., 2020). This chapter presents various theories and models of coaching, and their effect on social-emotional learning skills, in general, and on social-emotional learning in the education system, in particular.

4.2.1 Cognitive-behavioral coaching

Cognitive behavioural coaching (CBC) is “an integrative approach which combines the use of cognitive, behavioural, imaginal and problem-solving techniques and strategies within a cognitive behavioral framework to enable coachees to achieve their realistic goals" (Palmer & Szymanaska, 2007, p. 86). It can improve performance, increase psychological resilience, enhance well-being, prevent stress, and help to overcome blocks to change.

Cognitive-behavioral coaching began to develop in the 1990s, when professionals began to adopt the principles of Cognitive Behavioral Therapy (CBT) for working with people from a non-clinical population (Neenan, 2008; Palmer & Szymanaska, 2007). Similar to CBT, it is based on the assumption that the way a person thinks about an event directly affects his feelings and behavior and, consequently, his level of stress and performance (Palmer & Szymanaska, 2007; Palmer & Williams, 2013). The number and length of sessions depend on the specific requirements and needs of each trainee (Neenan & Palmer, 2001).The basic goal of a CBC coach is to help the coachee achieve his goals and reduce the barriers that make it difficult for him; namely, through the identification, examination and change of limiting or defeatist thoughts and beliefs ("I cannot afford to make any mistake"), reducing unhealthy behaviors (counter-productive, such as an inability to make decisions), and learning skills to manage disturbing emotions (such as stress and anxiety) (Neenan, 2008.)

The CBC process begins with a discussion and clarification of the issues that concern the trainee, and from this they derive specific measurable, achievable, realistic/relevant, clear, and time-limited definitions (Katsikis et al., 2016) .

A significant technique that the coach can use at this stage is to present Socratic questions that are formulated in a way that evokes thought, increases the trainee's awareness of the goals that are important to him or her, and pinpoints where he aspires to go (Palmer & Williams, 2013). These questions that encourage a process of self-reflection can also help trainees identify obstacles that may prevent them from achieving their goals, and identify the specific steps they must take in order to achieve them (Katsikis et al.,2016). These questions are especially significant when the trainee is facing a cognitive or emotional barrier to change (Palmer & Williams, 2013). In addition to Socratic questions, the coach can also use in-depth observations of the

trainees' behaviors and customs in order to better understand the strengths and possible obstacles they face (Katsikis et al, 2016).

CBC works on two parallel levels to help the coachee achieve his or her goals – practical and psychological (Neenan, 2008). The practical level is designed to help trainees develop an orderly action plan aimed at the defined goals - that is, to translate the sometimes-vague goals into steps that can be implemented in training (problem solving, learning necessary skills) or outside (experiencing new skills, self-observation), and its consequences. The action plan allows the coachees to feel self-fulfillment and satisfaction that they were able to achieve their goals on their own (Neenan, 2008; Palmer & Williams, 2013). The psychological level of CBC is designed to remove barriers to change (such as lack of emotional regulation, procrastination, excessive insecurity, indecision, or self-criticism) (Neenan, 2008) - which make it difficult for the trainee to focus on the coaching process, and invest the necessary efforts to advance (Neenan & Palmer, 2001).

Several studies (Grant, 2006; Grant, 2014; Kearns et al., 2007; Matthys & Schutter, 2021) have examined the effectiveness of a ten-week CBC program. These studies found that, following the program, a variety of populations (graduate students, high school students, older people) achieved the goals they had set for themselves (Grant, 2014). In addition, it was found that CBC improved participants' ability to manage time and tasks (Kearns et al., 2007). Improvement was found in their satisfaction with life, their sense of control over their lives, their readiness for new experiences, their degree of flexibility, and their mental well-being – as expressed in personal growth, resilience, dealing with the environment, a good relationship with other people, self-acceptance, and hope .Also, CBC was found to reduce stress, depression and anxiety (Grant, 2006).

The contribution of CBC to the regulation of emotion has been shown by David & Cabeanu (2016). CBC contributes to emotional regulation by encouraging and enabling coachees' self-observation of their thoughts, feelings, and behavior through the help of the Socratic questions, which increase the awareness of feelings and thoughts that cause distress and stress.

4.2.2 Emotional coaching

After investigating four hundred different approaches to mental health care, Green (2011) argued that what makes the coachee and coach feel that the treatment is 'successful' is mainly due to the caregiver's ability to create a sense of trust and confidence. When the coach creates a 'safe place', the coachee knows how to repair his emotional crisis on his own, regardless of the therapist's therapeutic approach. In other words, emotional coaching allows the trainee to realize his abilities in the professional field and in any field that stimulates his curiosity and helps him to identify and improve his emotional skills, to create the safe place.

Emotional coaching takes emotions out of the realm of mysticism, and allows them to be defined outside the 'mental' context: we feel our emotions in our body, and through them know how to recognize reality, adapt to the changes that occur in it, avoid dangers, and choose safe places. Emotional coaching is based on the existence of natural emotional skills, which allow us to adapt to reality, and respond to the stimuli of reality. Emotional skills allow us to create at any moment in our lives, a sense of safe place, the ability to manage emotions, be independent, set and achieve positive goals, feel and show concern for others, maintain positive relationships, and make responsible decisions (CASEL, 2012; Green, 2011 ;Kautz et al., 2014).

In addition, emotional coaching is a structured process that adheres to a schedule, and is based on empathy, listening, compassion, positive feedback, setting goals, reaching conclusions, reflection on the process and the results, and systemic thinking by means of asking directed questions. Emotional coaching also focuses on observing each coachee's personal experiences, and provides them with clear tools that help them to deal with difficult feelings and problems with classmates. At the same time, the teacher-coach creates a positive experience, in which the students are focused, relaxed and ready to learn. Thus, emotional coaching helps students to pave their way to optimal development, promotes their personal and social growth, and ensures their mental welfare. The premise of emotional-social coaching is developing emotional and social strengths and skills, which contribute to students' mental welfare and ability to cope with changing reality – at present and throughout their lives (Carthy et al., 2022; Ministry of Education, 2020; Osher et al., 2020).

Emotional coaching helps to improve many areas that interface emotional social learning: character education, moral education, holistic perception of the child/school, emotional intelligence, positive psychology, culturally sensitive education, life skills, school-based prevention, health promotion, and civic learning (Cohen, 2017; Green, 2011).

While emotional coaching can enhance a person's life, it also enhances the social abilities inherent in it (Green, 2011) .In a meta-synthesis of 110 peer-reviewed studies, Erdös et al. (2020) concluded that emotion is a factor that is heavily under-researched and under-theorized in coaching. Therefore, in order to discover, examine and understand coaching clients' behaviors, we ought to focus on both their self and their social world as they interrelate in coaching. Without this awareness of totality, we cannot claim to fully understand coaching. Therefore, in the next sub-section we discuss the subject of social-emotional skills training.

4.2.2.1 Socio-Emotional Learning (SEL) Skills

The concept of social-emotional skills is synonymous with non-cognitive skills, and is usually directed at skills that fall into three broad categories that include the ability to produce long-term goals, to work with others, and to manage emotions. These categories are divided into sub-skills, including perseverance, passion for goals, sociability, respect, concern, self-esteem, optimism, and confidence. These skills include, according to another perception, emotional knowledge, the ability to regulate emotions and behavior, and social skills (OECD, 2015).

Socio-emotional learning has different and multiple definitions, which vary depending on the period, place and culture in which it is found (Sperling, 2018). Here are some definitions that describe the concept of social-emotional skills:

- An umbrella concept, which encapsulates several ideas, including non-cognitive development, character education, 21st century skills, and further learning for trauma (Jones et al., 2017).
- Part of a broader conceptual framework, known as pro-social education (Berkowitz et al., 2012).
- A process in which individuals learn to recognize and manage emotions, care for others, make good decisions to behave ethically and responsibly, develop

positive relationships, and avoid negative behaviors (Elias et al., 1997; Elias & Hanyes, 2008).

- Includes creating positive friendships, and dealing with challenges and situations effectively (Gunter et al., 2012).
- A process in which a particular set of social, emotional, behavioral, and personality skills required for success in school, the workplace, relationships, and civic life is applied (Jones et al., 2017).
- A concept that refers to focused learning in the processing, integration and selective application of social and emotional skills in a variety of ways, including modeling of these skills, done by adults and children, offering the latter opportunities to practice them in different situations to create safe and caring learning environments across the organization (Durlak et al., 2011).

The many definitions of the concept of "social-emotional learning" skills (Greenberg & Abenavoli, 2017; Schonert-Reichl, 2017; Sperling, 2018), include two shared elements: first, human behavior including the developing child .and second, a mapping of the emotional and social skills of children and adolescents with a practical goal - to help them improve.

The literature on emotional social learning dates back to 1900, and over the years has developed significantly, especially in the 1990s. In 1962, the Fetzer Institute was founded, an organization whose goal was to facilitate interaction between educators, researchers and child rights activists, fostering discussion on the coordination of learning strategies to advance children's socio-emotional abilities alongside their performance. The group came up with the idea of academic social learning, their health, and being good citizens. To fulfill these educational goals, the group also created an organization called the Collaborative for Academic, Social and Emotional Learning (CASEL, 2012) ,which works to gather scientific facts alongside programs that emphasize social and emotional learning from preschool to high school .These programs work to impart knowledge, skills and perceptions of children and adults that promote personal development, develop interpersonal relationships, and lead to ethical and productive work. Among the abilities that these programs aim for are the ability to manage emotions, set and achieve positive goals, feel, and show

concern for others, maintain positive relationships, and make responsible decisions (CASEL, 2017; Osher et al., 2016).

Conceptually, social and emotional learning relies on various theoretical frameworks, including the taxonomic five components of personality (John & De Fruyt, 2014), Positive Psychology, the Social-Emotional Learning Framework (CASEL, 2018); the KIPP Character Strengths framework (KIPP, 2018), and it competes with other approaches in developmental psychology. The skills associated with it have a number of characteristics: they are manifested in consistent patterns of thought, emotion, and behavior; they develop through formal and informal learning experiences; and they serve as important motivating factors that also affect the socio-economic status of the individual throughout life, such as the ability to integrate into society and work, earn a living, and be independent (CASEL, 2012; Kautz et al., 2014).

4.2.2.2 Emotional Coaching and its Impact on Social-Emotional Learning Skills

The importance of the ability to manage emotions and conduct oneself properly in the social context has been known since Aristotle's letters and the emphasis on the importance of emotions in Darwin's evolutionary theory, and is gaining momentum today. It later evolved into changes in the concept of "intelligence", especially in studies dealing with "emotional intelligence" and multiple intelligences, two of which are important in our context: 1 .Intrapersonal intelligence directed at a person's emotional capacity, his accessibility to his emotions, his ability to distinguish and rely on them to direct behavior, and knowledge of one's strengths, weaknesses, desires and intelligence; and 2 .interpersonal intelligence related to a person's social abilities, his ability to elicit an appropriate response depending on another person's mood, temperament, motivation and desires. Also contributing to the understanding of the importance of this ability was the development of the concept of emotional intelligence, its scientific validity, the ability to measure it, and its expansion in its social aspects (Elias et al., 2008).

Emotional-social coaching refers to the 21st -century adult according to a holistic perception as "an expert in his life and work, as a 'whole' with resourcefulness and creativity". According to this view, the adult persona is characterized by three aspects: activism (agency), which has an impact on interaction with the world; an integrative identity, directed at an internal component through which the individual

makes decisions consistent with his values, beliefs and goals and competencies, which indicate the individuals' ability to be effective in various tasks .These three concepts allow the graduate to manage and adapt to changing environments and conditions, and to successfully navigate different cultural expectations and systems. To this end, the individual must take an active part in decision-making, actively planning and implementing practices and knowledge, must act consistently over time and across different social systems (culturally, gender, religious, etc.), and have abilities such as critical thinking, decision making, ability to cooperate, etc., which allow him to be involved and take an active part in various contexts of life. The realization of the three concepts is made possible, according to this conception, through four basic abilities, which form the basis of an integrative definition of coaching for emotional-social learning:

- Self-regulation ,which includes self-awareness and environmental awareness, and the ability to manage attention, emotions, and behaviors in task-oriented ways.
- Knowledge and skills, which include a set of knowledge, facts and understandings for performing tasks with the aim of achieving certain results.
- Thought patterns, which include perceptions and attitudes in relation to the self and others, and the relationship between them, including unconscious biases, natural tendencies and more.
- Values, relating to enduring beliefs about good and evil and what is important in life, including long-term goals such as family management and contribution to the community and state (Jones et al., 2017)**.**

The prevailing approach today in education systems is to develop students with balanced skills in the cognitive, social and emotional fields so that they are able to cope with the challenges of the 21st century (Chernyshenko et al., 2018). Preparing a generation of learners for the life and work environments that characterize the 21st century, their great access and availability to information and technologies, and their presence in multicultural and socially and emotionally complex societies require, according to this approach, a broader view of the education system, including SEL skills for success in coping with these challenges.

It has been argued by Green (2011) that emotional training is based on the assumption that we can be responsible for our actions, our body, our health and our

emotions, and we do not have to be dependent on others and fall into predictable crises. That is, improving social and emotional skills is a basis for developing public health approaches to education .This view holds that the overarching goal of public health is to improve the common good, manifested not only in the prevention of diseases, disorders, vulnerability, etc., but also in creating positive results that improve the quality of life .It is assumed that schools are excellent sites for developing children's emotional-social skills, given that children spend many hours a day and many years there.

SEL school-based programs may improve student eligibility ,promote their achievements, and reduce the chance of dangerous and harmful behavior. Universal interventions or those that rely on evidence from all school-based programs may affect public health. Such an approach would focus on developing emotional social skills not only among students identified with a substantial problem or disorder, but also as a way to prevent future problems, and reinforce positive abilities and qualities in children .Interventions at this level extend beyond the individual level, and permeate the school culture, the student's home and his/her peer group (Greenberg et al., 2017).

4.2.2.3 Models for Assimilating Emotional-Social Learning Skills in the Education System

Along with the importance of emotional coaching, which is able to manage emotions and conduct itself properly in the social context, in recent years several theoretical frameworks have been developed to assimilate the emotional social skills in the education system. The professional literature lists five main models, but according to many researchers, the Big Five Personality Traits model is the most appropriate model for emotional and social learning (Sperling, 2018).

1. The Bar-On Model of Emotional-Social Intelligence (ESI) (Bar-On, 2006)

This model evolved with the development of the field of emotional intelligence and its expansion to social-emotional learning. It grew out of the need to measure normative development of emotional intelligence through identifying five principal elements:

a. Intrapersonal: self-regard, self-awareness, assertiveness, independence, self-actualization

b. Interpersonal: awareness of others' feelings, empathy, social responsibility

c. Stress management: stress tolerance, impulse control, emotional regulation

d. Adaptability: reality testing, flexibility, problem solving

e. General mood – motivational and emotional factors: optimism, feel and express positive emotions, create positive effect for self-motivation.

2. CASEL 5 Core Competencies Model (Goleman, 1998)

This model emphasizes the five cognitive, emotional and behavioral competencies that facilitate successful experiences at school and in life in general. It relates to short- and long-term implications of social-emotional competencies, and includes strategies adapted to the school, family and community levels to improve school achievements and social-emotional abilities. The CASEL model includes knowledge, interpersonal and cognitive skills divided as follows (CASEL, 2017; Weissberg et al., 2015):

a. Self-awareness: the ability to understand one's own emotions, thoughts, and values, and how they influence behavior across contexts. This includes capacities to recognize one's strengths and limitations.

b. Self-management: the ability to manage one's emotions, thoughts, and behaviors effectively in different situations, and to achieve goals and aspirations. This includes the capacities to delay gratification, manage stress, and feel motivation to accomplish personal and collective goals.

c. Social awareness: the ability to understand the perspectives of and empathize with others, including those from diverse backgrounds, cultures, and contexts. This includes the capacities to feel compassion for others, understand broader historical and social norms for behavior in different settings.

d. Relationship skills: the ability to establish and maintain healthy and supportive relationships, and to effectively navigate settings with diverse individuals and groups. This includes the capacities to communicate clearly, listen actively, cooperate, work collaboratively to problem solve, provide leadership, and seek or offer help when needed.

e. Responsible decision-making :the ability to make caring and constructive choices about personal behavior and social interactions across diverse situations. This includes the capacities to consider ethical standards and safety concerns.

3. SEL Organizing Model (Jones & Bouffard, 2012)

This model emphasizes things similarly to the CASEL competencies model, but groups the abilities and competencies of social-emotional learning as follows:

a. Cognitive self-regulation: includes competencies of attention, retraining control, planning and work memory, and cognitive flexibility.

b. Emotional processes: imparting a variety of skills including emotional awareness, emotional expression, and empathy.

c. Social and interpersonal skills: includes understanding social clues, resolving conflicts, and prosocial behaviors.

These three categories and their relevant skills and competencies are linked to short- and long-term outcomes: at school (grades or achievements in standard tests), behavior adjustment (the ability to get along with others, to solve conflicts, to show self-restraint, and to be less involved in behavior problems), and health and emotional welfare (less depression or social isolation). This model underlines that the child's development is affected by various contexts and their interactions. Some contexts are immediate such as family, peers, the classroom and school, and other contexts are more distant such as culture and politics. It should be noted that this model emphasizes the crucial role of teachers to the class and school contexts – maintaining a sound, healthy relationship with the students, and supporting teaching and class management (CASEL, 2017).

4. Person-Centered Key SEL Competencies Model (Zins et al., 2004)

The premise of this model is that children should be aware of themselves and their environment, make responsible decisions, behave ethically and responsibly, respect others, and pay attention to relevant circumstances and norms. Also, they should manage their emotions, and have social skills that allow them to perform responsible actions towards others. Furthermore, the learner has responsibility and commitment to the learning process, as well as interpersonally and socially. The model includes a list

of competencies that help students to increase their motivation to succeed, to believe in their abilities, to communicate better with their teachers, and to cope with challenges. the competencies are categorized as follows:

a. Self-awareness: Identifying and recognizing emotions, accurate self-perception, recognizing strengths, needs and values, self-efficacy, and spirituality.

b. Social awareness: Perspective taking, empathy, appreciating diversity, respect for others.

c. Responsible decision making: Problem identification and situation analysis, problem solving, evaluation and reflection, personal, moral and ethical responsibility.

d. Self-management: Impulse control and stress management, self-motivation and discipline, goal setting and organizational skills.

e. Relationship management: Communication, social engagement and building relationships, working cooperatively, negotiation, refusal and conflict management, help seeking and providing.

5. The Big Five Personality Traits Model (John et al., 2008)

This model presents an empirically based framework of emotional structures and social frameworks. The Big Five Personality Traits model was found to predict many outcomes including educational success, well-being, health, and job performance. Later, John & De Fruyt (2015) investigated the suitability of the five major personality traits as reflected in children and adolescents. In their opinion, this model is best suited for research on emotional social learning, and it has recently been adopted by the OECD (2018) as part of an international survey of adolescents examining their emotional social skills and their learning contexts between the years 2017-2020.

According to Chernyshenko et al., (2018), this model addresses five broad personality dimensions:

a. Conscientiousness. Includes the individual's tendency to self-control and carefully organize and plan behavior on the one hand, and an ambitious, consistent and dedicated effort to achieve personal goals.

b. Extraversion. Reflects the tendency to look for partners, maintain intimacy and be in relationships, and feel comfortable in the presence of the other .This dimension allows those who hold it to demonstrate more assertiveness in social situations and to lead .It is characterized by high levels of energy and passion for life.

c. Agreeableness. Refers to the tendency to cooperate, maintain positive relationships and avoid or reduce interpersonal conflicts .This dimension also includes an active concern for the well-being of the other and the maintenance of positive attitudes towards people.

d. Emotional Stability. Represents the level of control over emotions and moods and the quality of their emotional state in general .Humans endowed with this dimension will show more resilience in tense situations and will hold a more positive attitude towards the world and the future .They are also less likely to experience anger and sudden mood swings.

e. Openness. Represents the openness to mental stimuli in general as reflected in people's intellectual curiosity, imagination, creativity and preference for the new and diverse .Another aspect of this dimension is related to the extent to which they prefer experiential stimuli as expressed in art evaluation, aesthetic experiences, self-reflection and self-discovery.

In conclusion, the main purpose of emotional coaching is to improve the natural ability to create a sense of safe place. What sets emotional training apart is the development of a new skill of constant change, through which we re-create our sense of safe place in every encounter with reality, and do not allow the gap between us and reality to widen. Emotional coaching is a tool designed to adapt people to reality at every moment anew. It is not a 'treatment' that offers a one-time correction, nor does it have a one-time 'understanding' or 'enlightenment' that changes our lives. Emotional coaching turns the constant practice of emotional skills into a new way of life, allowing us to adapt to the small changes in reality at every moment, naturally and effortlessly. In addition, emotional coaching treats the individual as a whole that meets his

emotional, social and academic needs, and also deals with the acquisition of skills such as listening, following guidelines, and encouraging pro-social behaviors such as caring and support (Green, 2011; Sperling, 2018).

4.2.3 Learning Skills and Coaching

Studies have indicated that there might be a relationship between coaching and learning skills. Coaching was found to increase students' perseverance and retention (Bettinger & Baker, 2014), to help achieve goals (Losch et al., 2016), to aid self-regulation and management abilities (Richman et al., 2014), to instill learning strategies, self-esteem, and to increase satisfaction with school (Prevatt & Yelland, 2015), as well as self-confidence and motivation (Bellman, Burgstahler, & Hinke, 2015). Each of these outcomes reflects cognitive, metacognitive or motivational concepts that are highlighted in self-regulation and self-management theories. In other words, the coaching process is a model of effective learning by being target-oriented, controlled and reflective. It is important to include the rationale of coaching as a model of effective learning.

4.2.3.1 Learning Skills

The term learning skills refers to a collection of techniques or strategies, aimed at improving the quality of learning and even shortening the duration of learning. Improving learning skills includes, among other things, thinking skills, academic skills, time management and stress management techniques, and memory methods .That is, the issue of improving learning skills is extremely important, since learning skills themselves are the ability for mental development through learning (Murphy-Graham & Cohen, 2022).

Over the past two decades, no less than ten organizations and international committees, governments, private consortia, and private institutions have proposed frameworks, and described the learning skills needed to meet the challenges of the twenty-first century, as seen in Luna Scott (2015). Analyzing different approaches, Dede (2010) and Salas-Pilco (2013) compared several frameworks to identify the evolution of issues over time, and the points they have in common. While there is no single approach set for educating young people for the twenty-first century, a variety of competencies and skills need to be considered. While frameworks differ from each

other in their complexity, each is beneficial to the specific context for which it was developed .The comparison also draws attention to the lack of these competencies and skills in ongoing learning processes .There are a number of effective, research-based curriculum models capable of guiding twenty-first century learning, the three Ps model, the three Rs model, the other three Rs model, and the seven-survival skills model:

1. The three Ps model – advocating a student-centered curriculum that is based on three Ps, Prensky (2012) lists passion (including character), problem solving (including communication) and production of what is required in creativity and skill.

2. The three Rs model – Wagner et al. (2012) supporting a curriculum based on very different principles, argued that effective teaching can be described with three Rs: rigorous ,relevant, and based on respectful, trusting relationships. Rigorous refers to the abilities and skills that students acquire as a result of their learning. Relevant is associated with their understanding of how their learning connects to real-world challenges and future work .Respectful alludes to the promotion of respectful relationships among teachers and students who cultivate academic and social learning skills

3. The other three Rs model – Sternberg & Subotnik (2006) argued for a curriculum focused on fostering learners' capabilities in "The other three Rs: Reasoning (analytical, critical thinking and problem-solving skills), Resilience (life skills such as flexibility, adaptability and self-reliance), and Responsibility (wisdom or the application of intelligence, creativity and knowledge for a common good)" (p. 1).

4. The 7 Survival Skills model – Expanding on the above, Wagner (2010) and the Harvard Leadership Change Group identified an additional set of skills and competencies. After hundreds of interviews with business leaders, nonprofits and education professionals, Wagner stressed that learners need seven survival skills to be ready for life, work and citizenship of the twenty-first century:

- Critical thinking and problem solving
- Cooperation and leadership
- Agility and adaptability
- Initiative and entrepreneurship
- Effective oral and written communication

- Access to analysis and information
- Curiosity and imagination.

The salient features of the above models are exploration, planning and collaborative learning for effective teaching. A curriculum based on these teaching methods combined with more direct forms of instruction is essential for the construction of knowledge, understanding, creativity, and other skills of the twenty-first century (Trilling & Fadel, 2009).

The Delors Report (Delors et al., 1996) produced by the International Commission on Education for the 21st century suggested one of the first frameworks for identifying the competences that would be needed in the next century. The four learning visions described in this revolutionary report – namely, knowledge, understanding, life skills, and action skills – remain suitable reference points and organization principles for identifying 21st century learning abilities. The Delors Report also formulated four principles identified as the four pillars of education: learning to know, learning to do, learning to be, and learning to live together. The report is still very relevant today, and can be redefined and expanded over the twenty-first century.

Entwined with the traditional core subjects, Ackerman & Perkins (1989) supported the thinking skills taught as a "meta-curriculum". Emphasizing the importance of learners developing 'mental habits', Conley (2007) included analysis, interpretation, rigor and accuracy, problem solving and reasoning to support thinking and contemplation .Levy & Murnane (2004) preferred to build skills in "expert thinking", and to use detailed knowledge and meta-cognition to support decision-making.

Teaching that emphasizes the improvement of skills and thinking skills, as a "meta-curriculum" intertwined with traditional core subjects is also important (Luna Scott, 2015). Tucker &Codding, of the U.S.-Based National Center for Education and Economics (1998) called schools to adopt a thinking curriculum - one that provides a deeper understanding of the subject and the ability to apply this understanding to the complex, real, global problems that the student will face in adulthood.

A study conducted by OECD / CERI on the New Millennium Students (Ananiadou & Claro, 2009), described three learning skills in the twenty-first century - information, communication, ethics and social influence. An international survey

conducted by IBM (2010) on CEOs also found that CEOs believe that creativity will be essential to successfully navigate an increasingly complex world.

The *21st Century Skills Assessment and Teaching Project* (ATC21S) classified twentieth-century international skills into four broad categories - ways of thinking, ways of working, tools for working, and life skills in the world (Griffin et al., 2012). Meanwhile, the U.S.-based *Apollo Group of Education*, a leading provider of adult education programs for working adults, has listed ten skills students need to survive as twentieth-first-century workers (Barry, 2012): critical thinking, communication, leadership, collaboration, adaptability, productivity and responsibility, innovation, global citizenship, entrepreneurship, and the ability to access, analyze and mediate information.

Asia-Pacific Economic Cooperation (APEC) recognized the development of twentieth-century skills among youth as an "urgent international business ".These skills are defined as the knowledge, skills and approaches necessary to be competitive in the twenty-first century workforce, properly participate in an increasingly diverse society, use new technologies, and cope with rapidly changing workplaces. APEC defined four 21st Century Extension Skills to be integrated into existing education systems - lifelong learning, problem solving, self-management, and teamwork (APEC, 2008).

Learning skills are a collection of acquired skills or talents required to perform certain actions that enable learning. Learning skills are many and varied. Some of the skills are simple and relatively technical, and serve as a basis for higher skills that are more complex and developed .Learning skills can be divided into several areas (OECD, 2019):

- Cognitive competencies: perception, difficulty, memory.
- Linguistic competencies: phonological awareness, vocabulary, syntax, pragmatics, listening and speaking.
- Literacy skills: phonemic-graphic conversion, reading, reading comprehension, writing, written expression, digital literacy.
- Thinking skills: representation of knowledge, logic, creativity, drawing conclusions, ability to generalize, abstraction, meta-cognition.
- Managerial functions: inhibition, organization, decision making.

Finally, the *U.S.- based 21st Century Skills Partnership*, known as P21, a coalition of business leaders and educators, proposed a twenty-first century learning framework that identified essential competencies and skills for success in the work and life of the twenty-first century (P21, 2007a, 2011). These included four Cs – communication, collaboration, critical thinking, and creativity, which must be taught within the context of the core areas and issues of the twenty-first century .This framework is based on the determination that the challenges of the twenty-first century will require a broad set of skills that emphasize core professional skills, social and cross-cultural skills, proficiency in non-English languages, and an understanding of the economic and political forces influencing societies (P21, 2007a) .

In conclusion, there is a general consensus that mastery of core issues and learning around twenty-first century topics is essential for today's students. Some of the designated topics are: grammar, languages, arts, mathematics, craftmanship, economy, science, history, and more, with a recommended balance between education in science and technology, and culture and the humanities (Davies et al., 2011; Gardner, 2008; P21, 2007a, 2007b; Salas-Pilco, 2013). Above all, it should be based on twenty-first century skills, educated knowledge and content-integrated knowledge, rather than on systems of facts that are clarified and pasted in context .Twenty-first-century students must also commit themselves to lifelong learning, and constantly evaluate what they know and still need to understand in order to be successful in work and life, and be willing to retrain when new situations require new skills (Gijsbers & van Schoonhoven, 2012; P21, 2007a, 2011; Redecker & Punie, 2013).

4.2.3.2 Learning skills coaching

Learning coaching skills is an approach to developing excellence and success, while advancing a person's personal potential to achieve desirable goals and objectives through exploration and continuous learning in a short time (Blanchard & Human, 2006; Buckingham & Clifton, 2005; Katz, 2005). Learning skills coaching is a systematic, structured and results-focused process (Katz, 2005) .Its main purpose is to help learners see in a matter-of-fact way where they are and where they want to be, and then develop a personal plan on how to achieve this (Blanchard & Human, 2006) .The coach-coachee session is designed to promote learning and behavioral change. Defining students' learning skills coaching as a personal relationship between coach and student,

Campbell &Gardner (2005) describe a change process designed to enhance individual performance, personal growth, and improve well-being and quality of life .

Seen as an ongoing process, Grant (2001) defined coaching as a systematic, problem-focused collaborative process, given to trainees, in which the coach enables self-learning, personal growth, and achievement of the trainee's goals .The coaching process is based on an ongoing partnership between a coach, who contributes his knowledge and experience, and the trainee, to help the trainee achieve his or her personal and professional goals. and create a high quality of life for him/herself.

On a motivational level and from the coachee's perspective, Kedem (2006) emphasized that the coach's role is to help the trainee to seek, find and express the skills, resources and potential that naturally exist in him, in order to produce solutions and ways of dealing with the challenges and complexities that the environment presents . He opened a training program to improve learning skills at the Coaches Institute, which is based on the six-step model (SFM). The model deals with the development and realization of personal potential for the achievement of desirable goals and objectives, and focuses on growth through the realization of personal strengths, overcoming barriers, and the development of "success muscles" and new capabilities for achieving results .The model is a cognitive-behavioral method based on models for success in the fields of psychology, economics and business administration. The psychological approaches underlying the method are the humanistic approach, cognitive psychology, behavioral psychology, and positive psychology .The model has six stages:

1. Identifying the problem / defining the need: examining the situation, defining the problem in practical terms, signing a coaching contract that combines the commitment and mutual responsibility of the coach and the trainee for success.
2. Desirable future: defining desirable results, creating the personal vision, and defining the desired goals to be achieved in measurable terms relevant to the measures of success in learning.
3. An existing paradigm: Diagnosing and evaluating abilities through investigation to detect the pattern of the problem: The model of behavior that creates it.
4. Future paradigm: formulating new management strategies and new behavior patterns as a basis for creating a personal training plan to fulfill the vision and achieve the goals

5. Practice and exercises: implementation of a systematic personal training program for the development of "muscles" of ability and success
6. Establishing the implementation: assimilating the change and the new habits, measuring the results, examining their suitability to expectations, and the celebration of achievements.

Various studies that deal with the advancement of skills and abilities with the help of coaching focused mainly on high school students. Learning skills coaching was found to reduce symptoms of stress, anxiety and depression, to increase hope, quality of life and resilience, and to promote goals (Grant, 2003; Grant & Cavanagh, 2011; Green, Oades & Grant, 2006; Green, Grant & Rynsaardt, 2020; Griffiths, 2005).

Al Hilali et al. (2020) argued that by virtue of being goal-oriented, controlled and reflective, the coaching process is a model for effective learning, and that it is important to include in the educational system the rationale of coaching as a model for effective learning. A study conducted in schools in England found that learning skills coaching contributed to improving students' test success (Passmore & Brown, 2009). A study of postgraduate nursing students found that coaching enhanced learning thanks to the strong partnership formed between the student, the coach and the academic institution (Tee et al., 2009). Coaching has also been found to positively influence students by increasing their ability to set goals and their motivation to achieve them (Campbell & Gardner, 2005).

In studies on learning skills coaching that relates to resilience, self-esteem and academic achievement, the findings suggest that personal coaching has the potential to build resilience and a high quality of life for students. Students reported satisfaction and increased investment in studies during the coaching process. Promoting learning is done by helping the student set long-term goals, and derive activities from them in order to achieve those goals. The student learns to overcome the obstacles that are expected on the way to achieving the goals, to develop strategies for dealing with these obstacles, and to identify potential channels of assistance (Merriman & Codding, 2008). Because of our ever-changing world, especially regarding technologies, learning skills deemed as currently important are: technological literacy, creative thinking, critical thinking, and meta-cognition (Kim, et al., 2019). Coaching is seen today as a useful method for the learner to succeed personally and professionally, with the goal of reaching

maximum potential, and learning the required skills of our modern world (Atkinson et al., 2021).

Figure 3 summarizes the coaching theories and models, and their effect on social-emotional learning skills, in general, and social-emotional learning skills in the education system, in particular.

Figure 3.

The coach's role and coaching objective in each model

Coaching model	Coach's role	Coaching objective
Cognitive-behavioral	The basic goal of a CBC coach is to help the trainee achieve his/her goals, and reduce the barriers that make it difficult for him/her.	Coaching is foremost about developing adaptive thoughts, and changing behavior.
Socio-Emotional	The socio-emotional coach allows trainees to realize their competencies in the professional field, and in any field that stimulates their curiosity, and helps them to identify and improve their emotional skills, to create a 'safe place'.	The main purpose of emotional coaching is to improve our natural ability to create a sense of 'safe place'.
Learning Skills	The coach's role is to enable the trainee to seek, find and express the skills, resources and potential that naturally exist in him, in order to produce solutions and ways of dealing with the challenges and complexities that the environment presents.	A learning skill coach helps self-directed learners to reflect on and grow from their experiences.

Source: Carthy et al., 2022; Grant, 2006; Grant, 2014; Kearns et al., 2007; Kedem 2006; Matthys & Schutter, 2021; Ministry of Education, 2020; Osher et al., 2020.

4.3 PROFILE OF THE TEACHER-EDUCATOR, TEACHER-MENTOR AND TEACHER-COACH

"The quality of an educational system cannot exceed the quality of its teachers"

(McKinsey Report; Barber & Mourshed, 2007, p/23)

The last two decades have shown that, based on different parameters of the education structure – such as the size of the classrooms or the budget rate – there is a proportional impact on the quality of the system. On the other hand, alongside the pupils' personal data and their family background (which are the top priority factors for student success), the excellence of teachers is the most influential factor when it comes to the quality of the education system, and the success of a particular school or class (Talis, 2018).

In addition, there is vast consensus in the research world, and among many educators in the field, that quality manpower is the most influential factor in the quality of any education system (Bayar, 2014). Quite a few researchers have tried to identify the main factors that discern a successful education technique from an unsuccessful one (Donoghue & Hattie, 2021; Edwards et al., 2014; Sequeira, 2012), especially since the world has developed measurements to compare the students´ achievement in education (Tomer, 2021).

Studies conducted in education systems have found that coaching furthers effective learning abilities and competencies among students, promotes setting long-term goals, and contributes to coping capabilities (Green et al., 2006; Libri & Kemp, 2000). Several controlled studies about the effectiveness of coaching have indicated better goal achievement, improved metacognition, and reduced anxiety and depression (Grant, 2003; Grant, Curtayne & Burton, 2009).

Furthermore, coaching in education has been receiving increasing interest over the last decades (Van Nieuwerburgh & Barr, 2016). Schools, colleges and universities in Australia, the United Kingdom and the USA have been introducing coaching interventions to get better results for learners (Knight, 2007; Kee et al., 2010, Van Nieuwerburgh, 2012). The term ‘coaching in education’ covers a broad range of interventions that have the aim of improving outcomes for learners within educational settings. The term ‘school coaching’ or ‘coaching in education’ has best been defined as:

> A one-to-one conversation focused on the enhancement of learning and development through increasing self-awareness and a sense of personal responsibility, where the teacher-coach facilitates the self-directed learning of the student through questioning, active listening, and appropriate challenge in a supportive and encouraging climate (van Nieuwerburgh, 2012, p. 17).

School coaching as a field and as a process can play a key role in young people's social and emotional learning. In addition, Lochmiller (2021) has recently presented research demonstrating how coaching improves instructional practice within classrooms, and leadership practice in schools and districts, and how this popular professional development strategy can support not only an educator's personal learning needs, but also broader expectations related to school performance.

In conclusion, teaching becomes important and meaningful for students when it is done well and effectively by the teacher. In the study by Janes et al., (2016) that examined what the ideal teacher figure was in the eyes of students, it became clear that there are a number of recurring traits. In most of them, two main components of the ideal teacher emerged: mastery of the field of knowledge and teaching skills, the ability to create meaningful dialogue with students. Usually, teaching is performed by people who are educators or coaches .Although there are many similarities between education, mentoring and coaching, there are many differences between them that set them apart . Thus, in this chapter, we emphasize the differences between the three roles.

4.3.1 The role and characteristics of teacher-educator

Educators play an important role in the lives of their students when they impart knowledge as part of a regular curriculum, and are role models who shape their learning environment (Shemesh, 2018). The main role of the teacher is to transfer the material; i.e., the teacher has the knowledge and is the one who transmits to the students. The teacher's form of teaching is mainly frontal with the teacher at the center and an emphasis on transferring the material to the students. He brings to the students his experience and knowledge, explains, teaches, raises suggestions and provides answers. In other words, he conveys information to the students in a way that leaves them passive, often bored, and more or less challenged (Becker et al., 2016; Bill & Melinda Gates Foundation, 2016; INACOL, 2016).

According to Janes et al., (2016), an educator is a person who performs a multifaceted role, with the main goal being to educate, and pass on information to students while adhering to the guidelines set by the school administration. For the educating teacher, the main goal is to get the student to act in reality in a way that is as compatible as possible with the beliefs and principles he holds (Hermel-Stanescu, 2015). The main tool with which the teacher strives to achieve this goal is his personal charisma, and the requirement to follow his instructions.

A very important characteristic of the teacher-educator is the teaching process. The teaching process is based on the idea of equality between students, so that all students have an equal opportunity in the form of the same teaching, assuming that everyone can learn in the same way ('one size fits all'). That is, the teacher sets a fixed and identical goal for all students while the level of achievement between students

varies; meaning that the curriculum is delivered in the same way to all students .Consequently, the student has to adapt to the teacher's teaching. It should be noted that the teacher is the connoisseur, the one who determines the pace of learning . The teacher analyzes the students' problems rationally and objectively, so the solutions he offers to different people are generally the same . Learners invest significant time in acquiring new knowledge from their educators. Thus, the way the educator presents the materials and structures the learning environment can have a huge impact (District Reform Support Network, 2016; Levi-Feldman, 2020; Pane et al, 2015; Shemesh, 2018).

Another aspect of the teacher's work is providing students with feedback, which is based on his assessment and classification of the students at the beginning of the school year, on one hand, and exams at the end of the semester or year, on the other hand. The feedback is usually reported to the parents, and its main components are the student's scholastic achievements and behavior (Becker et al., 2016; Bill & Melinda Gates Foundation, 2016; INACOL, 2016).

4.3.2 The role and characteristics of teacher-mentor

When Odysseus embarked on his famous travels, which took him among other places to the Trojan War, he left his son, Telemachus, with a close friend named Mentor, who served as teacher and advisor, guided him, and imparted his wisdom. In time, the term 'mentoring' became synonymous with apprenticeship – a process in which an older or more experienced person (the mentor or tutor) advises and imparts his accumulated knowledge to a younger, less experienced person (the mentee or student) (Deitch et al., 2016). There are numerous definitions and theories of mentoring; some say over fifty (Levi-Feldman, 2020), for example:

- Mentoring is a training tool, which – through relationships between people – helps employee development. These relationships have a developmental component (Rhodes at al., 2002).
- Mentoring is a process in which one shares accumulated knowledge, skills, information and points of view that can assist the personal growth of another (Allen et al., 2004).

- Mentoring means a development-oriented relationship between a younger or less experienced person (the mentee) and an older or more experienced person (the mentor) (Rhodes, 2005).
- Mentoring is defined as a unique relationship, characterized by an emotional attachment between the mentor and the mentee, in which the mentor provides the mentee with instruction and new learning opportunities (Eby et al., 2007).
- The mentoring process is an open learning process, essentially advisory, free of power struggles, based on the mentor's and mentee's life experience. The process is not standalone, but is part of a larger process that the mentee experiences (Pepper & Masterman, 2020).

One of the common definitions describes mentoring as a process that informally imparts knowledge, social capital, and psychological support that are perceived by the mentee as relevant to work, career or professional development. Accordingly, mentoring involves informal communication, usually face-to-face, over a period of time, between one who is considered to have relevant knowledge, wisdom or experience (the mentor) and his/her mentee (Bozeman & Feeney, 2007). The mentor guides the mentee through a personal or professional development process. Mentoring is commonly used in a wide range of fields including business, law, medicine and healthcare, and in each field – general and specific methods are applied.

Although mentoring has a plethora of definitions and references in the literature, they all share a common premise: mentoring relationships take place when an experienced or senior person (the mentor) shows interest and encourages a person with less experience or one who is disadvantaged, and who could benefit from the relationship (Rhodes, 2005).

In the field of education, mentoring usually relates to professional learning and development of new teachers and school principals (Abu al-Hija et al., 2011; Searby & Armstrong, 2016). However, the term teacher-mentor can be used to conceptualize the teacher-student relationship in the context of teaching, learning, and assessment. Use of the term 'teacher-mentor' to describe the dialogical teacher-student relationship is not new, and can be found in Socrates' writings (Tauber, 2016). Tauber argued that Socrates' compared his pedagogic role (as a teacher) to that of a midwife. That is to say, through dialog, he wanted his students to give birth to their own insights, and

supposedly did not implant any external insights in them (Tauber, 2016). Furthermore, the Socratic dialog implies that realization of the pedagogic process requires three necessary conditions. The first is natural inculcation, or enrooting, of capabilities and talents in the student. The second focuses on the teacher-mentor, and the need for suitable education that befits these capabilities, education that helps the student see the 'right thing'. The third is the student's resolve toward the educational process. The teacher's persona, as suggested in Tauber's (2016) paper, the teacher who seems best for the postmodern era and the 21st century, is the teacher-mentor, who is equipped with skills that promote learning through dialogical teaching and assessment.

Mentoring gives each student the opportunity to learn from an adult with similar interests. The focus is on professional work that allows the students to learn within context and deepen their knowledge in a given field. The consequent relationships enable learning of not just the content but also codes of professional ethics, and understanding what it means to be an adult in the community through personal example. The mentor is a professional-ethical figure, who accompanies the students' growth process for a limited period, and exposes them to the professional aspect of their role. The mentor is a person who empowers the students, supports their professional development, serves as a significant adult and role model, and helps them set in motion a process of personal and social growth (Morgenstern et al., 2019).

The mentor's role is, thus, to guide or tutor the students during their personal and professional development by providing the conditions, tools and skills required for optimal, educated and independent self-management in a constantly changing, multicultural world, as both individuals and part of a group. Teacher-mentors must adapt to various learners, and recognize that the tools they impart will serve them not only through school, but throughout their adult lives too (lifelong learning). The teacher must contemplate the process rather than the content, see beyond the disciplines that are taught, and realize that knowing how to learn is a basic skill for learners (Levi-Feldman, 2020).

The Israeli Ministry of Education (2020) has defined two major features of the teacher-mentor – the characteristics of a good mentor, and his/her responsibilities.

a. The characteristics of a good mentor:
   - Expects the student to be committed to the workplace

- Has high expectations from the training
- Suggests challenging ideas
- Teaches through personal example
- Trusts in the student's training
- Inspires and offers encouragement
- Is committed to the student's training
- Shares his/her passion with the student
- Knows the student well
- Tolerant

b. The mentor's responsibilities:

- Communication – Call the mentee if he/she is missing or late; Schedule regular sessions with the mentee; Make regular contact with the mentee by email or phone; Meet regularly (once a month) with the mentee at the workplace; Contact the mentee whenever there is a question.
- Cooperation – Work with the mentee to plan a meaningful project at the apprenticeship; Identify shred matters of interest with the mentee; Follow the mentee's personal learning program; Participate in the mentee's product demonstrations; Participate in mentors' group meetings.
- Organization – Make a personal work and learning plan with the mentee; Identify resources for the job; Help the mentee plan the day, week and month he/she spends in the apprenticeship; Share time-planning tools with the mentee; Encourage the mentee to use a personal journal for reflection.

In sum, the mentor is a loyal friend, advisor or instructor, usually with rich experience in the field. The mentor's primary goal is to get the mentee to operate in reality in a way that reflects his/her beliefs and principles. The mentor's main tool to achieve this objective is personal charisma, and the demand to follow his/her instructions. The mentor's success is measured by the degree to which the mentees adopt their mentor's way, how much their lives change, and the intensity of their

emotional, mental and spiritual experience. It should be noted that the mentor sometimes generates a swift change, and sometimes leads a process of fear and self-deprecation. Mentoring is suitable mainly for crisis situations or when external motivation is required.

4.3.3 The role and characteristics of teacher-coach

Coaching also plays a multifaceted role in the school system. Coaches are like teachers in their areas of expertise, and play an important role in training and empowering students. The role of the teacher-coach includes many areas of responsibility such as providing practice and application programs, motivating learners to higher performance, and creating cohesion in a team environment. In addition, they guide and advise on learning. Their main role is to promote student learning and training for future life (Janes et al., 2016).

In this sense, Hermel-Stanescu (2015) added that the role of the teacher-coach is to accurately diagnose the learner's knowledge and development, and help him develop optimally. The main specialty of the teacher-coach is the ability to ask questions and listen, and it motivates the student to move forward in his search for the answers. From the coach-teacher's point of view, the student is at the center, and he adjusts the teaching methods to the learner in a unique and individual way. The student is actively responsible for his learning, with a wide choice about his learning, and his interests, abilities, background and goals are all taken into account (Atkinson et al., 2021; Becker et al., 2016; Bill & Melinda Gates Foundation, 2016; INACOL, 2016).

Another point addressed (Hermel-Stanescu, 2015; Janes et al., 2016) is that the teacher coaches the responsibility for learning together with the student, and the student is the active and central factor that shapes the agenda of the training process. The student’s activities are focused on the future, and the desire to increase his future life’s effectiveness.

Furthermore, the coach adopts new ways of presenting knowledge to the students in order to provide the greatest learning experience, and should create the right conditions to influence their learning, motivate them to achieve their goals and objectives, and maximize their potential. Coaching teachers who want to bring their students to the fullest of their abilities are teachers who maintain a personal teacher-student relationship with their students. They understand that teacher-student

relationships are relationships that include dialogue, love, authenticity, and directness. They perceive the classroom in which they teach as a human community, which has a variety of meaningful experiences that contribute to shaping the personalities of its members, and helping their growth process. The teacher-coach empowers the students, encourages them to enjoy and love learning, challenges them in a way that suits them so they can develop optimally, and succeed in developing expertise in the fields according to the goals they had set for themselves. These teachers' relationships with their students are rich and complex, relationships of mutual giving, and satisfaction and rewards, which are not necessarily material but more emotional (District RSN, 2016; Pane et al, 2015).

The teacher-coach places the differences between the students at the center of the teaching, emphasizes the positive in the difference, and treats each learner according to his or her uniqueness. In this way, each student can be helped to maximally develop his inherent personal potential by adapting the learning content to the student's needs, abilities, interests and inclinations (Ben-Yosef, 2009; Hermel-Stanescu, 2015). He actively teaches, encourages students to initiate and take responsibility. The teacher-coach controls the curriculum and diversity in learning methods, masters the knowledge about the student, the processes of diagnosis, evaluation and giving feedback. He builds a unique program for each student together with the student, while addressing the goals and objectives set by the student. The pace and approaches of learning and teaching are tailored to the student's needs, development, background, abilities, interests, goals, and other factors that set him or her apart. All of these emerge from the results of an ongoing process of diagnosis, evaluation, and measurement that shapes learning and teaching (Becker et al., 2016; Hermel-Stanescu, 2015; Hollweck & Lofthouse, 2021).

Coaching usually involves supervising a task and providing feedback. Thus, one of the important characteristics of the teacher-coach is sharing and discussion with students of the results of the diagnosis and evaluation of their progress, and providing frequent and rich feedback on a regular, real-time basis, in order to provide students with a measure of their expertise and learning style. All this is done to promote their learning, and so that they develop high reflection and independent learning skills. Finally, through the feedback, the teacher-coach develops a meaningful relationship with the students, and they feel important and valued (Boyatzis et al., 2022; Janes et al., 2016; Office of Educational Technology, 2017).

In conclusion, teacher-educators, teacher-mentors and teacher-coaches share a number of similarities in their role. Educators are role models for students at all levels, providing guidance and teaching life lessons from their own experiences. Mentors guide or tutor students during their personal and professional development, and provide the tools, conditions, and skills required for optimal, independent self-management. Coaches also serve as role models, navigators, counselors, and mentors. They adopt effective teaching strategies on an equal footing, and cultivate unique talents, skills and interests. They enjoy a meaningful relationship with the students, and are more satisfied with their work. Ultimately, teaching is the goal, and all three types transfer knowledge and expertise to their students (District RSN, 2016; Janes et al., 2016; Pane et al, 2015).

However, there are also many differences between the roles, including depth of knowledge, knowledge transfer, and feedback mechanisms .Educators emphasize cognition, and the knowledge that they impart includes a wide range of theories .The teacher-mentor serves as a mediator, and suggests support and preparation mechanism to facilitate progress – both educational and social. The knowledge imparted by coaches highlights other areas such as psychomotor and psychosocial skills, and is related to mastery of skill by doing .Educators often communicate with students through lecture-based measures, and provide feedback through tests of reading material/ideas. Coaches, on the other hand, provide individual feedback that is often derived from an intimate acquaintance with the knowledge, skills, or attitudes inherent in their teaching (Janes et al., 2016; Kutsyuruba & Godden, 2019).

Finally, what sets educators and coaches apart in their teaching methods is the involvement of the learners .The teacher-educator is perceived as a key figure in the learner's education, having full control over the student in the classroom, regardless of the student's wishes, while a coach welcomes the student's inputs regarding his or her learning decision, i.e., they promote learning instead of lecturing .The teacher-mentor, on the other hand, is an experienced individual, who builds the abilities of the student/mentee through guidance and advice, by using his or her personal charisma, and an expectation to act according to the provided guidelines. However, the teacher-coach is part of the student's path, and motivates him on the path to self-discovery, which will allow him to make the most of himself. The learner is viewed as an expert in his life and work, and is believed to be creative, resourceful and complete. The coach takes responsibility for being a partner in what the trainee wants to achieve, and

motivates him according to his age. The main role of the teacher-coach, in contrast to that of the educator and mentor, is to lead the trainee to discover the expertise within him, and to translate it into a strategy that is as effective as possible, consistent with his personal values and true abilities (Ashkenazi, 2011; Katz, 2008; Al Hilali et al., 2020).

Figure 4 presents a comparison between the three types of teachers that were examined above – teacher-educator, teacher-mentor, and teacher-coach, as well as the effect of their teaching methods on the learner's/graduate's skills – particularly metacognitive and self-regulation skills.

Figure 4.

Comparison between teacher-educator, teacher-mentor, and teacher-coach.

	Teacher-educator	Teacher-mentor	Teacher-coach
Profile	The teacher holds the knowledge, and imparts it to students. The main goal is to educate and provide knowledge, while adhering to school guidelines. The teacher aims to get the students to behave in real life according to his own beliefs and principles. The teacher's main tool is personal charisma, and a demand to comply with his instructions.	The teacher is a guide or tutor for students during their personal and professional development, and provides the tools, conditions, and skills required for optimal, independent self-management. The main goal is to show interest and encourage a person with less experience or one who is disadvantaged, and who could benefit from the relationship.	The teacher guides the student to discover his inherent skills, and translate them into an effective strategy that fits his personal values and abilities. The main goal is to guide the student to pose questions, to find his own best solutions to problems, and to clarify his vision of the future.
Influence	Students are passive, often bored, less challenged. The gap in student's achievements grows, grades go down. Overt and covert dropout rates increase. Unsatisfactory classroom/learning atmosphere, and increased violence.	The teacher-mentor's success is measured by the degree to which the students adopt the teacher's way, make changes in their life, and by the intensity of their emotional, spiritual, and mental experience.	The teacher-coach guides students to improve their decision-making, and develop capabilities to achieve his/her goals, and increase effectiveness in his/her life. Success is measured by the degree to which the student achieves his/her goals.

Source: Al Hilali et al., 2020; Ashkenazi, 2011; Becker et al., 2016; Bill & Melinda Gates Foundation, 2016; Katz, 2008; Levi-Feldman, 2020.

4.3.4 The impact of teachers' use of coaching tools on students' meta-cognitive abilities and self-regulation skills

Conjectures about the nature of a "good teacher" are a daily matter. Throughout history, different perceptions and models of a good tutor have been shaped, always influenced by the perspective and spirit of the time and its thinkers. A rather new

concept of the "good" teacher is one that recognizes the educator as a "coach", or a teacher using coaching tools, and equipped with coaching skills. Teaching through coaching means using a pedagogical approach, tailored to students' requirements to learn autonomously and independently. It refers to the ability to do so as a basic aptitude for life, in the 21st century, and the strength to continue learning throughout life in an ever-changing world. Supported by dialogic teaching, educators with coaching experience can focus their guidance to promote the individual student's self-learning abilities, and better prepare them to face future challenges. In these terms, good tutors can be defined as leaders who use coaching tools to handle the challenges of the 21st century's complex reality for the sake of teaching and educating scholars. In other words, the educator's role as a coach is to boost students' efforts to achieve the best possible results - in the short- and long-term. To be successful, the teacher-coach requires knowledge and understanding of the process as well as a variety of styles, skills, and techniques that are appropriate to the context in which the coaching takes place, in the following ways:

1. Allow the learners to make the right decisions, from an overall view of all possible events, and build the success strategy as the most appropriate course of action.
2. Create a teaching/learning framework that allows the students to focus on the best resources and abilities available to them, to achieve excellent results.
3. Help the learners to set performance patterns and address the inevitable crises that may arise on their way to the starting point.
4. Serve as a partner, friend, mentor, guide and supporter on an equal basis.
5. Make the students' vision and aspirations the main factor driving the process.
6. Motivate the learners to find the assets that suits them best, and design the best strategies and solutions for themselves.
7. Bring the students to where they optimally realize the potential of their personal, social, professional, and economic means.
8. Help them locate the crucial factors to their success, and help them form successful strategies that lead to the highest level of accomplishment.
9. In addition to all these, educators must provide students with independent direction and control resources, which will guide them to make the most correct decisions based on their own growth and the desired results (Al Hilali et al., 2020; District RSN, 2016; Janes et al., 2016; Levi-Feldman 2020; Pane et al., 2015).

