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Canvases of Professional Erudition in STEAM Education

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Article Info	Abstract
	The delivery of instruction in Science, Technology, Engineering, Art, and Mathematics (STEAM) requires layers upon layers of professional knowledge concerning STEAM pedagogy, methodologies, technology, and active involvement strategies to support student learning. A professional understanding of these critical areas is relevant for supporting student learning and is germane in actively involving parents in STEAM learning. While educators commonly engage in professional development opportunities, professional development is principally singular and typically ends without continuance or re-examination. Professional learning, on the other hand, is ongoing and revisits professional growth needs for educators. In this article, the researcher utilized targeted professional growth needs for STEAM educators that included qualities of site-based professional development and professional learning referred to as professional erudition. This study employed targeted professional erudition for providing high school science teachers skills related to constructivism, experiential learning, communications and dialogue, reflection and self-evaluation, and active parental involvement. Students and parents participating in the study maintained journals regarding their experiences during science inquiry learning and teachers maintained journals concerning their experiences and perceptions regarding targeted professional erudition. Qualitative data indicated providing professional erudition for STEAM teachers results in authentic professional growth, improved communications, and skills and strategies for supporting participatory science learning.

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Introduction

Many obstacles exist in Science, Technology, Engineering, Art, and Mathematics (STEAM) classrooms and investigatory spaces that impact teaching and learning and inhibit student comprehension. Some of these roadblocks consist of intrinsic factors, such as students' learning abilities, and others are extrinsic factors, such as the level of parent involvement. However, when teachers are provided professional development that they can apply in STEAM learning spaces, they are empowered to effectively support all learners (Levin & Schrum, 2016). Moreover, when teachers are provided specific ongoing professional learning they can apply towards their own practice, they are empowered to effectively improve professional capacity (Shahali & Halim, 2023).

STEAM teachers cannot adequately help students utilize technology, improve scientific inquiry and scientific literacy skills, employ specific instructional methodologies, or cultivate meaningful parental involvement without meaningful, targeted professional growth opportunities (Kirner & Lebrun-Griffin, 2013). In essence, authentic, improved professional practice will only occur if teachers develop these skills so they can employ directed pedagogical and methodological stratagems. Only then can success be passed down to students. There is also a need to provide authentic professional development and professional learning for teachers to learn up-to-date strategies for teaching high school STEAM content (Shahali & Halim, 2023).

Professional development typically takes place as singular seminars, workshops, meetings, etc. and concerns a particular topic that is addressed. When the session ends, so too does the learning regarding the singular focused item for developing professional skills. Subsequent professional development that takes place soon focused on yet another isolated topic and so on. Site-based professional development, however, is much more detailed, as it engages specific individuals with a specific purpose for promoting prolonged and more intense learning (Strike et al., 2019). Professional learning on the other hand is ongoing and thematic. Educators typically revisit the same topic or theme throughout the year for continued growth. Both professional development and professional learning have advantages and the key is to apply both forms of professional growth as targeted measures with specific purposes and outcomes (DuFour & DuFour, 2013). Teachers of STEAM require both professional development and professional learning opportunities that will enable them to support students in developing academic, social, emotional, and behavioral aptitudes, which are life-skills (Gulamhussein, 2013; Hebebci, 2021; 2023). In addition, students will not be able to utilize authentic technologies unless teachers are provided professional growth opportunities that enable practitioners to develop these same skills (Strike et al., 2019). Professional growth opportunities that utilize authentic STEAM technologies, instructional methodologies, and involvement strategies provide teachers with skills and a repertoire of techniques they can employ for improved student learning and transforming the learning environment (Harris & Jones, 2019).

Professional Erudition

Throughout this article, when collectively referring to both site-based professional development and professional learning, the researcher jointly refers to them as professional erudition. The researcher is a former high school science educator with approximately ten years of classroom experience and seventeen additional years of educational leadership experience as an administrator and in leading schools as a principal and district superintendent. The researcher began using the term professional erudition when leading professional growth opportunities, as the expression infers qualities of both site-based professional development and professional learning. Moreover, the researcher employs professional erudition within the article as he also utilizes this philosophical construct with students in higher education for developing a methodological approach in designing teacher professional supports.

Enlisting parental involvement for STEAM learning requires professional erudite opportunities for teachers to advance in the area of enlisting and collaborating with parents to enhance the effectiveness of parent involvement activities. Professional erudition enables teachers to learn about the importance of designing extended inquiry-based activities, interactive homework, and communication strategies such as dialogue journaling to increase collaboration, understanding, and partnerships with parents (Esterhazy et al., 2021; Kaufmann & Ryve, 2019). Employing a constructivist leadership philosophy in designing professional erudite opportunities enables relationships to develop to support improving scientific inquiry and literacy skills students can use throughout a lifetime of learning. Professional erudition related to involving parents enables authentic, constructivist leadership instructional strategies to be developed and increases professional capacity (Shen et al., 2020).