In addition, recent research (Ramdial-Budhai, 2018; Hollweck & Lofthouse, 2021) has shown that the use of teaching strategies based on coaching makes teaching better. Namely, guidance that cultivates, develops and promotes a person with openness and generosity, that is endowed with logical and critical thinking, good taste and empathy, and acts with sensitivity and respect for others, and is committed to democratic citizenship and moral values. That is, teaching which rests on the principles of mutual dialogue, joint work, collective responsibility, collaborative inquiry, collective autonomy, initiative and efficacy seems to benefit. Therefore, the perception of guidance should be based on moving beyond the process of self-realization and treating learners as adults.

Specifically, the use of the following tools of coaching makes teaching better (Ashkenazi, 2011; Foster, 2018; Katz, 2008; Pedagogy folder for Guide in Marom Schools, 2019; Zalkowitz & Goldstein, 2011):

• Consequential thinking is the ability to aim for a higher level of achievement. The idea that should guide teachers as educators is not *what I would like to have* (in terms of efficiency, performance, inputs, narrow vision, short term) but *what do I need* in order to live and achieve my goals in the best way. In other words, what are the right things to do? In consequence, we must ask the learner some questions that should be examined in various areas of life including the emotional, social, and leisure time aspects: Where is the student today? Where does he/she want to go? What are they willing to do or ready to give up in order to achieve their goals?

• Results map is the tool for diagnosis, analysis and execution. It lists six types of results: values, vision, goal, areas of results (outputs and indices), goals, and intermediate goal.

• Teaching/learning framework – "Training ground". The teaching and learning framework should be based on coaching strategies, and serve as a basic infrastructure for the school's organizational culture. Students participate in formulating strategies, which effectively lead them to success in various areas of life according to their individual needs. Also, the teaching and learning strategies facilitate shared learning with tailored teaching, which provides solutions for the heterogenous student group (Barak-Medina et al., 2017).

• The coach-student relationship is a professional relationship between equals, characterized by friendship and camaraderie, in which the coach represents the pupil's aspiration.

• Questions of inside-out listening: Asking students to breed new ideas, directions and insights from within, in a process that evolves from the inside out, according to Socratic knowledge, which assumes that all answers are already in one's consciousness.

• Dialogic teaching and assessment that fit the learners' personal needs. The central process that should take place in coaching is targeting results that that bring the coachees to maximal realization of their potential and resources. To this end, it helps them examine the factors that harm their success, and to formulate the most suitable success strategy, from which they derive an action plan that leads them to higher achievements within a shared activity. The way to accomplishing this is through dialog, which is both focused and open, and based on a process that develops inside-out. Such dialog allows the teacher-coach to get the students to see results in a short time, and to professionally and effectively approach their long-term vision.

• Actions of emotional connection and positive reinforcement. This tool is based on the teacher-student relationship. The teacher acts as a subject, and strives to come closer to the students' actual subjective experience. Thus, the teacher reveals the entirety of the student's emotional, social and academic needs, and serves as an adult that provides constant emotional support based on unconditional acceptance, and a relationship of understanding, compassion and empathy.

• Barriers to success: These help students to identify the factors that are blocking their progress, and have prevented them, to date, to mobilize all the resources available to them, and are best gotten rid of, such as fear of failing, leaving one's comfort zone, low self-esteem, inappropriate friends, and many others. The teacher does not address the barriers, but helps the student to neutralize and evade them, and mainly helps his students to be aware of their own values and resources, which can be used as anchors against these barriers, and allow them to realize their vision.

• Establishment of performance and results patterns. The teacher's relationship with the student is a professional relationship between equals, and helps the student become the active factor of the solutions. In other words, the teacher helps the student pose

questions, the answers to which help him/her make the most of his/her potential, and formulate an action path that leads to the best results and fulfillment of his/her vision.

• Recruiting and leveraging resources: Locating the student's resources encompasses locating and identifying the learner's available ways and means, such as knowledge and education, experience, competences and abilities, social connections and so on. The use of this capacity is also often examined, as well as the results they generate in the four areas of the student's life. The procedure of establishing/locating the strategic resources allows the learner to harness their closest environment to their needs, and to assemble and leverage their means, whose purpose is to help them to achieve their vision.

• Control, evaluation, assessment and documentation/reports tools. The teacher-coach helps the students develop metacognitive control processes by means of questions that inspire reflection, observation, and examination of the learning processes integrated in the teaching-learning processes. In addition, he encourages students to set targets and to follow their progress. Also, the teacher-coach emphasizes the short-term action and result, while establishing clear goals for the long run. These goals lead to building a vision and designing an action plan, which produces outputs that can be assessed and measured.

Teachers' use of coaching tools helps them guide and influence students throughout their personal and professional development process by providing the conditions, tools and skills necessary for optimal, intelligent and independent self-management in the ever-changing multicultural world, both individually and as a group. These types of mentors have the talent to adapt to different learners, and convey the wisdom they need, not only during their studies period, but also in their adult lives (lifelong learning). In addition, educators that adopt coaching tools also provide students with the necessary know-how to critically and intelligently reach information accessible in the high-tech world. This way he also offers the tools needed for independent work during life, self-management in times of uncertainty and change, independent learning, and teamwork. It is worth bearing in mind that this teacher-coach significantly emphasizes these abilities and utensils, without sacrificing their expertise in a certain discipline. In fact, emphasis should be placed not only on the knowledge itself but also on the comprehension assimilation, as an opportunity to provide tools for

independent learning skills that the learner will serve the learner for further learning throughout life (Levi-Feldman, 2020).

Similarly, using coaching tools makes learning effective. These tools allow students to be aware of their thinking and their ability to self-regulate, control their decision-making process, and criticize their own learning. The teacher-coach improves the planning, monitoring and control procedures of the thinking strategies pupils internalize. It helps them pay better attention to their thought system, as well as be aware of the task, in order to gather information about it and deal with it accordingly (Adler, Zion & Mevorech, 2015; Gutierrez & Schraw, 2015; Hart & Memnun, 2015).

Both self-regulation and self-management processes are essential in intervention and training processes. Both performances can be measured as part of the training programs, and require an important investment of effort. The research literature indicates that these two processes use shared internal resources. Therefore, it is no surprise to find a decrease and depletion of self-capabilities after the effort of behavioral or emotional regulation (i.e., self-regulation) or exercising self-management skills. Imaging studies by Delazer et al. (2003) have validated experimental findings that management functions and self-regulation use the same resources. These studies also indicated the mutual relationship and interaction between management functions and sentimental states, and academic achievement. Therefore, it is important to appraise the use of personal resources (including areas of power) in planning intervention and training programs, in order to prevent erosion of self-forces (Margalit, 2014).

The teacher-coach has a significant impact on the apprentices. He or she shares the responsibility for the students' ambitions, encouraging and allowing them to produce their own solutions and strategies, and inspiring personal excellence, love of learning, attaining high expertise, while seeing the students as responsible and committed to their aspirations (Becker et al., 2016; Bill & Melinda Gates Foundation, 2016; Hermel-Stanescu, 2015; INACOL, 2016).

In addition, Foster (2018) emphasized that the coach's influence is reflected in the fact that he helps learners to locate the elements that impair their success, and helps them develop success strategies that lead them to the highest level of achievement. According to her, there is a positive impact of the use of coaching strategies on improving students' meta-cognitive abilities and techniques. That is to say, the use of

coaching tools allows the learner to make the right decisions from an overall view of all possible outcomes, and build the success strategy as the most appropriate course of action.

The teacher-coach helps the students to improve their self-regulation and self-management skills, and this is mirrored in the ability to take responsibility and ownership for their own learning. Furthermore, it greatly influences the student's behavior. Discipline issues were significantly reduced, making them more involved in their own learning, and able to solve complex and challenging problems. They do not give up when facing difficulties, and it helps them learn more in-depth, mastering the adjustment of adult life outside school (District RSN, 2016; Pane et al, 2015; Ramdial-Budhai, 2018; Zalkowitz & Goldstein, 2011).

Teachers who wish to drive their pupils to the fullest of their cognitive, emotive and social abilities who nurture a teacher-student relationship with their learners. They understand that teacher-student relationships include dialogue, love, authenticity, and openness. They perceive their classroom as a human community that conceives a variety of meaningful memories and experiences, contributing to shape its members' personalities, and helping the learners' growth process. The relationship with their pupils is rich and complex, mutually generous, full of satisfaction and rewards that are not necessarily material. Helped by the regular feedback given by the educator, the coach is constantly helping students to achieve success in terms of his or her expertise area, where the route to achievement is clinically and personally tailored to each pupil (Buckingham & Goodall, 2019; Office of Educational Technology, 2017).

According to Janes, Silvery & Dubrowski (2016), the teacher-coach creates a training framework that permits learners to focus on the best assets and abilities available to them in order to achieve optimal results, taking the students to a state where they optimally reach the potential of their personal, social, and economic resources. Additionally, he motivates his students to find the thing that suits them the best, and to produce their own best strategies and solutions.

In addition, Ramdial-Budhai (2018) argued that some of the most important skills a coach teaches students are independent management, monitoring and control mechanisms, which lead them to the best decisions in terms of coaching and outcomes.

Finally, a coach-teacher is a whole person, who is himself on the path of learning. His job is to educate, guide, mentor and reflect individual and group learning processes. He undertakes to provide learners with tools that enable them to take responsibility for their learning progress, as well as processing and critique, and encourages questioning (Pedagogy folder for Guide in Marom Schools, 2019).

The coaching teacher influences the learner primarily in the area of improving and changing the level of achievement and results, problem solving, choosing a crossroads, realization of a vision, making strategic decisions, or when they have significant struggles. The impact of the teacher-coach is significant and comprehensive, because he helps the student become an authentic person, aware of his desires, style, talents, feelings, and the relationships that exist between the components of his personality. Furthermore, the coach makes him a person who is able to manage himself, create rational action plans, and implement them. Guskov (2016) maintains that a person endowed with these characteristics advances through a process of "reflective experiences in life"; that is, a process in which the individual is compelled to deal with different situations that, to him, are suitable to his personality. In this way, students learn to know themselves, their environment and their society, through reflective observation of the reactions they develop in each situation. In other words, the influence of the teacher-coach is meaningful and extensive because it helps the coachee to be open to change and learning, and imparts the competency to handle inevitable crises that may arise on the way to success, and makes their vision and aspirations the central factor that drives the process (Ashkenazi, 2011; Boyatzis et al., 2022; Foster, 2018).

Consequently, of the three teaching forms mentioned in the previous chapter: teacher-educator, teacher-mentor, and a teacher-coach, personal coaching is best suited to the education system in the postmodern era, which advocates an autonomic policy, and is based on democratic and pluralistic values. An education system that trains educators to coach students at the individual and class-group level can succeed to recruit the maximum resources, capabilities and potential of its teaching staff, and leverage them for the school’s success at the systemic level, and for the success of the individual on the highest personal level (Ashkenazi, 2011; Hermel-Stanescu, 2015).

SECTION III. OBJECTIVES AND HYPOTHESIS

The main objective of this study was to investigate the effect of implementing coaching tools among educational staff on Palestinia-Arab middle-school students' metacognitive abilities, self-management and self-regulation skills.

There is a conspicuous need of a theoretical framework to which educational coaching may be aligned (Field et al., 2013; Grant, 2014; Robinson, 2015; Theeboom et al., 2014). This work seeks to contribute to these research efforts by empirically examining an established educational coaching intervention at a middle school. We empirically assessed the effects of coaching on metacognitive factors, a primary component of SRL associated with student growth and academic success. Metacognition can be fostered through interactions with teachers and peers, as students learn to question, reconstruct, and control their cognitive processes and strategies through collaboration with and observation of others (De Backer et al., 2012; Hurme, Palonen, & Järvelä, 2006). The opportunity to learn from modelling and actively discussing and reflecting on one's skills creates a powerful learning environment that challenges students to judge, control, and manage their learning (De Backer et al., 2012; Hartman & Sternberg, 1992). Given these research outcomes and based on the main goal of the current study, we hypothesized that interactions with trained educational coaches would elicit similar gains in students' metacognitive awareness, as well as their self-management and self-regulation. Consequently, the following research **hypotheses** were investigated:

(H1): There is a positive relationship between participants by fathers' education and the students' metacognitive awareness, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive).

(H2): There is a positive relationship between participants by mothers' education and the students' metacognitive awareness, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive).

(H3): There is a positive relationship between gender and age group and the students' metacognitive awareness, self-management skills (self-control, implementing problem-

solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive).

(H4): There is a positive relationship between coaching-based teaching strategies and the students' metacognitive awareness. That is, students who learn with coaching-based methods will improve their metacognitive skills more than students who do not learn with these methods will.

(H5) There is a positive relationship between teachers' use of coaching tools and 13-15-year-old students' self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events); i.e., the participants in the experimental group will improve their self-management skills more than the participants in the control group will.

(H6) There is a positive relationship between teachers' coaching strategies and the students' (emotional, behavioral, and cognitive) self-regulation capacity; i.e., students in the experimental group (with coaching) will improve their self-regulation capacity more than students in the control group (without coaching) will.

SECTION IV. METHODOLOGY

This study was designed to examine the effect of coaching on three variables (Self-regulation, Self-Management and Meta-Cognitive awareness). Specifically, the main purpose of this study was to examine five hypotheses which mentioned in previous section. In order to examine these hypotheses, we used the principals of the quantitative research. At the beginning of these section the research design will be presented. After that, the description of sample, the study variables, techniques and instruments of the study, Procedure, data analysis and finally the ethical considerations will be presented.

4.1. RESEARCH DESIGN

This study was performed from a quantitative paradigm. In general, quantitative research allows gathering data from many participants, and identifying the variables of the studied phenomena through comparison between the various research groups. In this research, a quasi-experimental study, a type of a quantitative research, was conducted to evaluate the association between an intervention (not randomly assigned) and an outcome. The pre-test–post-test quasi-experimental crossover design used in this research compared groups and measured changes between pre-test and post-test data among all groups. For several decades, researchers in the human resource development (HRD) field have been interested in determining if an intervention has made a change in knowledge, skills and/or attitudes. As noted by Russ-Eft & Hoover (2005, p. 94), "experimental and quasi-experimental designs can help advance HRD by aiding researchers and practitioners to determine cause-and-effect relationships".

4.2. DESCRIPTION OF SAMPLE

This study included 600 Palestinia-Arab 7^{ths} to 9^{th} grade students, of which 268 (44.66%) were boys and 332 (55.33%) were girls. The students were divided into two groups: 300 had participated in the program throughout the school year, and 300 students constituted the control group. Table 1 presents the students' distribution by gender and shows that the number of boys and girls in both groups was similar.

Table 1.

Frequencies and percentages for gender

Group	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Control	Boys	134	44.66	44.66	44.66
	Girls	166	55.33	55.33	100.00
	Total	300	100.00		
Experimental	Boys	134	44.66	44.66	44.66
	Girls	166	55.33	55.33	100.00
	Total	300	100.00		

Table 2 presents the students' distribution by age (grade at school), and shows that there was equal representation of each age group in both the research and control groups.

Table 2.

Frequencies and percentages for grade

Group	Grade	Frequency	Percent	Valid Percent	Cumulative Percent
Control	7	100	33.33	33.33	33.33
	8	100	33.33	33.33	66.66
	9	100	33.33	33.33	100.00
	Total	300			
Experimental	7	100	33.33	33.33	33.33
	8	100	33.33	33.33	66.66
	9	100	33.33	33.33	100.00
	Total	300	100.00		

Table 3 presents the distribution of the participants by father's education. The data in Table 3 shows that the frequency of fathers with middle school education is the highest (n=106) in the control group. On the other hand, in the research group, the frequency of fathers with high school education is the highest (n=152).

Table 3.

Frequencies and percentages for father's education

Group	Father's education	Frequency	Percent	Valid Percent	Cumulative Percent
Control	None	0	0.00	0.00	0.00
	Elementary	10	3.33	3.33	3.33
	Middle school	106	35.33	35.33	38.66
	High school	138	46.00	46.00	84.66
	Academic	46	15.33	15.33	100.00
	Total	300	100.00	100.00	
Experimental	None	2	0.66	0.66	0.66
	Elementary	8	2.66	2.66	3.33
	Middle school	84	28.00	28.00	31.33
	High school	152	50.66	50.66	82.00
	Academic	54	18.00	18.00	100.00
	Total	300	100.00	100.00	

Table 4 presents the distribution of the participants by mother's education. Table 4 shows that the frequency and percentage for mothers with high school education in both the control group and the research group are the highest (n=152 and n=160, respectively).

Table 4.

Frequencies and percentages for mother's education

Group	Mother's education	Frequency	Percent	Valid percent	Cumulative percent
Control	None	0	0.00	0.00	0.00
	Elementary	14	4.66	4.66	4.66
	Middle school	62	20.66	20.66	25.33
	High school	152	50.66	50.66	76.00
	Academic	72	24.00	24.00	100.00
	Total	300	100.00	100.00	
Experimental	None	0	0.00	0.00	0.00
	Elementary	8	2.66	2.66	2.66
	Middle school	36	12.00	12.00	14.66
	High school	160	53.33	53.33	68.00
	Academic	96	32.00	32.00	100.00
	Total	300	100.00	100.00	

4.3. VARIABLES

The recent research includes two independent variables: Demographics variables and coaching and three dependent variables*:* Self-regulation, Self-

Management and Meta-Cognitive awareness**.** On order to examine the effect of Coaching on the Self-regulation, Self-management, and Meta-Cognitive, the participants were divided into two groups: the research group and the control group.

The two groups' background data were similar, as described above. The teachers of the research group underwent coaching training, whereas the control group's teachers did not. The coaching instructors of the research group's teachers had been previously trained among teachers in higher education institutes in Israel. The training dealt with developing a guided process that helps the trainees to clarify values, strengths, and priorities, and to realize their potential to effectively lead to the desired results and achieve the goals they had set for themselves.

The next stage describes the instruments that were used to measure other variables.

4.4. TECHNIQUES AND INSTRUMENTS

The technique employed was a survey, and the instrument used was a questionnaire. The questionnaire was a closed self-report questionnaire, which included five parts: 1. Demographics; 2. Self-regulation; 3. Self-management; 4. Meta-Cognitive; 5. Coaching.

Part 1: Demographics

This part of the questionnaire related to the students' background characteristics: gender (nominal dichotomous variable: 1=boy, 2=girl); grade (1=7^{th}, 2=8^{th}, 3=9^{th}); father's education (1=elementary school, 2=middle school, 3=high school, 4=academic); mother's education (1=elementary school, 2=middle school, 3=high school, 4=academic); siblings (ordinal number).

Part 2: Meta-cognitive awareness

The Metacognitive Awareness Inventory (MAI) (Schraw & Dennison, 1994) is a self-report questionnaire that examines metacognitive knowledge. The items are not specific to a certain task but relate in general to situations that require learning. The questionnaire was translated to Hebrew in the back-translation method by Brislin (1980). The questionnaire includes 52 items in eight scales of at least four items each, divided into two main measures: metacognitive knowledge and knowledge of metacognitive control.

1. Metacognitive knowledge, measured by three scales:
    a. Conditions – knowledge of the timing and reason (when and how) for using strategies; i.e., "I learn best when I know something about the topic"; measured by items 15, 18, 26, 29, and 35.
    b. Application – knowledge of how learning strategies are applied; i.e., "I try to use strategies that have worked in the past"; measured by items 3, 14, 27, and 33.
    c. Resources – knowledge about one's skills, intellectual resources, strategies and abilities; i.e., "I understand my intellectual strengths and weaknesses"; measured by items 5, 10, 12, 16, 17, 20, 32, and 46.
2. Knowledge of metacognitive control, measured by five scales:
    d. Monitoring – relates to one's learning assessment or use of strategies; i.e., "I ask myself periodically if I am meeting my goals"; measured by items 1, 2, 11, 21, 28, 34, and 49.
    e. Planning – relates to organizing, setting goals, and allocating resources; i.e., "I organize my time to better achieve my goals"; measured by items 4, 6, 8, 22, 23, 42, and 45.
    f. Assessment – relates to performance analysis and strategy effectiveness following a learning episode, i.e., "Once I complete a task, I ask myself if I learned as much as I could"; measured by items 7, 19, 24, 37, and 50.
    g. Information management – relates to real-time skills and strategies of effective information processing, i.e., "After I solve a problem, I ask myself if I had considered all of the possibilities"; measured by items 9, 13, 30, 31, 36, 38, 39, 41, 43, 47, and 48.
    h. Mistake screening – relates to strategies used to correct understanding and performance mistakes, i.e., "I stop and go back to the data when I'm confused"; measured by items 25, 40, 44, 51, and 52.

Factor analysis conducted by Schraw & Dennison (1994) on metacognitive knowledge and knowledge of metacognitive control produced one score called general metacognition. At first, the response scale was sequential between 0 and 100 (the lower numbers indicating that the statement was not true for the respondent, and the higher numbers – that the statement was true). However, Ben-Avi (2005) changed the scale (in consultation with the authors) to a 5-point response scale of 1 (always untrue) to 5 (always true). They examined the measure on 197 and 110 normal respondents and

found high internal reliability (α=.90 and α=.88, respectively). Cronbach's alpha of the present study was .78. Confirmatory factor analysis validated the questionnaire. Figure 5depicts the structure of the 'metacognitive knowledge' variable by indicators.

Figure 5 indicates that the variable 'metacognitive knowledge' can be measured by seven indicators, after having removed the indicators with a loading of less than 0.40.

Figure 5.

Model plot of metacognitive knowledge indicators

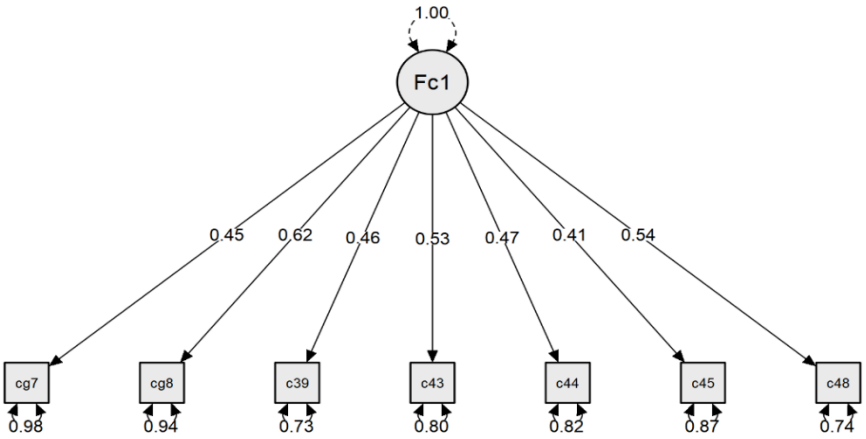


Table 5 presents the fit indices of the model to the data. As can be seen, the fit indices indicate good fit of the variable 'metacognitive knowledge' to the data. So that, the RMSEA value <.08, SRMR value<.06. The Comparative Fit Index CFI (Comparative Fit Index) is also used This metric is not affected by the complexity of the model, a value of 0.9 or more indicates a good match between the model and the data (Bentler & Bonett, 1980; Fan & Sivo, 2007; Hoyle, 1995).

Table 5.

Fit indices of metacognitive knowledge indicators

Index	Value
Comparative Fit Index (CFI)	0.969
Root mean square error of approximation (RMSEA)	0.040
RMSEA 90% CI lower bound	0.016
RMSEA 90% CI upper bound	0.062
RMSEA p-value	0.760
Standardized root mean square residual (SRMR)	0.031

Part 3: Self-Management

The Self-Control Dual Intervention Model (Rosenbaum, 1980) does not examine children's actual self-control, but rather their inclination and ability to use self-control skills when needed. The newer version of the questionnaire (2000) includes 27 items that express parameters of **self-management skills** (i.e., "When I feel bad because I failed, I encourage myself that it's not so terrible"), **problem-solving strategies** (i.e., "When something bothers me, I try to think and plan how to solve the problem"), **delaying satisfaction** (i.e., "When I'm hungry and can't eat, I try to ignore the hunger and imagine that my stomach is full"), **reaction to pain** (i.e., "When something hurts, I try to forget the pain and not think about it"), and **a general belief in the ability to regulate internal events** (i.e., "When I'm in a bad mood, I try to behave as if I'm in a good mood, and that's how I overcome my bad mood").

The items are scored on a Likert scale of 1 (very unlike me) to 5 (very typical of me). Each respondent receives a total self-control score according to Rosenbaum's (1980) guidelines: 1 and 2 values are converted to -1 and -2, respectively; 3 is converted to 0; and 4 and 5 are converted to 1 and 2, respectively. The consequent range of answers is from -2 to 2 for each item, and the total score for 27 items is between -54 and 54. A low score reflects low self-control skills, and a high score reflects high self-control skills. Three items (6, 13, and 22) were reverse-coded (i.e., "When I must make a difficult decision, I delay the decision even if I have all the facts").

This questionnaire has served in some studies of children and adolescents in Israel (Moldavsky, 2002; Roudeina, 2002; Zeeman, 2004). Rosenbaum (1980) found high internal reliability (α=.82), for adolescents in general. Hamama (2003), in a sample of 200 children aged 8-19 found reliability of α=.65, but the reliability increased the higher the respondents' age was. In a study of 567 adolescents in boarding schools, Zeeman (2004) found Cronbach's α=.77. The internal reliability of the present study was α=.86, which indicates high internal reliability.

Part 4: Self-regulation

The Adolescent Self-Regulatory Inventory (ASRI) (Moilanen, 2007) measures five components of self-regulation (activate, monitor, maintain, inhibit, and adapt), four areas of self-regulation (emotional, behavioral, cognitive, and attention), and two time-related aspects (short- and long-term). The questionnaire was translated into Hebrew

(using the back-translation method) by Selkovski (2013) and given to 50 adolescents to examine the quality of the translation. The questionnaire included 27 items – items 1-13 relating to the short term, and items 14-27 relating to the long term.

In the present study, as in previous studies (Selkovski, 2013), the final score is the calculated average of the items. Items 1, 2, 3, 6, 7, 8, 10, 11, 12, and 16 were reverse-coded to facilitate the final calculations. Selkovski (2013) reported good reliability (α=.80) for the long-term section, and rather low reliability for the short-term items (α=.60). In the present study, Final reliability coefficient was α=.60. Sample items: "If I do something and know it's wrong, I act carefully"; "When the lesson bores me, I find it hard to force myself to listen to the teacher".

4.5. PROCEDURE

After having received approval to conduct the study from the Ministry of Education, the Ethics Committee, the school principals and the students' parents, the questionnaires were distributed to the students twice – before participating in the program (beginning of school year 2020) and at the end of the school year. As mentioned, the participating schools were chosen for this study based on the Ministry of Education's educational portrayal to ensure similar measures.

To examine the effect of coaching on the research variables, the participants were divided into two groups: research group and control group. At the first stage, before the intervention program, the questionnaire was distributed to both groups. Each homeroom teacher was first requested to number their students' questionnaire forms according to classroom attendance sheets, to ensure compatibility between each student's before and after questionnaires. These lists were not passed on to the researchers.

The questionnaires were distributed at school during a lesson. The study's goals were explained to the students by the researchers, and they were instructed how to fill out the questionnaire. Students who had difficulties with some questions were provided additional instruction. It was also made clear that the data was collected only for research purposes, and analyzed as a group, and that anyone could stop filling out the questionnaire at any point. Filling out the questionnaires took about 45 minutes on average. Afterwards, the homeroom teachers were asked to note on the forms whether the student was recognized by the system as having a learning disability and/or attention

deficit disorder, or not. This study did not include students with either a learning disability or attention deficit disorders.

4.6. DATA ANALYSIS

In the first stage, descriptive analyses were depicted (frequencies and percentages of the sample), measures of central tendency and dispersion (mean and standard deviation of the different questionnaires) and examining the normality of sample distribution by using Skewness and Kurtosis. In the second stage of data analysis a chi-squared (χ^2) test was performed to examine the differences in the students' background. Furthermore, confirmatory factor analysis (CFA) was used to validate the construct of the meta-cognitive variable by using Jamovi software.

In order to examine the differences in the research variables – self-regulation, self-management, and metacognitive awareness – between the research and control groups before and after the intervention, the repeated measure ANOVA analysis was used to examine the differences between the groups before and after the intervention. Also, a two-way ANOVA analysis of variance was used to test the effect of gender and age group on the variabkes in the everage of the three dependent varibles in the study group. In addition, relationships between the research variables – self-regulation, self-management, and metacognitive awareness – were examined using Pearson correlations. The analyses were performed with SPSS (ver. 24) statistical software.

4.7. ETHICAL CONSIDERATIONS

Ethical considerations in research are a set of principles that guide one's research designs and practices. These principles include voluntary participation, informed consent (Denscombe, 2000), anonymity (Blaxter, Hughes & Tight, 2001), confidentiality, potential for harm, and results communication. Scientists and researchers must always adhere to a

certain code of conduct when collecting data from others. These considerations protect the rights of research participants, enhance research validity, and maintain scientific integrity.

This study adhered to the ethical considerations mentioned above. The anonymity of the participants was maintained, and all gave their informed consent. The topics of the research were described in detail, and repeated during the study, when necessary (Altrichter & Gstettner, 1993).

The questionnaires were distributed following authorization by the Chief Scientist of the Ministry of Education (see Appendix 5), and the parents' consent. A sincere attempt was made to use unbiased statements in the questionnaire, and care was taken not to harm any of the participants. The researcher assured the participants that any data would be used for research purposes only.

SECTION V. FINDINGS

At the first stage, the descriptive findings for the items examined in the questionnaire are reported, followed by the results of the examination of the research hypotheses and the effect of coaching on the three research variables (self-regulation, self-management and Metacognition). The relationships between the variables are also examined.

5.1 DESCRIPTIVE FINDINGS

First, the participants' demographic data are presented. Table 6 depicts the education of the participants' fathers, and Table 10 depicts the education of the participants' mothers. The first hypothesis (H1) was: There is a positive relationship between participants by fathers' education and the students' metacognitive awareness, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive). Table 6 shows a difference between the groups in the distribution of the participants by fathers' education. However, the difference between the groups was not significant ($\chi^2_{(1)}$=0.00; p>0.05).

Table 6.

Frequencies of fathers' education

Group	Father's education	Frequency	Percent	Valid Percent	Cumulative Percent
Control	None	0	0.00	0.00	0.00
	Elementary	10	3.33	3.33	3.33
	Middle school	106	35.33	35.33	38.66
	High school	138	46.00	46.00	84.66
	Academic	46	15.33	15.33	100.00
	Total	300	100.00	100.00	
Experimental	None	2	0.66	0.66	0.66
	Elementary	8	2.66	2.66	3.33
	Middle school	84	28.00	28.00	31.33
	High school	152	50.66	50.66	82.00
	Academic	54	18.00	18.00	100.00
	Total	300	100.00	100.00	

Effect of the father's education on the three research variables

The effect of the father's education on the three research variables – self-management, self-regulation and metacognition – was examined by means of one-way ANOVA. Table 7 presents the effect on self-management. The results show that there

was no significant effect of the father's education on self-management ($F_{(4,1195)}$=1.028, p>0.05).

Table 7.

Effect of the father's education on self-management

Cases	Sum of squares	df	Mean square	F	p
Father's education	0.941	4	0.235	1.028	0.392
Residuals	273.515	1195	0.229		

Note: Type III sum of squares

Table 8 displays the effect of the father's education on self-regulation. The results indicate that no significant effect of the father's education on self-regulation ($F_{(4,1195)}$ =.71, p>0.05) was found.

Table 8.

Effect of the father's education on self-regulation

Cases	Sum of squares	df	Mean square	F	p
Father's education	1.956	4	0.1489	.71	.501
Residuals	830.003	1195	0.69		

Note: Type III sum of squares

Table 9 displays the effect of the father's education on metacognition. The results indicate no significant effect of the father's education on metacognition ($F_{(4,1195)}$=.785, p>0.05).

Table 9.

Effect of the father's education on metacognition

Cases	Sum of squares	df	Mean square	F	p
Father's education	1.059	4	0.265	.786	.504
Residuals	397.461	1195	0.339		

Note: Type III sum of squares

The second hypothesis (H2) was: There is a positive relationship between participants by mothers' education and the students' metacognitive awareness, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional,

behavioral, and cognitive). In Table 10, The difference between the groups in the distribution of the participants by mothers' education was not significant ($\chi^2_{(1)}$=0.00; p>0.05).

Table 10.

Frequencies of mothers' education

Group	Mother's education	Frequency	Percent	Valid percent	Cumulative percent
Control	None	0	0.00	0.00	0.00
	Elementary	14	4.66	4.66	4.66
	Middle school	62	20.66	20.66	25.33
	High school	152	50.66	50.66	76.00
	Academic	72	24.00	24.00	100.00
	Total	300	100.00	100.00	
Experimental	None	0	0.00	0.00	0.00
	Elementary	8	2.66	2.66	2.66
	Middle school	36	12.00	12.00	14.66
	High school	160	53.33	53.33	68.00
	Academic	96	32.00	32.00	100.00
	Total	300	100.00	100.00	

Effect of the mother's education on the three research variables

The effect of the mother's education on the three research variables – self-management, self-regulation and metacognition – was examined by means of one-way ANOVA. Table 11 presents the effect on self-management. The results show no significant effect of the mother's education on self-management ($F_{(5,1194)}$=0.988, p>0.05).

Table 11.

Effect of the mother's education on self-management

Cases	Sum of squares	df	Mean square	F	p
Mother's education	1.665	5	0.333	.988	.601
Residuals	399.790	1194	0.334		

Note: Type III sum of squares

Table 12 displays the effect of the mother's education on self-regulation. The results indicate that no significant effect of the mother's education on self-regulation ($F_{(5,1194)}$=.50, p>0.05) was found.

Table 12.

Effect of the mother's education on self-regulation

Cases	Sum of squares	df	Mean square	F	p
Mother's education	1.025	5	0.205	.50	.33
Residuals	479.933	1194	0.402		

Note: Type III sum of squares

Table 13 displays the effect of the mother's education on metacognition. The results show no significant effect of the mother's education on the level of metacognition ($F_{(5,1194)}$=1.00, p>0.05).

Table 13.

Effect of the mother's education on metacognition

Cases	Sum of squares	df	Mean square	F	p
Mother's education	1.251	5	0.250	1.00	.24
Residuals	298.068	1194	0.250		

Note: Type III sum of squares

The third hypothesis (H3) was: There is a positive relationship between gender and age group and the students' metacognitive awareness, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive). In an attempt to examine whether the student's gender or age group had affected his or her improvement in any of the research variables, we constructed a variable for each participant that measured the degree of change in values following the intervention. Next, a two-way ANOVA was performed on each of the three variables, in which the independent variables were the students' gender and age group. Table 14 presents the number of male and female students in each age group, and the means and SDs of the degree of change in the variable *metacognition*.

Table 14.

Metacognition: degrees of change.

Age group	Gender	N	Mean	SD
1	Male	60	0.049	0.059
	Female	40	0.040	0.043
2	Male	38	0.044	0.048
	Female	62	0.029	0.057
3	Male	36	0.084	0.065
	Female	64	0.077	0.082

1: Grade 7th; 2: Grade 8th; Grade 3: 9th

Table 15 depicts the results of the two-way ANOVA on metacognition. The results show that there is no significant effect of the student's age group ($F_{(2, 294)}$ =1.363, p>0.05) or of the student's gender ($F_{(1,294)}$ = 1.878, p>0.05) on the change in the values of metacognition. Moreover, the table shows that there is no effect of the interaction between gender and age group ($F_{(2, 294)}$ = 0.102, p>0.05). The inference is that the student's gender and age group cannot significantly explain the change in metacognition.

Table 15.

Metacognition: two-way ANOVA

Cases	Sum of Squares	df	Mean Square	F	p	η^2
Age group	0.103	2	0.051	1.363	0.110	0.083
Gender	0.007	1	0.007	1.878	0.172	0.006
Age group ✻ gender	0.008	2	0.004	0.102	0.903	0.006
Residuals	1.131	294	0.004			

Note. Type III Sum of Squares

Table 16 describes the number of male and female students in each age group, and the means and SDs of the degree of change in the variable *self-management*.

Table 16.

Self-management: degrees of change.

Age group	Gender	N	Mean	SD
1	Male	60	0.099	0.110
	Female	40	0.077	0.090
2	Male	38	0.068	0.063
	Female	62	0.051	0.088
3	Male	36	0.079	0.093
	Female	64	0.073	0.098

1: Grade 7th; 2: Grade 8th; Grade 3: 9th

Table 17 presents the results of the two-way ANOVA on self-management. It is clear that there is no significant effect of the student's age group ($F_{(2, 294)} = 2.25$, $p > 0.05$) or of the student's gender ($F_{(1, 294)} = 1.79$, $p > 0.05$) on the change in the values of self-management. Furthermore, the results show that there is no effect of the interaction between gender and age group ($F_{(2, 294)} = 0.18$, $p > 0.05$), meaning that the student's age group and gender cannot significantly explain the change in the values of self-management.

Table 17.

Self-management: two-way ANOVA

Cases	Sum of Squares	df	Mean Square	F	p	η^2
Age group	0.040	2	0.020	2.257	0.106	0.015
Gender	0.016	1	0.016	1.793	0.182	0.006
Age group ✻ gender	0.003	2	0.002	0.188	0.828	0.001
Residuals	2.573	294	0.009			

Note. Type III Sum of Squares

Table 18 illustrates the number of male and female students in each age group, and the means and SDs of the degree of change in the variable *self-regulation*.

Table 18.

Self-regulation: degrees of change

Age group	Gender	N	Mean	SD
1	Male	60	0.036	0.106
	Female	40	0.032	0.108
2	Male	38	0.020	0.086
	Female	62	0.010	0.097
3	Male	36	0.006	0.102
	Female	64	0.021	0.098

1: Grade 7th; 2: Grade 8th; Grade 3: 9th

Table 19 presents the results of the two-way ANOVA on self-regulation. The findings show that there is no significant effect of the student's age group ($F_{(2, 294)} = 1.217$, $p > 0.05$) or of the student's gender ($F_{(1, 294)} = 0.003$, $p > 0.05$) on the change in the values of self-regulation. Additionally, the table shows that there is no effect of the interaction between gender and age group ($F_{(2, 294)} = 0.403$, $p > 0.05$). The conclusion is that the student's gender and age group cannot significantly explain the change in self-regulation.

Table 19.

Self-regulation: two-way ANOVA

Cases	Sum of Squares	df	Mean Square	F	p	η^2
Age group	0.024	2	0.012	1.217	0.298	0.008
Gender	0.001	1	0.001	0.003	1.000	0.001
Age group ✻ gender	0.008	2	0.004	0.403	0.669	0.003
Residuals	2.939	294	0.010			

Note. Type III Sum of Squares

5.2 THE EFFECT OF COACHING ON METACOGNITION

This section describes the analysis results of the items in the questionnaire that measured the metacognition variable. The results of the metacognition questionnaire items before the intervention in both groups (experimental group and control group) are shown in Table 20. The total mean of metacognition in the two groups is above average (M=3.23, SD= 1.01); namely, the participants perceive themselves as having above average metacognition. The distribution of the respondents' answers to the various items was symmetrical (skewness between -0.13 and 0.13), the answers were within the range of about one standard deviation, and the kurtosis was between -0.50 and 0.39.

Table 20.

Metacognition before the intervention (N=600)

Item	Item #	Mean	SD	Skewness	Kurtosis
Metacognition (total)		3.23	1.01	0.07	0.15
I know how well I have done as soon as I finish the exam.	61	3.28	1.09	0.02	-0.02
I set specific goals before I start.	62	3.26	1.51	0.08	-0.05
I try to translate new information into my own words.	93	3.35	0.97	0.03	0.02
I ask myself if what I'm reading is related to things I already know.	95	3.23	1.01	-0.12	-0.50
I re-assess my assumptions when I get confused.	98	3.36	1.02	-0.13	0.04
I organize my time so that I can achieve my goals better.	99	3.30	1.02	0.13	0.39
I focus on general meaning rather than specific details.	102	3.19	1.01	0.02	0.03

Table 21 presents the results for metacognition by group (experimental group and control group) before the intervention, as well as the differences between the two

groups on each item. The findings indicate that the total scores for metacognition were similar for both groups: control group (M=3.21, SD=1.24) and experimental group (M=3.26, SD=1.12). Also, there seem to be small differences between the two groups on the scores for the individual items.

Table 21.

Metacognition by group before the intervention

		Control group (N=300)		Experimental group (N=300)		d[1]
Item	**Item #**	**Mean**	**SD**	**Mean**	**SD**	
Metacognition (total)		3.21	1.24	3.26	1.12	0.05
I know how well I have done as soon as I finish the exam.	61	3.29	1.22	3.42	0.99	0.13
I set specific goals before I start.	62	3.29	1.39	3.44	1.13	0.15
I try to translate new information into my own words.	93	3.35	1.12	3.37	1.01	0.02
I ask myself if what I'm reading is related to things I already know.	95	3.21	1.24	3.26	1.12	0.05
I re-assess my assumptions when I get confused.	98	3.36	1.25	3.38	1.17	0.02
I organize my time so that I can achieve my goals better.	99	3.32	1.23	3.36	1.12	0.04
I focus on general meaning rather than specific details.	102	3.21	1.24	3.21	1.09	0.00

[1]The difference between the experimental group and the control group before the intervention.

Table 22 describes the means of the metacognition variable before and after the intervention, and by group. Before the intervention, the mean of metacognition was 3.26 in the experimental group and 3.21 in the control group. Following the intervention, the mean in the experimental group increased to 4.12, but the control group mean was slightly less than before the intervention.

Table 22.
Metacognition by group before and after the intervention

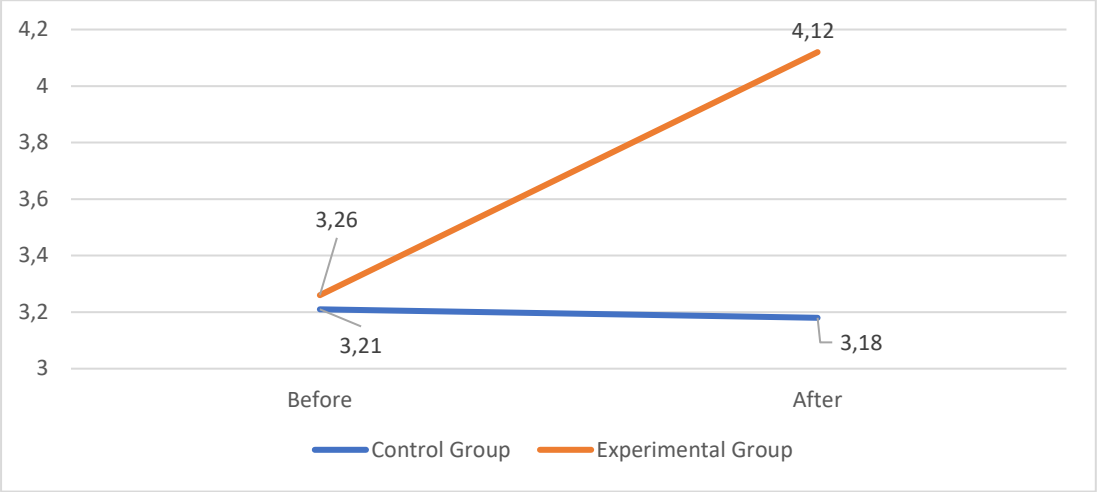
Time	Group	Mean	SD	N
Before	Control	3.21	0.34	300
	Experimental	3.26	0.34	300
After	Control	3.18	0.19	300
	Experimental	4.12	0.34	300

Figure 6 depicts the change in the means of the two groups between before and after the intervention, and shows that the mean score before the intervention is almost

equal for both groups; however, whereas the mean increased significantly in the experimental group after the intervention, the mean in the control group decreased slightly.

Figure 6.

Metacognition by group before and after the intervention



To examine the fourth research hypothesis (H4) – that coaching affects the participants' metacognition – repeated measures analysis of variance was employed. As can be seen in Table 23, there was a significant effect for the interaction between time (before and after the intervention) and group (experimental group or control group) ($F_{(1,299)} = 1491.20$, $p<0.001$). Furthermore, Table 23 shows that there was a significant effect on self-management of the time of measurement (before and after the intervention) ($F_{(1,299)} = 377.36$, $p<0.001$), and of the participant's group ($F_{(1,299)} = 1885.87$, $p<0.001$).

Table 23.

Effect of coaching on metacognition

Cases	Sum of Squares	df	Mean Square	F	p	η^2	η^2_p
Time	52.417	1.00	52.41	377.36	< .001	0.21	0.55
Residuals	41.532	299	0.14				
Group	73.725	1.00	73.72	1885.87	< .001	0.29	0.86
Residuals	11.689	299	0.04				
Time ✻ Group	58.751	1.00	58.75	1491.20	< .001	0.23	0.83
Residuals	11.780	299	0.04				

Note: Type III Sum of Squares

Tukey Post-hoc tests were employed to assess the source of the differences (Table 24). No significant difference was found between the metacognition mean of the two groups before the intervention (t= 1.29, p>0.05), or in the control group between the two measurements (before and after) (t= 1.00, p>0.05). However, a significant difference was found in the metacognition mean of the experimental group between the two times (t=37.51, p<0.001); that is, the mean of the experimental group increased significantly. The conclusion is that the coaching intervention had a positive effect on the participants' metacognition perception. Hence, Hypothesis 4 was corroborated.

Table 24.

Metacognition post-hoc tests

		Mean Difference	SE	t	p bonf
Before, EG[1]	After, EG	-0.86	0.03	-35.29	< .001***
	Before, CG	0.05	0.02	1.29	0.08
	After, CG	0.08	0.02	3.19	0.009**
After, EG[1]	Before, CG	0.92	0.02	37.51	< .001***
	After, CG	0.94	0.02	58.00	< .001***
Before, CG[1]	After, CG	0.03	0.02	1.00	1.000

[1]EG = experimental group; CG = control group; ** p < .01, *** p< .001

5.3 The effect of coaching on self-management

This chapter describes the analysis results of the items in the questionnaire that related to the self-management variable. The results of self-management before the intervention in both groups (experimental group and control group) are shown in Table 25. We can see that the total mean of self-management in both groups is 2.89 (SD=1.19). That is to say, the participants perceived their level of self-management as about average. Also, Table 19 shows that the distribution of the respondents' answers to the various items was symmetrical (skewness between 0.47 and 0.78), the answers were within the range of about one SD, and the kurtosis was between -0.90 and 0.68.

Table 25.

Self-management before the intervention (N=600)

Item	Item #	Mean	SD	Skewness	Kurtosis
Self-management (total)		2.89	1.19	0.39	-0.68
When I have a boring school assignment, I try to find interest in it, and think (while doing it) about what I will gain from it.	1	2.75	0.93	0.46	-0.03
When I have to do something that scares me, I try to imagine beforehand how I will cope with the fear while I do it.	2	2.79	1.03	0.15	-0.63
I often change my ways of thinking, and that way I can also change my feelings about certain things.	3	2.89	1.01	0.11	-0.48
When I feel depressed, I try to think about things that gave me pleasure in the past.	4	2.98	0.98	0.06	-0.49
When I'm troubled about a personal problem, I try to solve it methodically and systematically.	5	2.99	1.03	-0.04	-0.60
When I have to make a hard decision, I don't postpone the decision even if I don't know all the facts.	6	1.00	1.10	-0.39	-0.50
When I find it hard to concentrate on reading, I look for ways to increase my concentration.	7	2.90	1.07	0.21	-0.90
When I plan to study, I remove anything that isn't relevant to my studies.	8	2.57	1.07	0.25	-0.55
When I try to lose a bad habit, I first try to find the reasons for that habit.	9	2.59	1.07	0.34	-0.29
When I'm bothered by an unpleasant thought, I try to think nicer thoughts.	10	2.87	1.04	0.16	-0.70
When I'm in a bad mood, I try to behave as if I'm in a good mood, and that's how I get over my bad mood.	11	2.60	1.06	0.20	-0.51
When I feel depressed, I try to occupy myself with things that make me happy.	12	2.85	1.11	-0.08	-0.55
I usually postpone unpleasant things to tomorrow, even if I could do them today.	13	1.00	1.13	-0.47	-0.47
When I find it hard to sit down to do something, I look for ways that will help me do it.	14	2.87	1.05	-0.09	-0.40
I prefer first to finish school assignments that I have to do, before I do things that I like to do.	15	3.19	1.03	0.16	-0.57
When I feel pain in a certain part of my body, I try not to think about that part.	16	3.96	1.1	-0.04	-0.58
I admire myself when I manage to change an unwanted habit.	17	3.97	1.18	0.21	-0.82
When I feel bad, I sometimes tell myself: "It's not the end of the world, I can handle the situation".	18	2.65	1.16	0.11	-0.77
When I feel that I'm going to explode, I say to myself: "Stop and think before you act".	19	2.60	1.1	-0.06	0.68

Item	Item #	Mean	SD	Skewness	Kurtosis
When I have to make an important decision, I don't decide immediately but first find out all the options.	20	2.65	1.12	-0.10	-0.66
Usually, I do things that I like first, even if I have to do things that are urgent but less enjoyable.	21	2.58	1.17	-0.11	-0.76
When I know I'm late for an important meeting, I tell myself to calm down, and that it's no use to get stressed.	22	2.67	1.14	0.10	-0.82
When I feel pain in my body, I try not to think about the pain.	23	2.88	1.19	0.19	0.76
When I have a few jobs to do, I make myself a detailed work plan.	24	2.63	1.12	0.45	-0.85
When I find it hard to make do with the money I get, I write down what I spend it on, so I can plan my expenses better.	25	2.56	1.10	0.78	-0.74
If I find it hard to concentrate on a certain school assignment, I divide the assignment into smaller parts.	26	2.64	1.16	0.66	-0.79

Table 26 presents the means and standard deviations of the variable self-management of both groups (experiment and control) before the intervention, as well as the difference between the mean of the experimental group and the mean of the control group. The total mean of self-management before the intervention in the control group was 2.85 (SD=1.06), and 2.93 (SD=0.98) in the experimental group. The difference between the two groups was 0.08, and the differences between the individual items were around 0.

Table 26.

Self-management by group before the intervention (N=600)

		Control group (N=300)		Experimental group (N=300)		d[1]
Item	**Item #**	**Mean**	**SD**	**Mean**	**SD**	
Self-management (total)		2.85	1.06	2.93	0.98	0.08
When I have a boring school assignment, I try to find interest in it, and think (while doing it) about what I will gain from it.	1	2.76	0.85	2.86	0.81	-0.04
When I have to do something that scares me, I try to imagine beforehand how I will cope with the fear while I do it.	2	2.80	0.98	2.93	0.90	0.13
I often change my ways of thinking, and that way I can also change my feelings about certain things.	3	2.86	1.07	2.90	0.98	0.04
When I feel depressed, I try to think about things that gave me pleasure in the past.	4	2.98	1.07	3.01	0.98	0.03
When I'm troubled about a personal problem, I try to solve it methodically and systematically.	5	2.98	1.10	3.02	0.97	0.04
When I have to make a hard decision, I don't postpone the decision even if I don't know all the facts.	6	4.01	0.88	3.97	0.86	0.04
When I find it hard to concentrate on reading, I look for ways to increase my concentration.	7	2.91	1.02	2.98	0.47	0.07
When I plan to study, I remove anything that isn't relevant to my studies.	8	2.67	1.03	2.67	1.03	0.00
When I try to lose a bad habit, I first try to find the reasons for that habit.	9	2.60	0.87	2.59	0.78	-0.01
When I'm bothered by an unpleasant thought, I try to think nicer thoughts.	10	2.87	0.96	2.95	0.89	0.08
When I'm in a bad mood, I try to behave as if I'm in a good mood, and that's how I get over my bad mood.	11	2.61	1.05	2.73	0.94	0.12
When I feel depressed, I try to occupy myself with things that make me happy.	12	2.85	1.02	2.93	1.14	0.08
I usually postpone unpleasant things to tomorrow, even if I could do them today.	13	1.00	0.82	0.91	0.83	-0.09
When I find it hard to sit down to do something, I look for ways that will help me do it.	14	2.96	1.03	2.86	0.83	-0.10
I prefer first to finish school assignments that I have to do, before I do things that I like to do.	15	2.87	0.96	2.89	0.82	0.02

		Control group (N=300)		Experimental group (N=300)		d[1]
Item	**Item #**	**Mean**	**SD**	**Mean**	**SD**	
When I feel pain in a certain part of my body, I try not to think about that part.	16	2.74	1.05	2.87	1.05	0.13
I admire myself when I manage to change an unwanted habit.	17	2.72	1.14	2.87	1.08	0.15
When I feel bad, I sometimes tell myself: "It's not the end of the world, I can handle the situation".	18	2.74	1.05	2.76	1.16	0.02
When I feel that I'm going to explode, I say to myself: "Stop and think before you act".	19	2.96	1.24	3.03	1.05	0.07
When I have to make an important decision, I don't decide immediately but first find out all the options.	20	2.96	1.11	3.02	1.11	0.06
Usually, I do things that I like first, even if I have to do things that are urgent but less enjoyable.	21	2.68	1.12	2.68	1.12	0.00
When I know I'm late for an important meeting, I tell myself to calm down, and that it's no use to get stressed.	22	2.68	1.23	2.75	1.16	0.13
When I feel pain in my body, I try not to think about the pain.	23	2.33	1.07	2.38	1.05	0.05
When I have a few jobs to do, I make myself a detailed work plan.	24	2.65	1.23	2.73	1.16	0.08
When I find it hard to make do with the money I get, I write down what I spend it on, so I can plan my expenses better.	25	2.56	1.35	2.71	1.02	0.15
If I find it hard to concentrate on a certain school assignment, I divide the assignment into smaller parts.	26	2.64	1.28	2.64	1.28	0.00

[1]The difference between the experimental group and the control group before the intervention.

Table 27 describes the means of the self-management variable before and after the intervention, and by group. Before the intervention, the mean of self-management was 2.93 in the experimental group and 2.85 in the control group. Following the intervention, the mean in the experimental group increased to 3.76, but the control group mean was slightly less than before the intervention.

Table 27.

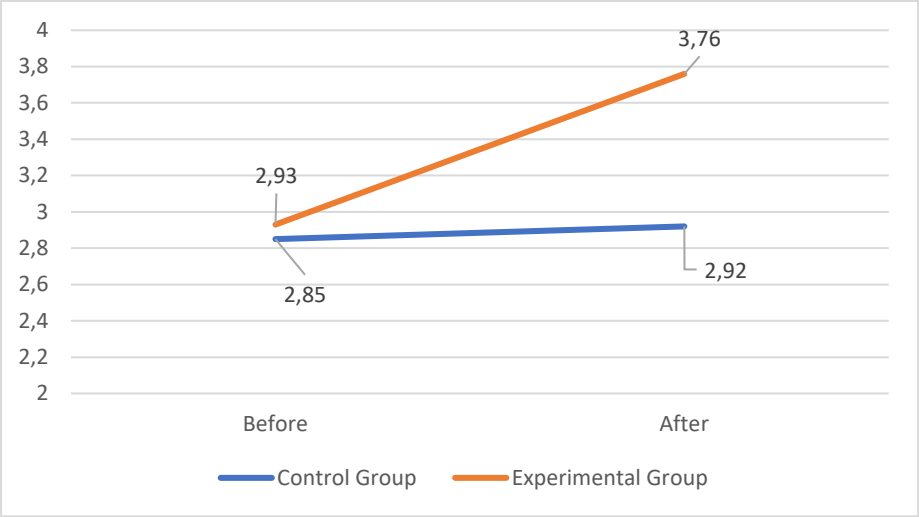
Self-management by group before and after the intervention

Time	Group	Mean	SD	N
Before	Control	2.85	0.29	300
	Experimental	2.93	0.29	300
After	Control	2.92	0.19	300
	Experimental	3.76	0.37	300

Figure 7 depicts the change in the self-management means of the two groups between before and after the intervention.

Figure 7.

Self-management by group before and after the intervention



To examine the fifth research hypothesis (H5) – that coaching affects the participants' level of self-management – repeated measures analysis of variance was employed. As can be seen in Table 28, there was a significant effect for the interaction between time (before and after the intervention) and group (experimental group or control group) ($F_{(1, 299)} = 1075.53$, $P<0.001$). Furthermore, Table 16 shows that there was a significant effect on self-management of the time of measurement (before and after the intervention) ($F_{(1, 299)} =492.55$, $p<0.001$), and of the participant's group ($F_{(1, 299)} = 1691.88$, $p<0.001$).

Table 28.

Effect of coaching on self-management

Cases	Sum of Squares	df	Mean Square	F	p	η^2	η^2_p
Time	60.79	1.00	60.79	492.55	< .001	0.26	0.62
Residuals	36.90	299	0.12				
Group	63.71	1.00	63.71	1691.88	< .001	0.27	0.85
Residuals	11.25	299	0.038				
Time ✻ Group	44.79	1.00	44.79	1075.53	< .001	0.19	0.78
Residuals	12.45	299	0.04				

Tukey post-hoc tests were employed to assess the source of the differences (Table 29). A significant difference was found in the self-management mean of the experimental group between before and after the intervention (t=-35.66, p<0.001). However, no significant difference was found in the self-management mean of the control group between the two times (t= -1.31, p>0.05). The conclusion is that the coaching intervention had a positive effect on the participants' self-management perception. Hypothesis 5 was corroborated.

Table 29.

Self-management post-hoc tests

		Mean Difference	SE	t	p bonf
Before, EG[1]	After, EG	-0.82	0.02	-35.66	< .001***
	Before, CG	0.07	0.02	4.57	< .001***
	After, CG	0.01	0.02	0.46	1.000
After, EG[1]	Before, CG	0.91	0.02	39.31	< .001***
	After, CG	0.85	0.02	52.11	< .001***
Before, CG[1]	After, CG	-0.06	0.02	-1.31	.071

[1]EG = experimental group; CG = control group; *** p< .001

5.4 The effect of coaching on self-regulation

This chapter describes the analysis results of the items in the questionnaire that related to the self-regulation variable. The results of self-regulation before the intervention in both groups (experimental group and control group) are shown in Table 30. We can see that the total mean of self-regulation in the two groups is above average (M=2.89, SD= 0.97); namely, the participants perceive themselves as having above average self-regulation. Also, item #38 ("I never know how many things I have to do") got the highest score (M=4.04, SD= 1.02). The distribution of the respondents' answers to the various items was symmetrical (skewness between -0.48 and 0.44), the answers were within the range of about one standard deviation, and the kurtosis was between -0.90 and 0.06.

Table 30.

Self-regulation before the intervention (N=600)

Item	Item #	Mean	SD	Skewness	Kurtosis
Self-regulation (total)		2.89	0.97	0.18	-0.06
When I'm hungry and can't eat, I try not to think about food, or try to imagine that my stomach is full.	27	3.07	1.01	0.06	-0.68
When I'm sad, I can start doing something that makes me feel better.	28	2.43	1.05	0.46	-0.34
When I'm bored, I become agitated and can't sit still.	29	1.45	1.07	-0.30	-0.60
When I fight with someone, I can still behave normally with others.	30	2.90	1.09	-0.05	-0.70
I can keep track of many things around me, even when I'm stressed.	31	2.67	1.07	0.20	-0.47
I can start a new task even if I'm tired.	32	3.96	0.95	-0.44	-0.67
Small problems side-track me from my long-term plans.	33	2.00	1.20	-0.02	-0.90
When I do something really enjoyable, I forget about other things I have to do.	34	1.81	1.08	-1.01	-0.68
When a lesson bores me, I find it hard to listen to the teacher.	35	2.08	1.08	-0.20	-0.75
After someone disturbs or distracts me, I can easily continue working from where I stopped.	36	3.98	0.91	-0.47	-0.56
When a lot of things happen around me, I find it hard to concentrate on what I'm doing.	37	0.96	0.82	-0.37	-0.81
I never know how many things I have to do.	38	4.04	1.02	0.01	-0.57
It's hard to plan how to deal with a big project or big problem, especially when I'm stressed.	39	2.84	0.92	-0.33	-0.52
I know how to calm myself when I'm excited or upset.	40	3.14	0.78	-0.39	-0.39
If my plan goes wrong, I change my behavior in order to achieve my goals in spite of it.	41	3.19	0.87	-0.29	-0.12
I know how to make myself study, even when my friends invite me out.	42	3.96	0.85	-0.32	-0.77
I lose control when things don't go the way I want them to.	43	1.03	0.94	0.04	-0.66
If I really want something, I have to have it immediately.	44	2.35	0.89	0.29	-0.08
When I have a serious difference of opinion with someone, I can still talk to them calmly without losing control.	45	2.60	0.88	0.19	-0.06
I can keep concentrating on a task, even if it's boring.	46	2.57	1.03	0.19	-0.54
When I'm furious, I can stop myself from acting out (like slamming a door or throwing things).	47	2.85	1.05	0.21	-0.33
If I do something that I know is wrong, I act carefully.	48	2.37	0.88	0.23	-0.36

Item	Item #	Mean	SD	Skewness	Kurtosis
I am usually aware of my feelings before they burst out.	49	2.98	1.09	-0.27	-0.64
In class, I can concentrate on the lesson, even if my friends are talking around me.	50	3.46	0.85	-0.15	-0.18
When I'm excited about achieving a goal (for instance, getting a driver's license), it's easy for me to make an effort for that goal.	51	3.48	0.83	-0.37	0.06
I can stick to my plans and goals, even when it's difficult.	52	3.57	1.05	-0.48	-0.32
I can persevere and work on a project, even when it's something big.	53	3.43	1.03	-0.33	-0.38
I can restrain myself from doing something that is forbidden.	54	3.42	0.95	-0.32	-0.41

Table 31 presents the results for self-regulation by group (experimental group and control group) before the intervention. The findings indicate that the total score for self-regulation was identical for both groups (M=2.89). Also, there seem to be very few differences between the two groups on the scores for the individual items.

Table 31.

Self-regulation by group before the intervention

		Control group (N=300)		Experimental group (N=300)	
Item	Item #	Mean	SD	Mean	SD
Self-regulation (total)		2.89	1.07	2.89	0.87
When I'm hungry and can't eat, I try not to think about food, or try to imagine that my stomach is full.	27	2.92	1.29	2.92	0.98
When I'm sad, I can start doing something that makes me feel better.	28	3.56	1.21	3.56	0.87
When I'm bored, I become agitated and can't sit still.	29	2.45	1.23	2.44	0.89
When I fight with someone, I can still behave normally with others.	30	2.90	1.31	2.90	0.82
I can keep track of many things around me, even when I'm stressed.	31	2.67	1.31	2.69	0.73
I can start a new task even if I'm tired.	32	4.03	0.97	3.90	0.92
Small problems sidetrack me from my long-term plans.	33	2.96	1.42	3.03	0.93
When I do something really enjoyable, I forget about other things I have to do.	34	3.27	0.91	3.10	1.23
When a lesson bores me, I find it hard to listen to the teacher.	35	2.92	1.25	2.91	0.80

		Control group (N=300)		Experimental group (N=300)	
Item	Item #	Mean	SD	Mean	SD
After someone disturbs or distracts me, I can easily continue working from where I stopped.	36	1.00	0.95	1.05	0.87
When a lot of things happen around me, I find it hard to concentrate on what I'm doing.	37	0.95	0.97	0.97	0.83
I never know how many things I have to do.	38	4.03	0.83	4.05	0.80
It's hard to plan how to deal with a big project or big problem, especially when I'm stressed.	39	2.84	0.84	2.84	0.91
I know how to calm myself when I'm excited or upset.	40	3.15	0.94	3.13	0.90
If my plan goes wrong, I change my behavior in order to achieve my goals in spite of it.	41	3.19	0.80	3.19	0.77
I know how to make myself study, even when my friends invite me out.	42	4.00	089	3.91	0.85
I lose control when things don't go the way I want them to.	43	1.00	0.86	1.05	0.84
If I really want something, I have to have it immediately.	44	2.60	1.00	2.67	0.89
When I have a serious difference of opinion with someone, I can still talk to them calmly without losing control.	45	2.55	1.22	2.59	0.82
I can keep concentrating on a task, even if it's boring.	46	2.84	1.12	2.84	0.91
When I'm furious, I can stop myself from acting out (like slamming a door or throwing things).	47	3.15	0.94	3.13	0.90
If I do something that I know is wrong, I act carefully.	48	2.84	1.09	2.86	1.00
I am usually aware of my feelings before they burst out.	49	2.38	1.05	2.36	0.67
In class, I can concentrate on the lesson, even if my friends are talking around me.	50	2.97	1.17	2.99	1.01
When I'm excited about achieving a goal (for instance, getting a driver's license), it's easy for me to make an effort for that goal.	51	3.48	1.00	3.44	0.96
I can stick to my plans and goals, even when it's difficult.	52	3.48	0.97	3.47	0.66
I can persevere and work on a project, even when it's something big.	53	3.57	1.23	3.58	0.85
I can restrain myself from doing something that is forbidden.	54	3.42	1.25	3.44	0.73

Table 32 shows a comparison of the means and standard deviations of self-regulation for both groups before and after the intervention. Before the intervention, the mean score is equal for both groups (M=2.89). However, after the intervention, the

mean score in the experimental group is higher (M=3.49) than in the control group (M=3.20).

Table 32.

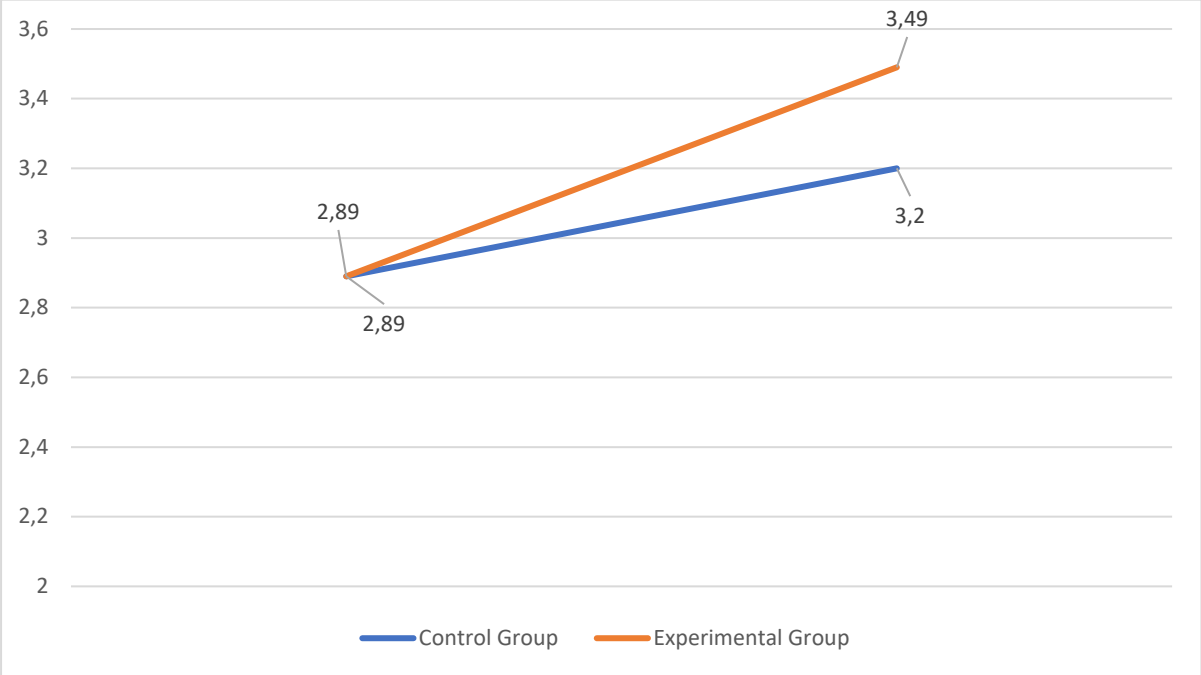
Self-regulation by group before and after the intervention

Time	Group	Mean	SD	N
Before	Control	2.89	0.243	300
	Experimental	2.89	0.219	300
After	Control	3.20	0.219	300
	Experimental	3.49	0.272	300

Additional support for this difference can be seen in Figure 8. The results show that the self-regulation mean in both groups before the intervention was almost equal, but the mean in the experimental group increased significantly following the intervention – in comparison to both the same group prior to the intervention and the control group after the intervention. Also, the mean score of the control group after the intervention decreased slightly in comparison to before the intervention.

Figure 8.

Self-regulation by group before and after the intervention



To examine the sixth research hypothesis (H6) – that coaching affects the participants' level of self-regulation – repeated measures analysis of variance was

employed. As can be seen in Table 33, there was a significant effect for the interaction between time (before and after the intervention) and group (experimental group or control group) ($F_{(1,299)} = 5.14$, $P<0.001$). Furthermore, Table 27 shows that there was a significant effect on self-regulation for the time of measurement (before and after the intervention) ($F_{(1,299)} = 49.87$, $p<0.001$), and for the participant's group ($F_{(1, 299)} = 497.13$, $p<0.001$).

Table 33.

Effect of coaching on self-regulation

Cases	Sum of Squares	df	Mean Square	F	p	η^2	η^2_p
Time	4.38	1.00	4.38	49.87***	< .001	0.09	0.143
Residuals	26.25	299	0.09				
Group	6.94	1.00	6.94	497.13***	< .001	0.14	0.624
Residuals	4.17	299	0.01				
Time ✻ Group	5.14	1.00	5.14	382.75***	< .001	0.10	0.561
Residuals	4.02	299	0.01				

p***< .001

To examine the source of the differences, Tukey *post-hoc* tests were used, as presented in Table 34. The results show that the mean of the self-regulation variable before the intervention in the experimental group was significantly lower in comparison to the mean after the intervention ($t=-13.70$, $p<0.001$), and that the mean of the experimental group after the intervention was significantly higher than the mean of the control group after the intervention ($t=29.62$, $p<0.001$). In addition, no significant difference was found in the mean of self-regulation in the control group before and after the intervention ($t=0.55$, $p>0.05$). Based on these findings, it can be concluded that coaching has a positive effect on the participants' level of self-regulation. Hence, Hypothesis 6 was corroborated.

Table 34.

Self-regulation post-hoc tests

		Mean Difference	SE	t	p_{bonf}
Before, EG[1]	After, EG	-0.252	0.02	-13.70	< .001***
	Before, CG	0.021	0.01	2.21	0.164
	After, CG	0.031	0.02	1.70	0.542
After, EG[1]	Before, CG	0.273	0.02	14.81	< .001***
	After, CG	0.283	0.01	29.62	< .001***
Before, CG[1]	After, CG	0.010	0.02	0.55	1.000

[1]EG = experimental group; CG = control group; *** p< .001

5.5 Summary of findings

This study examined the effect of the coaching intervention on three dependent variables: self-regulation, self-management, and metacognition. The method that was used was the experiment method – the variables were examined at two points in time, before and after the intervention, and in two groups.

The findings show that no significant differences were found in the demographics of the two groups, and the means of the three dependent variables were very similar between the groups before the intervention. However, following the intervention, a significant positive difference was found between the means of each of the variables between before and after. In the experimental group, the means of all three variables – self-regulation, self-management, and metacognition – increased after the coaching intervention in comparison to before the intervention. In addition, the means of the three variables were significantly higher compared to the means of the two groups before the intervention. These findings indicate that coaching had a significant positive effect on the participants' self-regulation, self-management, and metacognition. The first three research hypotheses were not corroborated; however, the other three hypotheses were corroborated.

SECTION VI. DISCUSSION OF THE RESULTS AND CONCLUSIONS

6.1 DISCUSSION OF THE RESULTS

The main objective of this study was to investigate the effect of implementing coaching tools among educational staff on middle-school students' metacognitive awareness, self-management and self-regulation skills.

There is a conspicuous need of a theoretical framework to which educational coaching may be aligned (Field et al., 2013; Grant, 2014; Robinson, 2015; Theeboom et al., 2014). This work seeks to contribute to these research efforts by empirically examining an established educational coaching intervention at a middle school. We empirically assessed the effects of coaching on metacognitive factors, a primary component of SRL associated with student growth and academic success. Metacognition can be fostered through interactions with teachers and peers, as students learn to question, reconstruct, and control their cognitive processes and strategies through collaboration with and observation of others (De Backer et al., 2012; Hurme, Palonen, & Järvelä, 2006). The opportunity to learn from modelling and actively discussing and reflecting on one's skills creates a powerful learning environment that challenges students to judge, control, and manage their learning (De Backer et al., 2012; Hartman & Sternberg, 1992). Given these research outcomes and based on the main goal of the current study, we hypothesized that interactions with trained educational coaches would elicit similar gains in students' metacognitive awareness, as well as their self-management and self-regulation.

The relationship between socio-demographic variables and the students' metacognitive awareness, self-management skills and self-regulation skills

The first hypothesis (**H1**) examined the the relationship between fathers' education and the students' metacognitive skills, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive). This hypothesis was disproved. No effect was found of the father's level of education on the three dependent variables.

The second hypothesis (**H2**) examined the relationship between mothers' education and the students' metacognitive skills, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive).

This hypothesis was disproved. No effect was found of the mothers' level of education on the three dependent variables.

The third hypothesis (**H3**) examined the relationship between gender and age group and the students' metacognitive skills, self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events) and self-regulation capacity (emotional, behavioral, and cognitive). This hypothesis was disproved. No effect was found of the gender or age group on the three dependent variables.

The results of the examination of the first two hypotheses indicate that the differences between the means of the three dependent variables of the control and research groups were not affected by the students' backgrounds (parents' education). Additional findings, which were included in the third hypotheses, relate to the relationship between the students' gender and age group, and the three variables: metacognitive awareness, self-management and self-regulation skills. No effect was found between gender and age group, and the three dependent variables.

In conclusion, the **socio-demographic variables** (parents' education, gender and grade level) had no statistically significant impact on the students' meta-cognitive awareness, self-management, and self-regulation skills.

The relationship between coaching-based teaching strategies and the students' metacognitive awareness

The fourth hypothesis **(H4)** examined the relationship between teachers' use of coaching tools and metacognitive skills among young adolescents (ages 13-15). The findings corroborated the hypothesis. Specifically, a positive relationship was found between coaching-based teaching strategies and the students' improved metacognitive skills. That is, students who learned with coaching-based methods improved their metacognitive skills more than students who did not learn with these methods did.

The finding that there is a positive relationship between the use of coaching tools and improved metacognitive skills among students is in line with the research literature, which indicated that the teacher-coach helps the students to identify the factors that hinder their success, and helps them develop success strategies that eventually lead to better achievements. Furthermore, the use of coaching tools has a

positive effect on metacognitive skills and abilities. Namely, students are able to make better decisions through comprehensive consideration of all possible outcomes, and build the success strategy that best suits them (Foster, 2018).

In terms of instruction, meta-cognition is a key part of effective learning. It allows students to be aware of and regulate their thinking, control how decisions are made, and critique their learning. Training in meta-cognitive strategies increases the planning, monitoring and control processes of the thinking strategies they internalize, helps them to pay better attention to the thought processes as well as be aware of the task, and thus gather information about it and deal with it accordingly (Adler et al., 2017; Hart & Memnun, 2015; Schraw & Gutierrez, 2015).

Similarly, the research findings show that meta-cognitive teaching affects performance in different areas of knowledge. The activation of meta-cognitive thinking contributes to improving the understanding of learning contents. Knowledge of oneself as a learner, as well as knowledge of learning strategies and meta-cognitive processes, may promote learning planning as well as monitoring and controlling one's understanding of the learning materials (Zohar, 2016). In mathematics, for example, an improvement was found in mathematical knowledge and inference following metacognitive coaching (Schneider & Artelt, 2010), due to which students asked themselves meta-cognitive questions while solving math problems. Questions of this kind are related to understanding the nature of the problems, linking them to prior knowledge, and aiming at planning steps, solving them, and evaluating the results. Another study found the impact of a program that focuses on explicit and regular practice on understanding math even at young kindergarten ages (Mevarech et al., 2018). A recent study (Antonio & Prudent, 2022) showed similar findings in dealing with learning sciences such as biology, physics, or chemistry. Also, in these studies, students who received meta-cognitive support were more engaged in acts of thinking and self-examination, and showed better control and deeper understanding of the study material compared to groups who did not receive such support (Baten et al., 2017).

The teacher-coach helps the students develop metacognitive control processes by means of questions that inspire reflection, observation, and examination of the learning processes integrated in the teaching-learning processes. In addition, he encourages students to set targets and to follow their progress. Also, the teacher-coach

emphasizes the short-term action and result, while establishing clear goals for the long run. These goals lead to building a vision and designing an action plan, which produces outputs that can be assessed and measured (Ashkenazi, 2011; Foster, 2018; Katz, 2008; Pedagogy folder for Guide in Marom Schools, 2019; Zalkowitz & Goldstein, 2011).

Meta-cognition was found to have a positive effect both on reading level and reading comprehension for English speaking students, for students who have difficulty reading, and also for students learning English as a second language (Ahmadi et al., 2013; Soodla et al., 2017). Similar to meta-cognitive support in other learning areas, teachers explicitly taught thinking strategies, linking prior knowledge to new knowledge, monitoring comprehension through asking questions, dealing with problems while reading, and examining comprehension at the end of reading.

Curricula based on principles of the cognitive approach are an example of the perception that the teacher-coach is an intermediary between specific content and the learner. It is the teacher's job to impart to the student the content included in the program, or to teach him or her to use a certain strategy to solve problems. The teacher's personal engagement is not expressed in content or by defining functions that students should learn, but by creating a learner-friendly learning environment. That is to say, teachers are, in fact, mediators between the curriculum and the student. Teachers can work with individual students or with groups. In either case, they present to the learners the goals of the curriculum, its conceptual world, and the expectations defined for the students' achievements (Hess, 2019).

In summary, integration of the literature review and the present findings indicates that the use of coaching tools based on the principles of cognitive and behaviorist psychological theories improves students' cognitive abilities – from guided imagery and cognitive-behavioral problem-solving methods that help the student achieve goals and lower the barriers that make it difficult, through identifying, examining and changing limiting thoughts and beliefs ("I can't afford to make a mistake") or reducing counterproductive behaviors (e.g., not being able to make decisions), to learning to manage troublesome emotions (e.g., stress or anxiety).

The relationship between teachers' use of coaching tools and students' self-management skills

The fifth hypothesis (**H5)** examined the relationship between teachers' use of coaching tools and 13-15-year-old students' self-management skills (self-control, implementing problem-solving strategies, deferring gratification, and regulating internal events). The findings substantiated the hypothesis. This means that there is a positive relationship between coaching-based teaching methods and the students' self-management abilities. In other words, the participants in the experimental group improved their self-management skills more than the participants in the control group did.

The finding that there is a positive relationship between the use of coaching tools and improved self-management skills among the participants is in line with the research literature, which indicated that the teacher-coach helps students improve their self-management and self-regulation abilities, expressed mainly in their ability to take responsibility and ownership of their learning. It also has a strong effect on their behavior. Discipline problems decreased noticeably, and it made them more involved in learning. They were able to solve complex, challenging problems, were less hopeless when faced with difficulty, were able to learn in a deeper sense in a way that would match their adult life after school (District RSN, 2016; Pane et al., 2015; Ramdial-Budhai, 2018; Zalkowitz & Goldstein, 2011).

The findings of this study clearly indicate that teachers' use of coaching tools helps them guide and influence students throughout their personal and professional development process by providing the conditions, tools and skills necessary for optimal, intelligent and independent self-management in the ever-changing multicultural world, both individually and as a group. Such teachers have the talent to adapt to different learners, and convey the wisdom they need, not only during their studies period, but also in their adult lives (lifelong learning). In addition, educators who use coaching tools also provide students with the necessary know-how to critically and intelligently reach information accessible in the high-tech world. Learners receive the tools needed for independent work during life, self-management in times of uncertainty and change, independent learning, and teamwork. It is worth bearing in mind that this teacher-coach significantly emphasizes these abilities and tools, without

sacrificing his/her expertise in a certain discipline. In fact, emphasis should be placed not only on the knowledge itself but also on comprehension assimilation, as an opportunity to provide tools for independent learning skills that will serve the learner for further learning throughout life (Levi-Feldman, 2020).

This study also found that emotional coaching makes emotions more accessible, and allows them to be defined outside the 'mental' context: we feel our emotions in our body, and through them know how to recognize reality, adapt to the changes that occur in it, avoid dangers, and choose safe places. Emotional coaching is based on the existence of natural emotional skills, which allow us to adapt to reality, and respond to the stimuli of reality. Emotional skills allow us to create at any moment in our lives, a sense of safe place, the ability to manage emotions, be independent, set and achieve positive goals, feel and show concern for others, maintain positive relationships, and make responsible decisions (CASEL, 2012; Green, 2011; Kautz et al., 2014).

Furthermore, the findings showed that social and emotional learning relies on various theoretical frameworks, including the taxonomic five components of personality (John & De Fruyt, 2014), Positive Psychology, the Social-Emotional Learning Framework (CASEL, 2018); the KIPP Character Strengths framework (KIPP, 2018), and it competes with other approaches in developmental psychology. The skills associated with it have a number of characteristics: they are displayed in consistent patterns of thought, emotion, and behavior; they develop through formal and informal learning experiences; and they serve as important motivating aspects that also affect the individual's socio-economic status throughout life; for example, the ability to integrate into society, earn a living, and be independent (CASEL, 2012; Kautz et al., 2014). The many definitions of the concept of "social-emotional learning" skills (Greenberg & Abenavoli, 2017; Schonert-Reichl, 2017; Sperling, 2018), include two shared elements: first, human behavior that also includes the developing child. and second, a mapping of the emotional and social skills of children and adolescents with a practical aim of helping them develop.

The relationship between teachers' coaching strategies and the students' self-regulation capacity

The sixth hypothesis (**H6)** examined the relationship between teachers' coaching strategies and the students' (emotional, behavioral, and cognitive) self-

regulation capacity in the short and long run. The findings corroborated this hypothesis. That is, a positive relationship was found between coaching-based teaching strategies and students' self-regulation. Students in the experimental group (with coaching) improved their self-regulation capacity more than students in the control group (without coaching) did.

The findings regarding the positive relationship between coaching-based teaching strategies and students' self-regulation are in line with the literature, according to which both self-regulation and self-management processes are essential in intervention and training processes, and use shared internal resources. Both performances require an important investment of effort. Consequently, it is no surprise to find a depletion of self-capabilities after the effort of behavioral or emotional regulation (i.e., self-regulation) or exercising self-management skills. Imaging studies by Delazer et al. (2003) validated findings that management functions and self-regulation use the same resources. Studies also indicated the mutual relationship and interaction between management functions and sentimental states, and academic achievement. Therefore, it is important to appraise the use of personal resources (including areas of power) in planning intervention and training programs, in order to prevent erosion of one's own internal forces (Margalit, 2014) .

As mentioned, scholars (Brown, 2005; Shabbat-Simon, Yosef & Shavit, 2019) have pointed out that management functions refer to a wide range of brain functions, and cannot be represented by one single behavior. Managerial functions are also accountable, among other things, for concentration and resisting distractions, and are essential for planning and decision-making, finding and correcting mistakes, understanding dangerous or complex situations, overcoming negative habits, and fighting temptation. They also allow a person to develop self-control, the ability to self-regulate, and to reject immediate gratification for the benefit of long-term goals.

Furthermore, research has shown that learning rooted in the cognitive approach nurtures learners' self-regulation skills, and improves their problem-solving capabilities (Gidelewich, 2021). These learning principles are based on metacognitive questions to oneself – What? When? Why? How? – during the three stages of solution: planning, control, and assessment. These general questions are specifically targeted at the self-regulation stages, and help the learner to integrate all the available knowledge

during problem-solving, trough coming up with new ideas, creating connections and insights, finding effective strategies, and developing one's thinking capacity.

Similarly, the findings of this research indicate that using coaching tools makes learning effective. These tools allow students to be aware of their thinking and their ability to self-regulate, control their decision-making process, and criticize their own learning. The teacher-coach improves the planning, monitoring and control procedures of the thinking strategies that pupils internalize. It helps them pay better attention to their thinking system, as well as understand the task, in order to gather information about it and deal with it accordingly (Adler, Zion & Mevorech, 2015; Gutierrez & Schraw, 2015; Hart & Memnun, 2015).

Furthermore, the findings support the idea that the teacher-coach gets the students to improve their self-regulation and self-management skills, and this is mirrored in their ability to take responsibility and ownership for their own learning. Also, this affects the student's behavior. Discipline issues were found to be significantly reduced, making students more involved in their own learning, and able to solve complex and challenging problems. They do not give up when facing difficulties, and it helps them learn more in-depth, mastering the adjustment of adult life outside school (District RSN, 2016; Pane et al, 2015; Ramdial-Budhai, 2018; Zalkowitz & Goldstein, 2011).

Various studies (Grant, 2003; Grant & Cavanagh, 2011; Green, Oades & Grant, 2006; Green, Grant & Rynsaardt, 2020; Griffiths, 2005) deal with the advancement of skills and abilities with the help of coaching primarily among high school students. The present findings support that learning skills coaching reduced symptoms of stress, anxiety and depression, increased hope, quality of life and resilience, and promoted goals.

The findings of this study corroborate a number of studies conducted on learners' self-regulation. Al Hilali et al. (2020) argued that by virtue of being goal-oriented, controlled and reflective, the coaching process is a model for effective learning, and that it is important to include in the educational system the rationale of coaching as a model for effective learning. A study conducted in schools in England found that learning skills coaching contributed to improving students' test success (Passmore & Brown, 2009). A study of postgraduate nursing students found that

coaching enhanced learning thanks to the strong partnership formed between the student, the coach and the academic institution (Tee et al., 2009). Coaching has also been found to positively influence students by increasing their ability to set goals and their motivation to achieve them (Campbell & Gardner, 2005).

The present findings are also in line with Bandura's (1977) cognitive learning theory, according to which people learn from each other through observation, imitation and modeling. Also, people tend to perform tasks that they believe they can handle, and are less likely to take on tasks that they feel less competent to perform. People's beliefs about their ability in a given field affect how they choose the effort they invest, their perseverance, and their resistance to obstacles or failure. Therefore, self-efficacy contributes to the motivation to carry out achievements, and has the potential to cause change. This concept is related to the individual's belief in his strength to cope with a task in his daily life (Bandura, 1986). It should be noted that the principle of self-regulation expresses a person's capacity to adapt to circumstances in order to learn and develop, to learn from his or her interaction with the environment, strengthen himself, and focus behavior on the objectives he has set for himself. For example, developing self-efficacy requires belief and confidence in inner personal abilities. Self-efficacy arises from the talent to appreciate, organize and achieve the required actions to control different situations, and belief in one's potential to cultivate the motivation, cognitive and appropriate actions to control task requirements (Bandura, 1990).

6.2 CONCLUSIONS

Educational coaching represents an evolution in academic support services. A lack of definitional, theoretical, and empirical clarity likely increases confusion among education institutions practitioners, as well as potentially undermines the opportunity to expand theoretically grounded and evidence-based academic support services. The present study contributes to the growing empirical literature on educational coaching in education systems by situating educational coaching within theoretical frameworks, and assessing the effects of the intervention on students' metacognition, self-management and self-regulation. It suggests that educational coaching may be a promising and effective intervention for increasing students' metacognitive awareness. Based on the fact the students' metacognition, self-regulation and self-management become critical skills for future academic success, student support programs like

educational coaching may be increasingly important complements to classroom-based interventions.

Use of coaching-based learning strategies is meant to boost metacognitive capacities, self-management and self-regulations skills. Research has shown that coaching-based teaching makes a significant positive change to the 21st century school graduate.

The importance and relevance of this study to education is primarily its affinity to wide educational issues of coaching-based strategies that are grounded in varied educational approaches – behaviorist, cognitive, Adlerian, existentialist, constructivist, and humanistic. The teaching and learning methods described in this study address the 21st century school graduate's metacognitive and emotional-social abilities. In the metacognitive arena, the student identifies his or her individual learning style, asks questions, plans the learning process, evaluates the outcome, draws conclusions, and learns lessons. In the emotional-social arena, this method creates a learning environment that nurtures self-regulation and self-management skills. Importantly, coaching-based teaching does not depend on specific content or knowledge; that is, the student can adjust his or her perception to any discipline or field.

This study validates previous research that has shown that there is a connection between coaching and learning skills, and has found that coaching is related to increased perseverance and preservation (Bettinger & Baker, 2014), achieving goals (Losch et al., 2016), management functioning and self-regulation (Richman et al., 2014), learning strategies, self-evaluation and satisfaction with school (Prevatt & Yelland, 2015), and self-confidence and motivation (Bellman, Burgstahler, & Hinke, 2015). Each of these outcomes reflects cognitive, metacognitive or motivational concepts that are emphasized in the self-regulation theories. In other words, the coaching process is a model of effective learning by the very fact of being goal-oriented, controlled and reflexive. As such, the rationale of coaching as a learning strategy should undoubtedly be incorporated in the education system.

The **practical implications** of this study are that every teacher should be given the opportunity, as part of his or her sabbatical, to learn coaching. Coaching is a way of life that leads to unusual performance and achievements. This field deals with defining a desired future and how to accomplish it, through raising the coachee's level of

awareness, and developing his or her personal and professional skills for realizing goals. A coach is a person who creates a framework for people, which includes their commitment and enthusiasm, and allows them to achieve their goals and fulfill their dreams. The coach helps the coachee, listens to him or her, advises on a direction, and uses various coaching skills to help the coachee get where they want to go. In light of the recent economic crises in Israel and worldwide, it seems that the field of coaching is gaining momentum, and is expected to strengthen its position and become increasingly professional in the near future. At present, many families are finding it hard to survive in the economic climate in Israel today. More and more families, previously "middle class", are joining the cycle of poverty due to low salaries, high tax rates, and the cost of living. All these have increased these families' need to change their internal conduct, with the assistance of a professional, certified coach.

This study has a number of **limitations**, primarily concerned with the type of research. The first limitation is its representability. The research population consisted of adolescents from an Arab village in the north of Israel, medium and lower economic-social status. The village is a small Muslim village that does not represent other Arab populations such as Christians, Bedouins, Druze, city-dwelling Arabs, or others. Also, this research was based on self-reports by the participants about their attitudes to metacognitive, self-management and self-regulation capacities. Self-reporting is a subjective rather than an unbiased viewpoint. There could have been a degree of social desirability in the respondents' replies. Another limitation relates to how the data were collected. Since the research tool was a questionnaire, the respondents' degree of freedom was limited, and they had to answer one of the given replies (the answer scale). An additional limitation is the time constraint of the research. Data were gathered over one year. A lengthier investigation of the effectiveness of the intervention program, after it had ended, could examine the preservation of the improvement that had been achieved.

Regarding suggestions for **future research**, we can indicate that future research should continue to examine educational coaching practices as they gain prominence in school settings. Due to the promising results with regard to students' metacognitive awareness, self-management skills and self-regulation skills, future research should more directly examine the link between educational coaching and academic achievement as well as how the educational coaching practices may relate to other

components of metacognitive awareness, self-management skills and self-regulation skills such as metacognition flexibility, self-efficacy and motivation.

Future research should consider collecting longitudinal data on students' metacognition, self-management learning (SML) and SRL behavior change. educational coaching research would be bolstered by incorporating other data collection methodologies in addition to self-report measures, such as observation and think aloud protocols. These research methods could provide valuable information on how to enhance metacognitive, SML and other SRL skills in education systems and what supports may be needed to maintain change over time. Further, researchers should consider collecting data on various student outcomes such as academic achievement and retention to understand how increases in metacognitive awareness, Self-management learning and SRL through academic coaching impacts students' ability to learn, develop, and use their newly acquired skills to actively improve their situation. Researchers could also examine how educational coaching may be used in combination with other targeted interventions for skills development both internal and external to the classroom environment.

Also, future research could use a qualitative approach (as opposed to the quantitative method used in the present study), which often makes it easier to reach conclusions about causality. Semi-structured interviews could be conducted with both groups of students – with and without a teacher who had coaching training. However, although this type of research would better reveal the general effect of learning with a teacher-coach, it would make it harder to examine specific variables.

SECTION VII. REFERENCES

Acharyya, R. (2017). *Self-management Skills Every Manager Should have*. https://bit.ly/3d0DlTO

Abu al-Hija, F.N., Fresco, B., & Reichenberg, R. (2011). The process of specializing in teaching: An overview. In O. Schatz-Oppenheimer, D. Maskit, & S. Zilberstrom (Eds.), *To be a teacher: On the path of entry into teaching* (pp. 55-88). Tel Aviv: Mofet Institute.

Ackerman, D., & Perkins, D.N. (1989). Integrating thinking and learning sills across the curriculum. In H. Jacobs (Ed.), *Interdisciplinary curriculum: Design and implementation.* Alexandria, VA: Association for Supervision and Curriculum Development.

Adler, A. (1931/1998). *What life could mean to you*. Hazelden.

Adler, A. (2008). *The Meaning of our Lives*. (Translation: D. Guttman). Or Yehuda: Dvir Publishing.

Adler, I., Zion, M., & Mevarech, Z.R. (2017). Integrating meta-cognitive support in teaching research: how and why? *Intermediate Reading, 28-29*, 41-43. https://bit.ly/3ivmWtq

Adler, I., Zion, M., & Mevarech, Z.R. (2015). The effect of explicit environmentally oriented metacognitive guidance and peer collaboration on student's expressions of environmental literacy. *Journal of Research in Science Teaching, 53*(4), 620-663. https://doi.org/10.1002/tea.21272

Agolla, J.E., & Ongori, H. (2009). An assessment of academic stress among undergraduate students: The case of the University of Botswana. *Educational Research and Reviews, 4*(2), 63-70. http://hdl.handle.net/10311/837

Ahmadi, M.R., Ismail, H.N., & Abdullah, M.K.K. (2013). The importance of metacognitive reading strategy awareness in reading comprehension. *English Language Teaching*, *6*(10), 235-244. http://dx.doi.org/10.5539/elt.v6n10p235

Al Hilali, K.S., Al Mughairi, B.M., Kian, M.W., & Karim, A.M., (2020). Coaching and Mentoring Concepts and Practices in Development of Competencies: A Theoretical Perspective. *International Journal of Academic Research in*

Accounting, Finance and Management Sciences. 10 (1), 41-54. http://dx.doi.org/10.6007/IJARAFMS/v10-i1/6991

Allen, T. D., Eby, L. T., Poteet, M. L., Lentz, E., & Lima, L. (2004). Career benefits associated with mentoring for protégé: A meta-analysis. *Journal of Applied Psychology*, 89, 127-136. http://dx.doi.org/10.1037/0021-9010.89.1.127

Aloni, N. (2011). Humanistic education. In *Education and humanism* (pp. 35-46). SensePublishers. http://bit.ly/3Hcausm

Aloni, A., & Bialar, L. (2022). *Ogden Implementation of Inclusive Pedagogy in Teaching Science and Technology in Middle School*. National Teacher Center for Science and Technology in High School, Department of Science Teaching, Weizmann Institute & the Faculty of Education, Bar Ilan University.

Alsemgeest, L., Booysen, K., Bosch, A., Boshoft, S., Betha, S., & Cunninghum, P. (2017). *Introduction to Business Management: Fresh Perspective.* Pearson.

Altrichter, H., & Gstettner, P. (1993). Action research: A closed chapter in the history of German social science? *Educational Action Research*, *1*(3), 329-360. http://dx.doi.org/10.1080/0965079930010302

Alvernaz, A. (2019). Self-Management: How to Prioritize and Be More Productive. https://blog.trello.com/self-management

Al-Yagun, M., & Margalit, M. (2022). *Developmental intellectual disability: Theory, research, and applied implications.* Rotem Advertising and Productions.

Ananiadou, K., & Claro, M. (2009). 21st century skills and competences for new millennium learners in OECD countries. https://dx.doi.org/10.1787/218525261154

Anderson, J. D. (1993). Power, privilege, and public education: Reflections on savage inequalities. *Educational Theory*, *43*(1), 1-10. http://bit.ly/3UJ9sY3

Anderson, J.R. (2005). *Cognitive Psychology and its Implications (6th ed)*. Worth Publishers.

Antonio, R.P., & Prudente, M.S. (2022). Effectiveness of Metacognitive Instruction on Students' Science Learning Achievement: A Meta-Analysis. *International Journal on Studies in Education,* 4(1), 43-54. https://doi.org/10.46328/ijonse.50

Apatow, R. (1999). Socratic Dialogue. *Executive Excellence*, 16(5), 10-11.

APEC (2008). 2nd APEC Education Reform Symposium: *21st Century Competencies*. Xi'an, China: Asia-Pacific Economic Cooperation Human Resources Development Working Group.

Apergis-Schoute, A. M., Schiller, D., LeDoux, J. E., & Phelps, E. A. (2014). Extinction resistant changes in the human auditory association cortex following threat learning. *Neurobiology of Learning and Memory*, *113*, 109-114. http://dx.doi.org/10.1016/j.nlm.2014.01.016

Apple, M. W. (2014). *Official knowledge: Democratic education in a conservative age*. Routledge.

Ashkenazi, E. (2011). *Coaching in the Educational System from Counseling to Coaching Essence, Relevance and Necessity*. The magazine of the Israeli Association for Organizational Development. IPPA Journal, 1-7. http://bit.ly/3O93YnG

Atkinson, A., Watling, C. J., & Brand, P. L. (2021). Feedback and coaching. *European Journal of Pediatrics, 181*(2), 1-6. https://bit.ly/3U8tqfm

Baddeley, A. D., & Logie, R. H. (1999). Working memory: The multiple-component model. In A. Miyake & P. Shah (Eds.), *Models of working memory: Mechanisms of active maintenance and executive control* (pp. 28–61). Cambridge University Press. https://psycnet.apa.org/doi/10.1017/CBO9781139174909.005

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*(2), 122-147. https://psycnet.apa.org/doi/10.1037/0003-066X.37.2.122

Bandura, A. (1986). *Social foundations of thought and action*. Prentice-Hall, Inc.

Bandura, A. (1990). Selective activation and disengagement of moral control. *Journal of Social Issues, 46*(1), 27-46. https://bit.ly/3kiBlcY

Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI) 1. *Psicothema*, 13-25. http://bit.ly/3VYiKjP

Barak-Medina, E., Axelrod, V., Malachi, R., Teger, N., Sheptinsky-Zamir, N., Badran, S., & Titi, T. (2017).) Israeli Diversity: The Laboratory's Response to Heterogeneity in Education. In N. Mandel-Levy (Ed.), *Equals: School Support for Equal Opportunities* (pp. 49-56.) Jerusalem: Headstones Institute.

Barber, M., & Mourshed, M. (2007). *How the World's Best Performing School Systems Come Out on Top*. https://mck.co/3Wy0wH4

Barry, M. (2012). *What skills will you need to succeed in the future?* University of Phoenix.

Baten, E., Praet, M., & Desoete, A. (2017). The relevance and efficacy of metacognition for instructional design in the domain of mathematics. *ZDM*, *49*(4), 613-623. http://dx.doi.org/10.1007/s11858-017-0851-y

Bauer, I. M., & Baumeister, R. F. (2011). Self-regulatory strength. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 64–82). Guilford Press.

Bayar, A. (2014). The Components of Effective Professional Development Activities in Terms of Teachers' Perspective. *Online Submission*, *6*(2), 319-327. http://dx.doi.org/10.15345/iojes.2014.02.006

Bear, M.F., Connors, B.W., & Paradiso, M.A. (2007). The central visual system. In *Neuroscience: Exploring the Brain* (3rd ed.) (pp. 309-340). Lippincott Williams & Wilkins.

Becker, S.A., Freeman, A., Hall, C. G., Cummins, M., & Yuhnke, B. (2016). NMC/CoSN *Horizon Report: 2016 K* (pp. 1-52). The New Media Consortium.

Bellman, S., Burgstahler, S., & Hinke, P. (2015). Academic Coaching: Outcomes from a Pilot Group of Postsecondary STEM Students with Disabilities. *Journal of Postsecondary Education and Disability*, *28*(1), 103-108. https://bit.ly/3TawOoo

Ben-Avi, I. (2005). *Metacognitive knowledge and activity*. PhD thesis, Bar-Ilan University, Department of Psychology, Ramat-Gan. (000551473) (Education 153 Ben-Avi)

Ben-Shahar, T. (2007*). In Happiness and Happiness*. Matar.

Benbenishty, R., & Friedman, T. (2020). *Fostering emotional-social learning in the education system.* Summary of the work of the Committee of Experts, situation and recommendations. Initiative - Center for Knowledge and Research in Education, The Israeli National Academy of Sciences. https://bit.ly/3U872Ta

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological bulletin*, *88*(3), 588-606. http://bit.ly/3UuqI3b

Ben-Yosef, O. (2009). *Circles of Attachment and Growth*. Mofet Institute.

Ben-Zadok, G., Mintz, R., & Nachmias, R. (2006). Pedagogical innovation of science and technology teachers in the school. The elementary ones that integrate ICT in teaching. Chase conference. pulled out of: *telem, The integration of technology in the education system (1)*, 141-148. http://bit.ly/3tDJEkV

Berglas-Shapiro, T. (2016). *Learning and instruction of science contents and representational skills in a digital environment designed to support self-regulated learning (SRL) in junior high school* [Doctoral dissertation]. Weizmann Institute of Science (Israel).

Berkowitz, M.V., Althof, W., & Bier, M.C. (2012). The Practice of Prosocial Education. In P. Brown, M. Corrigan, & Higgins-D'Alessandro (Eds.), *The Handbook of Prosocial Education* (pp. 71-90). Rowman & Littlefield.

Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis*, *36*(1), 3-19. https://doi.org/10.3102/0162373713500523

Bill & Melinda Gates Foundation. (2016). *Personalized Learning: Helping Teachers Spark a Love of Learning in Every Student.* https://gates.ly/3Us9cgm

Bishara, S. (2016). Cultivating Self-Intention in Learning and Teaching Mathematics. *Multicolor-Research and Discourse, 2*(15), 213-234. http://bit.ly/3ttUGJt

Biswas-Diener, R. (2009). Personal coaching as a positive intervention. *Journal of Clinical Psychology: In session, 65*(5), 544-553. https://doi.org/10.1002/jclp.20589

Bitman, A., Byte-Merom, R., Lahav, Z., & Puch, C. (2016). *Personality: Theory and Research* (units 3-4). The Open University.

Bittner, J. V., Stamov Robnagel, C., & Staudinger, U. M. (2022). Educational self-regulation competence: Toward a lifespan-based concept and assessment strategy. *International Journal for Educational and Vocational Guidance*, *22*(2), 307-325. https://doi.org/10.1007/s10775-021-09491-2

Blanchard, S., & Human, M. (2006). *Personal Training for Success in the Coaching Method*. Opus Ltd.

Bland, A. M. (2020). Existential givens in the COVID-19 crisis. *Journal of Humanistic Psychology*, *60*(5), 710-724. https://doi.org/10.1177/00221678209401

Blank, K., & Shavit, J. (2013). "Disrupting the whole class": Discipline problems in the classroom and their relation to student achievement. In D. Ben-David (Ed.), *State of the State Report: Society, Economy and Policy* (pp. 233-251). Taub Center for Social Policy Research in Israel.

Blaxter, L., Hughes, C., & Tight, M. (Eds.) (2001). *How to research*. Open University Press.

Botha, S., & Musengi, S. (2012). *Introduction to business management: Fresh perspectives.* Pearson.

Boyatzis, R. E., Hullinger, A., Ehasz, S. F., Harvey, J., Tassarotti, S., Gallotti, A., & Penafort, F. (2022). The Grand Challenge for Research on the Future of Coaching. *Journal of Applied Behavioral Science*, *58*(2), 202-222. https://doi.org/10.1177/00218863221079937

Bozeman, B., & Feeney, M.K (2007). Toward a useful theory of mentoring: A conceptual analysis and critique. *Administration & Society, 39*(6), 719-739. http://dx.doi.org/10.1177/0095399707304119

Braund, H., & Timmons, K. (2021). Operationalization of self-regulation in the early years: Comparing policy with theoretical underpinnings. *International Journal of Child Care and Education Policy*, *15*(1), 1-21. https://doi.org/10.1186/s40723-021-00085-7

Brislin, R. W. (1980). Cross-cultural research methods. In *Environment and culture* (pp. 47-82). Springer, Boston, MA.

Brock, V. G. (2008). Grounded theory of the roots and emergence of coaching. *International University of Professional Studies*. http://bit.ly/3gWPDP8

Brooks, M. G., & Brooks, J. G. (1999). The courage to be constructivist. *Educational Leadership*, *57*(3), 18-24. https://bit.ly/3FOT8kt

Brooks, M., & Brooks, P. (1997). *Towards Constructivist Teaching.* Jerusalem: Branco Weiss Institute.

Brown, A. (1987). Metacognition, executive control, self-regulation, and other more mysterious mechanisms. In F. E. Weinert, & R. H. Kluwe (Eds.), *Metacognition, motivation and understanding* (pp. 65–116). Hillsdale, NJ: Erlbaum

Brown, J.S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*(1), 32-42. https://doi.org/10.3102/0013189X018001032

Brown, T.E. (2005). *Attention deficit disorder: The unfocused mind in children and adults*. Yale University Press.

Brown, T.T. & Daly, A.J. (2016). Welcome to educational neuroscience. *Educational Neuroscience, 1*(1-2), 1-2. http://dx.doi.org/10.1177/2377616116632069

Bruijn-Smolders, M., Timmers, C. F., Gawke, J. C., Schoonman, W., & Born, M. P. (2016). Effective self-regulatory processes in higher education: Research findings and future directions. A systematic review. *Studies in Higher Education*, *41*(1), 139-158. http://dx.doi.org/10.1080/03075079.2014.915302

Buckingham, M., & Clifton, D. (2005). *Now, Discover Your Strengths*. Library of the Israeli Center for Management.

Buckingham, M., & Goodall, A. (2019). The feedback fallacy. *Harvard Business Review*, *97*(2), 92-101. https://hbr.org/2019/03/the-feedback-fallacy

Budiman, A. (2017). Behaviourism and foreign language teaching methodology. *ENGLISH FRANCA: Academic Journal of English Language and Education*, *1*(2), 101-114. http://dx.doi.org/10.29240/ef.v1i2.171

Campbell, M., & Gardner, S. (2005). A pilot study to assess the effects of life coaching with Year 12 students. In M. Cavanagh, A. M. Grant, & T. Kemp (Eds.), *Evidence-based coaching, Vol. 1. Theory, research and practice from the behavioural sciences* (pp. 159–169). Australian Academic Press.

Cañas, J. J., Fajardo, I., & Salmeron, L. (2006). Cognitive flexibility. *International Encyclopaedia of Ergonomics and Human Factors*, *1*(3), 297-301. http://dx.doi.org/10.13140/2.1.4439.6326

Capstick, M.K., Harrell-Williams, L.M., Cockrum, C.D., & West, S.L. (2019). Exploring the effectiveness of academic coaching for academically at-risk college students. *Innovative Higher Education*, *44*(3), 219-231. https://doi.org/10.1007/s10755-019-9459-1

Carlson, N.R. (2012). *Physiology of Behavior*. Allyn & Bacon.

Carlson, N.R. (2013). *Physiology of Behavior*. Pearson.