Forms of Professional Erudition

STEAM and Instructional Technologies

Schools should establish programs that provide technology training and parent awareness to encourage close communication and strong parental involvement at a school-wide level (Barrera & Warner, 2006). Professional erudition in the area of technology provides opportunities for all school-based personnel to prepare for the needs of the future. Teachers need to be provided opportunities to develop technology skills they can utilize in the classroom (Gaible & Burns, 2005). The technology utilized in the classroom should be authentic and relevant to the technology employed by scientists. Providing technology-based professional erudition in the areas of STEAM classroom and laboratory manipulatives, computer software, and digital communications platforms enables teachers to engage in authentic learning that is meaningful, relevant, and can be employed with students.

Engaging in Collegial Coaching

Employing a collegial coaching model between teachers is a constructivist strategy that better meets the professional erudite needs of all stakeholders in the learning organization (Røkenes, 2022). Collegial coaching creates opportunities for teachers engaged in non-evaluative dialogue with respect to instructional goals and practices for improving instruction (Dantonio, 2001; Management Mentors, 2013). A shared vision of effective STEAM instructional practices facilitates supporting all learners. Collegial coaching empowers teachers to observe one another's teaching performances and reflect on performances. Reflection provides an opportunity to engage in self-awareness regarding practice (Dantonio, 2001; Shahali & Halim, 2023). Self-reflective opportunities provided colleagues time to consider nuances and fine subtleties of practice to improve performance (Dantonio & Lynch, 2005). As a result, meaningful dialogue takes place between colleagues and serves as a catalyst in improving instructional delivery, performance and level of student learning. In addition, collegial coaching serves as a form of experiential learning for STEAM teachers, as they reflect on experiences and consider future actions (Kolb et al., 1984).

Change is constant in education and the collegial coaching model is a form of professional erudition for STEAM teachers that provides opportunities for all school-based personnel to improve the instruction and learning in school (Sheninger, 2019). Collegial coaching is also a form of professional development and professional learning that improves collegiality as well as teaching (Galbraith & Anstrom, 1996). Employing collegial coaching for professional growth increases parent involvement and student learning as a result of reducing teacher isolation and creating collaborative norms for reciprocal sharing of ideas (Guiney, 2001).

Constructing and Maintaining Portfolios

The utilization of professional portfolios by STEAM teachers enables teachers to utilize the self-reflective phase of both collegial coaching and experiential learning in planning, implementing, and participating in meaningful professional erudite opportunities. (Kolb, 2014; Kolb et al., 1984). Portfolios allow teachers to retain positive STEAM teaching exemplars for discussing and sharing as formative assessments of growth (Lee et al., 2020; Wolf, 1996). The process of reflective practice empowers teachers to develop dialogue with colleagues and grow as professionals (Harris & Jones, 2019; Shahali & Halim, 2023). Portfolios also enable teachers to self-evaluate and are thereby empowered (Lee et al., 2020; Lengeling, 1996). Furthermore, utilizing teacher portfolios provides a holistic view of instructional practice that is non-evaluative and self-reflective (Flottemesch, 2004). Professional portfolios serve as data collection tools that can be shared with colleagues to elucidate perspectives. Dialogue is key in transitioning from professional development towards professional learning that is active, participatory, and reciprocal (Esterhazy et al., 2021; Kaufmann & Ryve, 2019).

Student Self-Assessments

Professional erudition on employing student self-assessments in the forms of student journal entries, student-designed rubrics, and student-constructed exams provides STEAM teachers with skills they can employ for empowering student ownership of the learning (Yan, 2020). These skill sets are also central in developing relationships with students, as students are provided increased responsibilities for controlling their own outcomes (Howard et al., 2020; Osher et al., 2018). While teachers are very familiar with constructing rubrics and exams, students are not. Engaging in ongoing professional erudition centered on self-assessments that results in transference of this reflective practice skill from teachers to students. When students are enabled to self-reflect and self-assess, they are empowered to control their learning (Mahoney, et al., 2021). In addition, students are permitted to develop strategies for improving their own performance and creating rubrics to measure their own outcomes, resulting in success for students of all backgrounds (Shields & Hesbol, 2020).