Carthy, A., Chalmers, W., Guiry, E., & Owende, P. (2022). An Analysis of the Impact and Efficacy of Online Emotional Intelligence Coaching as a Support Mechanism for University Students. *Frontiers in Education: Digital Learning Innovations in Education in Response to the COVID-19 Pandemic.* https://doi.org/10.3389/feduc.2022.861564

CASEL (2012). *2013 CASEL Guide: Effective Social and Emotional Learning Programs – Preschool and Elementary School Edition*. Chicago. https://bit.ly/3FXg8hc

CASEL (2017). *CASEL's Widely Used Framework Identifies Five Core Competencies.* https://bit.ly/2HdErdD

CASEL (2018). *What is SEL*? https://bit.ly/2HdErdD

Catarino, M., Charepe, Z., & Festas, C. (2021). Promotion of self-management of chronic disease in children and teenagers: Scoping review. In *Healthcare* (Vol. 9, No. 12, p. 1642). MDPI. https://doi.org/10.3390/healthcare9121642

Chafouleas, S.M., Hagermoser-Sanetti, L.M., Jaffery, R., & Fallon, L.M. (2011). An Evaluation of a Classwide Intervention Package Involving Self-Management and a Group Contingency on Classroom Behavior of Middle School. *Journal of Behavioral Education, 21*(1), 34-57. http://dx.doi.org/10.1007/s10864-011-9135-8

Chang, B. (2019). Reflection in Learning. *Online Learning, 23*(1), 95-110. http://dx.doi.org/10.24059/olj.v23i1.1447

Chernyshenko, O., Kankaraš, M., & Drasgow, F. (2018). *Social and Emotional Skills for Student Success and Well-Being: Conceptual Framework for the OECD study on Social and Emotional Skills.* OECD Education Working Papers, No. 173, Paris. http://dx.doi.org/10.1787/db1d8e59-en

Cherry, K. (2021). *Kohlberg's theory of Moral Development. Very Well Mind.* Available Online at: http://bit.ly/3WfeBHV

Cheung, Y., Chu, Y., & Jang, H. (2021). Impact of a Socio-cognitive Approach to Teaching English Language Writing on Primary School Students' Compositions. *Iranian Journal of Language Teaching Research, 9*(1), 1-22. http://dx.doi.org/10.30466/ijltr.2021.120973

Child Welfare Information Gateway (2015). *Understanding the Effects of Maltreatment on Brain Development.* U.S. Department of Health and Human Service, Children`s Bureau.

Chittooran, M. M., (2015). Reading and Writing for Critical Reflective Thinking. *New Directions for Teaching and Learning, 143*, 79-95. http://dx.doi.org/10.1002/tl.20137

Chomsky, N. (1959). Verbal behavior by B. F. Skinner. *Language, 35*(1), 26-58. https://doi.org/10.2307/411334

Chomsky, N. (2013). A Review of BF Skinner's Verbal Behavior. In N. Block (Ed.), *Readings in Philosophy of Psychology, Volume I* (pp. 48-64). Harvard University Press. https://doi.org/10.4159/harvard.9780674594623.c6

Cohen, A., & Dori, J. (2021). *A hybrid approach to teacher education to create and support self-regulated learning*. Submitted to the Office of the Chief Scientist, Ministry of Education. https://bit.ly/3t5rsR4

Cohen, J. (2017). School Climate, Social Emotional Learning, and other Prosaically "Camps": Similarities and a Difference. *Teachers College Record* (20 September). http://bit.ly/3V7u5gW

Cohen-Azaria, Y. (2021). Discipline problems in the classroom: Perceptions, struggles and experience of classroom teachers in elementary schools. *"Shaanan" Yearbook, Volume 20*, 157-178. http://bit.ly/3gbGlOP

Conley, D.T. (2007). *Toward a More Comprehensive Conception of College Readiness*. Eugene, OR :Educational Policy Improvement Center (NJ1).

Corral, D., Carpenter, S. K., Perkins, K., & Gentile, D. A. (2020). Assessing students' use of optional online lecture reviews. *Applied Cognitive Psychology*, *34*(2), 318-329. http://dx.doi.org/10.1002/acp.3618

Corral, D., Healy, A.F., Rozbruch, E.V., & Jones, M. (2019). Building a Testing-Based Training Paradigm from Cognitive Psychology Principles. *Scholarship of Teaching and Learning in Psychology, 5*(3), 189–208. http://dx.doi.org/10.1037/stl0000146

Danan, M. (2016). Enhancing Listening with Captions and Transcripts: Exploring Learner Differences. *Applied Language Learning, 26*(2), 1-24. http://bit.ly/3hDJvLy

Darling-Hammond, L. (2007). The Story of Gloria Is a Future Vision of the New Teacher. *Journal of Staff Development, 28*(3), 25-26. http://bit.ly/3AkeuCX

David, O.A. & Cobeanu, O. (2016). Evidence-based Training in Cognitive-Behavioral Coaching: Can Personal Development Bring Less Distress and Better Performance? *British Journal of Guidance & Counseling, 44*(1), 12-25. http://dx.doi.org/10.1080/03069885.2014.1002384

Davies, A., Fidler, D. & Gorbis, M. (2011). *Future Work Skills 2020.* Palo Alto, Calif.: University of Phoenix Research Institute. http://bit.ly/3Gr1saG

De Backer, L., Van Keer, H., & Valcke, M. (2012). Exploring the potential impact of reciprocal peer tutoring on higher education students' metacognitive knowledge and regulation. *Instructional Science*, *40*(3), 559-588. http://dx.doi.org/10.1007/s11251-011-9190-5

De Corte, E. (2010). Historical development in the understanding of learning. In H. Dumont, & D. Istance (Eds.), *The Nature of Learning: Using Research to Inspire Practice* (pp. 113-129). OECD. http://bit.ly/3X6hAEs

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. Plenum Press.

Dede, C. (2010). Comparing Frameworks for 21st Century Skills. In J. Bellanca & R. Brandt (Eds.), *21st Century Skills* (pp. 51-76). Solution Tree Press.

Deitch, A., Timor, M., & Uriel-Raymond, A. (2016). Mentoring tutorial - Volunteering employees as mentors for employment promotion, *JDC Israel Tebet - Together in social action in employment*. JDC Israel, 1-72. http://bit.ly/3V3pGMd

Delazer, M., Domahs, F., Bartha, L., Brenneis, C., Lochy, A., Trieb, T., & Benke, T. (2003). Learning complex arithmetic—an fMRI study. *Cognitive Brain Research*, *18*(1), 76-88. http://dx.doi.org/10.1016/j.cogbrainres.2003.09.005

Delors, J., Al Mufti, I., Amagi, I., Carneiro, R., Chiung, F., Geremek, B., Gorham, W., Kornhauser, A., Manley, M., Padrón Quero, M., Savané, M-A., Singh, K., Stavenhagen, R., Won Suhr, M., & Nanzhao, Z. (1996*). Learning: The Treasure Within: Report to UNESCO of the International Commission on Education for the Twenty-First Century*. UNESCO Publishing. http://bit.ly/3TKxamb

Dembo, M.H., & Seli, H. (2013). *Motivation and Learning Strategies for College Success: A Self-Management Approach* (3rd Edition). Lawrence Erlbaum.

Denscombe, M. (2000). Social conditions for stress: young people's experience of doing GCSEs. *British Educational Research Journal*, *26*(3), 359-374. https://doi.org/10.1080/713651566

Dewey, J. (1910/2013). *How We Think*. Graphyco Editions Book.

Dewey, J. (1933). *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process*. Heath & Co Publishers.

Diamond, A. (2013). Executive Functions. *Annual Review of Psychology, 64*(1), 135-168. http://dx.doi.org/10.1146/annurev-psych-113011-143750

District Reform Support Network (2016). *Transforming the Culture of Teaching and Learning: Four Race to the Top-District Guarantees Implementation of Personalized Learning*. U.S. Department of Education. http://bit.ly/3UNnBnF

Donoghue, G.M., & Hattie, J.A.C. (2021). A Meta-Analysis of Ten Learning Techniques. *Frontiers in Education, 6*. http://dx.doi.org/10.3389/feduc.2021.581216

Doostian, Y., Fattahi, S., Goudini, A. A., Azami, Y., Massah, O., & Daneshmand, R. (2014). *The Effectiveness of Self-regulation in Students' Academic Achievement Motivation*. *Practice in Clinical Psychology, 2*(4), 261-270. http://bit.ly/3O4ZhLt

Dreikurs-Ferguson, A. (2010). Adler`s Innovative Contribution Regarding the Need to Belong. *Journal of Individual Psychology, 66*(1), 1-7. http://bit.ly/3gbAadJ

Dreikurs, R. (1965). *Classroom Psychology: A Teacher's Guidebook* (Translation: M. Dauber). Otzar HaMorah.

Dreikurs, R. (1981). *Dealing with Children's Inappropriate Behavior*. (Translation: H. Kline). Hapoalim Library.

Dreikurs, R. (2000). *Fundamentals of Adlerian Psychology*. (Translation: A. Babylonian). Adler Institute.

Dreikurs, R., & Saltz, V. (1994*). Children the Challenge*. (Translation: A. Burla-Adar). Yavne Publishing.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*(1), 405-432. https://doi.org/10.1111/j.1467-8624.2010.01564.x

Eberle, J., Hod, Y., & Fischer, F. (2019). Future learning spaces for learning communities: Perspectives from the learning sciences. *British Journal of Educational Technology, 50*(5), 2071-2074. https://doi.org/10.1111/bjet.12865

Eby, L. T., Rhodes, J. E. & Allen, T. D. (2007). Definition and evolution of mentoring. In T. D. Allen & L. T. Eby (Eds.), *The Blackwell handbook of mentoring: A multiple perspectives approach* (pp. 7–20). Blackwell.

Edwards, A. J., Weinstein, C. E., Goetz, E. T., & Alexander, P. A. (2014). *Learning and Study Techniques: Issues in Assessment, Instruction, and Evaluation.* Elsevier. http://bit.ly/3gbkffh

Edwards, D.L. & Gfroerer, K.D. (2010). Adlerian school-based interventions for children with attention-deficit/hyperactivity disorder. *Journal of Individual Psychology, 57*(3), 210-223. http://bit.ly/3hGLI8W

Efklides, A. (2006). Metacognition and Affect: What Can Metacognitive Experiences Tell Us about the Learning Process? *Educational Research Review, 1*(1), 3–14. http://dx.doi.org/10.1016/j.edurev.2005.11.001

Eisenberg, E., & Selivansky, E. (2019). *Adapting Israel's education system for the challenges of 21st century: Policy Research 130.* Jerusalem: The Israel Democracy Institute. http://bit.ly/3X1f2Y8

Elias, M.J., & Haynes, N.M. (2008). Social Competence, Social Support, and Academic Achievement in Minority, Low-Income, Urban Elementary School Children. *School Psychology Quarterly, 23*(4), 474-495. http://dx.doi.org/10.1037/1045-3830.23.4.474

Elias, M.J., Parker, S.J., Kash, V.M., Weissberg, R.P., & O'Brien, M.U. (2008). Social and Emotional Learning, Moral Education, and Character Education: A Comparative Analysis and a View Toward Governance. In L.P. Nucci & D. Narvaez (Eds.), *Handbook of Moral and Character Education* (pp. 248-266). Routledge.

Elias, M.J., Zins, J.E., Weissberg, R.P., Frey, K.S., Greenberg, M.T., Haynes, N.M., & Shriver, T.P. (1997). *Promoting Social and Emotional Learning: Guidelines for Educators*. Association for Supervision and Curriculum Development.

Elitzur, A., Tiano, S., Munitz, H., & Neumann, M. (2016). *Selected Chapters in Psychiatry (6th edition)*. Dionon.

Ellis, R. A., & Goodyear, P. (2016). Models of learning space: Integrating research on space, place and learning in higher education. *Review of Education, 4*(2), 149–191 .https://doi.org/10.1002/rev3.3056

Engle, R. W., & Ellingsen, V. J. (2020). Cognitive Approaches to Intelligence. In R.J. Sternberg (Ed.), *Human Intelligence: An Introduction* (pp.104-138). Cambridge University Press.

Erdös, T., de Haan, E., & Heusinkveld, S. (2020). Coaching: Client factors & contextual dynamics in the change process. *Coaching: An International Journal of Theory, Research and Practice, 14*(2), 162-183. https://doi.org/10.1080/17521882.2020.1791195

Eshet, Y., & Hammer, R. (2006). *Principles in the Design and Analysis of Computerized Learning Environments.* Open University.

Estes, W. K. (1999). Models of human memory: A 30-year retrospective. In C. Izawa (Ed.), *on Human Memory*: *Evolution, progress and reflections on the 30th anniversary of Atkinson-Shiffrin model* (pp. 59-86). Mahwah, NJ: Erlbaum.

Ewen, R. (1988). *An Introduction to Theories of Personality* (3rd ed.). Lawrence Erlbaum.

Eysenck, M. W., & Keane, M. T. (2015). *Cognitive psychology: A student'handbook*. Psychology press. https://doi.org/10.4324/9781315778006

Fan, X., & Sivo, S. A. (2007). Sensitivity of fit indices to model misspecification and model types. *Multivariate Behavioral Research*, *42*(3), 509-529. http://bit.ly/3h15oo6

Fauzan, A.F., & Akrim, M. (2017). Humanistic Approach in Education According to Paulo Freire. *At-Ta`dib, 12*(2), 25. http://dx.doi.org/10.21111/at-tadib.v12i2.1264

Field, S., Parker, D. R., Sawilowsky, S., & Rolands, L. (2013). Assessing the Impact of ADHD Coaching Services on University Students' Learning Skills, Self-

Regulation, and Well-Being. *Journal of Postsecondary Education and Disability, 26*(1), 67-81. http://bit.ly/3EG6vCN

Fielden, S. (2005). Literature review: Coaching effectiveness–a summary. *NHS. Modernisation Agency Leadership Centre Manchester: The University of Manchester*. http://bit.ly/3Gn8op1

Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.), *The nature of intelligence* (pp.231-235). Hillsdale, NJ: Erlbaum.

Flavell, J. H. (1979). Metacognition and Cognitive Monitoring: A New Area of Cognitive Developmental Inquiry. *American Psychologist, 34*(10), 906-911. https://doi.org/10.1037/0003-066X.34.10.906

Flavell J (1981) Cognitive monitoring. In P. Dickson (Ed.), Children's oral communication skills. Academic Press, New York, pp 35–60.

Flavell, J. H., Miller, P. H., & Miller, S. A. (2002). *Cognitive Development* (4th edition). Prentice Hall.

Fomina, T., Burmistrova-Savenkova, A., & Morosanova, V. (2020). Self-regulation and psychological well-being in early adolescence: A two-wave longitudinal study. *Behavioral Sciences*, *10*(3), 67. https://doi.org/10.3390%2Fbs10030067

Foster, E. (2018). The impact of coaching on teacher practice and student achievement. *The Learning Professional*, *39*(4), 16-19. http://bit.ly/3XaD5DQ

Frankl, V. (1946/1981). *Man searches for meaning: An introduction to logotherapy: from the death camps to existentialism* (H. Isaac, translator). Dvir Publishing.

Franklin, J., & Doran, J. (2009). Does all coaching enhance objective performance independently evaluated by blind assessors? The importance of the coaching model and content. *International Coaching Psychology Review*, *4*(2), 128-144. http://bit.ly/3TMH8DE

Frias, J. (2019). Improving learning experiences by using Humanism and Constructivism teaching approaches in the classroom. *Philosophy of Education, 1*(1), 1-5. http://bit.ly/3THMXlD

Friedman, H.S., & Schustack, M.W. (2012). *Personality: Classic Theories and Modern Research* (5th ed.). Pearson/Allyn & Bacon.

Friedman, J., Teichman-Weinberg, A. & Grobgald, A. (2016). *Achva Model for Neuro-Pedagogy-Application of Brain Research Findings in Teaching and Learning*. Achva Academic College.

Frigato, G. (2021). The Neural Correlates of Access Consciousness and Phenomenal Consciousness Seem to Coincide and Would Correspond to a Memory Center, an Activation Center and Eight Parallel Convergence Centers. *Frontiers in Psychology*, *12*, 749610. https://doi.org/10.3389%2Ffpsyg.2021.749610

Gable, S. I., & Haidt, J. (2005). What (and why) is Positive Psychology? *Review of General Psychology, 9*(2), 103-110. https://doi.org/10.1037/1089-2680.9.2.103

Gal, N. (2004). Reference to student behavior in classes of novice teachers. *Dapim (Pages), 38*, 166-192. http://bit.ly/3AkhDT4

Gardner, H. (2008). *Five Minds for the Future*. Harvard Business Press.

Garrett, T. (2008). Student-Centered and Teacher-Centered Classroom Management: A Case Study of Three Elementary Teachers. *Journal of Classroom Interaction, 43*(1), 34-47. https://eric.ed.gov/?id=EJ829018

Gfroerer, K., Nelsen, J., & Kern, M.R. (2013). Positive Discipline: Helping Children Develop Belonging and Coping Resources Using Individual Psychology. *Journal of Individual Psychology, 69*(4), 294-304. http://bit.ly/3O8nIbe

Gidelewich, S. (2021). Instruction for Meta-Cognitive Self-Judgment During Numerical Insight Problem-Solving Among Fourth-Graders. *Research and Study in Mathematical Education, 8*, 30-41. http://bit.ly/3GfwoKU

Gijsbers, G., & van Schoonhoven, B. (2012). *The Future of Learning: A Foresight Study on New Ways to Learn New Skills for Future Jobs*. European Foresight Platform (EFP) Brief No. 222. http://bit.ly/3EGJDD5

Gilat, Y. (2007). *Being Close - First-Aid to a Teacher Dealing with Student Distress.* Mofet Institute .

Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam.

Grant, A. M. (2001). Towards a psychology of coaching. *Unpublished manuscript, Sydney*. http://bit.ly/3Fu0edH

Grant, A.M. (2003). The Impact of Life Coaching on Goal Attainment, Metacognition and Mental Health. *Social Behavior and Personality, 31,* 253-264. http://dx.doi.org/10.2224/sbp.2003.31.3.253

Grant, A. M. (2006). A personal perspective on professional coaching and the development of coaching psychology. *International Coaching Psychology Review*, *1*(1), 12-22. http://bit.ly/3FJmMam

Grant, A.M. (2014). Autonomy Support, Relationship Satisfaction and Goal Focus in the Coach-Coachee Relationship: Which Best Predicts Coaching Success? *Coaching: An International Journal of Theory, Research and Practice, 7*(1), 18-38. http://dx.doi.org/10.1080/17521882.2013.850106

Grant, A. M., Curtayne, L., & Burton, G. (2009). Executive coaching enhances goal attainment, resilience and workplace well-being: A randomised controlled study. *The journal of positive psychology*, *4*(5), 396-407. http://bit.ly/3Y0F7a9

Grant, A. M., & Cavanagh, M. J. (2011). Coaching and positive psychology. *Designing positive psychology: Taking stock and moving forward*, 293-309. DOI:10.1093/acprof:oso/9780195373585.003.0019

Green, D. (2011). *Emotional Training*. The Institute of Emotional Training.

Green, S., Oades, L.G., & Grant, A.M. (2005). An Evaluation of a Life Coaching Group Program: Initial Findings from a Waitlist Control Study. In M. Cavanagh, A. Grant, & T. Kemp (Eds.), *Evidence Based Coaching* (pp. 127-142). Australian Academic Press.

Green, S., Oades, L.G., & Grant, A.M. (2006). Cognitive-Behavioral Solution-Focused Life Coaching: Enhancing Goal Striving, Well-Being and Hope. *Journal of Positive Psychology, 1*(3), 142-149. http://dx.doi.org/10.1080/17439760600619849

Green, S., Grant, A. M., & Rynsaardt, J. (2020). Evidence-based life coaching for senior high school students: Building hardiness and hope. *Coaching Researched: A Coaching Psychology Reader*, 257-268. https://doi.org/10.1002/9781119656913.ch13

Greenberg, M. T., & Abenavoli, R. (2017). Universal interventions: Fully exploring their impacts and potential to produce population-level impacts. *Journal of Research on Educational Effectiveness*, *10*(1), 40-67. https://doi.org/10.1080/19345747.2016.1246632

Greenberg, M.T., Domitrovich, C.E., Weissberg, R.P., & Durlak, J.A. (2017). Social and Emotional Learning as a Public Health Approach to Education. *The Future of Children, 27*(1), 13-32. http://dx.doi.org/10.1353/foc.2017.0001

Griffin, P., Care, E., & McGaw, B. (2012). The changing role of education and schools. In E. Care, P. Griffin, & M. Wilson (Eds.), *Assessment and teaching of 21st century skills* (pp. 1-15). Springer.

Griffiths, K.E. (2005). Personal Coaching: A Model for Effective Learning. *Journal of Learning Design, 1*(2), 55-65. http://dx.doi.org/10.5204/jld.v1i2.17

Gunter, L., Caldarella, P., Korth, B.B., & Young, K.R. (2012). Promoting Social and Emotional Learning in Preschool Students: A Study of Strong Start Pre-K. *Early Childhood Education Journal, 40*(3), 151-159. http://dx.doi.org/10.1007/s10643-012-0507-z

Guskov, E. (2016). *Teachers Don`t Have Eyes in the Back of their Head Anymore*. Mofet Institute.

Gutierrez, A. P., & Schraw, G. (2015). Effects of Strategy Training and Incentives on Students' Performance, Confidence, and Calibration. *Journal of Experimental Education, 83*(3), 386–404. https://doi.org/10.1080/00220973.2014.907230

Hadar, L. (2009). Open Thinking. *Hed Hahinuch (Echo of Education)*, *83*(5), 70-73.

Haegele, J.A. (2015). Promoting Leisure-Time Physical Activity for Students with Visual Impairments Using Generalization Tactics. *Journal of Visual Impairment & Blindness, 109*(4), 322-326. http://dx.doi.org/10.1177/0145482X1510900409

Hagger, M., & Weed, M. (2019). Debate: Do interventions based on behavioral theory work in the real world? *International Journal of Behavioral Nutrition and Physical Activity*. https://doi.org/10.1186/s12966-019-0795-4

Hamama, L. (2003). The effect of self-control, self-harm, and role burden in the family on stress reactions (anxiety, loneliness, physical symptoms) of healthy siblings of

a child with cancer. *Essay to receive the degree "Doctor of Philosophy"*, Tel Aviv University.

Harari, D. (2009*). Introduction to Adlerian Theory: Revising my brother Yotam's lectures.* Adler Institute Publishing.

Harpaz, Y., & Horowitz, E. (2020). *Education at a crossroads – Brainstorming about the future of education in Israel*. Branco Weiss Institute & Kinneret-Zmora-Dvir Publishers.

Hart, L.C., & Memnun, D.S. (2015). The Relationship between Preservice Elementary Mathematics Teachers' Beliefs and Metacognitive Awareness. *Journal of Education and Training Studies, 3*(5), 70–77. https://doi.org/10.11114/jets.v3i5.840

Hartman, H., & Sternberg, R. J. (1992). A broad BACEIS for improving thinking. *Instructional Science*, *21*(5), 401-425. http://dx.doi.org/10.1007/BF00121204

Heidegger, M. (1927). Heidegger, Martin. *Being and Time*.

Hennessy, S., Mavrikis, M., Girvan, C., Price, S., & Winters, N. (2019). B BJET editorial for the 50th Anniversary Volume in 2019: Looking back, reaching forward. *British Journal of Educational Technology, 50*(1), 5-11. https://doi.org/10.1111/bjet.12731

Hermel-Stanescu, M. (2015). Effective coaching: Key-factors that determine the effectiveness of a coaching program. *Managing Intellectual Capital and Innovation – Proceedings of the MakeLearn and TIIM Joint International Conference* (pp. 375-382). http://bit.ly/3EH61fC

Hess, I. (2019). CIL – Cycle of Internalization Program of students with visual impairments. *Journal of Practice Teaching and Learning, 16*(3). http://dx.doi.org/10.1921/jpts.v16i3.1135

Higgins, T.E. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review, 94*(3), 319-340. http://dx.doi.org/10.1037/0033-295X.94.3.319

Hinton, C., & Fischer, K.W. (2008). Research schools: Grounding research in educational practice. *Mind, Brain, and Education*, *2*(4), 157-160. http://dx.doi.org/10.1111/j.1751-228X.2008.00048.x

Hoffman, W., Schmeichel, P.J., & Baddeley, A.D. (2012). Executive functions and self-regulation. *Trends in Cognitive Sciences, 16*(3), 174-180. http://dx.doi.org/10.1016/j.tics.2012.01.006

Hollweck, T., & Lofthouse, R. M. (2021). Contextual coaching: levering and leading school improvement through collaborative professionalism. *International Journal of Mentoring and Coaching in Education*. ISSN 2046-6854 https://doi.org/10.1108/IJMCE-01-2021-0019

Hoyle, R. H. (1995). *Structural equation modeling: Concepts, issues, and applications*. Sage. http://bit.ly/3UzkezY

Hook, C.J., & Farah, M.J. (2013). Neuroscience for educators: What are they seeking, and what are they finding? *Neuroethics*, *6*(2), 331-341. http://dx.doi.org/10.1007/s12152-012-9159-3

Hoover, H. (2018). Cultivating Self-Awareness of Learning Processes among Elementary School Students Culture. *Multicolored: Research and Discourse, 16*(3), 145-189 .http://bit.ly/3AeB3cd

Howlett, M.A., McWilliams, M.A., Rademacher, K., O'Neill, J.C., Maitland, T.L., Abels, K., Demetriou, C., & Panter, A.T. (2021). Investigating the effects of academic coaching on college students' metacognition. *Innovative Higher Education*, *46*(2), 189-204. https://doi.org/10.1007/s10755-020-09533-7

Huang, R.T., & Yu, C.L. (2019). Exploring the impact of self-management of learning and personal learning initiative on mobile language learning: A moderated mediation model. *Australasian Journal of Educational Technology*, *35*(3). http://dx.doi.org/10.14742/ajet.4188

Hurme, T.R., Palonen, T., & Järvelä, S. (2006). Metacognition in joint discussions: An analysis of the patterns of interaction and the metacognitive content of the networked discussions in mathematics. *Metacognition and Learning*, *1*(2), 181-200. http://dx.doi.org/10.1007/s11409-006-9792-5

IBM. (2010). *IBM 2010 Global CEO Study: Creativity Selected as Most Crucial Factor for Future Success*. http://bit.ly/3AubuEa

Institute for the Study of the Methodology of Intelligence (2019). The Battle for Consciousness: Strategic and Intelligence Aspects. *Intelligence – Theory and Practice, 4*, 1-309. http://bit.ly/3GekoJA

International Association for Online learning 12-K Learning Online (INACOL) (2016). *What is Personalized Learning*? Retrieved from http://bit.ly/3UMsm0J

International Coach Federation (2009). *What is Coaching?* http://bit.ly/3UPGarA

International Coach Federation and Pricewaterhouse Coopers. (2016). 2016 ICF Global Coaching Study. http://bit.ly/3hlFtYA

Iordanou, I., Lech, A., & Barnes, V. (2015). Coaching in higher education. *Coaching in professional contexts*, 145-58. http://bit.ly/3WYEZr7

Janes, W., Silvey, D., & Dubrowski, A. (2016). Are Educators Actually Coaches? The Implication of Teaching and Learning via Simulation in Education in Healthcare Professions. *Cureus, 8*(8), e734. http://dx.doi.org/10.7759/cureus.734

Jansen, R.S., Van Leeuwen, A., Janssen, J., Jak, S., & Kester, L. (2019). Self-regulated learning partially mediates the effect of self-regulated learning interventions on achievement in higher education: A meta-analysis. *Educational Research Review*, *28*(3), 100292. http://dx.doi.org/10.1016/j.edurev.2019.100292

Jessel, T.M., & Sanes, J.R. (2013). Patterning the Nervous System. In E.R. Kandel, J.H. Schwartz, T.M. Jessell, S.A. Siegelbaum, A.J. Hudspeth (Eds.), *Principles of Neural Science (5th edition)* (pp. 1165-1186). McGraw-Hill.

Joelson, R.B. (2017). *Hardiness and Grit*. Psychology Today. http://bit.ly/3OpR1pF

John, O., Naumann, L., & Soto, C. (2008). Paradigm Shift to the Integrative Big-Five Trait Taxonomy: History, Measurement, and Conceptual Issues. In O. John, R. Robins, & L. Pervin (Eds.), *Handbook of Personality: Theory and Research*. New York: Guilford Press.

John, O.P., & De Fruyt, F. (2015). *Framework for the Longitudinal Study of Social and Emotional Skills in Cities*. OECD Publishing.

John, O.P., & De Fruyt, F. (2014). *Social and Emotional Skills Constructs and Measures for the OECD Longitudinal Study of Skills Dynamics*. OECD Publishing.

Jonassen, D.H. (2011). Ask systems: Interrogative Access to Multiple Ways of Thinking. *Educational Technology Research and Development, 59*(1), 159-175. http://dx.doi.org/10.1007/s11423-010-9179-9

Jones, S. M., & Bouffard, S. M. (2012). Social and Emotional Learning in Schools: From Programs to Strategies. Social Policy Report. Volume 26, Number 4. *Society for Research in Child Development*. http://bit.ly/3VZjXaw

Jones, S., Brush, K., Bailey, R., Brion-Meisels, G., McIntyre, J…, & Stickle, L. (2017). *Navigating from the Inside Out: Looking Inside and Across 25 Leading SEL Programs*. Harvard School of Education & Wallace Foundation. http://bit.ly/3TMMEGc

Jou, M., Lin, Y-T. & Wu, D-W. (2016). Effect of a blended learning environment on student critical thinking and knowledge transformation. *Interactive Learning Environments, 24*(6), 1131-1147. htpp://dx.doi.org/10.1080/1049820.2014.961485

Kadiyono, A.L., & Hafiar, H. (2017). The role of academic self-management in improving students' academic achievement. In A.G. Abdullah, I. Hamidah, S. Aisyah, A.A. Danuwijaya, G. Y. Heli, & S.H. Munawaroh (Eds.), *Ideas for 21st Century Education* (pp. 117-120). Routledge.

Kahneman, D. (2011). *Thinking Fast and Slow*. Farrar, Straus & Giroux.

Kandel, E.R., & Hudspeth, A.J. (2013). The Brain and Behavior. In E.R. Kandel, J.H Schwartz, T.M. Jessell, S.A. Siegelman, & A.J. Hudspeth (Eds.), *Principles of Neural Science (5th edition)* (pp. 5-20). McGraw-Hill.

Kaniel, S. (2001). *The Psychology of Mind Control*. Bar-Ilan University.

Kaniel, S. (2013). *Empathy in Education - Education with Love*. Mofet Institute.

Kapasi, A., & Pei, J. (2022). Mindset theory and school psychology. *Canadian Journal of School Psychology*, *37*(1), 57-74. http://dx.doi.org/10.1177/08295735211053961

Kapur, R. (2020). *Time Management Skills: Fundamental in Taking Out Time for all Job Duties*. http://bit.ly/3UROAy8

Katsikis, D., Kostogiannis, C., & Dryden, W. (2016). A rational-emotive behavior approach in life coaching. *Journal of Evidence-Based Psychotherapies*, *16*(1), 3-18. http://bit.ly/3tradts

Katz, G. (2016). Characterization of learning perceptions in a variety of fields and its impact on teacher training. *Education and its Environment, 18*, 213-232. http://bit.ly/3Tv0gpD

Katz, R. (2005). *Coaching - Coaching for Life*. Opus Ltd.

Katz, R. (2008*). The Double Guide: Results-Focused Counseling-Coaching*. Opus Ltd.

Kautz, T., Heckman, J.J., Diris, R., ter Weel, B., & Borghans, L. (2014). *Fostering and Measuring Skills: Improving Cognitive and Noncognitive Skills to Promote Lifetime Success*. OECD: OECD Education Working Papers no. 110. http://bit.ly/3tI86li

Kearns, H., Forbes, A., & Gardiner, M. (2007). A Cognitive Behavioural Coaching Intervention for the Treatment of Perfectionism and Self-Handicapping in a Nonclinical Population. *Behavior Change, 24*(3), 157-172. http://dx.doi.org/10.1375/bech.24.3.157

Kedem, K. (2006). *The Six-Step Model*. Available at http://bit.ly/3gbmOy8

Kee, K.M., Anderson, K.A., Dearning, V.S., Harris, E., & Shuster, F.A. (2010). *Results coaching: The new essentials for school leader*s. Corwin Press.

Keiny, S. (1994). Constructivism and Teacher's Professional Development. *Teaching & Teacher Education, 10*(2), 157-167. https://doi.org/10.1016/0742-051X(94)90010-8

Kennedy, A., Gask, L., & Rogers, A. (2005). Training professionals to engage with and promote self-management. *Health Education Research*, *20*(5), 567-578. https://doi.org/10.1093/her/cyh018

Ker, J. (2015). Reflection. *Education for Primary Care, 26*(5), 340-341. https://doi.org/10.1080/14739879.2015.1079433

Kierkegaard, S. (1843/1997). *Hail and Trembling: Dialectic Lyric* (revised 3rd edition; translated by A. Levin, edited by Y. Golomb). Magnes Press.

Kim, S., Raza, M., & Seidman, E. (2019). Improving 21st-century teaching skills: The key to effective 21st-century learners. *Research in Comparative and International Education*, *14*(1), 99-117. http://dx.doi.org/10.1177/1745499919829214

KIPP (2018). *Focus on character*. http://bit.ly/3UPqxQG

Kirschner, P.A., & Stoyanov, S. (2020). Educating youth for non-existent/not yet existing professions. *Educational Policy*, *34*(3), 477-517. https://doi.org/10.1177/0895904818802086

Klatzky, L.R. (1980). *Human Memory* (2nd edition). Freeman & Co.

Knight, J. (2007). *Instructional coaching: A partnership approach to improving instruction*. Corwin.

Kobasa, S. C., Maddi, S. R., & Courington, S. (1981). Personality and constitution as mediators of the stress-illness relationship. *Journal of Health and Social Behavior, 22*(4), 368-378. https://doi.org/10.2307/2136678

Kobylińska, D., & Kusev, P. (2019). Flexible emotion regulation: How situational demands and individual differences influence the effectiveness of regulatory strategies. *Frontiers in Psychology*, *10*, 72. https://doi.org/10.3389%2Ffpsyg.2019.00072

Kolb, A.Y., & Kolb, D.A. (2009). The learning way: Meta-cognitive aspects of experiential learning. *Simulation & Gaming*, *40*(3), 297-327. http://dx.doi.org/10.1177/1046878108325713

Kramer, J. (2016). A Deweyan Reflection: The Potential of Hospitality and Movement in the Classroom. *Curriculum and Teaching Dialogue, 18*(1/2), S75-87. http://bit.ly/3gnJQSd

Kreisman, B. (2018). *Humanist education*. Tel Aviv University.

Kristjánsson, Á., & Egeth, H. (2020). How feature integration theory integrated cognitive psychology, neurophysiology, and psychophysics. *Attention,*

Perception, & Psychophysics, *82*(1), 7-23. https://doi.org/10.3758/s13414-019-01803-7

Kuhn, D. (2000). Metacognitive development. *Psychological Science, 9*(5), 178–181. https://doi.org/10.1111/1467-8721.00088

Kutsyuruba, B., & Godden, L. (2019). The role of mentoring and coaching as a means of supporting the well-being of educators and students. *International Journal of Mentoring and Coaching in Education*,8 (4), 229-234. https://doi.org/10.1108/IJMCE-12-2019-081

La Voy, S.K., Brand, M.J., & McFadden, R.C. (2013). An Important Lesson from Our Past with Significance for Our Future: Alfred Adler`s Gemeinschaftsgefuhl. *Journal of Individual Psychology, 69* (4), 293-280. http://bit.ly/3EJjdAM

Landau, E. (2011). The Brain`s Amazing Potential for Recovery. http://bit.ly/3X8Rdxw

Lawrence, B. C., Ntelioglou, Y. B., & Milford, T. (2020). It is complicated: Learning and teaching is not about "learning styles". http://bit.ly/3Encawh

Levi-Feldman, A. (2008). Elements of the worthy teacher's identity in relation to educational philosophies. *Education and its Surroundings,* 32, 87-104. http://bit.ly/3UZgjgt

Levi-Feldman, A. (2020). From Educator to Mentor: The Good Teacher of the Twenty-First Century. *Opinion*, 16, 43-69. http://dx.doi.org/10.1108/IJMCE-10-2017-0067

Levy, F., & Murnane, R. (2004). *The New Division of Labor: How Computers Are Creating the Next Job Market*. Princeton University Press.

Libri, V., & Kemp, T. (2006). Assessing the efficacy of a cognitive behavioural executive coaching programme. *International Coaching Psychology Review*, *1*(2), 9-20. http://bit.ly/3uAqTPD

Lichtinger, E. (2018). Pedagogy of Self-Regulation and Motivation for Students at Risk. *Education Challenges, 3,* 23-31. http://bit.ly/3GduBG5

Liddle, B., & Nettle, D. (2006). Higher-Order Theory of Mind and Social Competence in School-Age Children. *Journal of Cultural and Evolutionary Psychology, 43*(3), 231–246. http://dx.doi.org/10.1556/JCEP.4.2006.3-4.3

Lochmiller, C.R. (2021). Guest editorial: Coaching for improvement in education: New insights and enduring questions. *International Journal of Mentoring and Coaching in Education, 10*(4), 393-398. https://doi.org/10.1108/IJMCE-12-2021-110

Losch, S., Traut-Mattausch, E., Mühlberger, M. D., & Jonas, E. (2016). Comparing the effectiveness of individual coaching, self-coaching, and group training: How leadership makes the difference. *Frontiers in Psychology, 7*, 629. https://doi.org/10.3389%2Ffpsyg.2016.00629

Lui, M., & Slotta, J. D. (2014). Immersive simulations for smart classrooms: Exploring evolutionary concepts in secondary science. *Technology, Pedagogy and Education, 23*(1), 57–80. https://doi.org/10.1080/1475939X.2013.838452

Luna Scott, C. (2015). *The futures of learning 2: What kind of learning for the 21st century?* Available at http://bit.ly/3X5AbAt

Luzzatto, E. (2021). *Neuro-Pedagogy*. Available at http://bit.ly/3OfMqGw

Maddi, S.R. (2002). The story of hardiness: Twenty years of theorizing, research, and practice. *Consulting Psychology Journal: Practice and Research*, *54*(3), 173. http://dx.doi.org/10.1037/1061-4087.54.3.173

Maksum, A., Widiana, I.W., & Marini, A. (2021). Path Analysis of Self-Regulation, Social Skills, Critical Thinking and Problem-Solving Ability on Social Studies Learning Outcomes. *International Journal of Instruction*, *14*(3), 613-628. http://dx.doi.org/10.29333/iji.2021.14336a

Margalit, M. (2014). *Learning Disabilities: Neurodevelopmental Model – After 15 Years*. *Mifgash: Journal of Social-Educational Work, 39*, 15-34. http://bit.ly/3OhiPMW

Marino, G. (Ed.). (2007). *Basic writings of existentialism*. Modern Library.

Maslow, A.H. (1943). A Theory of Human Motivation. *Psychological Review, 50*, 370-396. https://psycnet.apa.org/doi/10.1037/h0054346

Maslow, A.H. (1968). *Toward a Psychology of Being* (2nd edition). Van Nostrand Reinhold.

Maslow, A.H. (1970). *Motivation and Personality* (2nd edition). Harper & Row.

Matteucci, M.C., & Soncini, A. (2021). Self-efficacy and psychological well-being in a sample of Italian university students with and without specific learning disorder. *Research in Developmental Disabilities*, *110*, 103858. http://dx.doi.org/10.1016/j.ridd.2021.103858

Matthys, W., & Schutter, D.J. (2021). Increasing effectiveness of cognitive behavioural therapy for conduct problems in children and adolescents: What can we learn from neuroimaging studies? *Clinical Child and Family Psychology Review*, *24*(3), 484-499. https://doi.org/10.1007/s10567-021-00346-4

May, R. (1958). The Origins and Significance of the Existential Movement in Psychology. In R. May, E. Angel & H. F. Ellenberger (Eds.), *Existence.* Basic Books.

May, R. (1969). *Love and will*. Norton.

May, R. (1983). *The discovery of being: Writings in existential psychology*. Norton.

McLeod, S.A. (2019). Constructivism as a theory for teaching and learning. *Simply Psychology*. http://bit.ly/3XgfpxQ

Merriman, D.E., & Codding, R.S. (2008). The effects of coaching on mathematics homework completion and accuracy of high school students with attention-deficit/hyperactivity disorder. *Journal of Behavioral Education*, *17*(4), 339-355. http://dx.doi.org/10.1007/s10864-008-9072-3

Mevarech, Z.R., Verschaffel, L & De Corte, E. (2018). Metacognitive pedagogies in mathematics classrooms: From kindergarten to college and beyond. In D.H. Schunk & J.A. Greene (Eds.), *Handbook of Self-Regulation of Learning and Performance* (pp. 109–123). Routledge/Taylor & Francis Group.

Ministry of Education (2014). *Something good is happening now: Milestones in meaningful learning*. http://bit.ly/3geHR2F

Ministry of Education (2020). *Education System 2030 - Adult character skills: Adult character skills document.* http://bit.ly/3X8A339

Ministry of Education (2020). *The mentors guide*. Institute for Democratic Education & JDC Israel Ashalim .http://bit.ly/3TDk6yT

Mischel, W., Ayduk, O., Berman, M. G., Casey, B. J., Gotlib, I. H., Jonides, J., Kross, E., Teslovich, T., Wilson, N. L., Zayas, V., & Shoda, Y. (2011). 'Willpower' over the life span: Decomposing self-regulation. *Social Cognitive and Affective Neuroscience*, *6*(2), 252-256. http://dx.doi.org/10.1093/scan/nsq081

Moffitt, T.E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R.J., Harrington, H., ... & Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences*, *108*(7), 2693-2698. http://dx.doi.org/10.1073/pnas.1010076108

Moldavsky, A. (2002). Self-control, emotional problems, academic achievements and patterns of violence among elementary school children. *Essay towards the "qualified" degree in social work*, Tel Aviv University.

Moilanen, K.L. (2007). The adolescent self-regulatory inventory: The development and validation of a questionnaire of short-term and long-term self-regulation. *Journal of Youth and Adolescence*, *36*(6), 835-848. http://dx.doi.org/10.1007/s10964-006-9107-9

Moore, P. (2018). *The School as a Space for Learning and Development*. Ah Publishing Ltd.

Morgenstern, E., Pinto, A., Wegerhoff, E., Hoffman, T., & Lutti, S. (2019). *Future-oriented pedagogy 2: Trends, principles, implications and applications*. Ministry of Education. http://bit.ly/3V0QfBK

Muijs, D., & Bokhove, C. (2020). *Metacognition and Self-Regulation: Evidence Review*. Education Endowment Foundation.

Murphy, P.K., Alexander, P.A., & Muis, K.R. (2012). Knowledge and Knowing: The Journey from Philosophy and Psychology to Human Learning. In K.R. Harris, S. Graham T. Urdan, C.B. McCormick, G.M. Sinatra. & J. Sweller (Eds.),

Educational Psychology Handbook (pp. 189-226). American Psychological Association.

Murphy-Graham, E., & Cohen, A.K. (2022). Life Skills Education for Youth in Developing Countries: What Are They and Why Do They Matter? In J. DeJaeghere & E. Murphy-Graham (Eds.), *Life Skills Education for Youth* (pp. 13-41). Springer Cham.

Narayan, R., Rodriguez, C., Araujo, J., Shaqlaih, A., & Moss, G. (2013). Constructivism—Constructivist Learning Theory. In B. J. Irby, G. Brown, R. Lara-Alecio, & S. Jackson (Eds.), *The Handbook of Educational Theories* (p. 169–183). IAP Information Age Publishing.

Natvig, G.K., Albrektsen, G., & Qvarnstrøm, U. (2003). Associations between psychosocial factors and happiness among school adolescents. *International Journal of Nursing Practice*, *9*(3), 166-175. http://dx.doi.org/10.1046/j.1440-172X.2003.00419.x

Neenan, M., & Palmer, S. (2001). Cognitive Behavioral Coaching. *Stress News, 13*(3), 15-18. http://bit.ly/3V2ufX8

Neenan, M. (2008). From Cognitive Behavior Therapy (CBT) to Cognitive Behavioral Coaching. *Journal of Rational-Emotive and Cognitive Behavior Therapy, 26*(1), 3-15. http://dx.doi.org/10.1007/s10942-007-0073-2

Nelson, C.A., & Sheridan, M.A. (2011). Lessons from neuroscience research for understanding causal links between family and neighbourhood characteristics and educational outcomes. In G.J. Duncan & R.J. Murnane (Eds.), *Whither Opportunity* (pp. 27-46). Russell Sage Foundation.

Neuman, R. (2020). The life journeys of adults with intellectual and developmental disabilities: Implications for a new model of holistic supports. *Journal of Social Service Research*, 47(3), 327-342. https://doi.org/10.1080/01488376.2020.1802396

Newton, D.P. (2021). *Teaching for Understanding - What It Is and How to Do It*. Hakibbutz Hameuchad & Branco Weiss Publishing.

Nguyen, M.H. (2011). Learner Self-Management Procedures Reported by Advanced and Intermediate ESL Students. *The Asian EFL Journal Quarterly,* 13(4), 102. http://bit.ly/3g6wKJ0

Nguyen, Q.D., Fernandez, N., Karsenti, T., & Charlin, B. (2014). What is reflection? A conceptual analysis of major definitions and a proposal of a five-component model. *Medical Education*, *48*(12), 1176-1189. http://dx.doi.org/10.1111/medu.12583

Nickerson, R. S. (1985). Understanding understanding. *American Journal of Education*, *93*(2), 201-239. http://dx.doi.org/10.1086/443791

O`Rourke, S., Whalley, H., Janes, S., MacSweeney, N., Skrenes, A., Crowson, S., MacLean, L., & Schwannauer, M. (2020). *The development of cognitive and emotional maturity in adolescents and its relevance in judicial contexts*. Scottish Sentencing Council.

OECD (2015). *Skills for Social Progress: The Power of Social and Emotional Skills, OECD Skills Studies.* OECD Publishing. http://dx.doi.org/10.1787/9789264226159-en

OECD (2018). *The Future of Education and Skills: Education 2030, the Future we Want*. OECD Publishing. http://bit.ly/3TNjVRw

OECD (2019). *OECD Future of Education and Skills 2030: Conceptual learning framework.* OECD Publishing. https://www.oecd.org/education/2030-project/

Office of Educational Technology (2017). *What is Personalized Learning*? Available http://bit.ly/3EDi8dE

Orian, S. (2018). A Sense of Belonging Among At-Risk Youth: Ways to Establish it According to the Adlerian Approach. *Detachment to Integration – Aspects of Education for Children and Youth at Risk, 20* .http://bit.ly/3EaVtUz

Osher, D., Cantor, P., Berg, J., Steyer, L., & Rose, T. (2020). Drivers of human development: How relationships and context shape learning and development. *Applied Developmental Science*, *24*(1), 6-36. https://doi.org/10.1080/10888691.2017.1398650

Osher, D., Kidron, Y., Brackett, M., Dymnicki, A., Jones, S., & Weissberg, R.P. (2016). Advancing the science and practice of social and emotional learning: Looking back and moving forward. *Review of Research in Education*, *40*(1), 644-681. https://doi.org/10.3102/0091732X16673595

Ott, T., & Nieder, A. (2019). Dopamine and cognitive control in prefrontal cortex. *Trends in Cognitive Sciences*, *23*(3), 213-234. https://doi.org/10.1016/j.tics.2018.12.006

Ozturk, N. (2017). An analysis of teachers' self-reported competencies for teaching metacognition. *Educational Studies, 43*(3), 247-264. https://doi.org/10.1080/03055698.2016.1273761

P21 (2007a). *The Intellectual and Policy Foundations of the 21st Century Skills Framework*. Partnership for 21st Century Skills. http://bit.ly/3GtODw7

P21 (2007b*). 21st Century Curriculum and Instruction*. Partnership for 21st Century Skills. http://bit.ly/3UQCkhs

P21 (2011). *Framework for 21st Century Learning*. Partnership for 21st Century Skills. http://bit.ly/3AlNB1n

Pedagogy folder for Guide in Marom Schools. (2019). *Companies, settlements, principles, to improve teaching management in schools in Marom*. Israel: Ministry of Education, R&D Division, Pedagogical Administration. http://bit.ly/3Eu6Ecp

Pagis, M. (2016). Fashioning futures: Life coaching and the self-made identity paradox. *Sociological Forum, 31*(4), 1083-1103. https://doi.org/10.1111/socf.12297

Palmer. S. & Szymanska, K. (2007). Cognitive behavioural coaching: An integrative approach. In S. Palmer & A. Whybrow (Eds.). Handbook of coaching psychology (pp.86–117). London: Routledge.

Palmer, S. & Williams, H. (2013). Cognitive Behavioral Approaches. In J. Passmore, D.B. Peterson & T. Freire (Eds.), *The Wiley Blackwell Handbook of the Psychology of Coaching and Mentoring* (pp. 319-338). John Wiley & Sons.

Palmer, S., & Whybrow, A. (Eds.) (2018). *Handbook of coaching psychology: A guide for practitioners*. Routledge.

Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. *Frontiers in Psychology*, 422. https://doi.org/10.3389/fpsyg.2017.00422

Pane, J.F., Steiner, E.D., Baird, M.D., & Hamilton, L.S. (2015). *Continued Progress: Promising Evidence on Personalized Learning*. RAND Corporation. http://bit.ly/3hQOGbc

Papaleontiou-Louca, E. (2008). *Metacognition and theory of mind*.

Passmore, J., & Brown, A. (2009). Coaching Non-Adult Students for Enhanced Examination Performance: A Longitudinal Study. *Coaching: An International Journal of Theory, Research and Practice, 2(*1), 54-64. http://dx.doi.org/10.1080/17521880902783124

Pepper, M., & Masterman, E. (2020). *Mentoring program in employment – A booklet of tools and emphases for the mentor*. Ministry of Labor, Welfare and Social Services & JDC Israel. http://bit.ly/3GrQBxf

Pereira, G., Palmer, S., & Nardi, A. E. (2017). Integrating positive psychology and the solution-focused approach with cognitive-behavioural coaching: The integrative cognitive-behavioural coaching model. *European Journal of Applied Positive Psychology*, *1*, 1-8. http://bit.ly/3URT1JW

Perry, J., Lundie, D., & Golder, G. (2019). Metacognition in Schools: What Does the Literature Suggest About the Effectiveness of Teaching Metacognition in Schools? *Educational Review, 71*(4), 483–500. https://doi.org/10.1080/00131911.2018.1441127

Piaget, J. (1952). *The Origins of Intelligence in Children*. International Universities Press.

Piaget, J. (1972). *The Principles of Genetic Epistemology*. Routledge & Kegan Paul.

Pintrich P.R. (2000). The Role of Goal Orientation in Self-Regulation Learning. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.), *Handbook of Self-Regulation: Theory, Research and Applications* (pp. 451–502). Academic Press.

Platt, I.A., Kannangara, C., Tytherleigh, M., & Carson, J. (2020). The hummingbird project: A positive psychology intervention for secondary school

students. *Frontiers in Psychology*, *11*, 2012. https://doi.org/10.3389/fpsyg.2020.02012

Prensky, M. (2012). *From Digital Natives to Digital Wisdom: Hopeful Essays for 21st Century Learning.* Corwin Press.

Prevatt, F., & Yelland, S. (2015). An empirical evaluation of ADHD coaching in college students. *Journal of Attention Disorders*, *19*(8), 666-677. http://dx.doi.org/10.1177/1087054713480036

Purves, D., Augustine, G.J., Fitzpatrick, D., Hall, W. C., LaMantia, A.S., & White, L.E. (Eds.) (2013). *Neuroscience* (5th edition). Sinauer Associates, Inc.

Qinan, O. (2020). Education in the days of COVID: An opinion on aspects of the Israeli education system in light of the coronavirus crisis. *Negev, Dead Sea and Arava Studies, 12*(2), 50-55. http://bit.ly/3AjMore

Ramdial-Budhai, C. (2018). *An Exploration of the Impact of Instructional Coaching* [Doctoral dissertation]. University of New England. http://bit.ly/3AnWQhw

Ran, E. (2016). *Reflection: Thoughtful and Challenging Thinking in Education*. Mofet Institute Publishing.

Ranganath, A., & Jacob, S.N. (2016). Doping the Mind: Dopaminergic Modulation of Prefrontal Cortical Cognition. *The Neuroscientist, 22*(6), 593-603. https://doi.org/10.1177/1073858415602850

Redecker, C., & Punie, Y. (2013). The Future of Learning 2025: Developing a Vision for Change. *Future Learning, 2*(2), 3-17. http://dx.doi.org/10.7564/13-FULE12

Reiter, S. (2022). Philosophical, theoretical and applied aspects of meaningful learning and learners with disabilities: the internalization circle model and its application in the special and regular education systems. *Developmental intellectual disability: theory, research, and applied implications,* 233-261. http://bit.ly/3TFcpbn

Rhodes, J.E. (2005). A model of youth mentoring. In D. L. Dubois & M. J. Karcher (Eds.), *Handbook of youth mentoring* (pp. 30–43). Sage.

Rhodes, J.E., Reddy, R., Grossman, J.B., & Lee, J.M. (2002). Volunteer mentoring relationships with minority youth: An analysis of same versus cross-race matches. *Journal of Applied Social Psychology, 32*(10), 2114-2133. http://dx.doi.org/10.1111/j.1559-1816.2002.tb02066.x

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, *138*(2), 353-387. http://dx.doi.org/10.1037/a0026838

Richman, E.L., Rademacher, K.N., & Maitland, T.L. (2014). Coaching and college success. *Journal of Postsecondary Education and Disability*, *27*(1), 33-50. http://bit.ly/3AlzXeG

Robinson, C.E. (2015). *Academic/success coaching: A description of an emerging field in higher education* [Doctoral dissertation]. University of South Carolina.

Rodin, S., & Ron, A. (2018) "He should be punished": Kindergarten children define violence following an educational bibliotherapy discourse about children's books. *Education Time, 4*, 45-84. http://bit.ly/3OgndMi

Roediger, H.L., Finn, B., & Weinstein, Y. (2012). Applications of cognitive science to education. In S. Della Sala & M. Anderson (Eds.), *The Good, the Bad, and the Ugly* (pp. 13-30). Oxford University Press.

Rogers, C.R. (1959). A theory of therapy, personality and relationship, as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A Study of Science, vol.3* (pp. 184-256). McGraw Hill.

Rogers, C.R. (1969). *Freedom to Learn.* Columbus. Charles E. Merrill.

Rogers, C.R. (1973). *Freedom to Study*. Working Books.

Rogers, C.R., & Freiberg, H.J. (1993*). Freedom to Learn.* Merrill.

Rosenbaum, M. (1980). A schedule for assessing self-control behaviors: Preliminary findings. *Behavior therapy*, *11*(1), 109-121. https://doi.org/10.1016/S0005-7894(80)80040-2

Rosenbaum, A. (2016). *The Role of your Life: Five Goals for Strengthening Parental Resilience According to the Adlerian Method.* Publisher: Haifa Amaziah Book Publishing. http://bit.ly/3OtjFXb

Roudeina, A. (2002). The relationship between personal resources (self-control), environmental resources (social support) and behavioral problems in Arab children in boarding schools in the north of the country. *Essay towards the "qualified" degree in social work*, Tel Aviv University

Rubin, J. (2001). Language learner self-management. *Journal of Asian Pacific Communication, 11*(1), 25-37. http://dx.doi.org/10.1075/japc.11.1.05rub

Rubin, J. (2005). The Expert Language Learner: A Review of Good Language Learner Studies and Learner Strategies. In K. Johnson (Ed.), *Expertise in Second Language Learning and Teaching* (pp. 37-63). Palgrave Macmillan.

Rueda, C. (2020). Neuroeducation: Teaching with the brain. *Journal of Neuroeducation, 1*(1), 108-113. http://dx.doi.org/10.1344/joned.v1i1.31657

Ruiz-Martín, H., & Bybee, R.W. (2022). The cognitive principles of learning underlying the 5E Model of Instruction. *International Journal of STEM Education, 9*, 21. https://doi.org/10.1186/s40594-022-00337-z

Russ-Eft, D., & Hoover, A. L. (2005). Experimental and quasi-experimental designs. *Research in organizations: Foundations and methods of inquiry. San Francisco: Berrett-Koehler Publishers*, 75-95. http://bit.ly/3UxRK9N

Ryan, R.M., & Deci, E.L. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation Social Development and Well-Being. *American Psychologist, 55*(1), 68-78. http://dx.doi.org/10.1037/0003-066X.55.1.68

Ryan, R.M., & Deci, E.L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, *61*, 101860. https://bit.ly/3itrkJu

Ryckman, R.M. (2013). *Theories of Personality* (10th ed.). Cengage Learning.

Saair, A. (2019). Out of the Box: Behaviorism and the Mangle of Practice. *Discourse: Studies in the Cultural Politics of Education, 40*(1), 109-121. http://dx.doi.org/10.1080/01596306.2018.1549707

Sajeevanie, T.L., & Lecturer, S. (2020). Importance of self-management and future research thoughts: A critical review perspective. *International Journal of Creative Research Thoughts*, *8*(7), 4122-4127. http://bit.ly/3hBPf8w

Salas-Pilco, S.Z. (2013). Evolution of the framework for 21st century competencies. *Knowledge Management & E-Learning: An International Journal*, *5*(1), 10-24. http://hdl.handle.net/10722/191519

Sarig, G. (2015). *Transparent Childhood Trail: On Childhood Memories in an Adlerian Approach.* Mofet Institute.

Sato, M., & Dussuel Lam, C. (2021). Metacognitive instruction with young learners: A case of willingness to communicate L2 use, and metacognition of oral communication. *Language Teaching Research*, *25*(6), 899-921. https://doi.org/10.1177/13621688211004639

Schneider, M., & Stern, E. (2010). The cognitive perspective on learning: Ten cornerstone findings. In H. Dumont, D. Istance & F. Benavides (Eds.), *The nature of learning: Using research to inspire practice* (pp. 69-90). OECD Center for Educational Research and Innovation.

Schneider, W., & Artelt, C. (2010). Metacognition and mathematics education. *ZDM – Mathematics Education*, *42*(2), 149-161. https://doi.org/10.1007/s11858-010-0240-2

Schonert-Reichl, K.A. (2017). Social and emotional learning and teachers. *The Future of Children, 27*(1), 137-155. http://dx.doi.org/10.1353/foc.2017.0007

Schraw, G. (1998). Promoting general metacognitive awareness. *Instructional Science*, *26*(1), 113-125. http://dx.doi.org/10.1023/A:1003044231033

Schraw, G., & Dennison, R.S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology*, *19*(4), 460-475. https://doi.org/10.1006/ceps.1994.1033

Schraw, G., & Gutierrez, A.P. (2015). Metacognitive Strategy Instruction that Highlights the Role of Monitoring and Control Processes. In A. Peña-Ayala (Ed.), *Metacognition: Fundaments, Applications, and Trends* (pp. 3–16). Springer International Publishing.

Schraw, G., & Moshman, D. (1995). Metacognitive theories. *Educational psychology review*, *7*(4), 351-371. http://bit.ly/3PifhdE

Schultz, D.P., & Schultz, S.E. (2013). *Theories of Personality* (10th edition). Cengage Learning.

Schunk, D.H., & Mullen, C.A. (2013). Toward a conceptual model of mentoring research: Integration with self-regulated learning. *Educational Psychology Review*, *25*(3), 361-389. http://dx.doi.org/10.1007/s10648-013-9233-3

Schuster, C., Stebner, F., Leutner, D., & Wirth, J. (2020). Transfer of metacognitive skills in self-regulated learning: An experimental training study. *Metacognition and Learning*, *15*(2), 455-477. http://bit.ly/3hQMtwp

Searby, L.J., & Armstrong, D. (2016). Supporting the development and professional growth of middle space educational leaders through mentoring. *International Journal of Mentoring and Coaching in Education*, 5(3), 162-169. http://dx.doi.org/10.1108/IJMCE-06-2016-0054

Selkovski, M. (2013) *Decision-making about performing risky behaviors in a self-regulation perspective: relationship between cognitive, social, personality and meta-cognitive variables among normative and at-risk adolescents*. thesis. Ramat Gan: Bar-Ilan University. http://bit.ly/3HdHArL

Seligman M.E.P., & Adler, A. (2018). Positive Education. In J.F. Helliwell, R. Layard & J. Sachs (Eds.), *Global Happiness Policy Report: 2018* (pp. 52-73). Global Happiness Council.

Seligman, M. & Peterson, C. (2003). Positive clinical psychology. In: L.G. Aspinwall & U.M. Staudinger (Eds*.), A Psychology of Human Strengths: Perspectives on an Emerging Field* (pp. 305-317). American Psychological Association.

Seligman, M. (2005). *Possible Happiness: Self-Fulfillment Through Positive Psychology*. Modan .

Seligman, M.E., & Csikszentmihalyi, M. (2000). Positive Psychology – An introduction. *American Psychologist, 55*, 5-14. http://dx.doi.org/10.1037/0003-066X.55.1.5

Sequeira, A.H. (2012). Introduction to Concepts of Teaching and Learning. *SSRN Electronic Journal*. http://dx.doi.org/10.2139/ssrn.2150166

Shabbat-Simon, M., Yosef, C., & Shavit, C. (2019). The Effect of the Intensity of Acute Aerobic Exercise on Cognitive Ability among Physical Education Teaching Students aged 20-40. *Spirit of Sport, 5*, 1-18. http://bit.ly/3GtALSN

Shanker, S. (2017). *What You Need to Know: 5 Domains of Self-Regulation.* The MEHRIT Centre.

Shapira, T., Alon, B., & Schwartz, Z. (2017). Developed Self-Regulation Skills in Learning Are Key to Academic Success. *Intermediate Reading, 5*, 28-29. http://bit.ly/3EKQqvL

Shavit, P., & Reiter, S. (2016). *"I'm a partner"! Humanistic education for self-determination and self-advocacy*. Inspectorate Institute.

Shavit, Y., Friedman, Y., Gal, J., & Voknin, D. (2018). *Inequality Emerges in Early Childhood: On the Relationship Between Poverty, Distress and Sensory Stimuli to Child Development and Achievement.* Taub Center for the Study of Social Policy in Israel.

Shemesh, A. (2018). *Literature Review - Learning Personalization*. The Trump Foundation and the 8200 Alumni Association. http://bit.ly/3VCNo2w

Shifron, R. (2010). Adler`s Need to Belong as the Key to Mental Health. *Journal of Individual Psychology 66*(1), 10-29. http://bit.ly/3Ajeu6c

Shifron, R. (2020). The miracle of early recollections in Adlerian psychotherapy and supervision. *The Journal of Individual Psychology*, *76*(1), 110-127. http://dx.doi.org/10.1353/jip.2020.0022

Shimoni, S., Segal, S., & Sharoni, V. (1997). *Classroom Discipline - Psychological and Educational Aspects*. Mofet Institute.

Shkolnikov, S. (2008). Autonomy and Humanistic Education (answer to Ilan Gur-Ze'ev). In S. Sheinberg (Ed.), *Autonomy and Education: Critical Aspects* (pp. 269-280). Magnes.

Shkolnikov, S., Gover, N., & Soreq, Y. (1995). Teacher Education as Humanistic Education including. *Within the Planning of Education Policy, Position Papers, 5755-56, Volume II: Training of Pedagogical Personnel* (pp. 125-155.) Department of Education.

Shogren, K.A., Thompson, J.R., Shaw, L.A., Grandfield, E.M., & Hagiwara, M. (2018). Detecting changes in support needs over time. *American Journal on Intellectual and Developmental Disabilities, 123*(4), 315-328. http://dx.doi.org/10.1352/1944-7558-123.4.315

Shonkoff, J.P., & Phillips, D.A (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development.* National Academies Press.

Sigd, R. (1981). *Existentialism: Continuation and Turning Point in the History of Western Culture.* Dvir-Bialik.

Skinner, B.F. (1938). *The Behavior of Organisms*. Appleton-Century-Crofts.

Skinner, B.F. (1953). *Science and Human Behavior*. The Free Press.

Skinner, B.F. (1976). *Behaviorism*. Cherikover.

Smilansky, Y. (1987). Psychological consideration in the treatment of disciplinary problems in the classroom. In A. Lest (Ed.), *Psychological work in the school* (pp. 223-242). The Hebrew University.

Soodla, P., Jõgi, A.L., & Kikas, E. (2017). Relationships Between Teachers' Metacognitive Knowledge and Students' Metacognitive Knowledge and Reading Achievement. *European Journal of Psychology of Education*, 32(2), 201–218. https://doi.org/10.1007/s10212-016-0293-x

Spence, G.B., & Grant, A.M. (2007). Professional and peer life coaching and the enhancement of goal striving and well-being: An exploratory study. *Journal of Positive Psychology*, *2*(3), 185-194. http://dx.doi.org/10.1080/17439760701228896

Sperling, D. (2018). Social-emotional learning: Conceptual mapping, and theoretical and empirical basis. In L. Yosefsberg-Ben Yehoshua (Ed.), *Review of background material for team of experts on fostering and assimilating social-emotional learning in the education system*. Magnes Publishing. http://bit.ly/3EAJCjX

Sprinthall, R.C., & Sprinthall, N.A. (1981). *Educational Psychology: A Developmental Approach* (3rd edition). Addison-Wesley.

Stephen, J. S., & Rockinson-Szapkiw, A. J. (2021). A high-impact practice for online students: The use of a first-semester seminar course to promote self-regulation, self-direction, and online learning self-efficacy. *Smart Learning Environments*, *8*(1), 1-18. http://bit.ly/3gg7G2o

Sternberg, R.J. (Ed.) (1999). *The nature of cognition.* Bradford, MIT Press.

Sternberg, R.J., & Sternberg, K. (2012). *Cognitive Psychology* (6th edition). Cengage Learning.

Sternberg, R.J., & Subotnik, R.F. (Eds). (2006). *Optimizing Student Success in School with the Other Three Rs: Reasoning, Resilience, and Responsibility.* Research in Educational Productivity Series. Information Age Publishing.

Storrie, K., Ahern, K., & Tuckett, A. (2010). A Systematic Review: Students with Mental Health Problems – A Growing Problem. *International Journal of Nursing Practice 16*(1). http://dx.doi.org/10.1111/j.1440-172X.2009.01813.x

Sutherland, J., Wald, G., & Collins, C. (2010). Art Therapy Connection: Encouraging troubled youth to stay in school and succeed. *Journal of American Art Therapy Association,* 27(2), 69-74. https://doi.org/10.1080/07421656.2010.10129720

Sutherland, R., & Fischer, F. (2014). Future learning spaces: Design, collaboration, knowledge, assessment, teachers, technology and the radical past. *Technology, Pedagogy and Education, 23*(1), 1–5. http://dx.doi.org/10.1080/1475939X.2013.870107

Tair, K.B. (2020). *The Revolution of Consciousness.* https://bit.ly/3hFsSz1

TALIS (2018). *Teaching and Learning International Survey – Extended Report, Israeli Perspective* (pp. 146–148). http://bit.ly/3E9Fq9r

Talukdar, D. (2021). Humanistic approach benefits online teaching. *Journal of Interdisciplinary Cycle Research, 7*(9), 1731. https://bit.ly/3Glv891

Tanami, Y. (2022). Promoting Middle School Students' Learner Skills via Setting Goals. *Hemdat Multidisciplinary Journal,* 14, 109-134. http://bit.ly/3GmD7Tq

Tanner, K.D. (2012). Promoting Student Metacognition. *CBE Life Science Education, 11*(2), 113-120. https://doi.org/10.1187%2Fcbe.12-03-0033

Tauber, Z .(2016).) The Socratic Dialogue: Stimulation and Openness, Pedagogical Eros and Irony. In N. Aloni (Ed.), *Empowering Dialogues in Humanistic Education* (pp. 89–110). HaKibbutz HaMeuchad.

Tee, S.R., Jowett, R.M., & Bechelet-Carter, C. (2009). Evaluation study to ascertain the impact of the clinical academic coaching role for enhancing student learning experience within a clinical Master's education programme. *Nurse Education in Practice*, *9*(6), 377-382. http://dx.doi.org/10.1016/j.nepr.2008.11.006

The Collaborative for Academic, Social & E.L. (2017). CASL`s Widely Used Framework Identifies Five Core Competencies. https://casel.org/what-is-sel/

Theeboom, T., Beersma, B., & van Vianen, A. E. (2014). Does coaching work? A meta-analysis on the effects of coaching on individual level outcomes in an organizational context. *Journal of Positive Psychology*, *9*(1), 1-18. https://doi.org/10.1080/17439760.2013.837499

Thomason, J.A., & Pond III, S.B. (1995). Effects of Instruction on Stress-Management Skills and Self-Management Skills Among Blue-Collar Employees. In L.R. Murphy, J.J. Hurrell Jr., S.L. Sauter, & G.P. Keita (Eds.), *Job Stress Interventions* (pp. 7–20). American Psychological Association.

Timur, T. (2011). Classroom Management Approaches Among Beginner Teachers: "Who's the Boss". *Education and Around It – Seminar HaKibbutzim Annual, 33*, 59-71. http://bit.ly/3E9vBIJ

Tokuhama-Espinosa, T. (2011). *Mind, Brain, and Education Science. A Comprehensive Guide to the New Brain-Based Teaching*. W.W. Norton & Co.

Tolan, P., Ross, K., Arkin, N., Godine, N., & Clark, E. (2016). Toward an Integrated Approach to Positive Development: Implications for Intervention. *Applied*

Developmental Science, 20(3), 214-236. https://doi.org/10.1080/10888691.2016.1146080

Tomer, A. (2019). Creativity in the Educational Space. *Shiloah, 14*, 57-81. http://bit.ly/3UY8EyX

Tomer, A. (2021). *A Model of Employing Teachers in Israel and Improving the Education System*. Kohelet Policy Forum, Policy Paper 69. http://bit.ly/3THhRe2

Topol, N. (2019). *Research review – The motivations for values education in different countries of the world.* http://bit.ly/3X4dWux

Trias, D., Huertas, J. A., Mels, C., Castillejo, I., & Ronqui, V. (2021). Self-regulated learning, academic achievement and socioeconomic context at the end of primary school. *Revista Interamericana de Psicología/Interamerican Journal of Psychology*, *55*(2), e1509-e1509. https://doi.org/10.30849/ripijp.v55i2.1509

Trilling, B., & Fadel, C. (2009). *21st Century Skills: Learning for Life in Our Times.* Jossey-Bass/John Wiley & Sons. http://bit.ly/3AqMk9c

Tucker, M.S., & Codding, J.B. (1998). *Standards for Our Schools: How to Set Them, Measure Them, and Reach Them*. Jossey-Bass Inc.

Umeh, B. O., Oluwuo, S. O., & Nzokurum, J. C. (2021). Work-life integration and female lecturers' task performance in higher educational institutions in Imo state, Nigeria. *European Journal of Education Studies*, *8*(5), 346-365. http://bit.ly/3TORDWS

Van Laar, E., Van Deursen, A. J., Van Dijk, J. A., & De Haan, J. (2020). Determinants of 21st-century skills and 21st-century digital skills for workers: A systematic literature review. *Sage Open*, *10*(1), 2158244019900176. http://bit.ly/3UpepVJ

Van Nieuwerburgh, C. (Ed.) (2012). *Coaching in education: Getting better results for students, educators, and parents.* Karnac Books. http://bit.ly/3AoeqlG

Van Nieuwerburgh, C., & Barr, M. (2016). Coaching in Education. In T. Bachkirova, G. Spence & D. Drake (Eds.), *The SAGE Handbook of Coaching.* Sage. http://bit.ly/3hTNXWv

Veenman, M. V. (2011). Alternative assessment of strategy use with self-report instruments: A discussion. *Metacognition and learning*, *6*(2), 205-211. http://bit.ly/3iOeVPM

Veenman, M. V. (2016). Learning to self-monitor and self-regulate. In R.E. Mayer & P.A. Alexander (Eds.), *Handbook of research on learning and instruction* (pp. 249-273). Routledge.

Veenman, M. V., Hout-Wolters, V., Bernadette, H. A. M., & Afflerbach, P. (2006). Metacognition and learning: Conceptual and methodological considerations. *Metacognition and learning*, *1*(1), 3-14. http://bit.ly/3HhDlvv

Vygotsky, L.S. (1962). Thought and language. Cambridge, MA: MIT Press.

Vygotsky, L.S. (1986). *Thought and Language* (A. Kozulin, Trans.). MIT Press.

Vygotsky, L.S. (2004). *Learning in a social context: The development of higher psychological processes*. HaKibbutz HaMeuchad.

Vygotsky, L.S., & Cole, M. (1978). *Mind in society: Development of higher psychological processes*. Harvard University Press.

Wagner, H., & Elliott, A. (2014). Adlerian adventure-based counseling to enhance self-esteem in school children. *Journal of School Counseling, 12*(14), 1-35. http://bit.ly/3V3dr2f

Wagner, T. (2010). *The Global Achievement Gap*. Basic Books. http://bit.ly/3TOpHCM

Wagner, T., Kegan, R., Lahey, L.L., Lemons, R.W., Garnier, J., Helsing, D., Howell, A., & Rasmussen, H.T. (2012). *Change leadership: A practical guide to transforming our schools*. John Wiley & Sons.

Wang, Q. (2013). Structure and characteristics of effective coaching practice. *The Coaching Psychologist, 9*(1), 7–17. http://bit.ly/3Alc4UF

Warner, Z., Neater, W., Clark, L., & Lee, J. (2018). Peer coaching and motivational interviewing in postsecondary settings: Connecting retention theory with practice. *Journal of College Reading and Learning*, *48*(3), 159-174. https://doi.org/10.1080/10790195.2018.1472940

Watson, J. B. (1913). Psychology as the behaviorist views it. *Psychological review*, *20*(2), 158. https://psycnet.apa.org/doi/10.1037/h0074428

Weissberg, R.P., Durlak, J.A., Domitrovich, C.E., & Gullotta, T.P. (2015). Social and Emotional Learning: Past, Present, and Future. In J.A. Durlak, C.E. Domitrovich, R.P. Weissberg, & T.P. Gullotta (Ed.), *Handbook of Social and Emotional Learning* (pp. 3-19). Guilford Press.

White, M.A. (2016). Why won't it stick? Positive psychology and positive education. *Psychology of Well-Being Theory Research and Practice*, *6*(1), 1-16. http://dx.doi.org/10.1186/s13612-016-0039-1

Wubbels, T. (2011). An international perspective on classroom management: What should prospective teachers learn? *Teaching Education, 22*(2), 113-131. https://doi.org/10.1080/10476210.2011.567838

Yalom, I.D. (2011). *Existential Psychotherapy* (translated by Miriam Sheps) (originally published 1980).

Yehieli, T. (2008). How to do Constructivist Learning work? *Hed Hachinuch*, 82 (4), 40-44. http://bit.ly/3UH1PCc

Yondler, Y., & Weiss, D. (2021). *Humanistic Knowledge Building Community – Aspects of Teaching Practices of Educators in Future Learning Spaces*. Open University. http://bit.ly/3EoS8S6

Yotam, A. (2014). *Understanding Yourself, Your Family and Your Child: A Series of Lectures by my brother Yotam on Alfred Adler's Theory*. (Professional editing: Zivit Abramson) Orion Publishing .

Zalkowitz, C., & Goldstein, A. (2011). The Personalization Trend of Education in the Age of Information Technology – Literature Review. *21st Century Teachers' Conference on Teacher Education and Training*. Mofet Institute.

Zeeman, E. (2004) *The relationship between self-control and social support and mental well-being Subjectivity of adolescents in an educational boarding school in light of the threat of war with Iraq*. Essay to obtain a qualified degree, Tel Aviv University.

Zepeda, C.D., Hlutkowsky, C.O., Partika, A.C., & Nokes-Malach, T.J. (2019). Identifying teachers' supports of metacognition through classroom talk and its relation to growth in conceptual learning. *Journal of Educational Psychology*, *111*(3), 522-531. http://dx.doi.org/10.1037/edu0000300

Zhang, Y., Cui, B., Wang, T., Lu, Y., Chen, Z., Zou, Z., Miao, J., Zhao, X., Yuan, Y., Wang, H., & Chen, G. (2021). Early Enhancement of Neuroplasticity Index, the Ratio of Serum Brain-Derived Neurotrophic Factor Level to HAMD-24 Score, in Predicting the Long-Term Antidepressant Efficacy. *Frontiers in Behavioural Neuroscience*, *15*. http://dx.doi.org/10.3389/fnbeh.2021.712445

Zhoc, K. C., King, R. B., Chung, T. S., & Chen, J. (2020). Emotionally intelligent students are more engaged and successful: Examining the role of emotional intelligence in higher education. *European Journal of Psychology of Education*, *35*(5), 839-863. http://dx.doi.org/10.1007/s10212-019-00458-0

Zhu, M. (2021). Enhancing MOOC learners' skills for self-directed learning. *Distance Education*, *42*(3), 441-460. https://doi.org/10.1080/01587919.2021.1956302

Zilberstein, M. (1988). Reflective Teaching: Conceptual Clarification of Teacher Training Programs. In M. Zilberstein, M. Ben Peretz, & S. Ziv (Eds.), *Reflection in Teaching: A Central Axis in Teacher Development* (42-15). Mofet Institute Publishing.

Zimmerman, B.J. (1986). Becoming a Self-Regulated Learner: Which Are the Key Sub-Processes? *Contemporary Educational Psychology, 11*, 307-313. http://dx.doi.org/10.1016/0361-476X(86)90027-5

Zimmerman, B.J. (2000). Attaining self-regulation. A social-cognitive perspective. In M. Boekaerts, P.R. Pintrich, & M. Zeidner (Eds.), *Handbook of Self-Regulation.* Academic Press.

Zimmerman, B.J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, *41*(2), 64-70. http://dx.doi.org/10.1207/s15430421tip4102_2

Zimmerman, S. (2010). *Mental Well-Being in the Mirror of Positive Psychology*. Ach Publishing .

Zins, J.E., Weissberg, R.P., Wang, M.C., & Walberg, H.J. (2004). The Scientific Base Linking Social and Emotional Learning to School Success. In *Building Academic Success on Social and Emotional Learning: What Does the Research Say?* (pp. 3-22). Teachers College Press.

Ziv, A. (2010). *Psychology in Education.* The Open University.

Ziv, M., & Frye, D. (2004). Children's understanding of teaching: The role of knowledge and belief. *Cognitive Development*, *19*(4), 457-477. http://dx.doi.org/10.1016/j.cogdev.2004.09.002

Ziv, M., Smadja, M.L., & Aram, D. (2013). Mothers' mental-state discourse with pre-schoolers during storybook reading and wordless storybook telling. *Early Childhood Research Quarterly*, *28*(1), 177-186. http://dx.doi.org/10.1016/j.ecresq.2012.05.005

Zohar, E. (2016). Meta-Cognitive Thinking and Learning towards Understanding. In J. Harpaz (Ed.), *Understanding and Learning to Understand – Concepts and Acts* (pp. 162 - 171). Mofet Institute.

Zohar, E., & Bushrian, E. (Eds.) (2020). *Adapting the curricula and study materials to the 21st century – A summary of the work of the Committee of Experts, a snapshot and recommendations*. Jerusalem: Initiative - Center for Knowledge and Research in Education & Israel National Academy of Sciences. http://bit.ly/3Tvskct

Zull, J. E. (2012). *From brain to mind: Using neuroscience to guide change in education*. Stylus Publishing, LLC.

SECTION VIII. APPENDICES

APPENDIX 1

Intervention program (in Hebrew)

תכנית התערבות בית ספרית מערכתית לנושא קואוצ'ינג בחינוך

רציונל התוכנית

תחום האימון האישי או בשמו המוכר: קואוצ'ינג (Coaching), הינו פרקטיקה מקצועית מוכרת, שמטרתה לסייע בהגדרת מטרות אישיות, יצירת שינוי וקידום הגשמה עצמית בכל תחומי החיים. מקצוע ה Coaching נפוץ ברחבי העולם, כמו גם בישראל, וצבר פופולריות רבה, עקב יכולתם של מאמנים מקצועיים לסייע ביצירת שינויים מרחיקי לכת וכתוצאה מכך לשפר את איכות החיים של המתאמנים באמצעות תהליכים קצרי טווח.

תכנית ההתערבות לאימון אישי הנשענת על עקרונותיהן של גישות ותיאורית חינוכיות שונות הינה ייחודית מסוגה ומשלבת תיאוריות ופרקטיקות מתחום הפסיכולוגיה אל תוך תהליך האימון. צוות ההוראה בתוכנית הוא בעל רקע המשלב אימון, פסיכולוגיה ומדעי התנהגות. הצוות מסייע למורים לעתיד לכונן מסגרת ייחודית בחדר האימון וליצור ארגז כלים איכותי למימוש אישי ומקצועי.

התוכנית מאפשרת למורים לעסוק בתחום, כמו גם להישאר בתחום עיסוקם, ולהשתמש בכלים מתחום האימון האישי לשיפור ושכלול יכולותיהם המקצועיות והניהוליות.

יש להבחין בין אימון כמקצוע בעל מאפיינים ייחודיים המבחינים בינו לבין מקצועות כמו יעוץ, טיפול, הדרכה או מנטורינג, לבין שימוש במיומנויות אימון כחלק מהתערבויות בהן נעשה שימוש במסגרת מקצועות אחרים כמו ניהול, יעוץ, הוראה או טיפול. מיומנויות אימון יכולות להוות כלי מצוין ותומך במקצועות רבים וככאלה מומלץ ללמוד אותם, ולהשתמש בהן כחלק ממקצוע עיקרי כמו ההוראה. מי שמשתמש במיומנויות אימון במקצוע העיקרי שלו כמו מורה אינו מאמן אלא נעזר במיומנויות אימון. לעומת זאת בהגדרת מקצוע האימון יש הבחנה נחרצת ואינה ניתנת לחלופה בין אימון ליעוץ ובין אימון לטיפול. מנטורינג שקיים באימון הוא בהדרכת מאמנים וקידומם סביב מיומנויות האימון שלהם.

מטרות ויעדים

המטרה המרכזית של התכנית היא קידום למידה מבוססת על אסטרטגיות אימון אישי, דהיינו, שימוש בכלים של אימון בקרב המורים שתוביל לשיפור במודעות המטה קוגניטיבית ובמיומנויות הניהול והוויסות עצמי אצל תלמידים מתבגרים.

מן המטרה המרכזית נגזרו המטרות ויעדים הבאים:

- הענקת ידע תיאורטי ופרקטי בתחום האימון
- הכשרת דור חדש של מורים כאמנים בעלי זהות מקצועית מגובשת ואינטגרטיבית
- יישום סגנון אימון משקול ועצמי
- רכישת כלים מגוונים לאימון כדי להשיג מטרות אישיות ומקצועיות
- פיתוח מיומנויות הוראה ולמידה מבוססות אימון עם התלמידים
- הגברת מודעות מטה קוגניטיבית ומיומנויות ניהול וויסות עצמי הן בקרב המורים והן בקרב התלמידים
- למידת כלים אימוניים בעבודה אישית עם תלמיד/ מחנך באופן אישי או עם כיתה/צוות כקבוצה .
- הטמעה של סדרת כלים ותובנות על פיהם פועלים אדם ו/או ארגון ומשפרים באופן משמעותי את תוצאותיהם ובסבירות רבה משיגים את מטרותיהם .

תכנים מרכזיים

- מבוא לאימון. מהו אימון אישי? עקרונות יסוד והרציונל והתפתחות תהליך האימון
- מודלים של אימון
- כלים ושיטות עבודה
- תיאוריות וגישות חינוכיות הגישה התנהגותית, הגישה קוגניטיבית, הגישה אדלריאנית, הגישה האקזיסטנציאלית, הגישה הקונסטרוקטיביסטית, הגישה ההומניסטי, הפסיכולוגיה החיובית, וזיקתן לתהליכיה האימון וההוראה ולמידה
- מנהיגות אישית - ערכים מעצבים, גיבוש חזון אישי, בניית תכנית פעולה והצבת יעדים
- כלי האימון – השימוש בכלי האימוני להעצמה, הקשבה וזיהוי פרדיגמות
- טיפול בכוחות מעכבים – הרגלים, תירוצים, דימוי עצמי, אזורי נוחות, תוויות, פחדים, פרדיגמות
- טיפול בכוחות מניעים - על חשיבה מנצחת ואיך עושים את זה?
- פיתוח תחקיר מעצים ומיומנויות למטה קוגניציה, לניהול וויסות עצמי, לתהליך חברתי רגשי והקשבה
- כלים אימוניים - זיהוי ערכים, כתיבת חזון, בנית תכנית פעולה, מדידה וליווי
- מיומנויות אימוניות ובינאישיות - העצמה, אבחון, זיהוי פרדיגמות, הקשבה, שאילת שאלות, דיבוב, שיקוף ,re-framing , טיפול בהתנגדויות
- יחסי מאמן מתאמן - מיומנויות תקשורת הקשבה ודיאלוג, אתיקה, בניית קשר מקצועי בינאישי גבולות, העברה והעברה נגדית באימון, אופני תקשורת נוספים וסוגיות אתיות בתהליך האימון

דרכי הפעולה

בשנות הלימודים 2020/2021 הוכשרו 30 מורים מסגל בית הספר במסגרת ההתפתחות מקצועית של משרד החינוך (במימון התכנית הכלה והשתלבות) שנערך על ידי מאמנים בכירים. הסדנאות כללו הכרת הבסיס התיאורטי של אימון אישי, התנסות במודל שונים של אימון, והתאמת תכנית האימון לצורכיהם של המורים בבית הספר. המרצים עברו גם אימון אישי במטרה להתנסות בעצמם בתהליך של אימון. בשלב השני של התוכנית הגיעו מרצים מהפסגה ונתנו הרצאות במודעות המטה קוגניטיבית ומיומנויות ניהול וויסות עצמי גם היועצת לקחה חלק בשלב זה של התוכנית.

תהליך האימון הוגדר לטווח של שני סמסטרים, כשמורה משתתף ב-14 מפגשי אימון. היעד הסופי של האימון האישי הוגדר מראש כשיפור במצב ההוראה ולמידה של המורה. יעדי הביניים הוגדרו על ידי המורה המתאמן והמאמן במהלך האימון האישי. התכנים המשותפים באימון האישי עימם התמודדו המרצים-המאמנים והמורים-המתאמנים היו: מודעות מטה קוגניטיבית, ניהול עצמי, וויסות עצמי, ובנוסף המאמנים התייחסו למספר נושאים כמו: ניהול לפי יעדים, ניהול זמן ומשימות, התמודדות עם מצבי לחץ ועומס, וסגנונות למידה.

ביה"ס (קבוצת הניסוי) מקדם מזה ארבע שנים תכנית ייחודית וראשונית לחדשנות, יזמות ומנהיגות פדגוגית מתודולוגית מותאמת עתיד – למקצועות המחר. על כן, במוקד התכנית הוצבו יעדים וערכים הקשורים לבניית מתודות ומודלים שיעסקו בפיתוח והעצמת המודעות המטא-קוגניטיבית, מיומנויות ניהול עצמי ומיוניות וויסות עצמי.

יעד מרכזי ומוביל עוסק בנושאי הוראה-למידה תוך כדי לימוד ואימון מתמיד של יכולות, כישורים ומיומנויות המתאימות לדמות הבוגר הרצוי "הגלואקלי" שצריך להתמודד בעתיד עם מקצועות שאנחנו לא יודעים עדיין לחזות.

התכנית מקפלת בתוכה אוריינטציה, הזנה הדדית ושיתופי פעולה בין מורים תלמידים והורים בדגש על הצוותים והכשרתם כמאמנים מחוללי שינוי. בתכנית מתוכננים גם מפגשים משותפים בין קבוצות היעד על מנת לייצר מכנים ובסיס משותפים של השפה ודרכי הפעולה. בנוסף התכנית מדגישה ומקדמת למידת העמיתים, העבודה בצוותים למשימות לימודיות שיתופיות מאפשרות ומזמנות הכלה, שילוב וסינרגיה בין חוזקות, כישורים ומיומנויות.

התכנית הייחודית תורמת רבות להזדהות עם בית הספר למוטיבציה ולתחושת הלכידות החברתית והקהילתית. כמו כן, התכנית מקדמת סובלנות והכלה, של כבוד הדדי ודיאלוג פתוח באמצעות החשיפה למגוון דעות סוגי אישיות סגנונות למידה ועבודה.

תהליך הלמידה החדשני בבית הספר כבר הניב תוצאות של מצוינות במבחני המיצ"ב ובפרמטרים רבים נוספים, שהם פועל יוצא וישיר של למידה חווייתית מלהיבה ומאתגרת.

התכנית מתמקדת בכוח האמתי של הלמידה דרך השימוש בכלים של אימון ופיתוח היכולות ליצירת אינטראקציות חדשות, ראיה מערכתית ויצירתית, שמשמשת לרעיונות ייחודיים בתוך הכיתה ומחוצה לה. הלמידה החדשנית האחרת מתרחשת בהלימה בעולמם של המורה, התלמיד וההורים ביחס לרגשותיהם ולאשכול המושגים והערכים שלהם.

המודל הייחודי של התכנית מעצב את הלמידה בעצם התרחשותה החדשנית שמשנה את מציאות חייהם את אישיותם חזקותיהם, היכולות המטה-קוגניטיביות, מיומנויות הניהול והוויסות עצמי של התלמידים בכיתה ובבית הספר ומחוצה להם.

סילבוס ולו"ז

מפגש	תאריך	תוכן	היקף שעות
1	ינואר 2020	מפגש ראשון לאוריינטציה הצגת התכנית הרציונל, המטרות והיעדים, תכנים, לו"ז ודרכי הערכה	4
2	ינואר 2020	מודלים של אימון, כלים ושיטות עבודה	4
3	ינואר 2020	• תיאוריות וגישות חינוכיות הגישה התנהגותית, הגישה קוגניטיבית, הגישה אדלריאנית, הגישה האקזיסטנציאלית, הגישה הקונסטרוקטיביסטית, הגישה ההומניסטי, הפסיכולוגיה החיובית, וזיקתן לתהליכיה האימון וההוראה ולמידה	4
4	פברואר 2020	תיאוריות וגישות חינוכיות הגישה התנהגותית, הגישה קוגניטיבית, הגישה אדלריאנית, הגישה האקזיסטנציאלית, הגישה הקונסטרוקטיביסטית, הגישה ההומניסטי, הפסיכולוגיה החיובית, וזיקתן לתהליכיה האימון וההוראה ולמידה	4
5	פברואר 2020	• מנהיגות אישית - ערכים מעצבים, גיבוש חזון אישי, בניית תכנית פעולה והצבת יעדים	4

6	פברואר 2020	• כלי האימון – השימוש בכלי האימוני להעצמה, הקשבה וזיהוי פרדיגמות	4
7	מרץ 2020	• טיפול בכוחות מעכבים – הרגלים, תירוצים, דימוי עצמי, אזורי נוחות, תוויות, פחדים, פרדיגמות	4
8	מרץ 2020	• טיפול בכוחות מניעים - על חשיבה מנצחת ואיך עושים את זה?	4
9	מרץ 2020	• פיתוח תחקיר מעצים ומיומנויות למטה קוגניציה, לניהול וויסות עצמי, לתהליך חברתי רגשי והקשבה	4
10	אפריל 2020	• פיתוח תחקיר מעצים ומיומנויות למטה קוגניציה, לניהול וויסות עצמי, לתהליך חברתי רגשי והקשבה	4
11	מאי 2020	• כלים אימוניים - זיהוי ערכים, כתיבת חזון, בנית תכנית פעולה, מדידה וליווי	4
12	מאי 2020	• מיומנויות אימוניות ובינאישיות - העצמה, אבחון, זיהוי פרדיגמות, הקשבה, שאילת שאלות, דיבוב, שיקוף ,re-framing , טיפול בהתנגדויות	4
13	מאי 2020	• יחסי מאמן מתאמן - מיומנויות תקשורת הקשבה ודיאלוג, אתיקה, בניית קשר מקצועי בינאישי גבולות, העברה והעברה נגדית באימון, אופני תקשורת נוספים וסוגיות אתיות בתהליך האימון	4
14	יוני 2020	כל מורה יעשה 20 שעות פרקטיקום אישי	20
15	יוני 2020	כל מורה יעביר 10 שעות אימון	10
16	יוני 2020	מפגש סיום וסיכום - משנת תשפ"א לשנת תשפ"ב מה ישתנה?	4

הערכה

המורים שהשתתפו בתכנית מלמדים בבית הספר, וחלק מהם מכהנים בנוסף, בתפקידים מגוונים בבית הספר, מחנכים יועצות, רכזים/ות. המטרות הבסיסות של התכנית היו להקנות ידע , כלים, מיומנויות ושיטות לביצוע תהליך האימון, ולגייס, להעצים ולמנף את המשאבים של המורה כמאמן ושל התלמידים – לצורך מימוש חזונם ומטרותיהם ברמה הגבוהה ביותר המתאימה להם. את כל אלה ביקשה התכנית לבצע בעזרת מכלים של אימון ובנייה של אסטרטגיות פעולה שתפתח את המורה כמאמן ותקדם אותו ברמה האישית והמקצועית מדרך התנסות בתהליכי אימון אישיים, ובאימון מתאמנים – תלמידים ועמיתים.

הנושאים שבהם עסקה התכנית התבססו על מודל הקואצינג שהוצג בעבודת המחקר, מתוך מגמה ליישמו במגרש האימונים בית הספר. התכנית נגעה בנושאים מהבאים: בית הספר כמגרש אימונים, תפקיד המורה כמאמן, והשימוש ב"ארגז הכלים" ובטכניקות של הקואוצינג. המטרה של התכנית שהציבה הייתה להשיג תוצאות בדרך של חשיבה תוצאתית בכל אחד משלבי התהליך של הקואוצינג: ערכים, חזון, מטרה, תחומי תוצאה, תפוקות ומדדים, קשר מאמן-מתאמן, הצבת שאלות והקשבה, התחברות רגשית וחיזוק חיובי, מיסוד של דפוסי ביצוע והשגת תוצאות, גיוס ומינוף משאבים, ויישום של כלי בקרה, הערכה ומדידה ותיעוד.

מטרת ההערכה הייתה לספק למקבלי ההחלטות ולהנהלת בית הספר מידע שישמש בסיס התכנית ולקבל החלטות על הפעלתה ופיתוחה.

ההערכה התבצעה כדלקמן:

1. שאלונים, במחקר נעשה שימוש בשלושה שאלונים שחוברו ביחד עבור המחקר: שאלון מודעות מטה קוגניטיבית, שאלון ניהול עצמי ושאלון וויסות עצמי. ממצאי המחקר עלה שישנו קשר חיובי בין השימוש בכלים של אימון בקרב המורים לבין שיפור היכולות המטה קוגניטיביות, מיומנויות ניהול וויסות עצמי אצל תלמידים מתבגרים.
2. משוב של המשתתפים על התכנית, על שביעות הרצון שלהם מהתכנית ועל התחומים שבהם מסייעת להם. המידע נאסף באמצעות ראיונות עם המורים, המאמנים והתלמידים. מטרת הראיונות הייתה ללמוד מסיפורי ההצלחה שלהם.
3. במסגרת התכנית תועדו תהליכי אימון של המורים משתתפי הקורס. בעקבות ההתנסות נרשמו משובים הדדים, של המתאמנים ומאמנים, וכן נרשמו תובנות המורות המאמנות בנושא התועלת והאקטיביות של ההכשרה האימונית ברמה האישית וברמה המקצועית-הבית ספרית ויישומה במערכת החינוך.

להלן משובים של תלמידים מתאמנים למורות המתאמנות:

תלמידה 1: פגשתי את המאמנת בתקופה קשה בחיי שבה הציונים היו נמוכים. המאמנת ידעה לצקת בי ביטחון עצמי , הראתה לי את יכולותיי ונתנה לי חיזוקים חיוביים. היא עוררה בי מוטיבציה ללמוד ולרצות להצליח. היא הטילה עליי משימות שהביאו אותי לתוצאות, לשינוי הרגל למידה, לחלוקת זמן, ללמידה ורצון להצליח.

תלמיד 2: אני מרגיש שאת מקשיבה לי ומובילה אותי למקום טוב יותר. האימון חיזק אותי מבחינה אישית וחברתית, והוביל לשיפור בציונים שלי. השגתי את הממוצע שאליו שהתחייבתי. בעקבות השיחות והמשימות שנתת לי אני מודע יותר לעצמי.

תלמיד 3: אני מקווה שיהיו לי יותר חברים, כי זה הדבר הכי חשוב לי עכשיו.

תלמידה 4: היום ברור לי יותר מה אני רוצה להשיג ומה עליי לעשות לשם כך.

תלמיד 5: אני מרגיש טוב כי אני יודע שיש עוד מישהו בבית הספר שאליו אני יכול לפנות.

תלמידה 6: לא פעם נשאלתי שאלות קשות, אבל זה עזר לי להבין דברים חדשים על עצמי ולהיות יותר פתוחה.

תלמיד 7: עזרת לי להעלות את רמת הביטחון העצמי שלי.

תלמיד 8: כשנתת לאימא ואבא לקרוא את הסיפור שכתבתי הרגשתי שהם קצת גאים בי, וזה טוב.

משובים של מורות מאמנות לתלמידים מתאמנים

מאמנת 1: במהלך האימון שביצעתי, מה שעמד כמגדלור בפני ובפני המתאמנים היה החשיבה על התוצאה שאנחנו רוצים להשיג.

מאמנת 2: התלמיד שאימנתי הצטיין בספורט, ואפשרתי לו לבטא את יכולותיו הגופניות בתחום הספורט כדי למנף את משאביו בשילוב הכלים והערכות של האימון האישי.

מאמנת 3: התלמידה מרגישה שיש לה אוזן קשבת. הנהלת הבית הספר והעירייה החלו לסייע לה.

מאמנת 4: אין לי ספק, על פי התרשמותי מהמתאמן ואישיותו, שהוא ישיג לפחות חלק גדול מהחזון שלו.

מאמנת 5: בשיחות הסיכום בחדר המנהלת סיפרה המתאמנת בחיוך גדול שהתהליך חיזק את הביטחון העצמי שלה. כשאר דברים כאלו נאמרים מפיה של ילדה ביישנית כל כך, זה ממש מרגש.

מאמנת 6: חשוב לי לרכוש את אמון המתאמנת וליצור איתה ברית של שיתוף פעולה, בד בבד עם חיזוק ביטחונה העצמי, הארת יכולותיה בעזרת עידוד ותמיכה, ומתן משוב חיובי

מאמנת 7: השאלות וההקשבה שלי אפשרו לי לקבל תמונה מקיפה על התלמיד.

מאמנת 8: אני רואה חשיבות בתיעוד האימון, המסייע להתאמן להתמקד בנושאים שעולים במהלך האימון ולחדד את השאלות.

מאמנת 9: ההורים גילו נכונות לתמוך בהמשך המפגשים של ילדם, להעניק לו יותר תשומת לב ולעודד אותו.

תובנות המורות המאמנות ברמה המקצועית הבית ספרית

מורה 1: לשחיקת המורים גורמים רבים, כמו חוסר אתגר העבודה, חוסר בכלים, תחושת כישלון, חוסר במערכת תמיכה וכרסום במשאבי המורה. בית הספר כארגון עשוי למנוע את תהליך שחיקתם של העושים במלאכת החינוך באמצעות האימון האישי.

מורה 2: בעידן המודרני, החינוך הערכי בבית הספר, החותר לתלמיד אוטונומי, תפקידו לסייע לבן אדם הצעיר להגיע למודעות, להבהיר לעצמו את עמדותיו, לבחון את עוצמת רגשותיו, לבדוק התנהגויות הנובעת מנקיטת עמדתו, ולהגיע להבנה ולטיפוח אמון כלפי תהליך ההערכה, התהליך שבאמצעותו מגדיר האדם את ערכו ללא ביקורת, שיפוטיות והטפת מוסר.

מורה 3: תפקיד המורה, על פי גישה זו, היא לשמש כמנחה העוזר לאדם להיפגש עם עצמו, עם ציפיותיו, העדפותיו, שיקוליו ובחירותיו, בצורה נטולה שיפוטיות ומגמתיות. לשם כך נדרשים הכישורים והמיומנויות של האימון האישי.

מורה 4: האימון מאפשר להפעיל בבית הספר עשייה חינוכית המבוססת על תהליכים דיאלוגים מתמשכים בין לומדים למלמדים ובין לומדים לעמיתיהם, במטרה ליצור תנאים המאפשרים צמיחה, העצמה והתפתחות אינדיבידואלית בין כותלי בית הספר.

מורה 5: מורים ממלאים בתוך הארגון תפקידם כחונכים למורים אחרים, ראשי צוותים, ראשי מגמות, רכזי שכבה, מנהלים פדגוגים וכו' האימון האישי יכול לסייע להם בכך

מורה 6: בתהליך האימון, המאמן לומד להעלות שאלות המיילדות מתוך המתאמן את התשובות המתאימות לו ביותר, המובילות אותו להתבונן קדימה

מורה 7: הכנסת מושגים מעולם האימון האישי, לא רק מעשירה את שפת ההוראה והפרקטיקה, אלא גם משנה את פניה, ומעצבת גישה חינוכית חדשה

מורה 8: באמצעות האימון למדתי, כמורה, דבר נוסף על הצרכים והרגשות של התלמידים עיני נפקחו לראות את האושר שיכול לחוות התלמיד המוגדר כלקוי למידה במהלך תהליך האימון מול הקושי והתסכול שהוא מרגיש בכיתה בעת שהוא נדרש להפעיל מיומנויות שטרם רכש

מורה 9: למדתי מה החשיבות של האימון בבית הספר ככלי בידי המורה למינוף משאבי התלמיד, ומה יעילותה של החשיבה התוצאתית.

מורה 10: תהליך הלמידה מאפשר לתלמיד המתאמן לשפר את יכולותיו, להעצים את נקודות החוזקה שלו, לשפר את איכות חייו ברמה האישית בסביבת בית הספר, ובסביבה החברתית והמשפחתית.

מורה 11: אני מאמינה שתהליך האימון יכול לעזור לתלמידים להתמודד עם הקשיים שבהם הם נתקלים במסגרת הלימודים. האימון יכוון אותם להצלחה, יעלה את הביטחון העצמי שלהם, יקל על מצוקות חברתיות ויוביל להצלחה. שינוי כזה יקל על המורים בבית הספר, וכמובן על הורי התלמידים.

מורה 12: במהלך הקורס, מפת הידע והחשיבה שלי בתחום האימון האישי התרחבו. חשתי שאני נעה מנקודת ההתחלה, שבה הרגשתי חוסר ביטחון, אל עבר המצב שבו אני מודעת לכך שזה אפשרי, שיש לו את הכלים שלו.

מורה 13: האימון האישי מאפשר למורה המאמן להיות במקביל גם מתאמן, לממש את הפוטנציאל האישי והמקצועי הטמון בו, לרכוש כלים מקצועיים "ארגז כלים" המאפשר לו ליצור פריצת דרך אישית מקצועית, לתמוך בתלמידיו ולהדריכם כיצד להשיג את יעדיהם ומטרותיהם.

מורה 14: רכישת "ארגז כלים" של האימון מאפשרת למורה לעבור חוויה של צמיחה, למנף את משאביו, הן ברמה האישית והן ברמה המקצועית, ולמנוע את שחיקתו של הצוות במהלך העבודה היומיומית בבית הספר.

מורה 15: גם המורה וגם התלמיד יוצאים נשכרים מהאימון המורה השחוק יכול לשנות את התחום התעסוקתי שלו, או להחליף כיוון/תפקיד בתוך התחום המקצועי שבו הוא עוסק.

יישום – בדרך לאימון במסגרת בית הספר

מורה 1: כמורה לחינוך המיוחד, אני כבר משלבת את האימון בעבודתי הטיפולית עם תלמידים במסגרת הבית ספרית, בשילוב אימון להורים.

מורה 2: כנחנכת אני משלבת את האימון עם התכניות החברתיות שהן חלק מתכנית הלימודים.

מורה 3: אין ספק שאשתמש בכלים שרכשתי בעבודתי החינוכית בבית הספר ומחוצה לו ואתחיל לממש את מטרותיי בחיים.

מורה 4: התחושה העיקרית שלי היא שיש בידי עלי יעיל, שבעזרתו אוכל לגרום לתלמידים להעז לחלום, וגם להגשים את מטרותיהם.

מורה 5: במסגרת עבודתי בכיתה שיניתי את דרך החשיבה שלי על אירועים ומצבים. התחלתי להציב מטרות, הכנתי תכנית פעולה, וקבעתי מדדים לבקרה ולהערכה.

מורה 6: במסגרת עבודתי כמורה לחינוך גופני אני עובדת על פי החשיבה התוצאתית. אני מקנה לתלמידים כלים שנועדו לעזור להם לשפר הישגים. בעקבות התכנית אשתמש בכלים נוספים, על מנת לקדם ולחזק אותם גם בתחום הלימודי, החברתי, הרגשי וההתנהגותי.

מורה 7: אני אעשה מאמצים לשלב את האימון במסגרת בלימודים, באופן אישי וקבוצתי.

מורה 8: במהלך התכנית בחנתי את דרך עבודתי כמורה לתלמידיי, וכאדם. היכן אני נמצאת , האם אני עוסקת רק בחומר הלימוד, האם אני קשובה לצרכים שלי ולצורכי תלמידיי, מה הם הערכים שלי, מהו החזון שלי, מה המטרה שלשמה אני מתעוררת בכל בוקר?

מורה 9: אני רואה חשיבות רבה בהפצת הידע שרכשתי. בידע זה גם אני וגם אנשי חינוך אחרים נוכל להשתמש ולהיות ערים לצורכי התלמידים, וכל העת ללמוד ולהשתפר.

מורה 10: במהלך ואחרי התכנית שיפרתי את מערכי השיעור שלי הן מבחינת ידע, ערכים ומיומנויות. כאשר בבסיס ההוראה שלי עומד בפניי השונות בין התלמידים והמיומנויות שהוא צריך לרכוש במיוחד בשלושת המיומנויות שעלו במהלך התכנית, מודעות מטה קוגניטיבית, מיומנויות ניהול עצמי ומיומנויות ניהול עצמי.

סיכום, ניכר כי המורים היו שבעי רצון מן הסדנה ותכניה. ניתן ללמוד על כך בעיקר מן הנטייה של מרבית המשתתפים להמליץ על סדנה זו למורים אחרים. ציפיות המורים מן הסדנה נענו, ביטחונם בגיוון בדרכי ההוראה ובמיוחד בשימוש בכלים של אימון עלה והחוויה הייתה מהנה עבורם. כתוצאה מכך צפוי שנראה יותר מורים משתמשים בכלים של אימון, ובטווח הרחוק נראה יותר בוגרי מערכת החינוך מצוידים במיומנויות המאה ה-21.

APPENDIX 2

Systemic School Intervention Program – Coaching in Education
(English summary)

Rationale:

Personal coaching is a well-known professional practice, aimed at helping to define personal goals, creating change, and promoting self-realization in all areas of life. Coaching is widespread all over the world, and in Israel, and has gained popularity due to professional coaches' ability to help create far-reaching change, and improve their coachees' quality of life through short-term processes.

The personal coaching intervention program, which is based on the principles of educational theories and approaches, is unique, and integrates psychological theories and practices in the coaching process. The teaching staff in the program have backgrounds that combine coaching, psychology and behavior sciences. The staff helps the teachers to establish a unique framework in the coaching room, and create a high-quality toolbox for personal and professional fulfillment.

The program allows the teachers to work in the field, while keeping their original profession, and use tools of personal training to improve their professional and management skills.

Goals and targets:

The main goal of the program is to promote learning based on personal coaching strategies; that is to say, teachers use coaching tools, which leads to improved metacognition, self-management and self-regulation skills among adolescent students.

The following targets were derived from the main goal of the program:

- To provide theoretical and practical knowledge in the field of coaching;
- To train a new generation of teachers as coaches with an integrative professional identity;
- To implement a personal coaching style;
- To acquire varied coaching tools in order to achieve personal and professional goals;
- To develop coaching-based teaching and learning skills for the students;

- To increase metacognitive awareness, and self-management and self-regulation skills, among both teachers and students;
- To learn coaching tools in personal work with the student/teacher, or with the class/team as a group;
- To assimilate a series of insights and tools by which an individual or an organization act, and to significantly improve their results and (with high probability) achieve their goals.

Syllabus and timetable:

Session	**Date**	**Content**	**Number of hours**
1	January 2020	Introduction: presenting the program, rationale, goals and targets, content	4
2	January 2020	Coaching models, tools and methods	4
3	January 2020	Educational theories and approaches: behaviorist, cognitive, Adlerian, existentialist, constructivist, humanistic, and positive psychology – their affinity to coaching, teaching and learning	4
4	February 2020	Educational theories and approaches: behaviorist, cognitive, Adlerian, existentialist, constructivist, humanistic, and positive psychology – their affinity to coaching, teaching and learning	4
5	February 2020	Personal leadership: values, personal vision, building a work plan, setting goals	4
6	February 2020	Coaching tools: use of coaching tools for empowerment, listening, and identifying paradigms	4
7	March 2020	Dealing with restraints: habits, excuses, self-image, comfort zones, labels, fears, paradigms	4
8	March 2020	Dealing with motivators: positive thinking and how it's done	4

9	March 2020	Development of an empowering investigation and skills for metacognition, self-regulation management, social-emotional process, and listening	4
10	April 2020	Development of an empowering investigation and skills for metacognition, self-regulation management, social-emotional process, and listening	4
11	May 2020	Coaching tools: identifying values, writing a vision, building an action plan, measurement, and accompaniment	4
12	May 2020	Coaching and interpersonal skills: empowerment, diagnosis, identifying paradigms, listening, asking questions, encouraging to talk, reflecting, reframing, dealing with objections	4
13	May 2020	Coach-coachee relationship: communication, listening and dialog skills, ethics, building a professional relationship, boundaries, transference and countertransference in coaching, additional forms of communication, and ethical issues during the process	4
14	June 2020	Each teacher performs 20 hours of personal practicum	4
15	June 2020	Each teacher performs 10 hours of coaching	20
16	June 2020	Final session and summary: From 2020 to 2021 – what will change?	10

Evaluation:

The aim of the evaluation was to provide decision-makers and school management with information that serves as a basis for the program, and to make decisions about its operation and development.