Authentic Instructional Strategies

In order for students to improve their science reasoning skills for STEAM application, teachers need to be provided professional erudite opportunities that facilitate authentic instructional strategies (Ross & Hogaboam, 2011; Shahali & Halim, 2023). Providing teachers with professional erudition with respect to how students learn enables teachers to develop a deeper understanding and self-assess practice (Yan & Carless, 2022). In dynamic STEAM learning environments, students learn and develop knowledge through experiential learning (Kolb et al., 1984; Kolb, 2014). In addition students make connections about the world around them through discovery learning, constructivism, and inquiry-based activities (Dewey, 1933; Piaget, 1972; Vygotsky, 1978). Providing teachers with targeted erudition regarding experiential, student-centered learning affords teachers with knowledge concerning both methodology and pedagogy for establishing a supportive classroom environment for supporting all learners (Hickey & Riddle 2022; Shields & Hesbol, 2020).

Enlisting Parental Involvement

Most colleges and universities provide inadequate family and community engagement strategies for teachers and administrators (Epstein et al., 1999; Epstein & Sheldon 2022). A small percentage of teachers or administrators have engaged in education or professional erudition in engaging parents, families, and communities (Epstein & Connors, 1994). In addition, little teacher or administrator preparation includes preparing teachers or administrators to work with students, families, and schools (Epstein et al., 1999; Epstein & Sheldon, 2022). Although administrators are responsible for managing and leading schools and communities,

many lack sufficient background in enlisting meaningful parent involvement and fostering skills in teachers (Epstein & Sheldon, 2022).

When teachers engage in parental involvement professional erudition their ability to positively engage and interact with parents is enhanced (Rutherford et. al., 1995). Time must be provided for STEAM teachers to engage in professional erudition that links the importance of creative science homework with the creative science learning that takes place in classrooms (Epstein et al., 2021; Van Voorhis 2001). Parent involvement activities should focus on helping teachers develop skills they can utilize in collaborating to improve student achievement. Professional erudition provides STEAM teachers with strategies to help students and parents establish positive dispositions for home learning activities (Battle-Bailey, 2003; Epstein, 1995). Providing authentic professional erudite opportunities for STEAM teachers that are constructivist in design are important in facilitating inquiry skills students can use in science learning. Professional erudite opportunities focusing on employing interactive parent involvement in student learning opportunities is key to student science improvement. Parents are valuable resources that need to be utilized to foster the development of scientific inquiry and literacy skills in students.

Effective Dialogue for Collaboration

The development of new skills via effective dialogue and collaboration supports group processes and actualization (Lingard, 2021; Oliver et al., 2018). Social connections also impact collaborative efficacy, which serves to support collaborative goals (Schieffer, 2016; Woolley et al., 2015). Communications between parents, students, and teachers are particularly helpful in fostering active collaboration on inquiry activities. When students engage in socially supportive inquiry, they are more likely to achieve and succeed both academically and socially (Epstein & Sheldon, 2022; Woolley et al., 2015). Furthermore, employing self-reflections and self-evaluations are central components of collaborative processes that position active participants to learn from processes (Dusdal & Powell, 2021).

Constructivist STEAM Learning

Involving parents in myriad teaching and learning strategies and providing teachers authentic professional erudite opportunities empowers teachers, parents, and students to engage in constructive, meaningful learning opportunities (Epstein & Sheldon, 2022; Vygotsky, 1978). When constructivist science learning activities include parent participation, the utilization of ongoing performance assessments supports and enables parents to also engage in experiential learning processes (Kolb et al., 1984; Shymansky et al., 1999). Constructivist learning that incorporates interactive parental involvement fosters the development of scientific problem-

solving skills and enables students to take greater control of the learning (Wen, et al., 2020). In 1933, Dewey proposed his Theory of Inquiry, which is based on cognitive constructivism and provides a forum for learners to actively manipulate the environment in the process of learning to build knowledge. Constructivist problem-solving enables parents to be actively engaged with students as a result of taking control of the learning.

Parents are a primary resource for students. Home learning and engagement via interactive homework are highly influential for learners and for the development of content knowledge and skills acquisition for children (Epstein, et al., 2021; Rutherford et al., 1995). Home learning can include a variety of parental involvement and participation on homework assignments, scientific investigations, communications and dialogue between parents, teachers and students to support content objectives, and through dialogue journals or any other activity that supports student achievement (Chan & Aubrey, 2021; Epstein et al., 2021; Stillman et al., 2014). Home learning can be a single activity or a number of activities that individuals in the home and students actively engage in for supporting student academic growth (Rutherford et al., 1995). Targeted professional erudition centered on parental involvement and constructivist STEAM learning supports teacher growth and student learning.