The following three stages were employed:

1. Questionnaires: Three questionnaires that were combined for the research – metacognitive awareness, self-management, and self-regulation questionnaires. The findings indicated a positive relationship between teachers' use of coaching tools and improved metacognitive abilities and self-management and self-regulation skills among the adolescent students.
2. Feedback from the program participants about their satisfaction with the program and how it helped them. the information was gathered through interviews with the teachers, coaches, and students. The aim of the interviews was to learn from their success stories.
3. Throughout the program, the teachers' coaching processes were documented. Following the experience, mutual feedback between coaches and coachees was recorded, as were the teacher-coaches' insights about the benefits and effectiveness of the coaching training – on both the personal and professional-school levels – and its implementation in the education system.

APPENDIX 3

Questionnaire in Arabic –استمارة: التفاصيل الديمغرافيّة

الجنس: 1. ذكر، 2. أنثى.

الصف: السابع، الثامن، التاسع.

ثقافة الأب: ابتدائيّ، اعداديّ، ثانويّ، جامعيّ.

ثقافة الأم: ابتدائيّ، اعداديّ، ثانويّ، جامعيّ.

عمل الاب: ----------

عمل الام: ----------

عدد الأخوة والأخوات: 1، 2، 3، 4، 5، 6، 7.

مكان السكن: ----------

المعايير	غير صحيح بالمرّة	غير صحيح أحيانًا	صحيح أحيانًا وأحيانًا غير صحيح	صحيح أحيانًا	صحيح دائمًا
1. عندما أقوم بحل مهمة تعليمية مملة، أحاول البحث عما هو مهم فيها، وأفكر بالفائدة التي أكتسبها من هذه المهمة.	1	2	3	4	5
2. عندما أكون ملزم بعمل ما يخيفني، فأقوم بالتخيل مسبقًا كيف أتأقلم مع هذا الخوف أثناء إنجاز العمل.	1	2	3	4	5
3. في أوقات متقاربة أقوم بتغيير طرق التفكير لديّ، وهكذا أستطيع تغيير أحاسيسي تجاه أمور معينة.	1	2	3	4	5
4. عندما أشعر بالاكتئاب، أحاول أن أتذكر أمورًا سببت لي السعادة سابقًا.	1	2	3	4	5
5. عندما أكون قلقًا بسبب مشكلة شخصية صعبة، أحاول حلها بطريقة منهجية محسوبة.	1	2	3	4	5
6. عندما يتوجب علي أخذ قرار صعب، أقوم بتأجيل اتخاذ القرار حتى ولو كان معلومًا لدي نتيجة ذلك.	1	2	3	4	5
7. عندما أشعر بانه من الصعب علي التركيز في القراءة، أحاول البحث عن طرق تساعدني على التركيز.	1	2	3	4	5
8. عندما أنوي المطالعة، أترك جانبًا كل الأمور غير المرتبطة بمطالعتي.	1	2	3	4	5
9. عندما أحاول التخلص من عادة سلبية، أحاول التعرف أولًا على دوافع هذه العادة.	1	2	3	4	5
10. عندما يقلقني تفكير غير لائق، أحاول التفكير في أمور أكثر راحة.	1	2	3	4	5
11. عندما أكون بمزاج سيء، أحاول التظاهر باني بمزاج جيد، وهكذا أتمكن من التغلب على مزاجي السيء.	1	2	3	4	5
12. عندما أشعر بالاكتئاب، أحرص أن أشغل نفسي بأمور تسبب لي الراحة.	1	2	3	4	5
13. بشكل عام أقوم بالتأجيل للغد كل المهام غير الممتعة، حتى ولو كان باستطاعتي إنجازها اليوم.	1	2	3	4	5

14. عندما أشعر بانه من الصعب علي الجلوس لإنجاز وظيفة ما، أحاول البحث عن أمور تساعدني في الجلوس لإتمام الوظيفة.	1	2	3	4	5
15. من المفضل لدي أن انهي أولًا كل الوظائف الواجب علي فعلها، وبعدها أتفرغ لفعل الأمور المحببة لديّ.	1	2	3	4	5
16. عندما أشعر بألم ما في جسمي، أحاول عدم التفكير بهذا الألم.	1	2	3	4	5
17. أقوم بتقدير نفسي بشكل أفضل، عندما أنجح في تغيير عادة سيئة لدي.	1	2	3	4	5
18. عندما أحس بعدم الارتياح، أقول لنفسي: يمكنني التعايش مع هذا الوضع، فهذه ليست نهاية العالم.	1	2	3	4	5
19. عندما أحس بأني متسرع، أقول لنفسي: انتظر وفكر قبل الإقدام على شيء.	1	2	3	4	5
20. عندما أريد اتخاذ قرار مهم، فلا أتسرع في القرار، بل أستفسر أولًا عن الإمكانيات الأخرى.	1	2	3	4	5
21. بشكل عام أبدأ أولًا بالأمور المفضلة لدي، حتى ولو كان مطلوب مني القيام بأمور أكثر أهمية، ولكنها أقل متعة عندي.	1	2	3	4	5
22. عندما أشعر بأني سأتأخر عن لقاء مهم، أحاول أن أكون هادئًا حيث لا فائدة من التوتر.	1	2	3	4	5
23. عندما أشعر بالم ما في جسدي، أحاول أن لا أفكر بهذا الألم.	1	2	3	4	5
24. عندما يتطلب مني القيام بعدة مهام، فأنا معتاد ان أقوم ببناء تخطيط مفصل لإنجاز جميع المهام.	1	2	3	4	5
25. عندما أحصل على مبلغ معين، وأكتشف بأنه من الصعب علي تنظيم مصروفاتي، فأقوم بتنظيم المصروفات من خلال تسجيل الأشياء المهمة التي أصرف عليها المبلغ.	1	2	3	4	5
26. إذا كان من الصعب علي التركيز في إنجاز وظيفة معينة، فأقوم بتجزئتها الى مهام صغيرة.	1	2	3	4	5
27. عندما أكون جائعًا وليس بمقدوري تناول الطعام، أحاول عدم التفكير بالطعام، وأتخيل بأن معدتي ممتلئة.	1	2	3	4	5
28. عندما أكون عصبي المزاج، أحاول فعل شيء يهدئ من مزاجي.	1	2	3	4	5
29. عندما أشعر بالملل، أتحول الى عصبي المزاج ولا أجلس بهدوء.	1	2	3	4	5
30. عندما أتخاصم مع شخص ما، باستطاعتي التعامل مع غيره بشكل طبيعي.	1	2	3	4	5
31. بإمكاني متابعة العديد من الأشياء من حولي، حتى ولو كنت مضغوطًا.	1	2	3	4	5
32. بإمكاني البدء بمهمة جديدة حتى ولو كنت متعبًا.	1	2	3	4	5
33. المشاكل الصغيرة تثنيني عن مخططاتي لفترة طويلة.	1	2	3	4	5
34. عندما أقوم بفعل شيء ممتع، تكون لدي الرغبة لفعل أمور أخرى مطلوبة مني.	1	2	3	4	5
35. عندما تكون الحصة مملة بالنسبة لي، فمن الصعب علي الاستماع للمعلم.	1	2	3	4	5
36. عندما يضايقني شخص ما أو يشتت انتباهي، فأستطيع بسهولة إتمام عملي من النقطة التي وقفت عندها.	1	2	3	4	5
37. من الصعب علي التركيز بما أقوم به عند حدوث عدة أمور من حولي.	1	2	3	4	5

38. لا أعلم ولا مرة كم هي الأشياء التي علي فعلها.	1	2	3	4	5
39. من الصعب علي التخطيط لكيفية التأقلم مع مشروع كبير أو مشكلة كبيرة، خاصة عندما أكون مضغوطًا.	1	2	3	4	5
40. باستطاعتي السيطرة على نفسي عندما أكون منفعلًا وهائجًا.	1	2	3	4	5
41. إذا تشوش تخطيطي، أقوم بتصرفات أخرى للوصول الى أهدافي الموضوعة.	1	2	3	4	5
42. بإمكاني إجبار نفسي على المطالعة حتى ولو قام أصدقائي بدعوتي للخروج.	1	2	3	4	5
43. أفقد السيطرة على نفسي عندما لا تسير الأمور كيفما أريد.	1	2	3	4	5
44. عندما أرغب بالحصول على شيء، فيجب علي الحصول عليه حالًا.	1	2	3	4	5
45. عندما أختلف بالرأي مع آخر، فبإمكاني الحديث معه بهدوء دون فقدان السيطرة على نفسي.	1	2	3	4	5
46. بإمكاني التركيز بوظيفة ما، حتى ولو كانت مملة.	1	2	3	4	5
47. عندما يزداد غضبي، بإمكاني السيطرة على نفسي دون مشاغبة، فلا أرمي مثلًا أغراض ما.	1	2	3	4	5
48. عندما أقوم بفعل شيء ما وأعلم بأنه مضلل، فأفعله بحذر.	1	2	3	4	5
49. بشكل عام لي علم بمشاعري قبل خروجها.	1	2	3	4	5
50. عندما أكون في الصف، بإمكاني التركيز بتعليمي، حتى ولو كان زملائي يتحدثون.	1	2	3	4	5
51. عندما أنفعل للحصول على هدف ما، فمن السهل علي بذل الجهد للوصول لهذا الهدف.	1	2	3	4	5
52. بإمكاني السير وفق التخطيط والاهداف التي وضعتها حتى ولو كانت صعبة.	1	2	3	4	5
53. باستطاعتي العمل والمداومة على إنجاز مشروع ما حتى ولو كان كبيرًا.	1	2	3	4	5
54. بإمكاني السيطرة على نفسي في عدم ارتكاب شيء ممنوع.	1	2	3	4	5
55. أنا أتساءل بشكل دومي عن كنت سأحقق أهدافي.	1	2	3	4	5
56. انا أوازن بين عدة إمكانيات قبل الإجابة.	1	2	3	4	5
57. انا أحاول استخدام استراتيجيات استخدمتها بنجاح سابقًا.	1	2	3	4	5
58. انا احدد وتيرة عملي خلال دراستي حتى يكون لدي الوقت الكافي لإتمامها.	1	2	3	4	5
59. انا على دراية بجوانب القوة والضعف بقدراتي الفكرية.	1	2	3	4	5
60. قبل ان أبدأ بإنجاز وظيفة ما، أتساءل بما سأتعلمه منها.	1	2	3	4	5
61. أستطيع ان أعرف مدى نسبة نجاحي بالامتحان من لحظة انتهائي منه.	1	2	3	4	5
62. انا أحدد اهداف خاصة قبل البدء بالعمل.	1	2	3	4	5
63. أتمهل عندما أصطدم بمعلومات مهمة.	1	2	3	4	5
64. باستطاعتي العلم أي نوع من المعرفة أكثر أهمية لي حتى أتعلمها.	1	2	3	4	5
65. عندما أتغلب على صعوبة ما، أتساءل: هل فحصت كل الإمكانيات.	1	2	3	4	5

66. انا جيد بتنظيم المعلومات.	1	2	3	4	5
67. بإمكاني توجيه نفسي بطريقة سليمة للمعلومات المهمة.	1	2	3	4	5
68. يوجد لدي هدف محدد من الاستراتيجية التي استخدمها.	1	2	3	4	5
69. اتعلم بشكل أفضل عندما يكون لدي دراية بالموضوع.	1	2	3	4	5
70. لي علم بما يتوقعونه مني أن أتعلمه.	1	2	3	4	5
71. انا جيد بتذكر المعلومات.	1	2	3	4	5
72. استخدم استراتيجيات تعلم مختلفة بحسب الظروف.	1	2	3	4	5
73. بعد انتهائي من وظيفة ما أتساءل: هل كانت هناك طريقة أكثر سهولة لإنجازها؟	1	2	3	4	5
74. أراقب نفسي في مدى تقدمي التحصيلي.	1	2	3	4	5
75. أراقب نفسي دومًا لفهم العلاقات المهمة.	1	2	3	4	5
76. أطرح على نفسي بعض الأسئلة قبل البدء بالمهمة.	1	2	3	4	5
77. انا أفكر في عدة طرق لحل مشكلة ما، ثم أختار أفضلها.	1	2	3	4	5
78. أقوم بتلخيص ما فهمته بعد انتهائي من الدراسة.	1	2	3	4	5
79. عندما يصعب عليّ فهم شيء، أتوجه للآخرين لطلب المساعدة.	1	2	3	4	5
80. عندما أريد أن أتعلم، فباستطاعتي أن أدفع نفسي لذلك.	1	2	3	4	5
81. انا على دراية بالاستراتيجيات التي أستخدمها لدراستي.	1	2	3	4	5
82. خلال الدراسة باستطاعتي تحليل مدى فائدة الاستراتيجيات المختلفة.	1	2	3	4	5
83. أقوم باستخدام نقاط القوة في ثقافتي للتعويض عن ضعفي.	1	2	3	4	5
84. أركز في فهم كل معلومات جديدة.	1	2	3	4	5
85. أحاول ان يكون لديّ بعض التخوفات حتى يكون التعليم عندي أكبر أهمية.	1	2	3	4	5
86. أقوم بالحكم بصورة جيدة على التعليم الذي أستفيد منه.	1	2	3	4	5
87. أجد نفسي أقوم باستخدام استراتيجيات تعليم مختلفة بشكل تلقائي.	1	2	3	4	5
88. أجد نفسي قادرًا على التوقف دومًا من أجل التأكد مما فهمته.	1	2	3	4	5
89. أنا على دراية بفائدة كل استراتيجية أستخدمها.	1	2	3	4	5
90. عندما أنهي المهام أتسائل: لأي مدى قمت بتحقيق أهدافي.	1	2	3	4	5
91. أقوم بتخطيط رسومات معينة تساعدني على الفهم خلال الدراسة.	1	2	3	4	5
92. أسأل نفسي: هل فحصت كل الإمكانيات قبل حل المشكلة؟	1	2	3	4	5
93. انا أحاول تلخيص مادة جديدة بكلماتي.	1	2	3	4	5
94. عندما لا أفهم شيء ما، أحاول تغيير أساليب الفهم.	1	2	3	4	5
95. أستعمل المبنى التنظيمي للمعطيات لمساعدتي على الفهم.	1	2	3	4	5
96. أقوم بقراءة التعليمات بدقة قبل البدء بالمهمة.	1	2	3	4	5
97. أنا أسأل نفسي: هل الذي أقرأه مرتبط بما أعرفه؟	1	2	3	4	5
98. انا أراجع التعليمات من جديد عندما يختلط علي الأمر.	1	2	3	4	5

5	4	3	2	1	**99**. أقوم بتنظيم وقتي بطريقة تساعدني للوصول الى هدفي بالطريقة الأفضل.
5	4	3	2	1	**100**. أتعلم بشكل أفضل عندما أهتم بالموضوع بشكل أكبر.
5	4	3	2	1	**101**. أحاول تجزأه المهام التعليمية الى أجزاء صغيرة.
5	4	3	2	1	**102**. يكون تركيزي على المعنى العام أكثر من الأشياء الخاصة.
5	4	3	2	1	**103**. خلال تعلمي أشياء جديدة أتساءل: هل أقوم بالأمر على الوجه الحسن؟
5	4	3	2	1	**104**. لحظة انتهائي من وظيفة ما، أتساءل: هل بذلت الجهد بقدر استطاعتي؟
5	4	3	2	1	**105**. أقوم بمراجعة معلومات جديدة غير مفهومة لديّ.
5	4	3	2	1	**106**. أقوم بمراجعة التعليمات عندما يختلط الأمر عليّ.

APPENDIX 4

Translation of Questionnaire to English

Gender: 1. Male 2. Female

Class: Seventh, eighth, ninth grade.

Father's Education: Elementary school, Middle school, High school, Academic.

Mother's Education: Elementary school, Middle school, High school, Academic.

Father's job: _____

Mother's job: _____

Brothers and Sisters number: _____

living location \ address: _____

Never true	Sometimes wrong	Sometimes true and sometimes wrong	Sometimes true	Always true
1	**2**	**3**	**4**	**5**

1. When I do a dull academic assignment, I try to look for interest in this work and think, while working, about the benefits to me when I finish.	1	2	3	4	5
2. When I have to do something that frightens me, I try to imagine in advance how I will deal with fear while I carry out this action.	1	2	3	4	5
3. I often change my ways of thinking so I can change my feelings about certain things.	1	2	3	4	5

4. When I feel depressed, I try to think of things that have made me happy in the past.	1	2	3	4	5
5. When I am troubled by a difficult personal problem, I try systematically and calculatedly to solve it.	1	2	3	4	5
6. When I face a difficult decision, I reject the decision, even if I know all the facts.	1	2	3	4	5
7. When I find it hard to concentrate on reading, I look for ways to increase concentration in reading.	1	2	3	4	5
8. When I plan to work, I remove things that are not directly related to my studies.	1	2	3	4	5
9. When I try to liberate myself from a bad habit, I try first to figure out what the reasons for this habit are.	1	2	3	4	5
10. When an unpleasant thought bothers me, I try to think of more pleasant things.	1	2	3	4	5
11. When I am in a bad mood, I try to behave as if I am in a good mood and so I overcome my bad mood.	1	2	3	4	5
12. When I feel depressed, I concern engaging myself in things that make me happy.	1	2	3	4	5
13. Usually I postponed doing unpleasant activities for tomorrow, even if I could do them today.	1	2	3	4	5
14. When I find it difficult to sit down to do a certain task, I look for ways to help me settle down and do the task.	1	2	3	4	5
15. I prefer to finish a work first that I have to do and then engage in things I like more to do.	1	2	3	4	5
16. When I feel pain in a certain part of my body, I try not to think about that part.	1	2	3	4	5
17. I appreciate myself so much when I succeed in changing an unwanted habit.	1	2	3	4	5
18. When I feel bad, because I have failed something, I sometimes say to myself: "This is not the end of the world, I can handle the situation."	1	2	3	4	5
19. When I feel like bursting, I say to myself: "Stop and think before you act."	1	2	3	4	5
20. When I need to make an important decision, I do not decide right away but rather ask myself all the possibilities.	1	2	3	4	5
21. I usually do the things I love first, even if I have to do things that are more urgent but less pleasant.	1	2	3	4	5
22. When I know that I am late for an important meeting, I tell myself to relax and that there is no point in getting into tension.	1	2	3	4	5
23. When I feel pain in my body, I try not to think about the pain.	1	2	3	4	5
24. I set a detailed work plan for myself when I have a number of tasks to perform.	1	2	3	4	5
25. When I find it difficult to manage with the money I receive, I write down what I am spending the money on, so I could plan my expenses better.	1	2	3	4	5
26. If it is hard for me to concentrate on a particular learning assignment, I divide the task into smaller parts.	1	2	3	4	5

27. When I am hungry and cannot eat, I try not to think about hunger or imagine my stomach as full.	1	2	3	4	5
28. When I'm sad I can start doing something that will make me feel better.	1	2	3	4	5
29. When I'm bored, I get nervous or cannot sit still.	1	2	3	4	5
30. When I quarrel with someone, I am still able to behave normally with others.	1	2	3	4	5
31. I can follow a lot of things around me, even when I'm stressed.	1	2	3	4	5
32. I can start a new task even when I'm tired.	1	2	3	4	5
33. Small problems distract me from my long-term plans.	1	2	3	4	5
34. When I do something really enjoyable, I forget about other things I have to do.	1	2	3	4	5
35. When the lesson is boring, it's hard for me to force myself to listen to the teacher.	1	2	3	4	5
36. After someone bothered me or distracted me, I could easily continue working from where I stopped.	1	2	3	4	5
37. When a lot of things happen around me, it's hard for me to concentrate on what I'm doing.	1	2	3	4	5
38. I never know how many things I have to do.	1	2	3	4	5
39. It's hard for me to plan how to deal with a large project or a big problem, especially when I'm under pressure.	1	2	3	4	5
40. I can calm myself when I'm excited or heated.	1	2	3	4	5
41. If my plans go wrong, I change my behavior in order to achieve my goals nonetheless.	1	2	3	4	5
42. I can force myself to study even when my friends invite me out.	1	2	3	4	5
43. I lose control when things do not get along the way I want.	1	2	3	4	5
44. If I really want something, I must get it right away.	1	2	3	4	5
45. When I have serious disagreements with someone, I can still speak to him calmly without losing control.	1	2	3	4	5
46. I can focus on the task even when it's boring.	1	2	3	4	5
47. When I am furious, I can stop myself and do not go wild, like going out and slamming a door or not throwing objects.	1	2	3	4	5
48. If I do something and know that this is misleading, I act cautiously.	1	2	3	4	5
49. Usually I am aware of my feelings before they break out.	1	2	3	4	5
50. When I'm in class, I can concentrate on my studies even when my friends talk.	1	2	3	4	5
51. When I am excited about achieving a goal (such as issuing a driver's license), it is easy for me to invest and strive for the goal.	1	2	3	4	5
52. I can stick to my plans and goals even when it's hard.	1	2	3	4	5
53. I can persist and work on a project even when it's something big.	1	2	3	4	5

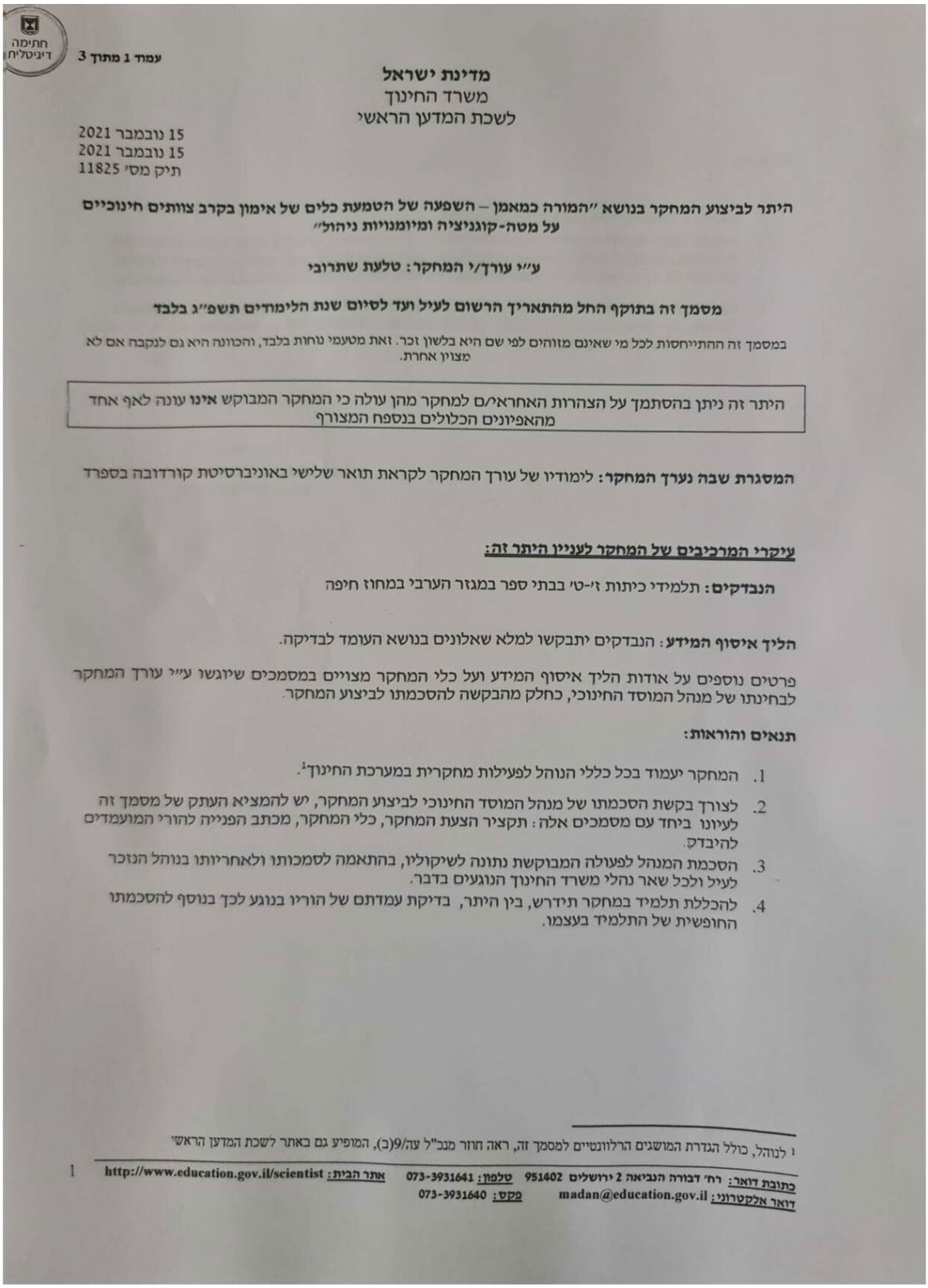
54. I can restrain myself from doing something if it is forbidden.	1	2	3	4	5
55. I ask myself periodically if I am meeting my goals.	1	2	3	4	5
56. I consider several alternatives to problem before I answer.	1	2	3	4	5
57. I try to use strategies that have worked in the past.	1	2	3	4	5
58. I pace myself while learning in order to have enough time.	1	2	3	4	5
59. I understand my intellectual strengths and weakness.	1	2	3	4	5
60. I think about what really need to learn before begin a task.	1	2	3	4	5
61. I know how well I did once I finished the test.	1	2	3	4	5
62. I see specific goals before I begin a task.	1	2	3	4	5
63. I slow done when I encounter important information.	1	2	3	4	5
64. I know what kind of information is most important to learn.	1	2	3	4	5
65. I ask myself if I have considered all options when solving a problem.	1	2	3	4	5
66. I am good at organizing information.	1	2	3	4	5
67. I consciously focus attention on important information.	1	2	3	4	5
68. I have a specific purpose for each strategy I use .	1	2	3	4	5
69. I learn best that I know something about the topic.	1	2	3	4	5
70. I know what the teacher expects me to learn.	1	2	3	4	5
71. I am good in remembering information.	1	2	3	4	5
72. I use different learning strategies depending on the situation.	1	2	3	4	5
73. I ask myself if there was an easier way to do things after I finish a task.	1	2	3	4	5
74. I have control over how well I learn.	1	2	3	4	5
75. I periodically review to help me understand important relationships.	1	2	3	4	5
76. I ask myself questions about the material before I begin.	1	2	3	4	5
77. I think of several ways to solve a problem and choose the best one.	1	2	3	4	5
78. I summarize what I have learned after I finish.	1	2	3	4	5
79. I ask others for help from when I do not understand somethings.	1	2	3	4	5
80. I can motivate myself to learn when need to	1	2	3	4	5
81. I am aware of what strategies I use when I study.	1	2	3	4	5
82. I find myself analyzing the usefulness of strategies while a study.	1	2	3	4	5
83. I use my intellectual strengths to compensate for my weaknesses	1	2	3	4	5
84. I focus on the meaning and significance of new information.	1	2	3	4	5
85. I create my own examples to make the information more meaningful.	1	2	3	4	5
86. I am a good judge of the how well I understood something.	1	2	3	4	5

87. I find myself using helpful learning strategies automatically.	1	2	3	4	5
88. I find myself pausing regularly to check my comprehension.	1	2	3	4	5
89. I know when each strategy I use will be most effective.	1	2	3	4	5
90. I ask myself how well I accomplished my goals once I am finished.	1	2	3	4	5
91. I draw pictures or diagrams to help me understand while learning.	1	2	3	4	5
92. I ask myself if I have considered all the options after I solve a problem.	1	2	3	4	5
93. I try to translate new information into my own words.	1	2	3	4	5
94. I change strategies when I fail to understand.	1	2	3	4	5
95. I use the organizational structure of the text to help me learn.	1	2	3	4	5
96. I read instructions carefully before I begin a task.	1	2	3	4	5
97. I ask myself if what I am reading is related to what I already know.	1	2	3	4	5
98. I reevaluate my assumptions when I get confused.	1	2	3	4	5
99. I organize my time to best accomplish my goals.	1	2	3	4	5
100. I learn more when I am interested in the topic	1	2	3	4	5
101. I try to break studying down into smaller steps.	1	2	3	4	5
102. I focus on overall meaning rather than specific.	1	2	3	4	5
103. I ask myself questions about how well I am doing while I am learning something new.	1	2	3	4	5
104. I ask myself if I learned as much as I could have once I finish a task.	1	2	3	4	5
105. I stop and go back over new information that is not clear.	1	2	3	4	5
106. I stop and reread when I get confused.	1	2	3	4	5

APPENDIX 5

State of Israel – Ministry of Education

Chief Scientist's authorization to conduct this research



חתימה דיגיטלית

עמוד 1 מתוך 3

מדינת ישראל
משרד החינוך
לשכת המדען הראשי

15 נובמבר 2021
15 נובמבר 2021
תיק מס׳ 11825

היתר לביצוע המחקר בנושא "המורה כמאמן – השפעה של הטמעת כלים של אימון בקרב צוותים חינוכיים על מטה-קוגניציה ומיומנויות ניהול"

ע"י עורך/י המחקר: טלעת שתרובי

מסמך זה בתוקף החל מהתאריך הרשום לעיל ועד לסיום שנת הלימודים תשפ"ג בלבד

במסמך זה ההתייחסות לכל מי שאינם מזוהים לפי שם היא בלשון זכר. זאת מטעמי נוחות בלבד, והכוונה היא גם לנקבה אם לא מצוין אחרת.

היתר זה ניתן בהסתמך על הצהרות האחראי/ם למחקר מהן עולה כי המחקר המבוקש **אינו** עונה לאף אחד מהאפיונים הכלולים בנספח המצורף

המסגרת שבה נערך המחקר: לימודיו של עורך המחקר לקראת תואר שלישי באוניברסיטת קורדובה בספרד

עיקרי המרכיבים של המחקר לעניין היתר זה:

הנבדקים: תלמידי כיתות ז'-ט' בבתי ספר במגזר הערבי במחוז חיפה

הליך איסוף המידע: הנבדקים יתבקשו למלא שאלונים בנושא העומד לבדיקה.

פרטים נוספים על אודות הליך איסוף המידע ועל כלי המחקר מצויים במסמכים שיוגשו ע"י עורך המחקר לבחינתו של מנהל המוסד החינוכי, כחלק מהבקשה להסכמתו לביצוע המחקר.

תנאים והוראות:

1. המחקר יעמוד בכל כללי הנוהל לפעילות מחקרית במערכת החינוך[1].
2. לצורך בקשת הסכמתו של מנהל המוסד החינוכי לביצוע המחקר, יש להמציא העתק של מסמך זה לעיונו ביחד עם מסמכים אלה: תקציר הצעת המחקר, כלי המחקר, מכתב הפנייה להורי המועמדים להיבדק.
3. הסכמת המנהל לפעולה המבוקשת נתונה לשיקוליו, בהתאמה לסמכותו ולאחריותו בנוהל הנזכר לעיל ולכל שאר נהלי משרד החינוך הנוגעים בדבר.
4. להכללת תלמיד במחקר תידרש, בין היתר, בדיקת עמדתם של הוריו בנוגע לכך בנוסף להסכמתו החופשית של התלמיד בעצמו.

1 לנוהל, כולל הגדרת המושגים הרלוונטיים למסמך זה, ראה חוזר מנכ"ל עה/9(ב), המופיע גם באתר לשכת המדען הראשי

1 **כתובת דואר:** רח' דבורה הנביאה 2 ירושלים 951402 **טלפון:** 073-3931641 **אתר הבית:** http://www.education.gov.il/scientist
דואר אלקטרוני: madan@education.gov.il **פקס:** 073-3931640

Scanned with CamScanner

מדינת ישראל
משרד החינוך
לשכת המדען הראשי

הבהרות:

1. לא נדרש היתר לביצוע המחקר מטעם המחוז.
2. **ההיתר כפוף למילוי ההנחיות העדכניות של משרדי הממשלה הנוגעים בדבר באשר להתנהלות הנדרשת במוסדות חינוך למניעת התפשטותם של נגיפים ובכלל זאת, עמידה במגבלות החלות בהקשר זה על כניסת עורך/י המחקר למוסד וביצוען של פעולות מחקריות בתחומו/באמצעותו.**
3. **מנהל המוסד החינוכי מוזמן לפנות ללשכת המדען הראשי להיוועצות בנוגע לפעולה המבוקשת לביצוע, כמו גם בקשר לנהלים בכלל, בטלפון שמספרו 073-3931641 או באמצעות דוא"ל, שכתובתו Madan@education.gov.il**

רוני אמיתי
מנהל תחום (רגולציה של המחקרים)
לשכת המדען הראשי

כתובת דואר: רח' דבורה הנביאה 2 ירושלים 9514402 טלפון: 073-3931641 אתר הבית: http://www.education.gov.il/scientist
דואר אלקטרוני: madan@education.gov.il פקס: 073-3931640

מדינת ישראל
משרד החינוך
לשכת המדען הראשי

נספח

אפיוני מחקר שאינם כלולים במסגרת היתר מסוג זה

במסגרת המחקר מתוכננים איסוף מידע ו/ או פעולה כלשהי בקרב תלמידים באחד או יותר מנושאים אלה :

- אלימות, בריונות או הצקות
- התנהגויות לא חוקיות
- התנהגות סיכון (לעצמי או לזולת) הכוללת התמכרויות בתחומים שונים וביניהם: שימוש בחומרים ממכרים (סמים, אלכוהול), הימורים, נהיגה מסוכנת.
- טראומה כתוצאה מאירועים ביטחוניים או אישיים
- קיומם של רגשות שליליים אצל הנבדק או אצל אחרים (כגון חרדה, דיכאון, כוונות אובדניות)
- זהות מגדרית ו/או מיניות (התנהגות/פעילות מינית, חשיפה לתכנים מיניים וכו')
- עמדות סטריאוטיפיות (אמונות לגבי מאפיינים של קבוצה)
- אמונה דתית
- הפרעה נפשית כלשהי (לרבות שימוש מלא או חלקי בנתונים המיועדים לצורכי אבחון)

המחקר מתוכנן לכלול אחד או יותר מאלה:

- הפעלת מכשיר או אביזר שאינו מצוי בשימוש שגרתי במוסד החינוכי
- איסוף נתונים, שכולם או חלקם מיועדים למסירה לגורם מחוץ לצוות המחקר
- בדיקה רפואית או איסוף מידע רפואי
- הטעייה מכוונת של הנבדק
- איסוף נתונים בקרב אחת או יותר מאוכלוסיות אלה: ילדים בגני ילדים, תלמידים בחינוך המיוחד, מרכזי מחוננים או כיתות למחוננים
- צילומי ווידיאו ו/או הקלטות שמע במסגרת קבוצה או כיתה
- קיומם של קשרי כפיפות או תלות בין אחד או יותר מחברי צוות המחקר למועמדים להיבדק
- בדיקה סוציומטרית (הערכת עמיתים)

כתובת דואר: רח' דבורה הנביאה 2 ירושלים 951402 טלפון: 073-3931641 אתר הבית: http://www.education.gov.il/scientist
דואר אלקטרוני: madan@education.gov.il פקס: 073-3931640

TÍTULO DE LA TESIS:

El maestro como *coach*. El efecto de implementar herramientas de entrenamiento entre el personal educativo en la conciencia metacognitiva, la autogestión y las habilidades de autorregulación de los estudiantes árabes palestinos de secundaria

The teacher as coach. The effect of implementing coaching tools among educational staff on middle-school students' metacognitive awareness, self-management and self-regulation skills

DOCTORANDO/A: TALAT SHATROUBI

INFORME RAZONADO DEL/DE LOS DIRECTOR/ES DE LA TESIS

(se hará mención a la evolución y desarrollo de la tesis, así como a trabajos y publicaciones derivados de la misma).

La tesis realizada por el doctorando se ha llevado a cabo a lo largo de cuatro años de trabajo en los que ha compaginado su profesión con la investigación.

Durante este tiempo la tutorización se ha realizado online debido a su lugar de residencia en Israel. Este proceso ha sido fluido en el tiempo y el doctorando ha demostrado interés e iniciativa personal en el desarrollo de la investigación.

En cuanto a la tesis que se presenta, esta incluye un marco teórico actualizado y acorde al tema de investigación, destacando la importancia de las habilidades cognitivas, de autogestión y de autorregulación. Asimismo, presenta una reflexión sobre una nueva forma de formación del profesorado a través del *coaching* y su repercusión en la práctica educativa. Esta reflexión profundiza en las diferentes teorías y modelos de *coaching* y en el perfil de un docente que desempeña su labor en este marco.

La investigación, de naturaleza cuantitativa, ha contado con el permiso del Ministerio de Educación israelí. La muestra ha estado constituida por 600 estudiantes árabes-palestinos de diferentes cursos académicos.

Las pruebas estadísticas realizadas en torno a los datos obtenidos son pertinentes, dando respuesta a los objetivos y las seis hipótesis planteadas, permitiendo una discusión ajustada de los resultados y su argumentación en base al marco teórico redactado.

La tesis finaliza con unas conclusiones generales, una serie de limitaciones detectadas y una propuesta de futuras líneas de investigación.

Fruto de la tesis doctoral se ha publicado un artículo y se espera que se lleven a cabo otras publicaciones posteriores a la defensa de la misma. De igual forma, la

doctoranda ha participado en acciones formativas desarrollas por la Escuela de Doctorado de la Universidad de Córdoba, como las jornadas congresuales.
El artículo publicado ha sido el siguiente:

SHATROUBI, T. Y RAMÍREZ-GARCÍA, A. (2023). Coaching-Based Pedagogy and Its Impact on Students' Self-Regulation among Marginalized and Segregated Communities: Palestinian Arab Middle School Students as a Case Study. *Education Sciences*, 13, 527, 1-15. https://doi.org/10.3390/educsci13050527. Indexada: SCOPUS (2021): SNIP: 1.314; SJR: 0.518; Cite Score: 2.9; Posición: 395 de 1406 (percentil 71).

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

Córdoba, 30 de mayo de 2023

Firma de la directora

RAMIREZ GARCIA ANTONIA - 30800577N

Firmado digitalmente por RAMIREZ GARCIA ANTONIA - 30800577N
Fecha: 2023.07.29 00:15:09 +02'00'

Fdo.: Antonia Ramírez García

El maestro como *coach*. El efecto de implementar herramientas de entrenamiento entre el personal educativo en la conciencia metacognitiva, la autogestión y las habilidades de autorregulación de los estudiantes árabes palestinos de secundaria

Talat Shatroubi

Resumen tesis doctoral

Este estudio tiene como objetivo examinar el efecto de un programa de *coaching* en docentes árabes palestinos y su aplicación en el aula, en relación a la conciencia metacognitiva y habilidades de autogestión y autorregulación (emocional, conductual y cognitiva) de estudiantes de secundaria árabes palestinos en Israel.

Aunque los investigadores han estado explorando cada vez más la relación entre la enseñanza basada en el *coaching* y la conciencia metacognitiva de los estudiantes la autogestión y la autorregulación, se ha prestado poca atención a esta relación entre los estudiantes de secundaria, y mucho menos entre los estudiantes segregados y desfavorecidos en comunidades determinadas.

Se diseñó un estudio cuasi-experimental para probar la hipótesis de que existían diferencias en la conciencia de la metacognición, la autogestión y la autorregulación entre los estudiantes que participaron en una enseñanza basada en *coaching* docente y los que no. Seiscientos estudiantes árabes palestinos de secundaria que no habían participado previamente en entrenamiento educativo fueron invitados a participar en este estudio y fueron asignados aleatoriamente a dos grupos: un grupo experimental (n=300) y un grupo de control (n=300). Todos los participantes completaron un instrumento de prueba previa y posterior que incluía el Inventario de Conciencia Metacognitiva (MAI), el Modelo de Intervención Dual de Autocontrol/Manejo y el Inventario de Autorregulación Adolescente (ASRI). Se utilizaron ANOVA de medidas repetidas para analizar los datos. Los resultados revelaron una correlación estadísticamente significativa entre la educación basada en el *coaching* y la capacidad de los estudiantes para asumir la responsabilidad en su propio aprendizaje.

Los resultados de este estudio indicaron que el programa aumentó el uso de habilidades metacognitivas por parte de los estudiantes durante el transcurso de la intervención, que es un componente clave para participar y facilitar los procesos de autorregulación y autogestión.

Los resultados del estudio mostraron también que el *coaching* educativo puede tener un impacto directo y positivo en el uso de estrategias metacognitivas por parte de los estudiantes para aumentar la participación en varios dominios que, a menudo, están destinados a mejorar el rendimiento académico, como las habilidades de estudio y la gestión del tiempo. Este resultado refleja la relación entre la metacognición y los aspectos cognitivos de la autorregulación, es decir, que la metacognición permite a los estudiantes elegir, emplear y monitorear estrategias cognitivas en contextos de aprendizaje. Usando un enfoque colaborativo que respeta a los estudiantes como expertos en sus propias vidas, el *coaching* educativo se alinea con la autorregulación al ayudar a los estudiantes a establecer metas, desarrollar un plan de acción para alcanzar las metas y monitorear el progreso a través de la autorreflexión y la evaluación. Este enfoque puede facilitar los procesos cognitivos y metacognitivos necesarios para generar circuitos de retroalimentación entre los estudiantes, su comportamiento y su entorno. Aunque existen intervenciones de autorregulación basadas en evidencia, estas intervenciones tienden a dirigirse a niños más pequeños o, a menudo, son prácticas basadas en el aula.

Si bien se necesita investigación empírica adicional, el *coaching* educativo ofrece potencialmente una nueva vía para apoyar el desarrollo de habilidades de autorregulación cognitivas, metacognitivas y motivacionales en entornos escolares, lo que puede conducir a un mayor rendimiento académico y una mayor confianza en sí mismo, retención y éxito del alumnado.

Los resultados de este estudio no sólo sugieren que las herramientas de entrenamiento pueden alinearse bien con las teorías de autorregulación y autogestión, sino que también respaldan la literatura que sugiere que el uso de herramientas de entrenamiento durante las interacciones con el alumnado tiene implicaciones positivas para el desarrollo metacognitivo dentro y fuera del aula.

Las futuras investigaciones han de continuar examinando las prácticas de entrenamiento educativo a medida que ganan importancia en los entornos escolares. Debido a los resultados prometedores respecto a la conciencia metacognitiva, las habilidades de autogestión y las habilidades de autorregulación de los estudiantes, se podría examinar en un futuro el vínculo que se pudiera producir entre el entrenamiento educativo y el rendimiento académico, así como también las prácticas de entrenamiento educativo y otros componentes de la conciencia metacognitiva, las habilidades de

autogestión y las habilidades de autorregulación como la flexibilidad de la metacognición, la autoeficacia y la motivación.

Otras propuestas de investigación deberían considerar la recopilación de datos longitudinales sobre las habilidades de metacognición, autogestión y autorregulación de los estudiantes. La investigación sobre el *coaching* educativo se vería reforzada mediante la incorporación de otras metodologías de recopilación de datos además de las medidas de autoinforme, como la observación y los protocolos de pensamiento en voz alta. Estos métodos de investigación podrían proporcionar información valiosa sobre cómo mejorar las habilidades metacognitivas, de autogestión y autorregulación en los sistemas educativos, y qué disposiciones pueden ser necesarias para mantener el cambio a lo largo del tiempo. Además, los investigadores deberían considerar la recopilación de datos sobre varios resultados de los estudiantes, como el rendimiento académico y la retención, para comprender cómo los incrementos en la conciencia metacognitiva, la autogestión y la autorregulación a través del entrenamiento académico afectan la capacidad de los estudiantes para aprender, desarrollar y utilizar sus habilidades recién adquiridas.

El estudio recomienda que la pedagogía basada en el *coaching* se incorpore en el sistema educativo, en general, y en el sistema educativo que atiende las necesidades de las comunidades marginadas y desfavorecidas de Israel, en particular.

Palabras clave: *coaching* educativo, herramientas de coaching, conciencia metacognitiva, autorregulación de la autogestión, comunidades segregadas, árabes palestinos, teorías y enfoques educativos

SECCIÓN I. INTRODUCCIÓN

En un mundo que cambia rápidamente en distintos ámbitos (tecnológico, científico y socialmente), el sistema educativo tiene como objetivo ayudar a los estudiantes a enfrentar los desafíos del mañana y desarrollar las habilidades apropiadas, que incluyen metacognición, resolución de problemas, pensamiento crítico, cooperación, autorregulación y autogestión, capacidades para hacer frente a estos desafíos. Dado que el *coaching* está orientado a las fortalezas y los objetivos y mira hacia el futuro, las estrategias de enseñanza basadas en el *coaching* se consideran uno de los enfoques educativos más adecuados para el sistema educativo en la era posmoderna (Ashkenazi, 2011; Hermel-Stanescu, 2015; Morgenstern et al., 2019; Murphy et al., 2012; Van Laar et al., 2020; Zohar & Bushrian, 2020).

El *coaching* es una "caja de herramientas": una combinación única de herramientas orientadas a resultados que se recopilaron meticulosamente a partir de varios enfoques teóricos. El *coaching* ha crecido y se ha desarrollado sobre los cimientos de las teorías de la psicología humanista y las diversas escuelas de la psicología cognitiva, pero también fue influenciado por las teorías conductistas, adlerianas, existencialistas y constructivistas. Así es como el *coaching* combina enfoques filosóficos y humanísticos que se relacionan con el alma humana y la posibilidad de felicidad con enfoques racionales que enfatizan el autocambio y el logro de metas (Pagis, 2016).

El *coaching* educativo ha atraído cada vez más la atención de investigadores y docentes, debido a su conexión con la mejora de las habilidades de estudio y el rendimiento académico, y se ha convertido en una forma popular de apoyo a los estudiantes en las escuelas y campus universitarios (Bettinger & Baker, 2014; Capstick et al., 2019; Field et al., 2013; Franklin & Doran, 2009; Howlett et al., 2021; Losch et al., 2016; Prevatt & Yelland, 2015; Richman, Rademacher & Maitland, 2014; Robinson, 2015; Warner et al. 2018). Sin embargo, existe la necesidad de desarrollar marcos teóricos que examinen las intervenciones de aprendizaje autorregulado (SRL) en la educación superior (Bruijn-Smolders et al., 2016; Richardson et al., 2012; Schunk & Mullen, 2013). Además, se ha prestado poca atención al efecto de la educación basada en el entrenamiento en los estudiantes de secundaria, y mucho menos en los estudiantes de comunidades segregadas y desfavorecidas de todo el mundo, como es el caso de la árabe palestina en Israel.

Este estudio tiene como objetivo llenar este vacío en la literatura, investigando el efecto de la educación basada en la puesta en práctica de un programa de *coaching* en estudiantes de secundaria árabes palestinos en Israel. En base a mi experiencia de treinta y tres años en el sistema educativo como docente, director y entrenador personal, descubrí que muchos docentes expresan dificultades para enseñar en aulas heterogéneas y se sienten agotados, especialmente después de la pandemia de COVID. Muchos estudiantes también se sienten de este modo, les resulta difícil realizar tareas independientes y demuestran poca motivación para estudiar. Gradualmente hemos llegado a la conclusión de que el *coaching* educativo puede servir como un medio para fomentar el desarrollo de habilidades clave relacionadas con el aprendizaje autorregulado (SRL) la metacognición y la autogestión de los estudiantes.

Durante muchos años, el sistema educativo árabe-palestino en Israel ha sufrido discriminación y falta de fondos en comparación con el sistema educativo judío. Tanto el plan de estudios en sí mismo como la forma en que se implementa no solo desnacionalizan a los estudiantes árabes palestinos y los alejan de su herencia cultural e historia, sino que tampoco brindan a los estudiantes del sistema educativo árabe palestino los conocimientos y habilidades necesarios para el futuro y su integración en el mercado laboral. De hecho, este sistema educativo de dos niveles en Israel impide que los estudiantes desarrollen todo su potencial.

El sistema educativo israelí ha intentado implementar muchas reformas para promover las habilidades del siglo XXI: pensamiento de alto nivel, habilidades tecnológicas y habilidades para la vida, pero la mayoría solo se implementaron parcialmente o no se implementaron en absoluto. En consecuencia, sigue predominando la enseñanza presencial tradicional. Como tal, como señalaron Eisenberg y Selivansky (2019), la preparación del sistema educativo israelí para el siglo XXI revela muchas deficiencias. También afirman que el plan de estudios del sistema educativo israelí no se ha adaptado al siglo XXI. Israel, en general, ocupa un lugar bajo en las pruebas internacionales como PISA (Programa para la Evaluación Internacional de Estudiantes) y PIAAC (Programa para la Evaluación Internacional de Competencias de Adultos). El sistema educativo israelí no brinda a sus estudiantes las habilidades necesarias y no los prepara para un futuro empleo (Eisenberg & Selivansky, 2019).

Esto es aún más cierto para el sistema educativo árabe-palestino en Israel que funciona como un subsistema segregado dentro del sistema educativo estatal más amplio.

El sistema educativo en Israel se caracteriza por profundas brechas y disparidades entre estudiantes de diferentes orígenes socioeconómicos como resultado del presupuesto por estudiante asignado al desarrollo de cada sistema y sus planes de estudio (Zeedan & Hogan, 2022). El análisis de pruebas internacionales como PISA también muestra que las puntuaciones de los niños árabes son incluso más bajas que las de sus homólogos judíos (Hadad Haj-Yahya et al., 2021). Además, hay indicios de que la calidad de los docentes en el sistema educativo árabe-palestino que, en cierto modo había sido más alta que en el sistema educativo hebreo, está disminuyendo (Hadad Haj-Yahya et al., 2021). Las principales barreras que se interponen en el camino son los docentes poco capacitados, los programas de formación docente que no respaldan los métodos de enseñanza innovadores, un sistema educativo centralizado, una estructura organizativa engorrosa y los frecuentes cambios políticos (Tehawkho et al., 2022).

Asimismo, el sistema educativo árabe-palestino en Israel prioriza la excelencia académica al tiempo que descuida "las necesidades sociales, intelectuales y emocionales de los estudiantes" (Magadley, Amara & Jabareen 2019, p.1). El desarrollo de habilidades que se ajusten al futuro mercado laboral puede aumentar el capital humano de la población árabe y conducir a la realización de su potencial económico, particularmente porque un segmento considerable de los empleados árabes (principalmente hombres) tienen habilidades de bajo nivel y corren el riesgo de quedarse sin empleo (Eisenberg y Selivansky, 2019). Si bien no existe un consenso sobre el conjunto de habilidades que necesitarían los egresados, Newton (2021) y Zepeda et al. (2019) están de acuerdo en que las habilidades y destrezas que se consideran exclusivas de los humanos y que no pueden ser reemplazadas por máquinas son importantes para la futura incorporación al mercado laboral. Éstas incluyen el pensamiento crítico, la resolución de problemas en un entorno digital, la gestión de la información, la colaboración y el trabajo en equipo, así como la conciencia ética, legal y cultural. Estudios recientes (Newton, 2021; Zepeda et al., 2019) muestran la necesidad de cultivar habilidades de autorregulación entre los estudiantes para lograr el acceso al mundo laboral, un tema que no ha recibido mucha atención entre los educadores en la sociedad árabe palestina todavía.

SECCIÓN II. REVISIÓN DE LITERATURA

En esta disertación se explorará la relación entre el entrenamiento educativo, la conciencia metacognitiva, la autogestión y las habilidades de autorregulación en el contexto de la educación árabe palestina en Israel. En esta sección, se revisará la literatura sobre las tres habilidades principales de este estudio, a saber, habilidades metacognitivas, habilidades de autorregulación y habilidades de autogestión. También se examinarán los estudios actuales sobre el *coaching* y su efecto en la enseñanza.

2. 1. Habilidades y destrezas metacognitivas

El término metacognición, que fue acuñado por primera vez por Flavell (1979), denota la capacidad del individuo para reflexionar, comprender y criticar sus propios procesos de pensamiento (Flavell, 1979). El término se originó en la psicología cognitiva, pero con los años también se ha extendido al campo de la educación y, en este contexto, indica la capacidad del estudiante para reflexionar, comprender y criticar los procesos de aprendizaje (Ozturk, 2017; Perry et al., 2019; Veenman, 2011; Schraw y Gutiérrez, 2015).

La metacognición se refiere al conocimiento de una persona, así como a la regulación y control de los procesos y productos de su sistema cognitivo (Flavell, 1976). En el pensamiento metacognitivo se piensa en varios aspectos de los procesos epistemológicos, es decir, el pensamiento gira en torno al conocimiento que tiene una persona y los procesos de adquisición del conocimiento. El conocimiento generado como resultado de los procesos de pensamiento metacognitivos se denomina en la literatura "conocimiento de segundo orden" (Nickerson et al., 1985). Elevar los procesos de pensamiento a la conciencia implica un pensamiento reflexivo, en el que el propio proceso de pensamiento se convierte en objeto de observación y análisis; en otras palabras, pensar sobre pensar.

La metacognición, a veces, se define como "pensar sobre el pensamiento" o "el pensamiento de una persona sobre su propio pensamiento". Flavell et al. (2002) distinguen tres componentes clave de la metacognición: conocimiento metacognitivo (MK), autorregulación y monitoreo que, a menudo se denominan habilidades metacognitivas (MS) o experiencia metacognitiva (ME). Otros investigadores han ampliado el uso del término e incluido en él una referencia a los componentes efectivos (emocionales) de los procesos de aprendizaje en lugar de sólo a los componentes

cognitivos; por ejemplo, experiencias metacognitivas, creencias metacognitivas, sentimiento de saber, juicio de aprendizaje, seguimiento epistemológico y juicio.

Sin embargo, existe un amplio consenso entre los investigadores (Brown, 1987; Flavell, 1979; Schraw & Moshman, 1995) sobre una distinción básica entre algunos componentes de la metacognición:

1. Habilidades Metacognitivas (MS). Estas son las habilidades y procesos activos en la planificación y evaluación del pensamiento y el aprendizaje (Veenman, 2011). Estas habilidades se clasifican en tres categorías: planificación, seguimiento y evaluación.

2. Conocimiento metacognitivo (MC). La activación de las habilidades metacognitivas implica procesos reflexivos; es decir, un reflejo de los procesos de pensamiento. El producto de estos procesos reflexivos es el conocimiento metacognitivo (Gidelewich, 2021) que se relaciona con el arte, las ideas y las teorías sobre el pensamiento y las acciones humanas, así como sobre las diversas interacciones de los seres humanos con tareas y estrategias cognitivas (Flavell et al., 2002).

3. Experiencias Metacognitivas (ME). Este componente de la metacognición ha sido definido por Flavell et al. (2002, p. 154) como "una experiencia cognitiva o emocional que pertenece a la actividad cognitiva". Las experiencias metacognitivas abordan tres aspectos: sentimientos, juicios/evaluaciones y conocimiento específico de tareas en línea.

Las habilidades metacognitivas se pueden desarrollar a través de la enseñanza y el entrenamiento (Kolb & Kolb, 2009; Sato & Lamb, 2021). Estas habilidades son un componente clave en el desarrollo de un alumno con capacidad de aprendizaje independiente y afectan directa y positivamente el rendimiento del alumno en una variedad de campos. Debido a que el desarrollo de estudiantes de alto rendimiento es una de las funciones clave del sistema educativo, muchos educadores fomentan una combinación de pedagogías para desarrollar habilidades metacognitivas entre los estudiantes durante los procesos de enseñanza y aprendizaje en el aula. Numerosos estudios muestran que la enseñanza metacognitiva mejora tanto el pensamiento metacognitivo en sí mismo, como el rendimiento de los estudiantes en diversas áreas del

conocimiento como lectura, matemáticas y ciencias (Baten et al., 2017; Hart & Memnun, 2015; Schraw y Gutiérrez, 2015; Veenman, 2011).

La opinión predominante es que las habilidades metacognitivas primero se desarrollan como habilidades específicas en áreas de contenido específicas y se convierten en habilidades generales que se pueden aplicar a diversas tareas y áreas de contenido en etapas posteriores. La metacognición es una parte clave del aprendizaje efectivo, pues permite a los estudiantes ser conscientes y regular su pensamiento, controlar cómo se toman las decisiones y criticar su aprendizaje. El entrenamiento en estrategias metacognitivas incrementa los procesos de planificación, seguimiento y control de las estrategias de pensamiento que interiorizan, les ayuda a prestar una mejor atención a los procesos de pensamiento, así como a ser conscientes de la tarea, recopilando información sobre ella y afrontándola (Adler et al., 2017; Hart & Memnun, 2015; Schraw & Gutierrez, 2015).

Además, algunos estudios mostraron que la metacognición tiene un efecto positivo tanto en el nivel de lectura, como en la comprensión de lectura para estudiantes de habla inglesa, para estudiantes que tienen dificultades para leer y también para estudiantes que aprenden inglés como segundo idioma (Ahmadi et al., 2013; Soodla et al., 2017). También es interesante expresar que, aunque la enseñanza metacognitiva es efectiva para la población de estudiantes en su conjunto, se ha encontrado que tiene efectos particularmente fuertes en los estudiantes de bajo rendimiento. La explicación de este hallazgo radica en el hecho de que los estudiantes de bajo rendimiento, en contraste con los estudiantes de alto rendimiento, a menudo no logran comprender los componentes del conocimiento metacognitivo por sí mismos y, por lo tanto, se benefician particularmente de la intervención centrada en la enseñanza metacognitiva (Zohar, 2016).

2.2. Habilidades de autogestión

La autogestión es la capacidad de una persona para regular sus sentimientos, pensamientos y comportamiento en diferentes situaciones. El manejo eficaz del estrés incluye el control de los impulsos, la capacidad de automotivación y la capacidad de establecer metas personales y académicas, y trabajar para alcanzarlas. La capacidad de autogestión incluye el control de la agresión y la conducta destructiva y antisocial, el ajuste del comportamiento de acuerdo con la retroalimentación, la automotivación positiva, la aspiración a realizar el potencial y la percepción optimista (The Collaborative

for Academic, 2017). La autogestión requiere habilidades y actitudes que faciliten la capacidad de regular el comportamiento y las emociones, incluido el rechazo de la gratificación, el manejo del estrés, el control de los impulsos y la autoconservación, para alcanzar las metas educativas y personales (Weissberg et al., 2015). Las habilidades de autogestión incluyen habilidades de gestión del estrés, habilidades de gestión del tiempo, habilidades de organización, habilidades de resolución de problemas, habilidades de toma de decisiones, confianza en uno mismo y habilidades de autocontrol (Dembo & Seli, 2013). Además, las habilidades de autogestión están relacionadas con la automotivación, es decir, la capacidad de tomar la iniciativa y perseguir objetivos. Aunque es algo personal, en general, cuando nos motivamos, anticipamos y planificamos tareas potenciales necesarias para llevar a cabo tareas más significativas o resolver problemas actuales. La automotivación es la parte de la autogestión que asegura liderar el progreso con proyectos y actividades concretas (Levi-Feldman, 2020).

El impacto del estrés en las habilidades de autogestión, especialmente en la toma de decisiones, se abordó en la literatura temprana (Thomason & Pond III, 1995). El estrés puede alterar nuestro pensamiento lógico equilibrado, muy necesario para la toma de decisiones. El manejo de los factores estresantes en el lugar de trabajo puede ayudarnos a mantener la calma. El manejo del estrés, antes de que se convierta en un problema, nos permite centrarnos en nuestras emociones y objetivos, manteniendo un comportamiento profesional en el lugar de trabajo (Acharyya, 2017; Umeh et al., 2021).

La autogestión del alumno (LSM) se refiere a la capacidad de implementar procedimientos, conocimientos y creencias para lograr los objetivos de aprendizaje en un entorno dinámico y cambiante. Los procedimientos de LSM incluyen cinco estrategias metacognitivas: planificación, seguimiento, evaluación, resolución de problemas e implementación. Los estudiantes con autogestión se distinguen por ser conscientes de su capacidad para utilizar sus conocimientos, creencias, motivación y procesamiento cognitivo de forma flexible. Los estudiantes experimentados en autogestión poseen muchas cualidades, pues tienen suficiente conocimiento y creencias bien desarrolladas sobre sí mismos, el proceso de aprendizaje, las posibles estrategias, la naturaleza de las tareas y el conocimiento previo. Además, pueden acceder a sus conocimientos y creencias para describir el uso que hacen de los procedimientos (Rubin, 2001; Huang & Yu, 2019).

La autogestión del alumnado requiere una interacción constante entre las estrategias metacognitivas y el conocimiento y las creencias de éste. Este último

componente abarca: El conocimiento de los estilos de aprendizaje de la persona, la creencia en la importancia de la tarea, las creencias generales sobre el aprendizaje de idiomas, el uso de conocimientos previos y el saber hacer, lo que permite a los aprendices expertos utilizar de manera efectiva una extensa lista de estrategias. Las estrategias metacognitivas incluyen la planificación, el establecimiento de objetivos, el seguimiento, la identificación de fuentes de dificultad y la evaluación de la eficacia de las estrategias utilizadas. Las habilidades de autogestión pueden considerarse como una aplicación personal de estrategias que producen un cambio deseable en el comportamiento. Las habilidades de autogestión son beneficiosas para los estudiantes, asegurando que funcionen de la manera más independiente posible. En consecuencia, cuando los estudiantes pueden establecer sus propias metas y monitorear su comportamiento, son capaces de generalizar muchas y variadas habilidades a una amplia gama de definiciones y situaciones (Danan, 2016; Haegele, 2015; Zhu, 2021).

2. 3. Habilidades de autorregulación

La autorregulación está asociada a la autogestión de los estudiantes y es también uno de los componentes psicológicos que influyen en el proceso de aprendizaje (Fomina et al., 2020; Natvig et al., 2003). Se considera un factor esencial que afecta la consistencia de las actividades de aprendizaje de una persona y el enfoque en el logro de los objetivos de aprendizaje. La autorregulación es una habilidad cognitiva y emocional multidimensional (Maksum et al., 2021). Puede decirse que la creciente toma de conciencia en los últimos años de la necesidad de desarrollar esta habilidad deriva de alguna manera de la naturaleza del mercado laboral y del conocimiento desarrollado en el siglo XXI.

La autorregulación expresa la capacidad de una persona para adaptarse a las circunstancias con el fin de aprender y desarrollarse, de aprender de su interacción con el entorno, fortalecerse y orientar su conducta a los objetivos que se propone. Centrándose en los obstáculos de la autorregulación, Shonkoff & Phillips (2000) describieron la capacidad de aprender a manejar emociones intensas, así como enfocar y mantener la atención en el tiempo. Por su parte, Hoffman et al. (2012) discutieron técnicas de autorregulación para controlar comportamientos indeseables, como adicciones e impulsos. Centrándose en el monitoreo psicológico, Shanker (2017) evidenció el papel de los padres, educadores y amigos para ayudar a calmar y disminuir los niveles de estrés, ayudar a otros a regular su comportamiento y enseñar a cómo regularse a sí mismos.

La pedagogía de la autorregulación y la motivación (generar un comportamiento positivo en el aula a través de estrategias motivacionales como recompensas que luego conducen a la motivación intrínseca) está diseñada para promover los logros de los estudiantes, así como para mejorar su estado emocional y social. En las técnicas educativas basadas en este enfoque, el profesorado permite que su alumnado fije objetivos y realice un seguimiento de su propio progreso. De esta forma, los estudiantes se capacitan en la ejecución de diversas estrategias y fortalecen sus prácticas de control. Esta corriente de enseñanza se centra en fortalecer la autoeficacia del alumnado y la creencia en su capacidad para tener éxito en tareas académicas y sociales. El objetivo es transferir la responsabilidad de resolver problemas al estudiante. La autorregulación está determinada por el entorno de aprendizaje (creado por el docente), por las interacciones (entre docentes y compañeros) y por la estructura e ideas del contenido que se enseña (Sprinthall & Sprinthall, 1981; Schuster et al., 2020).

El principio básico de la pedagogía de la autorregulación es la participación de los estudiantes en los procesos educativos en el aula. En consecuencia, la enseñanza de acuerdo con este enfoque debe comenzar con el establecimiento de metas junto con los estudiantes, escuchando con sensibilidad sus necesidades y apoyando sus pasos de planificación, supervisión y evaluación para ayudarlos. La perspectiva central que surge de la investigación de Lichtinger (2018), así como de la presente investigación, es que escuchar a los estudiantes en riesgo y trabajar juntos para lograr sus expectativas son herramientas clave para realmente cumplirlas en el aula (Schuster et al., 2020).

El aprendizaje autorregulado (SRL) se refiere a la forma en que los estudiantes, a cualquier edad y en cualquier situación de aprendizaje, manejan y participan en la práctica de aprendizaje con el objetivo de lograr los objetivos de aprendizaje. La literatura apunta a una relación positiva entre la capacidad de autorregulación en el aprendizaje y el rendimiento académico (Doostian et al., 2014; Trias et al., 2021). En este sentido, los estudiantes con herramientas de regulación del aprendizaje desarrolladas tienen más éxito en la realización de tareas académicas y tienen un mayor éxito académico que los estudiantes cuyas habilidades de regulación del aprendizaje están subdesarrolladas.

Además, la práctica de la autorregulación contribuye al estado emocional, la adaptación social y la calidad de vida de los estudiantes en general (Kirschner & Stoyanov, 2020). De manera similar, Lichtinger (2018) argumentó que la autorregulación

es un desempeño activo y dinámico en el que los estudiantes se fijan objetivos y tratan de monitorear su cognición, motivación y comportamiento para lograrlos.

La autorregulación tiene varias etapas: Antes de la acción, el alumnado practica la planificación que incluye la recopilación de datos, el establecimiento de hitos y la construcción de un plan de trabajo. A medida que aprende, supervisa su éxito y cambia las estrategias que emplea, en relación con la retroalimentación que recibe. Al final del procedimiento, evalúa el trabajo realizado y extrae conclusiones para el futuro (Lichtinger, 2018). Varios investigadores (Bittner et al., 2022; Panadero, 2017; Stephen et al., 2021) demostraron que un alto nivel de habilidades de autorregulación en el aprendizaje es clave para el éxito académico, la autoeficacia, la calidad de vida, y el avance de las habilidades emocionales y sociales. Esto es cierto para los estudiantes en general, y en particular para los estudiantes de poblaciones desfavorecidas (Pedagogy folder for Guide in Marom Schools, 2019).

Tanto los procesos de autorregulación como los de autogestión son fundamentales en los procesos de intervención y formación. Ambos desempeños pueden medirse como parte de los programas de capacitación y requieren una importante inversión de esfuerzo. La literatura de investigación indica que estos dos procesos utilizan recursos internos compartidos. Por lo tanto, no sorprende encontrar una disminución y agotamiento de las capacidades propias después del esfuerzo de regulación conductual o emocional (es decir, autorregulación) o ejercicio de habilidades de autogestión. Los estudios de imágenes realizados por Delazer et al., (2003) han validado los hallazgos experimentales de que las funciones de gestión y la autorregulación utilizan los mismos recursos. Estos estudios también indicaron la relación mutua y la interacción entre las funciones de gestión y los estados sentimentales y el rendimiento académico. Por lo tanto, es importante evaluar el uso de los recursos personales (incluidas las áreas de poder) en la planificación de programas de intervención y capacitación, para evitar la erosión de las fuerzas propias (Margalit, 2014).

2.4. El *coaching* en el sistema educativo – El docente como *coach*

Los estudios han indicado que podría haber una relación entre el *coaching* (entrenamiento) y las habilidades de aprendizaje. Se descubrió que el *coaching* aumenta la perseverancia y la retención de los estudiantes (Bettinger & Baker, 2014), ayuda a lograr metas (Losch et al., 2016), ayuda a la autorregulación y las habilidades de gestión

(Richman et al., 2014), desarrolla estrategias de aprendizaje, autoestima y la satisfacción con la escuela (Prevatt & Yelland, 2015), así como la autoconfianza y la motivación (Bellman, Burgstahler, & Hinke, 2015). Cada uno de estos resultados refleja conceptos cognitivos, metacognitivos o motivacionales que se destacan en las teorías de autorregulación y autogestión. En otras palabras, el proceso de *coaching* es un modelo de aprendizaje efectivo al estar orientado a objetivos, controlado y reflexivo.

Según la International Coach Federation (ICF) (2016), el *coaching* es la colaboración con los aprendices en un proceso creativo y estimulante que los inspira a maximizar su potencial personal y profesional. Para la ICF, el *coaching* se refiere al aprendiz desde una percepción holística, como un experto en su vida y trabajo, como un 'todo' ingenioso y creativo. Así, en el *coaching* personal, la "experiencia" del *coachee* es la principal herramienta del *coach* (Ashkenazi, 2011, p. 123). El *coaching* es un proceso deliberado que ayuda a un individuo a aclarar valores, fortalezas y prioridades, y a darse cuenta de su potencial para llevarlo a lograr los resultados deseados y efectivos y las metas que se ha fijado. A través de las herramientas y habilidades que proporciona la formación, la persona puede mantenerse motivada y superar obstáculos en el camino hacia el logro de sus metas y una sensación de felicidad (Hermel-Stanescu, 2015).

Discutiendo el papel principal del entrenador (*coach*), Katz (2008) enfatizó la necesidad de guiar al aprendiz para que descubra la experiencia dentro de él y traducirla en una estrategia que sea lo más efectiva posible, consistente con sus valores personales y verdaderas habilidades. La clave es sumergirse en su visión y hacer preguntas cuyas respuestas lo ayudarán a formular un curso de acción que conduzca a la realización de su visión. El *coach* no le dice al alumno qué hacer, sino que lo guía sobre cómo estar activo y activarse.

El *coaching*, como enfoque centrado en la persona, apoya la idea de un aprendizaje personalizado y desafiante y proporciona una perspectiva sobre el aprendizaje como un compromiso personal con el cambio (van Nieuwerburgh, 2012). El *coaching* ha demostrado ser un método crítico de desarrollo y aprendizaje utilizado para generar cambios, desarrollar eficiencia, concienciar y cambiar actitudes y comportamientos en organizaciones de todo tipo, e involucra interrelaciones entre factores externos, capacidades internas y prácticas relacionadas con el desarrollo de las prácticas de *coaching-mentoring* y su competencia (Al Hilali et al., 2020). A pesar de las diferentes definiciones y percepciones del *coaching*, la premisa básica del *coaching* es que las

personas tienen una capacidad innata para aprender y desarrollarse mientras se enfocan en lograr las metas acordadas (Biswas-Diener, 2009).

Estudios previos (Green et al., 2005; Spence & Grant, 2007) han demostrado que el *coaching* puede reducir la sensación de estrés, aumentar el logro de objetivos, fortalecer la sensación de control y aumentar la satisfacción con la vida. Es decir, el *coaching* puede mejorar las habilidades cognitivo-conductuales y socioemocionales y el aprendizaje del alumnado.

2.4.1. Teorías y modelos de coaching

El proceso de *coaching* requiere mucha planificación, reflexión y evaluación constante de la situación (Osher et al., 2020). Se han desarrollado varias teorías y modelos de *coaching* a lo largo de los años para comprender su efecto en las habilidades de aprendizaje socioemocional, en general, y en el aprendizaje socioemocional en el sistema educativo, en particular.

2.4.2. Habilidades de aprendizaje y entrenamiento

Como se indicó anteriormente, los estudios han demostrado que el *coaching* aumenta la perseverancia y la retención de los estudiantes (Bettinger & Baker, 2014), ayuda a lograr objetivos (Losch et al., 2016), ayuda a la autorregulación y las habilidades de gestión (Richman et al., 2014), desarrolla estrategias de aprendizaje, autoestima y aumenta la satisfacción con la escuela (Prevatt & Yelland, 2015), así como la autoconfianza y la motivación (Bellman, Burgstahler, & Hinke, 2015). Por lo tanto, es importante incluir la lógica del *coaching* como modelo de aprendizaje efectivo.

El aprendizaje de habilidades de *coaching* permite desarrollar la excelencia y el éxito, al mismo tiempo que se avanza en el potencial personal de una persona para lograr metas y objetivos deseables a través de la exploración y el aprendizaje continuo en poco tiempo (Blanchard & Human, 2006; Buckingham & Clifton, 2005; Katz, 2005). El *coaching* de habilidades de aprendizaje es un proceso sistemático, estructurado y centrado en los resultados (Katz, 2005). Su objetivo principal es ayudar al alumnado a ver de manera práctica dónde están y dónde quieren estar, y luego desarrollar un plan personal sobre cómo lograrlo (Blanchard & Human, 2006). La sesión *coach-coachee* está diseñada para promover el aprendizaje y el cambio de comportamiento. Definiendo el *coaching* de habilidades de aprendizaje de los estudiantes como una relación personal entre el

entrenador y el estudiante, Campbell y Gardner (2005) describen un proceso de cambio diseñado para mejorar el desempeño individual, el crecimiento personal y mejorar el bienestar y la calidad de vida.

Visto como un proceso continuo, Grant (2001) definió el *coaching* como un proceso colaborativo sistemático, centrado en el problema, dado al alumnado, en el que el entrenador permite el autoaprendizaje, el crecimiento personal y el logro de los objetivos del alumnado. El proceso de *coaching* se basa en una asociación continua entre un *coach*, que aporta su conocimiento y experiencia, y el aprendiz, para ayudarlo a lograr sus objetivos personales y profesionales, así como para crear una alta calidad de vida para sí mismo. A nivel motivacional y desde la perspectiva del *coachee*, Kedem (2006) enfatizó que el rol del *coach* es ayudar al aprendiz a buscar, encontrar y expresar las habilidades, recursos y potencial que naturalmente existen en él, para producir soluciones y formas de hacer frente a los desafíos y complejidades que presenta el entorno.

En estudios sobre el *coaching* de habilidades de aprendizaje que se relacionan con la resiliencia, la autoestima y el rendimiento académico, los hallazgos sugieren que el *coaching* personal tiene el potencial de desarrollar resiliencia y una alta calidad de vida para los estudiantes. Los estudiantes reportaron satisfacción y mayor inversión en estudios durante el proceso de *coaching*. La promoción del aprendizaje se realiza ayudando al estudiante a establecer objetivos a largo plazo y derivar actividades de ellos para lograr esos objetivos. El estudiante aprende a superar los obstáculos que se esperan en el camino hacia el logro de las metas, a desarrollar estrategias para lidiar con estos obstáculos y a identificar posibles canales de ayuda (Merriman & Codding, 2008).

Diversos estudios que tratan sobre el avance de habilidades y destrezas con la ayuda del *coaching* y se focalizan principalmente en estudiantes de secundaria, mostraron que el *coaching* de habilidades de aprendizaje reduce los síntomas de estrés, ansiedad y depresión, aumenta la esperanza, la calidad de vida y la resiliencia y promueve metas (Grant, 2003; Grant & Cavanagh, 2011; Green, Oades & Grant, 2006; Green, Grant & Rynsaardt, 2020; Griffiths, 2005). Al Hilali et al. (2020) argumentaron que, en virtud de estar orientado a objetivos, controlado y reflexivo, el proceso de *coaching* es un modelo para el aprendizaje efectivo, y que es importante incluir la lógica del *coaching* como modelo para el aprendizaje efectivo en el sistema educativo. Un estudio realizado en escuelas de Inglaterra encontró que el entrenamiento en habilidades de aprendizaje contribuyó a mejorar el éxito de los estudiantes en los exámenes (Passmore & Brown,

2009). Un estudio centrado en estudiantes de enfermería de posgrado encontró que el *coaching* mejoró el aprendizaje gracias a la fuerte asociación formada entre el estudiante, el *coach* y la institución académica (Tee et al., 2009). También se ha descubierto que el *coaching* influye positivamente en los estudiantes al aumentar su capacidad para establecer metas y su motivación para alcanzarlas (Campbell & Gardner, 2005).

El *coaching* se ve hoy como un método útil para que el alumno tenga éxito personal y profesionalmente, con el objetivo de alcanzar el máximo potencial y aprender las habilidades requeridas de nuestro mundo moderno (Atkinson et al., 2021).

2.4.3. El papel y las características de los modelos de profesor-*coach*

El *coaching* también juega un papel multifacético en el sistema escolar. Los entrenadores son como maestros en sus áreas de especialización y juegan un papel importante en la capacitación y el empoderamiento de los estudiantes. El papel del profesor-*coach* incluye muchas áreas de responsabilidad como proporcionar programas de práctica y aplicación, motivar al alumnado para un mayor rendimiento y crear cohesión en un entorno de equipo. Su función principal es promover el aprendizaje y la formación de los estudiantes para la vida futura (Janes et al., 2016).

Por su parte, Hermel-Stanescu (2015) agregó que la misión del docente-*coach* es diagnosticar con precisión el conocimiento y el desarrollo del alumnado y ayudarlo a desarrollarse de manera óptima. La principal especialidad del docente-*coach* es la capacidad de preguntar y escuchar, ya que motiva al alumnado a avanzar en su búsqueda de las respuestas. Desde el punto de vista del profesor-*coach*, el estudiante está en el centro y ajusta los métodos de enseñanza al alumnado de una manera única e individual. El estudiante es activamente responsable de su aprendizaje, con una amplia elección sobre su aprendizaje, puesto que se tienen en cuenta sus intereses, habilidades, antecedentes y objetivos (Atkinson et al., 2021; Becker, Freeman et al., 2016; Bill & Fundación Melinda Gates, 2016; Inacol, 2016).

Otro aspecto abordado por Hermel-Stanescu (2015) y Janes et al. (2016) es que el docente entrena la responsabilidad de aprender junto con el estudiante, y el estudiante es el factor activo y central que conforma la agenda del proceso formativo. Las actividades del estudiante se centran en el futuro y el deseo de aumentar la eficacia de su vida futura. Además, el *coach* adopta nuevas formas de presentar el conocimiento a los estudiantes para brindar la mayor experiencia de aprendizaje y debe crear las condiciones adecuadas

para influir en su aprendizaje, motivarlos para lograr sus metas y objetivos, y maximizar su potencial. Los profesores entrenadores que quieren llevar a su alumnado al máximo de sus capacidades son docentes que mantienen una relación personal con sus estudiantes, entienden que las relaciones docente-alumno son relaciones que incluyen diálogo, amor, autenticidad y franqueza, y perciben el aula en la que enseñan como una comunidad humana, que tiene una variedad de experiencias significativas que contribuyen a formar la personalidad de sus miembros y ayudan a su proceso de crecimiento.

El docente-*coach* empodera a los estudiantes, los alienta a disfrutar y amar el aprendizaje, los desafía de la manera que más les convenga para que puedan desarrollarse de manera óptima y logren desarrollar experiencia en los campos de acuerdo con las metas que se han propuesto. Las relaciones de estos docentes con sus alumnos son ricas y complejas, caracterizadas por la entrega mutua, satisfacción y recompensa, que no son necesariamente materiales, sino emocionales (District RSN, 2016; Pane et al., 2015).

El docente-*coach* coloca las diferencias entre los estudiantes en el centro de la enseñanza, enfatiza lo positivo en la diferencia y trata a cada alumno de acuerdo con su singularidad. De esta forma, se puede ayudar a cada alumno a desarrollar al máximo su potencial personal inherente adaptando el contenido de aprendizaje a las necesidades, habilidades, intereses e inclinaciones del alumno (Ben-Yosef, 2009; Hermel-Stanescu, 2015). Además, enseña activamente, alienta a los estudiantes a iniciar y asumir responsabilidades.

El docente-*coach* controla el currículo y la diversidad en los métodos de aprendizaje, domina los conocimientos sobre el alumno, los procesos de diagnóstico, evaluación y retroalimentación. Asimismo, construye un programa único para cada estudiante junto con el estudiante, mientras aborda las metas y objetivos establecidos por el estudiante. El ritmo y los enfoques de aprendizaje y enseñanza se adaptan a las necesidades, el desarrollo, los antecedentes, las habilidades, los intereses, las metas y otros factores del estudiante que lo distinguen. Todo esto surge de los resultados de un proceso continuo de diagnóstico, evaluación y medición que da forma al aprendizaje y la enseñanza (Becker et al., 2016; Hermel-Stanescu, 2015; Hollweck & Lofthouse, 2021).

El *coaching* generalmente implica también supervisar una tarea y proporcionar retroalimentación. Por lo tanto, una de las características importantes del profesor-*coach* es compartir y discutir con los estudiantes los resultados del diagnóstico y la evaluación

de su progreso, así como proporcionar retroalimentación frecuente y rica en forma regular y en tiempo real. Todo esto se hace para promover su aprendizaje, y para que desarrollen altas habilidades de reflexión y aprendizaje autónomo. Finalmente, a través de la retroalimentación, el docente-*coach* desarrolla una relación significativa con los estudiantes y estos se sienten importantes y valorados (Boyatzis et al., 2022; Janes et al., 2016; Office of Educational Technology, 2017).

2.4.4. El impacto del uso de herramientas de *coaching* por parte de los docentes en las habilidades metacognitivas y de autorregulación de los estudiantes

Estudios recientes (Ramdial-Budhai, 2018; Hollweck & Lofthouse, 2021) han demostrado que el uso de estrategias didácticas basadas en el *coaching* mejora la enseñanza. Es decir, una orientación que cultive, desarrolle y promueva una persona abierta y generosa, dotada de pensamiento lógico y crítico, buen gusto y empatía, que actúe con sensibilidad y respeto por los demás, comprometida con la ciudadanía democrática y los valores morales. Al mismo tiempo, parece beneficiar la enseñanza que descansa sobre los principios del diálogo mutuo, el trabajo conjunto, la responsabilidad colectiva, la investigación colaborativa, la autonomía colectiva, la iniciativa y la eficacia. Por lo tanto, la percepción de la orientación debe basarse en ir más allá del proceso de autorrealización y tratar al alumnado como adulto.

Otros estudios (Ashkenazi, 2011; Foster, 2018; Katz, 2008; Pedagogy folder for Guide in Marom Schools, 2019; Zalkowitz & Goldstein, 2011) también han demostrado que diferentes herramientas de *coaching* mejoran la enseñanza en cuanto al pensamiento consecuente; mapa de resultados; marco de enseñanza/aprendizaje; cuestiones de escucha de adentro hacia afuera; enseñanza y evaluación dialógica; acciones de conexión emocional y refuerzo positivo; barreras para el éxito; establecimiento de patrones de desempeño y resultados; reclutar y aprovechar los recursos; y herramientas de control, evaluación, valoración y documentación/informes.

El uso de herramientas de *coaching* por parte de los docentes les ayuda a guiar e influenciar a los estudiantes a lo largo de su proceso de desarrollo personal y profesional, brindándoles las condiciones, herramientas y habilidades necesarias para una autogestión óptima, inteligente e independiente en el mundo multicultural en constante cambio, tanto individualmente como como grupo. Este tipo de mentores tienen el talento para adaptarse a diferentes aprendices y transmitir la sabiduría que necesitan, no solo durante su período

de estudios, sino también en su vida adulta (aprendizaje permanente). Además, los educadores que adoptan herramientas de *coaching* también brindan a los estudiantes los conocimientos necesarios para alcanzar de manera crítica e inteligente la información accesible en el mundo de la alta tecnología. De esta manera también ofrece las herramientas necesarias para el trabajo independiente durante la vida, la autogestión en tiempos de incertidumbre y cambio, el aprendizaje independiente y el trabajo en equipo (Levi-Feldman, 2020).

Del mismo modo, el uso de herramientas de *coaching* hace que el aprendizaje sea efectivo. Estas herramientas permiten a los estudiantes ser conscientes de su pensamiento y de su capacidad de autorregularse, controlar su proceso de toma de decisiones y criticar su propio aprendizaje. El profesor-*coach* mejora los procedimientos de planificación, seguimiento y control de las estrategias de pensamiento que interiorizan los alumnos. Les ayuda a prestar una mejor atención a su sistema de pensamiento, así como a ser conscientes de la tarea, con el fin de recopilar información sobre ella y afrontarla en consecuencia (Adler, Zion & Mevorech, 2015; Gutierrez & Schraw, 2015; Hart & Memnun, 2015).

El profesor-*coach* tiene un impacto significativo en los aprendices. Él o ella comparte la responsabilidad de las ambiciones de los estudiantes, alentándolos y permitiéndoles producir sus propias soluciones y estrategias, e inspirando la excelencia personal, el amor por el aprendizaje, el logro de una alta experiencia, mientras ve a los estudiantes como responsables y comprometidos con sus aspiraciones (Becker et al., 2016; Fundación Bill y Melinda Gates, 2016; Hermel-Stanescu, 2015; Inacol, 2016). Además, Foster (2018) enfatizó que la influencia del entrenador se refleja en el hecho de que ayuda a los alumnos a localizar los elementos que impiden su éxito y los ayuda a desarrollar estrategias de éxito que los lleven al más alto nivel de logro. Según ella, existe un impacto positivo del uso de estrategias de coaching en la mejora de las habilidades y técnicas metacognitivas de los estudiantes. Es decir, el uso de herramientas de *coaching* permite al alumno tomar las decisiones correctas desde una visión general de todos los resultados posibles y construir la estrategia de éxito como el curso de acción más adecuado.

El profesor-*coach* ayuda a los estudiantes a mejorar sus habilidades de autorregulación y autogestión, y esto se refleja en la capacidad de asumir la responsabilidad y la propiedad de su propio aprendizaje. Además, influye mucho en el

comportamiento del alumnado, por ejemplo, los problemas de disciplina se reducen significativamente, se involucran en su propio aprendizaje, son capaces de resolver problemas complejos y desafiantes, no se dan por vencidos ante las dificultades, y aprenden más en profundidad, dominando la adaptación de la vida adulta fuera de la escuela (District RSN, 2016; Pane et al., 2015; Ramdial-Budhai, 2018; Zalkowitz & Goldstein, 2011).

Según Janes, Silvery & Dubrowski (2016), el profesor-*coach* crea un marco de formación que permite al alumnado centrarse en los mejores activos y habilidades disponibles para lograr resultados óptimos, llevándolos a un estado en el que alcanzan de forma óptima el potencial de sus recursos personales, sociales y económicos. Además, motiva a su alumnado a encontrar lo que más le conviene y a producir sus propias y mejores estrategias y soluciones. Además, Ramdial-Budhai (2018) argumentó que algunas de las habilidades más importantes que un *coach* enseña a los estudiantes son los mecanismos independientes de gestión, seguimiento y control, que los llevan a tomar las mejores decisiones en términos de entrenamiento y resultados.

Finalmente, un entrenador-docente es una persona completa, que está en el camino del aprendizaje. Su trabajo es educar, guiar, orientar y reflejar los procesos de aprendizaje individuales y grupales. Se compromete a proporcionar a los alumnos herramientas que les permitan asumir la responsabilidad de su progreso de aprendizaje, así como el procesamiento y la crítica, y fomenta el cuestionamiento (Pedagogy folder for Guide in Marom Schools, 2019).

SECCIÓN III. OBJETIVOS E HIPÓTESIS DE LA INVESTIGACIÓN

Este estudio tiene como objetivo examinar el efecto de un programa de *coaching* en docentes árabes palestinos y su aplicación en el aula, en relación a la conciencia metacognitiva y habilidades de autogestión y autorregulación (emocional, conductual y cognitiva) de estudiantes de secundaria árabes palestinos en Israel. Existe una necesidad evidente de un marco teórico al que pueda alinearse el *coaching* educativo (Field et al., 2013; Grant, 2014; Robinson, 2015; Theeboom et al., 2014). Más importante aún, los investigadores no han examinado el efecto de la educación basada en el entrenamiento (*coaching*) en estudiantes de secundaria, y mucho menos en los estudiantes de comunidades segregadas y desfavorecidas de todo el mundo, como es el caso de la comunidad árabe-palestina en Israel.

Este trabajo busca contribuir a estos esfuerzos de investigación al examinar empíricamente una intervención de entrenamiento educativo establecida en una escuela secundaria. Evaluamos empíricamente los efectos del *coaching* en los factores metacognitivos, un componente principal de SRL asociado con el crecimiento y el éxito académico de los estudiantes. La metacognición se puede fomentar a través de interacciones con maestros y compañeros, a medida que los estudiantes aprenden a cuestionar, reconstruir y controlar sus procesos y estrategias cognitivas a través de la colaboración y la observación de otros (De Backer et al., 2012; Hurme, Palonen y Järvelä, 2006). La oportunidad de aprender modelando y discutiendo y reflexionando activamente sobre las propias habilidades crea un poderoso entorno de aprendizaje que desafía a los estudiantes a juzgar, controlar y gestionar su aprendizaje (De Backer et al., 2012; Hartman & Sternberg, 1992).

Teniendo en cuenta estos resultados de investigaciones precedentes y el objetivo principal del estudio, planteamos la hipótesis principal de que las interacciones con entrenadores educativos capacitados generarían ganancias similares en la conciencia metacognitiva de los estudiantes, así como en sus habilidades de autogestión y autorregulación. En consecuencia, se investigaron las siguientes hipótesis de investigación:

(H1): Existe una relación positiva entre el nivel educativo de los padres de los estudiantes participantes y la conciencia metacognitiva, las habilidades de autogestión (autocontrol, implementación de estrategias de resolución de problemas, diferimiento de la gratificación y regulación de eventos internos) y la capacidad de autorregulación (emocional, conductual y cognitiva) de los estudiantes

(H2): Existe una relación positiva entre el nivel educativo de las madres de los estudiantes participantes y la conciencia metacognitiva, las habilidades de autogestión (autocontrol, implementación de estrategias de resolución de problemas, aplazamiento de la gratificación y regulación de eventos internos) y la capacidad de autorregulación (emocional, conductual y cognitiva) de los estudiantes.

(H3): Existe una relación positiva entre el género y el grupo de edad y la conciencia metacognitiva, las habilidades de autogestión (autocontrol, implementación de estrategias de resolución de problemas, aplazamiento de la gratificación y regulación de eventos

internos) y la capacidad de autorregulación de los estudiantes (emocionales, conductuales y cognitivas).

Estas tres hipótesis anteriores se consideraron para tratar de controlar otros factores que pudieran influir en los resultados de la investigación.

(H4): Existe una relación positiva entre las estrategias de enseñanza basadas en el *coaching* y la conciencia metacognitiva de los estudiantes. Es decir, los estudiantes que aprenden con métodos basados en *coaching* mejorarán sus habilidades metacognitivas más que los estudiantes que no aprenden con estos métodos.

(H5): Existe una relación positiva entre el uso de herramientas de *coaching* por parte de los docentes y las habilidades de autogestión de los estudiantes de 13 a 15 años (autocontrol, implementación de estrategias de resolución de problemas, aplazamiento de la gratificación y regulación de eventos internos); es decir, los participantes del grupo experimental mejorarán sus habilidades de autogestión más que los participantes del grupo de control.

(H6): Existe una relación positiva entre las estrategias de coaching de los docentes y la capacidad de autorregulación (emocional, conductual y cognitiva) de los estudiantes; es decir, los estudiantes del grupo experimental (con *coaching*) mejorarán su capacidad de autorregulación más que los estudiantes del grupo de control (sin *coaching*).

SECCIÓN IV. METODOLOGÍA

4. METODOLOGÍA

4.1. Diseño de la investigación

En esta investigación de naturaleza cuantitativa se realizó un estudio cuasi-experimental para evaluar la asociación entre una intervención (no asignada al azar) y un resultado. El diseño cruzado cuasi-experimental anterior a la prueba (pretest) y posterior a la prueba (postest) utilizado en esta investigación comparó grupos y midió los cambios entre los datos previos y posteriores a la intervención en todos los grupos.

4.2. Descripción de la muestra

Este estudio incluyó a 600 estudiantes árabes palestinos de 7º a 9º grado, de los cuales 268 (44.66%) eran niños y 332 (55.33%) eran niñas. Los estudiantes se dividieron en dos grupos: 300 habían participado en el programa de *coaching* durante todo el año

escolar y 300 estudiantes constituyeron el grupo de control. La Tabla 1 presenta la distribución de estudiantes por género y muestra que el número de niños y niñas en ambos grupos fue similar.

Tabla 1.

Frecuencias y porcentajes por género

Group	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Control	Boys	134	44.66	44.66	44.66
	Girls	166	55.33	55.33	100.00
	Total	300	100.00		
Experimental	Boys	134	44.66	44.66	44.66
	Girls	166	55.33	55.33	100.00
	Total	300	100.00		

La Tabla 2 muestra la distribución de los estudiantes por edad (grado escolar), destacando que hubo igual representación en cada grupo de edad tanto en el grupo de investigación como en el de control.

Tabla 2.

Frecuencias y porcentajes por grado

Group	Grade	Frequency	Percent	Valid Percent	Cumulative Percent
Control	7	100	33.33	33.33	33.33
	8	100	33.33	33.33	66.66
	9	100	33.33	33.33	100.00
	Total	300			
Experimental	7	100	33.33	33.33	33.33
	8	100	33.33	33.33	66.66
	9	100	33.33	33.33	100.00
	Total	300	100.00		

La Tabla 3 presenta la distribución de los participantes según el nivel educativo del padre. Los datos de la Tabla 3 muestran que la frecuencia de padres con educación secundaria es la más alta tanto en el grupo control (n=138), como en el grupo experimental (n=152).

Tabla 3.

Frecuencias y porcentajes del nivel educativo del padre

Group	Father's education	Frequency	Percent	Valid Percent	Cumulative Percent
Control	None	0	0.00	0.00	0.00
	Elementary	10	3.33	3.33	3.33
	Middle school	106	35.33	35.33	38.66
	High school	138	46.00	46.00	84.66
	Academic	46	15.33	15.33	100.00
	Total	300	100.00		
Experimental	None	2	0.66	0.66	0.66
	Elementary	8	2.66	2.66	3.33
	Middle school	84	28.00	28.00	31.33
	High school	152	50.66	50.66	82.00
	Academic	54	18.00	18.00	100.00
	Total	300	100.00		

La Tabla 4 refleja la distribución de los participantes en función del nivel educativo de la madre. En ella se muestra que la frecuencia y el porcentaje de madres con educación secundaria tanto en el grupo de control como en el grupo de investigación son los más altos (n=152 y n=160, respectivamente).

Tabla 4.

Frecuencias y porcentajes del nivel educativo de la madre

Group	Mother's education	Frequency	Percent	Valid percent	Cumulative percent
Control	Elementary	14	4.66	4.66	4.66
	Middle school	62	20.66	20.66	25.33
	High school	152	50.66	50.66	76.00
	Academic	72	24.00	23.33	99.33
	Total	300			
Experimental	Elementary	8	2.66	2.66	2.66
	Middle school	36	12.00	12.00	14.66
	High school	160	53.33	53.33	68.00
	Academic	96	32.00	32.00	100.00
	Total	300			

4.3. Variables

Este estudio tiene dos variables independientes (variables demográficas y aplicación del programa *coaching*) y tres variables dependientes (Autorregulación, autogestión y conciencia metacognitiva). Para examinar el efecto del *coaching* sobre la autorregulación, el autocontrol y la metacognición, los participantes se dividieron en dos grupos: el grupo experimental y el grupo de control.

Los antecedentes de los dos grupos fueron similares, como se describió anteriormente. Los docentes del grupo experimental recibieron capacitación en *coaching*, mientras que los docentes del grupo de control no lo hicieron. Los instructores de *coaching* de los profesores del grupo experimental habían sido formados previamente por profesorado de institutos de educación superior en Israel. La capacitación abordó el desarrollo de un proceso guiado que ayudase a los participantes a clarificar valores, fortalezas y prioridades, así como a darse cuenta de su potencial para alcanzar efectivamente a los resultados deseados y lograr las metas que se habían fijado.

4.4. Herramientas e instrumentos

Este estudio empleó como técnica la encuesta y como instrumento un cuestionario. El tipo de cuestionario fue un autoinforme cerrado, que incluía cuatro apartados: 1. Datos sociodemográficos; 2. Inventario de Conciencia Metacognitiva; 3. Modelo de Intervención Dual de Autocontrol (Autogestión) y 4. Inventario de Autorregulación de Adolescentes.

Apartado 1. Datos sociodemográficos

Esta parte del cuestionario se relacionaba con las características de origen de los estudiantes: género, grado, nivel educativo del padre y nivel educativo de la madre.

Apartado 2. Inventario de Conciencia metacognitiva

El Inventario de Conciencia Metacognitiva (MAI) (Schraw & Dennison, 1994) es un cuestionario de autoinforme que examina el conocimiento metacognitivo. Los ítems no son específicos de una determinada tarea, sino que se relacionan en general con situaciones que requieren de un aprendizaje. El cuestionario fue traducido al hebreo por el método de retrotraducción de Brislin (1980). El cuestionario incluye 52 ítems en ocho escalas de, al menos, cuatro ítems cada una, divididos en dos medidas principales: conocimiento metacognitivo y conocimiento de control metacognitivo.

1. Conocimiento metacognitivo, medido por tres escalas:

a) Condiciones: conocimiento del momento y la razón (cuándo y cómo) para usar estrategias; por ejemplo, "Aprendo mejor cuando sé algo sobre el tema". Se mide mediante los ítems 15, 18, 26, 29 y 35.

b) Aplicación: conocimiento de cómo se aplican las estrategias de aprendizaje; por ejemplo, "Trato de usar estrategias que han funcionado en el pasado". Se mide mediante los ítems 3, 14, 27 y 33.

c) Recursos: conocimiento sobre las propias habilidades, recursos intelectuales, estrategias y habilidades; por ejemplo, "Comprendo mis fortalezas y debilidades intelectuales". Se mide mediante los ítems 5, 10, 12, 16, 17, 20, 32 y 46.

2. Conocimiento del control metacognitivo, medido por cinco escalas:

d) Monitoreo: se relaciona con la evaluación del aprendizaje o el uso de estrategias; por ejemplo, “Me pregunto periódicamente si estoy cumpliendo mis metas”. Se mide mediante los ítems 1, 2, 11, 21, 28, 34 y 49.

e) Planificación: se relaciona con la organización, el establecimiento de objetivos y la asignación de recursos; por ejemplo, "Organizo mi tiempo para lograr mejor mis objetivos". Se mide mediante los ítems 4, 6, 8, 22, 23, 42 y 45.

f) Evaluación: se relaciona con el análisis del desempeño y la efectividad de la estrategia después de un episodio de aprendizaje; por ejemplo, "Una vez que completo una tarea, me pregunto si aprendí tanto como pude". Se mide mediante los ítems 7, 19, 24, 37 y 50.

g) Gestión de la información: se relaciona con las habilidades y estrategias en tiempo real del procesamiento efectivo de la información; por ejemplo, "Después de resolver un problema, me pregunto si había considerado todas las posibilidades". Se mide mediante los ítems 9, 13, 30, 31, 36, 38, 39, 41, 43, 47 y 48.

h) Detección de errores: se relaciona con las estrategias utilizadas para corregir errores de comprensión y desempeño; por ejemplo, "Me detengo y vuelvo a los datos cuando estoy confundido". Se mide mediante los ítems 25, 40, 44, 51 y 52.

El análisis factorial realizado por Schraw y Dennison (1994) sobre el conocimiento metacognitivo y el conocimiento del control metacognitivo produjo una

puntuación llamada metacognición general, que es la que mide este cuestionario. El alfa de Cronbach del presente estudio fue de .78. El análisis factorial confirmatorio validó el cuestionario.

Parte 3: Modelo de Intervención Dual de Autocontrol (autogestión)

El Modelo de Intervención Dual de Autocontrol (Rosenbaum, 1980) no examina el autocontrol real de los niños, sino más bien su inclinación y capacidad para usar habilidades de autocontrol cuando sea necesario. La versión más nueva del cuestionario (2000) incluye 27 ítems que expresan parámetros de habilidades de autogestión, estrategias de resolución de problemas, retraso en la satisfacción (reacción al dolor y creencia general en la capacidad de regular eventos internos). Los ítems se puntúan en una escala de Likert de 1 (muy diferente a mí) a 5 (muy típico de mí). Cada encuestado recibe una puntuación total de autocontrol de acuerdo con las pautas de Rosenbaum (1980): los valores 1 y 2 se convierten en -1 y -2, respectivamente, 3 se convierte en 0, y 4 y 5 se convierten en 1 y 2, respectivamente. El consiguiente rango de respuestas es de -2 a 2 para cada ítem, y la puntuación total para 27 ítems está entre -54 y 54. Una puntuación baja refleja habilidades de autocontrol bajas y una puntuación alta refleja habilidades de autocontrol altas. Tres ítems (6, 13 y 22) fueron codificados inversamente. La confiabilidad interna en el presente estudio fue α=.86, lo que indica una alta fiabilidad interna.

Parte 4: Inventario de Autorregulación de Adolescentes

El Inventario de Autorregulación de Adolescentes (ASRI) (Moilanen, 2007) mide cinco componentes de autorregulación (activar, monitorear, mantener, inhibir y adaptar), cuatro áreas de autorregulación (emocional, conductual, cognitiva y de atención) y dos aspectos relacionados con el tiempo (corto y largo plazo).

En el presente estudio, al igual que en estudios previos (Selkovski, 2013), la puntuación final es el promedio calculado de los ítems. Los ítems 1, 2, 3, 6, 7, 8, 10, 11, 12 y 16 se codificaron de forma inversa. Selkovski (2013) reportó una buena confiabilidad (α=.80) para la sección de largo plazo y bastante baja para los ítems de corto plazo (α=.60). En el presente estudio, el coeficiente de confiabilidad final fue α=.60.

4.5. Procedimiento

Para examinar el efecto del programa de *coaching* en las variables de investigación, los participantes se dividieron en dos grupos: un grupo experimental y un grupo de control. Después de haber recibido la aprobación para realizar el estudio por parte del Ministerio de Educación, el Comité de Ética, los directores de las escuelas y los padres de los estudiantes, los cuestionarios se distribuyeron a los estudiantes dos veces: antes de participar en el programa (inicio del año escolar 2020) y al final del año escolar.

En la primera etapa, antes del programa de intervención, se distribuyó el cuestionario a ambos grupos. Primero se solicitó a cada docente que numerara los formularios de los cuestionarios de su alumnado de acuerdo con las hojas de asistencia del aula, para garantizar la compatibilidad entre los cuestionarios previos y posteriores de cada alumno. Estas listas no se transmitieron al investigador.

Los cuestionarios se distribuyeron en la escuela durante una sesión. El investigador explicó a los estudiantes los objetivos del estudio y les indicó cómo completar el cuestionario. Los estudiantes que tuvieron dificultades con algunas preguntas recibieron instrucción adicional. También se aclaró que los datos se recopilarían solo con fines de investigación, se analizarían en grupo y que cualquier participante podía dejar de completar el cuestionario en cualquier momento. La cumplimentación de los cuestionarios duró alrededor de 45 minutos de promedio. Posteriormente, se solicitó a los tutores que anotaran en los formularios si el estudiante tenía dificultad de aprendizaje y/o un trastorno por déficit de atención. Este estudio no incluyó a este tipo de estudiantes.

4.6. Análisis de los datos

En la primera etapa se realizaron análisis descriptivos (frecuencias y porcentajes de la muestra), medidas de tendencia central y dispersión (media y desviación estándar de los diferentes cuestionarios) y se examinó la normalidad de distribución de la muestra mediante Skewness y Curtosis. En la segunda etapa del análisis de datos, se realizó una prueba de chi-cuadrado ($\chi 2$) para examinar las diferencias en los antecedentes de los estudiantes. Además, se utilizó el análisis factorial confirmatorio (AFC) para validar el constructo de la variable Conciencia metacognitiva mediante el uso del software Jamovi.

Para examinar las diferencias en las variables de investigación (autorregulación, autogestión y conciencia metacognitiva) entre los grupos experimental y de control antes y después de la intervención, se utilizó el análisis ANOVA de medidas repetidas para examinar las diferencias entre los grupos antes y después de la intervención. Además, las relaciones entre las variables de investigación (autorregulación, autogestión y conciencia metacognitiva) se examinaron mediante correlaciones de Pearson. Los análisis se realizaron con el software estadístico SPSS.24.

4.7. Consideraciones éticas

Este estudio se adhirió a las consideraciones éticas, incluida la participación voluntaria, el consentimiento informado (Denscombe, 2000), el anonimato (Blaxter, Hughes & Tight, 2001), la confidencialidad, la posibilidad de daño y la comunicación de los resultados. Los temas de la investigación se describieron en detalle y se repitieron durante el estudio, cuando fue necesario (Altrichter & Gstettner, 1993).

Los cuestionarios se distribuyeron previa autorización del Jefe Científico del Ministerio de Educación (ver Anexo 5) y el consentimiento de los padres. El investigador aseguró a los participantes que los datos se utilizarían únicamente con fines de investigación.

SECCIÓN V. RESULTADOS

En esta sección se reportan los hallazgos descriptivos de los ítems y escalas examinados en el cuestionario.

5.1. Resultados sobre el nivel educativo de padres y madres en relación con las variables estudiadas

La Tabla 5 muestra el nivel educativo de los padres de los participantes y la Tabla 6 muestra el nivel educativo de las madres de los participantes.

Tabla 5.

Frecuencias y porcentajes del nivel educativo de los padres.

Group	Father's Education	Frecuency	Percent	Valid Percent	Cumulative Percent
Control	None	0	0.00	0.00	0.00
	Elementary	10	3.33	3.33	3.33
	Middle school	106	35.33	35.33	38.66
	High school	138	46.00	46.00	84.66
	Academic	46	15.33	15.33	100.00
	Total	300	100.00		
Experimental	None	2	0.66	0.66	0.66
	Elementary	8	2.66	2.66	3.33
	Middle school	84	28.00	28.00	31.33
	High school	152	50.66	50.66	82.00
	Academic	54	18.00	18.00	100.00
	Total	300	100.00		

Table 6.

Frecuencias y porcentajes del nivel educativo de los padres

Group	Mother's education	Frequency	Percent	Valid percent	Cumulative percent
Control	Elementary	14	4.66	4.66	4.66
	Middle school	62	20.66	20.66	25.33
	High school	152	50.66	50.66	76.00
	Academic	72	24.00	23.33	99.33
	Total	300			
Experimental	Elementary	8	2.66	2.66	2.66
	Middle school	36	12.00	12.00	14.66
	High school	160	53.33	53.33	68.00
	Academic	96	32.00	32.00	100.00
	Total	300			

La Hipótesis 1 y la Hipótesis 2 establecían una relación positiva entre los niveles educativos de los padres y madres de los participantes y las habilidades metacognitivas

de los estudiantes, habilidades de autogestión (autocontrol, implementación de estrategias de resolución de problemas, aplazamiento de la gratificación y regulación de eventos internos) y – capacidad de regulación (emocional, conductual y cognitiva). No hubo diferencias significativas entre los grupos en la distribución de los niveles educativos de los padres ($\chi^2_{(1)}$=0.00; p>0.05) y madres ($\chi^2_{(1)}$=0.00; p>0.05) de los participantes. Igualmente, no hubo diferencias en relación a las tres habilidades estudiadas en los estudiantes.

5.2. Resultados sobre el género y edad y las tres habilidades estudiadas en los estudiantes

La Tabla 7 muestra los resultados del ANOVA de dos vías sobre la metacognición. Los resultados muestran que no existe un efecto significativo del grupo de edad del estudiante ($F_{(2, 294)}$ =1.363, p>0.05) o del género del estudiante ($F_{(1, 294)}$ = 1.878, p>0.05) en el cambio en los valores de la metacognición. Además, en la tabla se observa que no hay efecto de la interacción entre el género y el grupo de edad ($F_{(2, 294)}$ = 0.102, p>0.05). La inferencia es que el género y el grupo de edad del estudiante no pueden explicar significativamente el cambio en la metacognición.

Tabla 7.

Metacognición: ANOVA de dos vías

Cases	Sum of Squares	df	Mean Square	F	P	η²
Age group	0.103	2	0.051	1.363	0.110	0.083
Gender	0.007	1	0.007	1.878	0.172	0.006
Age group ✻ gender	0.008	2	0.004	0.102	0.903	0.006
Residuals	1.131	294	0.004			

Note. Type III Sum of Squares

La Tabla 8 presenta los resultados del ANOVA de dos vías para la variable autogestión. Se observa que no hay un efecto significativo del grupo de edad del estudiante ($F_{(2, 294)}$ =2.25, p>0.05) o del género del estudiante ($F_{(1, 294)}$ =1.79, p>0.05) en el cambio en los valores de la autogestión. Además, los resultados muestran que no hay efecto de la interacción entre género y grupo de edad ($F_{(2, 294)}$ =0.18, p>0.05), lo que significa que el grupo de edad y el género del estudiante no pueden explicar significativamente el cambio en los valores de Autogestión.

Tabla 8.