Constructivist Dialogue

Successful home learning activities enlist active parental involvement to support students academically and socially. Dialogue presents opportunities for sharing the content students are engaged in, the understandings of students regarding content, and the academic interests of students (Chan & Aubrey, 2021; Luneburg & Irby, 2002). Teachers leading STEAM learning require professional erudition to create dynamic, communicative learning environments. Employing dialogue journals during scientific inquiry activities facilitates a forum for students to engage in active, participatory communications with parents (Stillman, et al., 2014). Dialogue journals afford parents and students opportunities to explain what was learned and provide feedback to one another. Students benefit from these types of informal, yet formalized discussions with parents, as parents do not necessarily need to understand STEAM content but can provide specific, encouraging responses on homework, activities, or investigations (Chan & Aubrey, 2021; Stillman et al., 2014). When parents provide specific feedback, they also provide reinforcement, which positively impacts student learning and self-efficacy (Walker et al., 2004).

In order for students to actively engage parents through interactive homework, constructivist learning opportunities, self-reflections and -assessments, and creating rubrics, the school environment must support resources for teachers to create positive relationships between the home and school. (Darling-Hammond, et al., 2002; Darling-Hammond et al., 2016). Parental involvement at the high school level provides the substrate for

a social network that supports student achievement and success. Social networks and social supports are significant for adolescent students as they develop and progress through the middle and high school grade levels.

Environmental Adaptation

When children interact with their environment, they are afforded opportunities to transform learning and accept knowledge (Piaget, 1972). Accordingly, increased child/student interactions with parents during the completion of school assignments provides experiential learning and a forum for students to develop deeper understanding (Battle-Bailey, 2003; Epstein et al., 2021). Cognition occurs via Piaget's processes of assimilation and accommodation, in which the transformation of preexisting cognitive structures (assimilation) and acceptance of knowledge (accommodation) enables learners to adapt to the environment. Assimilation and accommodation occur simultaneously and alternately throughout life. Through these processes, meaning is constructed and the adaptation of cognition occurs (Piaget, 1972).

Cognitive development of students (learners) is enhanced through the constructivist and social process of discovery learning. Discovery learning is an instructional technique that is a component of Piaget's theory of cognitive development that aids students in developing effective social skills essential to engage in collaboration. Utilizing discovery learning provides teachers with direction for employing cooperative learning for both the cognitive and social (behavioral) realm. Increased positive educational outcomes are observed in students with well-developed social networks, and likewise, the greater the social supports, the more likely a student will thrive in school (Darling-Hammond, 2020; Epstein & Sheldon, 2022). STEAM teacher professional erudition empowers teachers by providing insight teachers can employ themselves in creating STEAM learning environments conducive to teaching and learning.

Role of Constructivism in Parental Involvement and STEAM Education

Constructivism is based on and supported by the theoretical cognitive constructivists Piaget, Bruner, and Dewey and the theoretical social constructivism of Vygotsky and Piaget. Students are positioned to construct new ideas or concepts as a result of considering information, creating hypotheses, and formulating answers via discovery learning (Bruner, 1996). Dewey (1916) stated, "The scientific method is a trial of ideas" that is sometimes unsuccessful but permits students to "learn from failures when their endeavors are seriously thoughtful" (p. 152). The process of problem solving enables learners to utilize inquiry for constructing knowledge (Dewey, 1916). Through these processes, meaning is constructed and the adaptation of cognition occurs. Cognitive development of learners is enhanced through the constructivist and social process of

discovery learning (Piaget, 1972). Creating targeted professional erudite efforts for STEAM teachers on constructivism is proactive in positioning students to develop knowledge and consider new ideas.

Conceptual Framework

The conceptual framework of this qualitative phenomenological study involved utilizing multiple data sets to discern phenomenon and identify emergent themes from phenomenological attitudinal data (Creswell & Poth, 2018; Merriam & Tisdell, 2016; Teddlie & Tashakkori, 2009). Literature reviewed supports the assertion that science teachers and teachers in STEAM disciplines require targeted professional erudition in an effort to engage in inquiry-based, experiential, constructivist learning with both parents and students. In addition, professional erudite opportunities provide much needed background skills for teachers in STEAM disciplines in employing dialogue journals to document growth and performances. These personal reflections memorialize perceptions of parents, students, and teachers with respect to engaging one another, as well as providing insight regarding the social, emotional influences for students.

Research Objective

The objective of this study was to identify the perceptions of science teachers and the implications for teachers in STEAM disciplines as a result of actively engaging in targeted professional erudition. Attitudinal data was also collected to discern not only teacher perceptions, but also parent and student perceptions with respect to interactive science teaching and learning and impacts on student social, emotional development.