Autogestión: ANOVA de dos vías

Cases	Sum of Squares	df	Mean Square	F	p	η²
Age group	0.040	2	0.020	2.257	0.106	0.015
Gender	0.016	1	0.016	1.793	0.182	0.006
Age group ✻ gender	0.003	2	0.002	0.188	0.828	0.001
Residuals	2.573	294	0.009			

Note. Type III Sum of Squares

La Tabla 9 presenta los resultados del ANOVA de dos vías para la variable autorregulación. Los resultados muestran que no hay un efecto significativo del grupo de edad del estudiante ($F_{(2, 294)} = 1.217$, $p>0.05$) o del género del estudiante ($F_{(1, 294)} = 0.003$, $p>0.05$) en el cambio de los valores arrojados en la variable autorregulación. Adicionalmente, en la tabla se muestra que no existe efecto de la interacción entre género y grupo de edad ($F_{(2, 294)} = 0.403$, $p>0.05$). La conclusión es que el género y el grupo de edad del estudiante no pueden explicar significativamente el cambio en la autorregulación.

Tabla 9.

Autorregulación: ANOVA de dos vías

Cases	Sum of Squares	df	Mean Square	F	p	η²
Age group	0.024	2	0.012	1.217	0.298	0.008
Gender	0.001	1	0.001	0.003	1.000	0.001
Age group ✻ gender	0.008	2	0.004	0.403	0.669	0.003
Residuals	2.939	294	0.010			

Note. Type III Sum of Squares

5.3. El efecto del *coaching* en la conciencia metacognitiva

Para examinar la cuarta hipótesis de investigación (H4), que el entrenamiento afecta la metacognición de los participantes, se empleó el análisis de varianza de medidas repetidas. La Tabla 10 muestra que hubo un efecto significativo para la interacción entre el tiempo (antes y después de la intervención) y el grupo (grupo experimental o grupo control) ($F_{(1,299)}$=1491.20, $p<0.001$). Además, se muestra que hubo un efecto significativo

en el automanejo del tiempo de medición (antes y después de la intervención) ($F_{(1,299)}$ = 377.36, p<0.001) y del grupo de participantes ($F_{(1,299)}$ = 1885.87, p<0.001).

Tabla 10.

Efecto del coaching en la conciencia metacognitiva

Cases	Sum of Squares	Df	Mean Square	F	P	η^2	η^2_p
Time	52.417	1.00	52.41	377.36	< .001	0.21	0.55
Residuals	41.532	299	0.14				
Group	73.725	1.00	73.72	1885.87	< .001	0.29	0.86
Residuals	11.689	299	0.04				
Time ✻ Group	58.751	1.00	58.75	1491.20	< .001	0.23	0.83
Residuals	11.780	299	0.04				

Note: Type III Sum of Squares

Se emplearon pruebas *post hoc* (Tukey) para evaluar el origen de las diferencias (Tabla 11). No se encontró diferencia significativa entre la media de la variable conciencia de metacognición de los dos grupos antes de la intervención (t= 1.29, p>0.05), ni en el grupo control entre las dos mediciones (antes y después) (t= 1.00, p>0.05). Sin embargo, se encontró una diferencia significativa en la media de la variable conciencia de metacognición del grupo experimental entre los dos tiempos (t=37.51, p<0.001); es decir, la media del grupo experimental aumentó significativamente. La conclusión es que la intervención de *coaching* tuvo un efecto positivo en la percepción metacognitiva de los participantes. Por lo tanto, se corroboró la Hipótesis 4.

Tabla 11.

Pruebas post-hoc (conciencia metacognitiva)

		Mean Difference	SE	t	p_{bonf}
Before, EG[1]	After, EG	-0.86	0.03	-35.29	< .001***
	Before, CG	0.05	0.02	1.29	0.08
	After, CG	0.08	0.02	3.19	0.009**
After, EG[1]	Before, CG	0.92	0.02	37.51	< .001***
	After, CG	0.94	0.02	58.00	< .001***
Before, CG[1]	After, CG	0.03	0.02	1.00	1.000

[1]EG = experimental group; CG = control group; ** p < .01, *** p< .001

5.4. El efecto del *coaching* en la autogestión

Para examinar la quinta hipótesis de investigación (H5), que el *coaching* influye en el nivel de autogestión de los participantes, se empleó el análisis de varianza de medidas repetidas. La Tabla 12 revela que hubo un efecto significativo para la interacción entre tiempo (antes y después de la intervención) y grupo (grupo experimental o grupo control) ($F_{(1,299)}$= 1075.53, p<0.001). Además, se muestra que hubo un efecto significativo en la autogestión del tiempo de medición (antes y después de la intervención) ($F_{(1,299)}$ =492.55, p<0.001) y del grupo del participante ($F_{(1,299)}$ =1691.88, p<0.001).

Tabla 12.

Efecto del coaching en la autogestión

Cases	Sum of Squares	Df	Mean Square	F	p	η^2	η^2_p
Time	60.79	1.00	60.79	492.55	< .001	0.26	0.62
Residuals	36.90	299	0.12				
Group	63.71	1.00	63.71	1691.88	< .001	0.27	0.85
Residuals	11.25	299	0.038				
Time ✻ Group	44.79	1.00	44.79	1075.53	< .001	0.19	0.78
Residuals	12.45	299	0.04				

Se emplearon pruebas *posthoc* (Tukey) para evaluar el origen de las diferencias (Tabla 13). Se encontró una diferencia significativa en la media de autogestión del grupo experimental entre antes y después de la intervención (t=-35,66, p<0.001). Sin embargo, no se encontró diferencia significativa en la media de autogestión del grupo control entre los dos tiempos (t= -1.31, p>0.05). La conclusión es que la intervención de *coaching* tuvo un efecto positivo en la percepción de autogestión de los participantes. Se corroboró, por tanto, la hipótesis 5.

Tabla 13.

Pruebas post-hoc (autogestión)

		Mean Difference	SE	t	p bonf
Before, EG[1]	After, EG	-0.82	0.02	-35.66	< .001***
	Before, CG	0.07	0.02	4.57	< .001***
	After, CG	0.01	0.02	0.46	1.000
After, EG[1]	Before, CG	0.91	0.02	39.31	< .001***
	After, CG	0.85	0.02	52.11	< .001***
Before, CG[1]	After, CG	-0.06	0.02	-1.31	.071

[1]EG = experimental group; CG = control group; *** p< .001

5.5. El efecto del *coaching* en la autorregulación

Para examinar la sexta hipótesis de investigación (H6), que el coaching afecta el nivel de autorregulación de los participantes, se empleó un análisis de varianza de medidas repetidas. La Tabla 14 muestra que hubo un efecto significativo para la interacción entre el tiempo (antes y después de la intervención) y el grupo (grupo experimental o grupo control) ($F_{(1,299)} = 5.14$, $p<0.001$). Además, se muestra que hubo un efecto significativo sobre la autorregulación para el momento de la medición (antes y después de la intervención) ($F_{(1,299)} = 49.87$, $p<0.001$), y para el grupo de participantes ($F_{(1, 299)} = 497.13$, $p<0.001$).

Tabla 14.

Efecto del coaching en la autorregulación

Cases	Sum of Squares	Df	Mean Square	F	p	η^2	η^2_p
Time	4.38	1.00	4.38	49.87***	< .001	0.09	0.143
Residuals	26.25	299	0.09				
Group	6.94	1.00	6.94	497.13***	< .001	0.14	0.624
Residuals	4.17	299	0.01				
Time ✻ Group	5.14	1.00	5.14	382.75***	< .001	0.10	0.561
Residuals	4.02	299	0.01				

p***< .001

Para descubrir el origen de las diferencias, se utilizaron pruebas *post-hoc* (Tukey), como se presenta en la Tabla 15. Los resultados muestran que la media de la variable autorregulación antes de la intervención en el grupo experimental fue significativamente

menor en comparación con la media después de la intervención (t=-13.70, p<0.001), y que la media del grupo experimental tras la intervención fue significativamente superior a la media del grupo control tras la intervención (t=29.62, p<0.001). Además, no se encontró diferencia significativa en la media de autorregulación en el grupo control antes y después de la intervención (t=0.55, p>0,05). En base a estos hallazgos, se puede concluir que el *coaching* tiene un efecto positivo en el nivel de autorregulación de los participantes. Por lo tanto, se corroboró la Hipótesis 6.

Tabla 15.

Pruebas post-hoc (autorregulación)

		Mean Difference	SE	t	p bonf
Before, EG[1]	After, EG	-0.252	0.02	-13.70	< .001***
	Before, CG	0.021	0.01	2.21	0.164
	After, CG	0.031	0.02	1.70	0.542
After, EG[1]	Before, CG	0.273	0.02	14.81	< .001***
	After, CG	0.283	0.01	29.62	< .001***
Before, CG[1]	After, CG	0.010	0.02	0.55	1.000

[1]EG = experimental group; CG = control group; *** p< .001

SECCIÓN VI. DISCUSIÓN DE LOS RESULTADOS Y CONCLUSIONES

El objetivo principal de este estudio fue investigar el efecto de la implementación de un programa de *coaching* en docentes árabes palestinos y su aplicación en el aula, en relación a la conciencia metacognitiva y habilidades de autogestión y autorregulación (emocional, conductual y cognitiva) de estudiantes de secundaria árabes palestinos en Israel. Presumimos que las interacciones con docentes entrenados en el programa propuesto generarían ganancias similares en la conciencia metacognitiva de los estudiantes, así como en su autogestión y autorregulación.

Los hallazgos muestran que no se encontraron diferencias significativas en las variables sociodemográficas de los dos grupos, y las medias de las tres variables dependientes fueron muy similares entre los grupos antes de la intervención. Sin embargo, tras la intervención se encontró una diferencia positiva significativa entre las medias de cada una de las variables entre el antes y el después. En el grupo experimental, las medias de las tres variables (conciencia metacognitiva, autogestión y autorregulación) aumentaron después de la intervención de *coaching* en comparación con antes de la

intervención. Estos hallazgos indican que el *coaching* tuvo un efecto positivo significativo en la conciencia metacognitiva, autogestión y autorregulación de los participantes.

6.1. Discusión de los resultados

Los resultados del examen de las dos primeras hipótesis (H1 y H2) indican que las diferencias entre las medias de las tres variables dependientes de los grupos de control e investigación no se vieron afectadas por los antecedentes de los estudiantes (nivel educativo de los padres y madres), sino probablemente por la intervención realizada.

La primera hipótesis (H1) examinó la relación entre el nivel educativo de los padres y las habilidades metacognitivas, de autogestión (autocontrol, implementación de estrategias de resolución de problemas, aplazamiento de la gratificación y regulación de eventos internos) y capacidad de autorregulación (emocionales, conductuales y cognitivas) de los estudiantes. Esta hipótesis fue refutada. No se encontró efecto del nivel educativo del padre sobre las tres variables dependientes.

La segunda hipótesis (H2) examinó la relación entre el nivel educativo de las madres y las habilidades metacognitivas, de autogestión (autocontrol, implementación de estrategias de resolución de problemas, aplazamiento de la gratificación y regulación de eventos internos) y capacidad de autorregulación (emocional, conductuales y cognitivas) de los estudiantes. Esta hipótesis fue refutada también. No se encontró efecto del nivel educativo de las madres sobre las tres variables dependientes.

La tercera hipótesis (H3) examinó la relación entre el género y el grupo de edad y las habilidades metacognitivas, de autogestión (autocontrol, implementación de estrategias de resolución de problemas, aplazamiento de la gratificación y regulación de eventos internos) y capacidad de autorregulación (emocionales, conductuales y cognitivas) de los estudiantes. Esta hipótesis fue refutada de igual forma. No se encontró efecto del género o grupo de edad sobre las tres variables dependientes.

La cuarta hipótesis (H4) examinó la relación entre el uso de herramientas de *coaching* por parte de los docentes y las habilidades metacognitivas entre los jóvenes adolescentes (de 13 a 15 años). Los resultados mostraron una relación positiva entre las estrategias de enseñanza basadas en el *coaching* y las habilidades metacognitivas mejoradas de los estudiantes. Es decir, los estudiantes que aprendieron con métodos

basados en *coaching* mejoraron su conciencia metacognitiva más que los estudiantes que no aprendieron con estos métodos.

Estos hallazgos están en línea con la literatura, que indica que el maestro-*coach* ayuda a los estudiantes a identificar los factores que dificultan su éxito y los ayuda a desarrollar estrategias de éxito que eventualmente conducen a mejores logros. Además, el uso de herramientas de *coaching* tiene un efecto positivo en las habilidades y destrezas metacognitivas. Es decir, los estudiantes pueden tomar mejores decisiones a través de una consideración integral de todos los resultados posibles y construir la estrategia de éxito que mejor se adapte a ellos (Foster, 2018).

Estos resultados brindan un apoyo adicional a la importancia de la metacognición como parte clave del aprendizaje efectivo. Permite a los estudiantes ser conscientes y regular su pensamiento, controlar cómo se toman las decisiones y criticar su aprendizaje. El entrenamiento en estrategias metacognitivas incrementa los procesos de planificación, seguimiento y control de las estrategias de pensamiento que interiorizan, les ayuda a prestar una mejor atención a los procesos de pensamiento, así como a ser conscientes de la tarea y, así, recopilar información sobre ella y afrontarla en consecuencia (Adler et al., 2017; Hart & Memnun, 2015; Schraw & Gutierrez, 2015).

La activación del pensamiento metacognitivo contribuye a mejorar la comprensión de los contenidos de aprendizaje. El conocimiento de uno mismo como aprendiz, así como el conocimiento de las estrategias de aprendizaje y los procesos metacognitivos, pueden promover la planificación del aprendizaje, así como el seguimiento y control de la comprensión de los materiales de aprendizaje (Zohar, 2016).

La metacognición tiene un efecto positivo tanto en el nivel de lectura como en la comprensión de lectura para estudiantes de habla inglesa, para estudiantes que tienen dificultades para leer y también para estudiantes que aprenden inglés como segundo idioma (Ahmadi et al., 2013; Soodla et al., 2017).

La quinta hipótesis (H5) examinó la relación entre el uso de herramientas de *coaching* por parte de los docentes y las habilidades de autogestión de los estudiantes de 13 a 15 años (autocontrol, implementación de estrategias de resolución de problemas, aplazamiento de la gratificación y regulación de eventos internos). Los hallazgos corroboraron la hipótesis. Esto significa que existe una relación positiva entre los métodos de enseñanza basados en el *coaching* y las habilidades de autogestión de los estudiantes.

Estos hallazgos confirman los resultados de otros estudios, que indicaron que el docente-*coach* ayuda a los estudiantes a mejorar sus habilidades de autogestión y autorregulación, expresadas principalmente en su capacidad de responsabilizarse y apropiarse de su aprendizaje (District RSN, 2016; Pane et al., 2015; Ramdial-Budhai, 2018; Zalkowitz & Goldstein, 2011).

La sexta hipótesis (H6) examinó la relación entre las estrategias de *coaching* de los docentes y la capacidad de autorregulación (emocional, conductual y cognitiva) de los estudiantes a corto y largo plazo. Tal como se planteó como hipótesis, se encontró una relación positiva entre las estrategias de enseñanza basadas en el coaching y la autorregulación de los estudiantes. Los estudiantes del grupo experimental (con *coaching*) mejoraron su capacidad de autorregulación más que los estudiantes del grupo control (sin *coaching*).

Los hallazgos son consistentes con la literatura, según la cual tanto los procesos de autorregulación como los de autogestión son fundamentales en los procesos de intervención y formación, y utilizan recursos internos compartidos. Al Hilali et al. (2020) argumentaron que, en virtud de estar orientado a objetivos, controlado y reflexivo, el proceso de *coaching* es un modelo para el aprendizaje efectivo y es importante incluirlo en el sistema educativo. Un estudio realizado en escuelas de Inglaterra encontró que el entrenamiento en habilidades de aprendizaje contribuyó a mejorar el éxito de los estudiantes en las pruebas (Passmore & Brown, 2009). Un estudio de estudiantes de enfermería de posgrado encontró que el *coaching* mejoró el aprendizaje gracias a la fuerte asociación formada entre el estudiante, el *coach* y la institución académica (Tee et al., 2009). También se ha descubierto que el *coaching* influye positivamente en los estudiantes al aumentar su capacidad para establecer metas y su motivación para alcanzarlas (Campbell & Gardner, 2005).

Además, diferentes investigaciones indican que el uso de herramientas de *coaching* hace que el aprendizaje sea efectivo. Estas herramientas permiten a los estudiantes ser conscientes de su pensamiento y de su capacidad de autorregularse, controlar su proceso de toma de decisiones y criticar su propio aprendizaje. Investigaciones precedentes han demostrado que el aprendizaje arraigado en el enfoque cognitivo nutre las habilidades de autorregulación del alumnado y mejora sus capacidades de resolución de problemas (Gidelewich, 2021). Estos principios de aprendizaje se basan en preguntas metacognitivas hacia uno mismo (¿Qué? ¿Cuándo? ¿Por qué? ¿Cómo?)

durante las tres etapas de solución: planificación, control y evaluación. Estas preguntas generales están específicamente dirigidas a las etapas de autorregulación y ayudan al alumnado a integrar todo el conocimiento disponible durante la resolución de problemas, generando nuevas ideas, creando conexiones y puntos de vista, encontrando estrategias efectivas y desarrollando la capacidad de pensamiento.

El profesor-*coach* mejora los procedimientos de planificación, seguimiento y control de las estrategias de pensamiento que interiorizan los alumnos, les ayuda a prestar una mejor atención a su sistema de pensamiento, así como a comprender la tarea, con el fin de recopilar información sobre ella y afrontarla en consecuencia (Adler, Zion & Mevorech, 2015; Gutierrez & Schraw, 2015; Hart & Memnun, 2015). Además, los hallazgos apoyan la idea de que el docente-*coach* logra que los estudiantes mejoren sus habilidades de autorregulación y autogestión. Esto se refleja en su capacidad de asumir la responsabilidad y propiedad de su propio aprendizaje, no se dan por vencidos ante las dificultades y aprenden más en profundidad, dominando la adaptación a la vida adulta fuera de la escuela (District RSN, 2016; Pane et al., 2015; Ramdial-Budhai, 2018; Zalkowitz & Goldstein, 2011).

El *coaching* hace más accesibles las emociones y permite definirlas fuera del contexto 'mental': sentimos nuestras emociones en nuestro cuerpo y a través de ellas sabemos reconocer la realidad, adaptarnos a los cambios que se producen en ella, evitar peligros y elegir lugares seguros. Las habilidades asociadas con él tienen una serie de características: se muestran en patrones consistentes de pensamiento, emoción y comportamiento; se desarrollan a través de experiencias de aprendizaje formales e informales; y sirven como importantes aspectos motivadores que también afectan el estatus socioeconómico del individuo a lo largo de la vida; por ejemplo, la capacidad de integrarse a la sociedad, ganarse la vida y ser independiente (CASEL, 2012; Kautz et al., 2014). Las muchas definiciones del concepto de habilidades de "aprendizaje socioemocional" (Greenberg & Abenavoli, 2017; Schonert-Reichl, 2017; Sperling, 2018), incluyen dos elementos compartidos: primero, el comportamiento humano que también incluye al niño en desarrollo. y segundo, un mapeo de las habilidades emocionales y sociales de los niños y adolescentes con el objetivo práctico de ayudarlos a desarrollarse.

Diversos estudios (Grant, 2003; Grant & Cavanagh, 2011; Green, Oades & Grant, 2006; Green, Grant & Rynsaardt, 2020; Griffiths, 2005) tratan sobre el avance de

habilidades y destrezas con la ayuda del *coaching* principalmente entre estudiantes de secundaria.

6.2 Conclusión

El coaching *educativo* representa una evolución en los servicios de apoyo académico. El uso de estrategias de aprendizaje basadas en el *coaching* tiene como objetivo potenciar las capacidades metacognitivas, la autogestión y las habilidades de autorregulación. La investigación ha demostrado que la enseñanza basada en el *coaching* genera un cambio positivo significativo para los estudiantes del siglo XXI.

El presente estudio contribuye a la creciente literatura empírica sobre el *coaching* educativo en los sistemas educativos, situando a éste dentro de marcos teóricos y evaluando los efectos de la intervención en la metacognición, la autogestión y la autorregulación de los estudiantes. Sugiere que el *coaching* educativo puede ser una intervención prometedora y efectiva para aumentar la conciencia metacognitiva de los estudiantes. Basado en el hecho de que la metacognición, la autogestión y la autorregulación de los estudiantes se convierten en habilidades críticas para el éxito académico futuro. Los programas de apoyo a los estudiantes, como el *coaching* educativo, pueden ser complementos cada vez más importantes para las intervenciones en el aula.

Este estudio valida investigaciones previas que han demostrado que existe una conexión entre el *coaching* y las habilidades de aprendizaje, y ha encontrado que el *coaching* está relacionado con una mayor perseverancia y conservación (Bettinger & Baker, 2014), el logro de objetivos (Losch et al., 2016), funcionamiento gerencial y autorregulación (Richman et al., 2014), estrategias de aprendizaje, autoevaluación y satisfacción con la escuela (Prevatt & Yelland, 2015), y autoconfianza y motivación (Bellman, Burgstahler, & Hinke, 2015). Cada uno de estos resultados refleja conceptos cognitivos, metacognitivos o motivacionales que se enfatizan en las teorías de autorregulación. En otras palabras, el proceso de *coaching* es un modelo de aprendizaje efectivo por el hecho de estar orientado a objetivos, controlado y reflexivo. Como tal, la lógica del *coaching* como estrategia de aprendizaje, sin duda, debe incorporarse en el sistema educativo.

Por lo tanto, el estudio recomienda que a todos los docentes árabes-palestinos se les debe dar la oportunidad, como parte de su año sabático, de aprender a entrenar. El *coaching* es una forma de vida que conduce a un desempeño y logros inusuales. Este

campo se ocupa de definir un futuro deseado y cómo lograrlo, mediante la elevación del nivel de conciencia del coachee y el desarrollo de sus habilidades personales y profesionales para la realización de las metas.

6.3. Limitaciones

Este estudio tiene una serie de limitaciones, principalmente relacionadas con el tipo de investigación. La primera limitación es su representatividad. La población de investigación estuvo constituida por adolescentes de un pueblo árabe del norte de Israel, de nivel económico-social medio y bajo. El contexto de investigación es un pequeño pueblo musulmán que no representa a otras poblaciones árabes como cristianos, beduinos, drusos, árabes citadinos u otros. Asimismo, esta investigación se basó en autoinformes de los participantes sobre sus actitudes hacia las capacidades metacognitivas, de autogestión y autorregulación. El autoinforme manifiesta un punto de vista subjetivo y podría haber generado un grado de deseabilidad social en las respuestas de los encuestados.

Otra limitación se relaciona con la forma en que se recolectaron los datos. Dado que la herramienta de investigación era un cuestionario, el grado de libertad de los encuestados estaba limitado y debían responder a las respuestas dadas (la escala de respuesta). Una limitación adicional es la limitación de tiempo de la investigación. Los datos se recopilaron durante un año. Una investigación más prolongada de la eficacia del programa de intervención, una vez finalizado, podría examinar la preservación de la mejora que se había logrado.

6.4. Futuras líneas de investigación

Respecto a las sugerencias para investigaciones futuras, podemos indicar que éstas deben continuar examinando las prácticas de entrenamiento educativo a medida que ganan prominencia en los entornos escolares. Una investigación futura debería examinar más directamente el vínculo entre el *coaching* educativo y el rendimiento académico, así como también su relación con otros componentes de la conciencia metacognitiva, las habilidades de autogestión y las habilidades de autorregulación, como la flexibilidad de la metacognición, la autoeficacia y la motivación.

En futuros estudios se podría considerar la recopilación de datos longitudinales sobre la metacognición de los estudiantes, el aprendizaje de autogestión (SML) y el cambio de comportamiento (SRL). Además, se podría considerar la recopilación de datos

sobre varios resultados de los estudiantes, como el rendimiento académico y la retención, para comprender cómo los aumentos en la conciencia metacognitiva, el aprendizaje de autogestión y SRL a través del entrenamiento académico afectan la capacidad de los estudiantes para aprender, desarrollar y utilizar sus habilidades recién adquiridas para mejorar activamente su situación.

Otros estudios podrían examinar cómo se puede utilizar el *coaching* educativo en combinación con otras intervenciones específicas para el desarrollo de habilidades tanto internas como externas al entorno del aula.

Finalmente, la investigación se podría ampliar utilizando un enfoque cualitativo (en oposición al método cuantitativo utilizado en el presente estudio) que, a menudo, facilita llegar a conclusiones sobre la causalidad. Se podrían realizar entrevistas semiestructuradas con ambos grupos de estudiantes, con y sin un maestro que haya recibido capacitación como *coach.* Sin embargo, aunque este tipo de investigación revelaría mejor el efecto general del aprendizaje con un profesor-coach, dificultaría el examen de variables específicas.

SECTION VII. REFERENCES

Acharyya, R. (2017). *Self-management Skills Every Manager Should have*. https://bit.ly/3d0DlTO

Adler, I., Zion, M., & Mevarech, Z.R. (2017). Integrating meta-cognitive support in teaching research: how and why? *Intermediate Reading, 28-29*, 41-43. https://bit.ly/3ivmWtq

Adler, I., Zion, M., & Mevarech, Z.R. (2015). The effect of explicit environmentally oriented metacognitive guidance and peer collaboration on student's expressions of environmental literacy. *Journal of Research in Science Teaching, 53*(4), 620-663. https://doi.org/10.1002/tea.21272

Ahmadi, M.R., Ismail, H.N., & Abdullah, M.K.K. (2013). The importance of metacognitive reading strategy awareness in reading comprehension. *English Language Teaching*, *6*(10), 235-244. http://dx.doi.org/10.5539/elt.v6n10p235

Al Hilali, K.S., Al Mughairi, B.M., Kian, M.W., & Karim, A.M., (2020). Coaching and Mentoring Concepts and Practices in Development of Competencies: A Theoretical Perspective. *International Journal of Academic Research in Accounting, Finance*

and Management Sciences. 10 (1), 41-54. http://dx.doi.org/10.6007/IJARAFMS/v10-i1/6991

Altrichter, H., & Gstettner, P. (1993). Action research: A closed chapter in the history of German social science? *Educational Action Research*, *1*(3), 329-360. http://dx.doi.org/10.1080/0965079930010302

Ashkenazi, E. (2011). Coaching in the Educational System from Counseling to Coaching Essence, Relevance and Necessity. *IPPA Journal, the magazine of the Israeli Association for Organizational Development*, 1-7. http://bit.ly/3O93YnG

Atkinson, A., Watling, C. J., & Brand, P. L. (2021). Feedback and coaching. *European Journal of Pediatrics, 181*(2), 1-6. https://bit.ly/3U8tqfm

Bandura, A. (1990). Selective activation and disengagement of moral control. *Journal of Social Issues, 46*(1), 27-46. https://bit.ly/3kiBlcY

Baten, E., Praet, M., & Desoete, A. (2017). The relevance and efficacy of metacognition for instructional design in the domain of mathematics. *ZDM*, *49*(4), 613-623. http://dx.doi.org/10.1007/s11858-017-0851-y

Becker, S.A., Freeman, A., Hall, C. G., Cummins, M., & Yuhnke, B. (2016). NMC/CoSN *Horizon Report: 2016 K* (pp. 1-52). The New Media Consortium.

Bellman, S., Burgstahler, S., & Hinke, P. (2015). Academic Coaching: Outcomes from a Pilot Group of Postsecondary STEM Students with Disabilities. *Journal of Postsecondary Education and Disability*, *28*(1), 103-108. https://bit.ly/3TawOoo

Ben-Yosef, O. (2009). *Circles of Attachment and Growth*. Mofet Institute.

Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis*, *36*(1), 3-19. https://doi.org/10.3102/0162373713500523

Bill & Melinda Gates Foundation. (2016). *Personalized Learning: Helping Teachers Spark a Love of Learning in Every Student.* https://gates.ly/3Us9cgm

Biswas-Diener, R. (2009). Personal coaching as a positive intervention. *Journal of Clinical Psychology: In session, 65*(5), 544-553. https://doi.org/10.1002/jclp.20589

Bittner, J. V., Stamov Robnagel, C., & Staudinger, U. M. (2022). Educational self-regulation competence: Toward a lifespan-based concept and assessment strategy. *International Journal for Educational and Vocational Guidance*, *22*(2), 307-325. https://doi.org/10.1007/s10775-021-09491-2

Blanchard, S., & Human, M. (2006). *Personal Training for Success in the Coaching Method*. Opus Ltd.

Blaxter, L., Hughes, C., & Tight, M. (Eds.) (2001). *How to research*. Open University Press.

Boyatzis, R. E., Hullinger, A., Ehasz, S. F., Harvey, J., Tassarotti, S., Gallotti, A., & Penafort, F. (2022). The Grand Challenge for Research on the Future of Coaching. *Journal of Applied Behavioral Science*, *58*(2), 202-222. https://doi.org/10.1177/00218863221079937

Brislin, R. W. (1980). Cross-cultural research methods. In *Environment and culture* (pp. 47-82). Springer, Boston, MA.

Brown, A. (1987). Metacognition, executive control, self-regulation, and other more mysterious mechanisms. In F. E. Weinert, & R. H. Kluwe (Eds.), *Metacognition, motivation and understanding* (pp. 65–116). Erlbaum

Bruijn-Smolders, M., Timmers, C. F., Gawke, J. C., Schoonman, W., & Born, M. P. (2016). Effective self-regulatory processes in higher education: Research findings and future directions. A systematic review. *Studies in Higher Education*, *41*(1), 139-158. http://dx.doi.org/10.1080/03075079.2014.915302

Buckingham, M., & Clifton, D. (2005). *Now, Discover Your Strengths*. Library of the Israeli Center for Management.

Campbell, M., & Gardner, S. (2005). A pilot study to assess the effects of life coaching with Year 12 students. In M. Cavanagh, A. M. Grant, & T. Kemp (Eds.), *Evidence-based coaching, Vol. 1. Theory, research and practice from the behavioural sciences* (pp. 159–169). Australian Academic Press.

Capstick, M.K., Harrell-Williams, L.M., Cockrum, C.D., & West, S.L. (2019). Exploring the effectiveness of academic coaching for academically at-risk college

students. *Innovative Higher Education*, *44*(3), 219-231. https://doi.org/10.1007/s10755-019-9459-1

CASEL (2012). *2013 CASEL Guide: Effective Social and Emotional Learning Programs – Preschool and Elementary School Edition*. Chicago. https://bit.ly/3FXg8hc

CASEL (2018). *What is SEL*? https://bit.ly/2HdErdD

Danan, M. (2016). Enhancing Listening with Captions and Transcripts: Exploring Learner Differences. *Applied Language Learning, 26*(2), 1-24. http://bit.ly/3hDJvLy

De Backer, L., Van Keer, H., & Valcke, M. (2012). Exploring the potential impact of reciprocal peer tutoring on higher education students' metacognitive knowledge and regulation. *Instructional Science*, *40*(3), 559-588. http://dx.doi.org/10.1007/s11251-011-9190-5

Delazer, M., Domahs, F., Bartha, L., Brenneis, C., Lochy, A., Trieb, T., & Benke, T. (2003). Learning complex arithmetic—an fMRI study. *Cognitive Brain Research*, *18*(1), 76-88. http://dx.doi.org/10.1016/j.cogbrainres.2003.09.005

Dembo, M.H., & Seli, H. (2013). *Motivation and Learning Strategies for College Success: A Self-Management Approach* (3rd Edition). Lawrence Erlbaum.

Denscombe, M. (2000). Social conditions for stress: young people's experience of doing GCSEs. *British Educational Research Journal*, *26*(3), 359-374. https://doi.org/10.1080/713651566

District Reform Support Network (2016). *Transforming the Culture of Teaching and Learning: Four Race to the Top-District Guarantees Implementation of Personalized Learning*. U.S. Department of Education. http://bit.ly/3UNnBnF

Doostian, Y., Fattahi, S., Goudini, A. A., Azami, Y., Massah, O., & Daneshmand, R. (2014). *The Effectiveness of Self-regulation in Students' Academic Achievement Motivation*. *Practice in Clinical Psychology, 2*(4), 261-270. http://bit.ly/3O4ZhLt

Eisenberg, E., & Selivansky, E. (2019). *Adapting Israel's education system for the challenges of 21st century: Policy Research 130*. The Israel Democracy Institute. http://bit.ly/3X1f2Y8

Field, S., Parker, D. R., Sawilowsky, S., & Rolands, L. (2013). Assessing the Impact of ADHD Coaching Services on University Students' Learning Skills, Self-Regulation, and Well-Being. *Journal of Postsecondary Education and Disability, 26*(1), 67-81. http://bit.ly/3EG6vCN

Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.), *The nature of intelligence* (pp.231-235). Erlbaum.

Flavell, J. H. (1979). Metacognition and Cognitive Monitoring: A New Area of Cognitive Developmental Inquiry. *American Psychologist, 34*(10), 906-911. https://doi.org/10.1037/0003-066X.34.10.906

Flavell, J. H., Miller, P. H., & Miller, S. A. (2002). *Cognitive Development* (4th edition). Prentice Hall.

Fomina, T., Burmistrova-Savenkova, A., & Morosanova, V. (2020). Self-regulation and psychological well-being in early adolescence: A two-wave longitudinal study. *Behavioral Sciences*, *10*(3), 67. https://doi.org/10.3390%2Fbs10030067

Foster, E. (2018). The impact of coaching on teacher practice and student achievement. *The Learning Professional*, *39*(4), 16-19. http://bit.ly/3XaD5DQ

Franklin, J., & Doran, J. (2009). Does all coaching enhance objective performance independently evaluated by blind assessors? The importance of the coaching model and content. *International Coaching Psychology Review*, *4*(2), 128-144. http://bit.ly/3TMH8DE

Gidelewich, S. (2021). Instruction for Meta-Cognitive Self-Judgment During Numerical Insight Problem-Solving Among Fourth-Graders. *Research and Study in Mathematical Education, 8*, 30-41. http://bit.ly/3GfwoKU

Grant, A. M. (2001). Towards a psychology of coaching. *Unpublished manuscript, Sydney*. http://bit.ly/3Fu0edH

Grant, A.M. (2003). The Impact of Life Coaching on Goal Attainment, Metacognition and Mental Health. *Social Behavior and Personality, 31,* 253-264. http://dx.doi.org/10.2224/sbp.2003.31.3.253

Grant, A.M. (2014). Autonomy Support, Relationship Satisfaction and Goal Focus in the Coach-Coachee Relationship: Which Best Predicts Coaching Success*? Coaching:*

An International Journal of Theory, Research and Practice, 7(1), 18-38. http://dx.doi.org/10.1080/17521882.2013.850106

Grant, A. M., & Cavanagh, M. J. (2011). Coaching and positive psychology. *Designing positive psychology: Taking stock and moving forward*, 293-309. https://doi.org/10.1093/acprof:oso/9780195373585.003.0019

Green, S., Oades, L.G., & Grant, A.M. (2005). An Evaluation of a Life Coaching Group Program: Initial Findings from a Waitlist Control Study. In M. Cavanagh, A. Grant, & T. Kemp (Eds.), *Evidence Based Coaching* (pp. 127-142). Australian Academic Press.

Green, S., Oades, L.G., & Grant, A.M. (2006). Cognitive-Behavioral Solution-Focused Life Coaching: Enhancing Goal Striving, Well-Being and Hope. *Journal of Positive Psychology, 1*(3), 142-149. http://dx.doi.org/10.1080/17439760600619849

Green, S., Grant, A. M., & Rynsaardt, J. (2020). Evidence-based life coaching for senior high school students: Building hardiness and hope. *Coaching Researched: A Coaching Psychology Reader*, 257-268. https://doi.org/10.1002/9781119656913.ch13

Greenberg, M. T., & Abenavoli, R. (2017). Universal interventions: Fully exploring their impacts and potential to produce population-level impacts. *Journal of Research on Educational Effectiveness*, *10*(1), 40-67. https://doi.org/10.1080/19345747.2016.1246632

Griffiths, K.E. (2005). Personal Coaching: A Model for Effective Learning. *Journal of Learning Design, 1*(2), 55-65. http://dx.doi.org/10.5204/jld.v1i2.17

Gutierrez, A. P., & Schraw, G. (2015). Effects of Strategy Training and Incentives on Students' Performance, Confidence, and Calibration. *Journal of Experimental Education, 83*(3), 386–404. https://doi.org/10.1080/00220973.2014.907230

Hadad Haj-Yahya, N., Saif, A., Kasir, N., & Fargeon, B. 2021. *Education in Arab Society: Disparities and signs of change.* IDI and Portland Trust. *Hebrew.* http://bit.ly/3GE3y7d

Haegele, J.A. (2015). Promoting Leisure-Time Physical Activity for Students with Visual Impairments Using Generalization Tactics. *Journal of Visual Impairment & Blindness, 109*(4), 322-326. http://dx.doi.org/10.1177/0145482X1510900409

Hart, L.C., & Memnun, D.S. (2015). The Relationship between Preservice Elementary Mathematics Teachers' Beliefs and Metacognitive Awareness. *Journal of Education and Training Studies, 3*(5), 70–77. https://doi.org/10.11114/jets.v3i5.840

Hartman, H., & Sternberg, R. J. (1992). A broad BACEIS for improving thinking. *Instructional Science*, *21*(5), 401-425. http://dx.doi.org/10.1007/BF00121204

Hermel-Stanescu, M. (2015). Effective coaching: Key-factors that determine the effectiveness of a coaching program. *Managing Intellectual Capital and Innovation – Proceedings of the MakeLearn and TIIM Joint International Conference* (pp. 375-382). http://bit.ly/3EH61fC

Hoffman, W., Schmeichel, P.J., & Baddeley, A.D. (2012). Executive functions and self-regulation. *Trends in Cognitive Sciences, 16*(3), 174-180. http://dx.doi.org/10.1016/j.tics.2012.01.006

Hollweck, T., & Lofthouse, R. M. (2021). Contextual coaching: levering and leading school improvement through collaborative professionalism. *International Journal of Mentoring and Coaching in Education,* 399-417. https://doi.org/10.1108/IJMCE-01-2021-0019

Howlett, M.A., McWilliams, M.A., Rademacher, K., O'Neill, J.C., Maitland, T.L., Abels, K., Demetriou, C., & Panter, A.T. (2021). Investigating the effects of academic coaching on college students' metacognition. *Innovative Higher Education*, *46*(2), 189-204. https://doi.org/10.1007/s10755-020-09533-7

Huang, R.T., & Yu, C.L. (2019). Exploring the impact of self-management of learning and personal learning initiative on mobile language learning: A moderated mediation model. *Australasian Journal of Educational Technology*, *35*(3). http://dx.doi.org/10.14742/ajet.4188

Hurme, T.R., Palonen, T., & Järvelä, S. (2006). Metacognition in joint discussions: An analysis of the patterns of interaction and the metacognitive content of the

networked discussions in mathematics. *Metacognition and Learning*, *1*(2), 181-200. http://dx.doi.org/10.1007/s11409-006-9792-5

International Association for Online learning 12-K Learning Online (INACOL) (2016). *What is Personalized Learning*? http://bit.ly/3UMsm0J

International Coach Federation and Pricewaterhouse Coopers. (2016). 2016 ICF Global Coaching Study. http://bit.ly/3hlFtYA

Janes, W., Silvey, D., & Dubrowski, A. (2016). Are Educators Actually Coaches? The Implication of Teaching and Learning via Simulation in Education in Healthcare Professions. *Cureus, 8*(8), e734. http://dx.doi.org/10.7759/cureus.734

John, O.P., & De Fruyt, F. (2014). *Social and Emotional Skills Constructs and Measures for the OECD Longitudinal Study of Skills Dynamics*. OECD Publishing.

Katz, R. (2005). *Coaching - Coaching for Life*. Opus Ltd.

Katz, R. (2008*). The Double Guide: Results-Focused Counseling-Coaching*. Opus Ltd.

Kautz, T., Heckman, J.J., Diris, R., ter Weel, B., & Borghans, L. (2014). *Fostering and Measuring Skills: Improving Cognitive and Noncognitive Skills to Promote Lifetime Success*. OECD Education Working Papers no. 110. http://bit.ly/3tI86li

Kedem, K. (2006). *The Six-Step Model*. http://bit.ly/3gbmOy8

KIPP (2018). *Focus on character*. http://bit.ly/3UPqxQG

Kirschner, P.A., & Stoyanov, S. (2020). Educating youth for non-existent/not yet existing professions. *Educational Policy*, *34*(3), 477-517. https://doi.org/10.1177/0895904818802086

Kolb, A.Y., & Kolb, D.A. (2009). The learning way: Meta-cognitive aspects of experiential learning. *Simulation & Gaming*, *40*(3), 297-327. http://dx.doi.org/10.1177/1046878108325713

Levi-Feldman, A. (2020). From Educator to Mentor: The Good Teacher of the Twenty-First Century. *Opinion*, 16, 43-69. http://dx.doi.org/10.1108/IJMCE-10-2017-0067

Lichtinger, E. (2018). Pedagogy of Self-Regulation and Motivation for Students at Risk. *Education Challenges, 3,* 23-31. http://bit.ly/3GduBG5

Losch, S., Traut-Mattausch, E., Mühlberger, M. D., & Jonas, E. (2016). Comparing the effectiveness of individual coaching, self-coaching, and group training: How leadership makes the difference. *Frontiers in Psychology, 7*, 629. https://doi.org/10.3389%2Ffpsyg.2016.00629

Magadley, W., Amara, M., & Jabareen, Y. 2019. Alternative education in Palestinian-Arab society in Israel: Rationale and characteristics. *International Journal of Educational Development*, *67*, 85-93. https://doi.org/10.1016/j.ijedudev.2019.04.002

Maksum, A., Widiana, I.W., & Marini, A. (2021). Path Analysis of Self-Regulation, Social Skills, Critical Thinking and Problem-Solving Ability on Social Studies Learning Outcomes. *International Journal of Instruction*, *14*(3), 613-628. http://dx.doi.org/10.29333/iji.2021.14336a

Margalit, M. (2014). *Learning Disabilities: Neurodevelopmental Model – After 15 Years*. *Mifgash: Journal of Social-Educational Work, 39*, 15-34. http://bit.ly/3OhiPMW

Merriman, D.E., & Codding, R.S. (2008). The effects of coaching on mathematics homework completion and accuracy of high school students with attention-deficit/hyperactivity disorder. *Journal of Behavioral Education*, *17*(4), 339-355. http://dx.doi.org/10.1007/s10864-008-9072-3

Moilanen, K.L. (2007). The adolescent self-regulatory inventory: The development and validation of a questionnaire of short-term and long-term self-regulation. *Journal of Youth and Adolescence*, *36*(6), 835-848. http://dx.doi.org/10.1007/s10964-006-9107-9

Morgenstern, E., Pinto, A., Wegerhoff, E., Hoffman, T., & Lutti, S. (2019). *Future-oriented pedagogy 2: Trends, principles, implications and applications*. Ministry of Education. http://bit.ly/3V0QfBK

Murphy, P.K., Alexander, P.A., & Muis, K.R. (2012). Knowledge and Knowing: The Journey from Philosophy and Psychology to Human Learning. In K.R. Harris, S. Graham T. Urdan, C.B. McCormick, G.M. Sinatra. & J. Sweller (Eds.), *Educational Psychology Handbook* (pp. 189-226). American Psychological Association.

Natvig, G.K., Albrektsen, G., & Qvarnstrøm, U. (2003). Associations between psychosocial factors and happiness among school adolescents. *International*

Journal of Nursing Practice, *9*(3), 166-175. http://dx.doi.org/10.1046/j.1440-172X.2003.00419.x

Newton, D.P. (2021). *Teaching for Understanding - What It Is and How to Do It*. Hakibbutz Hameuchad & Branco Weiss Publishing.

Nickerson, R. S. (1985). Understanding understanding. *American Journal of Education*, *93*(2), 201-239. http://dx.doi.org/10.1086/443791

Office of Educational Technology (2017). *What is Personalized Learning*? http://bit.ly/3EDi8dE

Osher, D., Cantor, P., Berg, J., Steyer, L., & Rose, T. (2020). Drivers of human development: How relationships and context shape learning and development. *Applied Developmental Science*, *24*(1), 6-36. https://doi.org/10.1080/10888691.2017.1398650

Ozturk, N. (2017). An analysis of teachers' self-reported competencies for teaching metacognition. *Educational Studies, 43*(3), 247-264. https://doi.org/10.1080/03055698.2016.1273761

Pedagogy folder for Guide in Marom Schools. (2019). *Companies, settlements, principles, to improve teaching management in schools in Marom*. Ministry of Education of Israel, R&D Division, Pedagogical Administration. http://bit.ly/3Eu6Ecp

Pagis, M. (2016). Fashioning futures: Life coaching and the self-made identity paradox. *Sociological Forum, 31*(4), 1083-1103. https://doi.org/10.1111/socf.12297

Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. *Frontiers in Psychology*, 422. https://doi.org/10.3389/fpsyg.2017.00422

Pane, J.F., Steiner, E.D., Baird, M.D., & Hamilton, L.S. (2015). *Continued Progress: Promising Evidence on Personalized Learning*. RAND Corporation. http://bit.ly/3hQOGbc

Passmore, J., & Brown, A. (2009). Coaching Non-Adult Students for Enhanced Examination Performance: A Longitudinal Study. *Coaching: An International*

*Journal of Theory, Research and Practice, 2(*1), 54-64. http://dx.doi.org/10.1080/17521880902783124

Perry, J., Lundie, D., & Golder, G. (2019). Metacognition in Schools: What Does the Literature Suggest About the Effectiveness of Teaching Metacognition in Schools? *Educational Review, 71*(4), 483–500. https://doi.org/10.1080/00131911.2018.1441127

Prevatt, F., & Yelland, S. (2015). An empirical evaluation of ADHD coaching in college students. *Journal of Attention Disorders*, *19*(8), 666-677. http://dx.doi.org/10.1177/1087054713480036

Ramdial-Budhai, C. (2018). *An Exploration of the Impact of Instructional Coaching* [Doctoral dissertation]. University of New England. http://bit.ly/3AnWQhw

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, *138*(2), 353-387. http://dx.doi.org/10.1037/a0026838

Richman, E.L., Rademacher, K.N., & Maitland, T.L. (2014). Coaching and college success. *Journal of Postsecondary Education and Disability*, *27*(1), 33-50. http://bit.ly/3AlzXeG

Robinson, C.E. (2015). *Academic/success coaching: A description of an emerging field in higher education* [Doctoral dissertation]. University of South Carolina.

Rosenbaum, M. (1980). A schedule for assessing self-control behaviors: Preliminary findings. *Behavior therapy*, *11*(1), 109-121. https://doi.org/10.1016/S0005-7894(80)80040-2

Rubin, J. (2001). Language learner self-management. *Journal of Asian Pacific Communication, 11*(1), 25-37. http://dx.doi.org/10.1075/japc.11.1.05rub

Sato, M., & Dussuel Lam, C. (2021). Metacognitive instruction with young learners: A case of willingness to communicate L2 use, and metacognition of oral communication. *Language Teaching Research*, *25*(6), 899-921. https://doi.org/10.1177/13621688211004639

Schonert-Reichl, K.A. (2017). Social and emotional learning and teachers. *The Future of Children, 27*(1), 137-155. http://dx.doi.org/10.1353/foc.2017.0007

Schraw, G., & Dennison, R.S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology*, *19*(4), 460-475. https://doi.org/10.1006/ceps.1994.1033

Schraw, G., & Gutierrez, A.P. (2015). Metacognitive Strategy Instruction that Highlights the Role of Monitoring and Control Processes. In A. Peña-Ayala (Ed.), *Metacognition: Fundaments, Applications, and Trends* (pp. 3–16). Springer International Publishing. https://bit.ly/3jJIzGm

Schraw, G., & Moshman, D. (1995). Metacognitive theories. *Educational psychology review*, *7*(4), 351-371. http://bit.ly/3PifhdE

Schunk, D.H., & Mullen, C.A. (2013). Toward a conceptual model of mentoring research: Integration with self-regulated learning. *Educational Psychology Review*, *25*(3), 361-389. http://dx.doi.org/10.1007/s10648-013-9233-3

Schuster, C., Stebner, F., Leutner, D., & Wirth, J. (2020). Transfer of metacognitive skills in self-regulated learning: An experimental training study. *Metacognition and Learning*, *15*(2), 455-477. http://bit.ly/3hQMtwp

Selkovski, M. (2013) *Decision-making about performing risky behaviors in a self-regulation perspective: relationship between cognitive, social, personality and meta-cognitive variables among normative and at-risk adolescents*. thesis. Bar-Ilan University. http://bit.ly/3HdHArL

Shanker, S. (2017). *What You Need to Know: 5 Domains of Self-Regulation.* The MEHRIT Centre.

Shonkoff, J.P., & Phillips, D.A (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development.* National Academies Press.

Soodla, P., Jõgi, A.L., & Kikas, E. (2017). Relationships Between Teachers' Metacognitive Knowledge and Students' Metacognitive Knowledge and Reading Achievement. *European Journal of Psychology of Education*, 32(2), 201–218. https://doi.org/10.1007/s10212-016-0293-x

Spence, G.B., & Grant, A.M. (2007). Professional and peer life coaching and the enhancement of goal striving and well-being: An exploratory study. *Journal of Positive Psychology*, *2*(3), 185-194. http://dx.doi.org/10.1080/17439760701228896

Sperling, D. (2018*).* Social-emotional learning: Conceptual mapping, and theoretical and empirical basis. In L. Yosefsberg-Ben Yehoshua (Ed.), *Review of background material for team of experts on fostering and assimilating social-emotional learning in the education system*. Magnes Publishing. http://bit.ly/3EAJCjX

Sprinthall, R.C., & Sprinthall, N.A. (1981). *Educational Psychology: A Developmental Approach* (3rd edition). Addison-Wesley.

Stephen, J. S., & Rockinson-Szapkiw, A. J. (2021). A high-impact practice for online students: The use of a first-semester seminar course to promote self-regulation, self-direction, and online learning self-efficacy. *Smart Learning Environments*, *8*(1), 1-18. http://bit.ly/3gg7G2o

Tee, S.R., Jowett, R.M., & Bechelet-Carter, C. (2009). Evaluation study to ascertain the impact of the clinical academic coaching role for enhancing student learning experience within a clinical Master's education programme. *Nurse Education in Practice*, *9*(6), 377-382. http://dx.doi.org/10.1016/j.nepr.2008.11.006

Tehawkho, M., Kalisher, A., Matar, H., & Mushkelev, C. 2022. *Policy to reduce gaps between the Hebrew and Arab education: Policy paper*. Reichman University. http://bit.ly/3hI4ptb

The Collaborative for Academic, Social & E.L. (2017). *CASL`s Widely Used Framework Identifies Five Core Competencies*. https://casel.org/what-is-sel/

Theeboom, T., Beersma, B., & van Vianen, A. E. (2014). Does coaching work? A meta-analysis on the effects of coaching on individual level outcomes in an organizational context. *Journal of Positive Psychology*, *9*(1), 1-18. https://doi.org/10.1080/17439760.2013.837499

Thomason, J.A., & Pond III, S.B. (1995). Effects of Instruction on Stress-Management Skills and Self-Management Skills Among Blue-Collar Employees. In L.R. Murphy, J.J. Hurrell Jr., S.L. Sauter, & G.P. Keita (Eds.), *Job Stress*

Interventions (pp. 7–20). American Psychological Association. https://bit.ly/3Wd5RSP

Trias, D., Huertas, J. A., Mels, C., Castillejo, I., & Ronqui, V. (2021). Self-regulated learning, academic achievement and socioeconomic context at the end of primary school. *Revista Interamericana de Psicología/Interamerican Journal of Psychology*, *55*(2), e1509-e1509. https://doi.org/10.30849/ripijp.v55i2.1509

Umeh, B. O., Oluwuo, S. O., & Nzokurum, J. C. (2021). Work-life integration and female lecturers' task performance in higher educational institutions in Imo state, Nigeria. *European Journal of Education Studies*, *8*(5), 346-365. http://bit.ly/3TORDWS

Van Laar, E., Van Deursen, A. J., Van Dijk, J. A., & De Haan, J. (2020). Determinants of 21st-century skills and 21st-century digital skills for workers: A systematic literature review. *Sage Open*, *10*(1), 2158244019900176. http://bit.ly/3UpepVJ

Van Nieuwerburgh, C. (Ed.) (2012). *Coaching in education: Getting better results for students, educators, and parents.* Karnac Books. http://bit.ly/3AoeqlG

Veenman, M. V. (2011). Alternative assessment of strategy use with self-report instruments: A discussion. *Metacognition and learning*, *6*(2), 205-211. http://bit.ly/3iOeVPM

Warner, Z., Neater, W., Clark, L., & Lee, J. (2018). Peer coaching and motivational interviewing in postsecondary settings: Connecting retention theory with practice. *Journal of College Reading and Learning*, *48*(3), 159-174. https://doi.org/10.1080/10790195.2018.1472940

Weissberg, R.P., Durlak, J.A., Domitrovich, C.E., & Gullotta, T.P. (2015). Social and Emotional Learning: Past, Present, and Future. In J.A. Durlak, C.E. Domitrovich, R.P. Weissberg, & T.P. Gullotta (Ed.), *Handbook of Social and Emotional Learning* (pp. 3-19). Guilford Press.

Zalkowitz, C., & Goldstein, A. (2011). The Personalization Trend of Education in the Age of Information Technology – Literature Review. *21st Century Teachers' Conference on Teacher Education and Training*. Mofet Institute.

Zeedan, R., & Hogan, R. E. (2022). The Correlation between Budgets and Matriculation Exams: The Case of Jewish and Arab Schools in Israel. *Education Sciences*, *12*(8), 545. https://doi.org/10.3390/educsci12080545

Zepeda, C.D., Hlutkowsky, C.O., Partika, A.C., & Nokes-Malach, T.J. (2019). Identifying teachers' supports of metacognition through classroom talk and its relation to growth in conceptual learning. *Journal of Educational Psychology*, *111*(3), 522-531. http://dx.doi.org/10.1037/edu0000300

Zhu, M. (2021). Enhancing MOOC learners' skills for self-directed learning. *Distance Education*, *42*(3), 441-460. https://doi.org/10.1080/01587919.2021.1956302

Zohar, E. (2016). Meta-Cognitive Thinking and Learning towards Understanding. In J. Harpaz (Ed.), *Understanding and Learning to Understand – Concepts and Acts* (pp. 162 - 171). Mofet Institute.

Zohar, E., & Bushrian, E. (Eds.) (2020). *Adapting the curricula and study materials to the 21st century – A summary of the work of the Committee of Experts, a snapshot and recommendations*. Initiative - Center for Knowledge and Research in Education & Israel National Academy of Sciences. http://bit.ly/3Tvskct