Research Questions

This study was conducted to determine the following research questions:
1. What are the most meaningful types of professional erudition engagements for STEAM teachers?
2. How does professional erudition impact parent-student-teacher communications for actively involving parents in high school science learning?
3. What are the implications of targeted professional erudition and communications during high school STEAM learning for supporting the social, emotional needs of students?

Method

This study employed a qualitative, emergent phenomenological design based in the tradition of portraiture. This study employed portraiture to include aspects of ethnography, case study, and narrative (Lawrence-Lightfoot & Davis, 1997). Portraiture methodology affords inquiry and documentation of the social and cultural contexts of the individuals negotiating phenomenon (Lawrence-Lightfoot & Davis, 1997). Portraiture was utilized for creating a narrative for tracing the interpretation of emergent themes for creating an aesthetic whole (Lawrence-Lightfoot & Davis, 1997). Utilizing a qualitative, emergent phenomenological construct provided insight regarding the shared experiences of students, parents, and teachers (Creswell & Poth, 2018). The intersectionalities of these shared experiences provided insight regarding the essence of the phenomenon being studied (Prosek & Gibson, 2021).

Data Collection Procedures

Two teachers participated in professional erudition related to STEAM instructional methodologies, communications, and enlisting and actively involving parents in STEAM learning between the home and school. Teachers maintained journal entries at the onset of professional erudition to memorialize perceptions and thoughts. The teachers maintained journal entries as they began initiating parental involvement STEAM learning with students. One hundred thirty-one parents and students created and maintained dialogue journal entries over the period of six-weeks in which they engaged in constructivist, interactive science learning. The dialogue journals were utilized by parents and students to record their perceptions regarding science inquiry and interactive learning opportunities. Students and parents also recorded perceptions with respect to their experiences in terms of working with one another. Students made initial journal entries followed by parents for memorializing dialogue. Students provided each classroom teacher with their respective dialogue journals at the end of each week. Teachers also made entries and then returned journals to students at the beginning of the following week.

During the course of this six-week study, teachers maintained journals reflecting beliefs regarding professional erudite experiences, collegial coaching, and perceptions concerning enlisting parental participation. These data provided an opportunity for examining the perspectives and experiences of the individuals and cultures observed (Lawrence-Lightfoot & Davis, 1997). The researcher provided the participating teachers ongoing professional erudition throughout the study. The participating teachers maintained their journals, which were collected by the researcher at the conclusion of the study.

Results

Professional Erudition

Participating classroom teachers were provided ongoing professional erudition by the researcher to build skills to guide students in constructing rubrics for use in self-assessing performances with parents. Classroom teachers modeled how rubrics are utilized in assessing growth and provided students with in-class opportunities to develop criteria to gauge and assess learning. Teachers modeled how to create criteria that students used to measure and assess actual knowledge and understanding.

The researcher provided professional erudition for the participating teachers in employing student self-assessments in the forms of student journal entries, student-designed rubrics, and student-constructed exams. In a journal entry, a teacher noted, "After all, there are advantages in shifting roles and putting students in the role of the self-evaluator. I was concerned about doing this and really didn't think it would work. It sounded like more hard work for me and fluff. But after I worked with the students to show them how to make self-assessments they made changes to improve performances. Their rubrics and exams helped them determine grades they believe they earned based on the assessments they made."

Participating teachers also used the professional erudite training they received from the researcher. This training enabled students to construct rubrics for self-assessing their performance on science inquiry activities with parents. Parent and student self-assessments became a component of student summative assessments regarding STEAM learning. This data source provided useful feedback that students utilized to share and communicate with parents in constructing self-assessments about learning. Self-assessment opportunities enabled students to grow and develop as a result of internalizing the information. A teacher journal entry noted, "When students are provided opportunities to reflect on their progress and performances they determine the changes and adjustments they need to make in order to be more successful." This assisted students in developing self-regulation and ownership of the learning.

Keyword Search

The researcher utilized keyword search in dialogue journal entries to identify themes and relationships amongst parents, students, and teachers. The researcher reviewed the dialogue journal entries of the participants and noted the four most common words the participants repeated. The four words were noted and reviewed in the context of each journal entry that they appeared in. The utilization of keyword search provided insight with respect to recurring perceptions, beliefs, and experiences amongst parents, students, and teachers.

An analysis of keyword search for parents resulted in the identification of the frequent repetition of the words *interesting*, *fun*, *experience*, and *opportunity*. The use of these words referred to ideas, beliefs, and perceptions of parents related to ideas associated with collaborating with the parent's child (Figure 1).
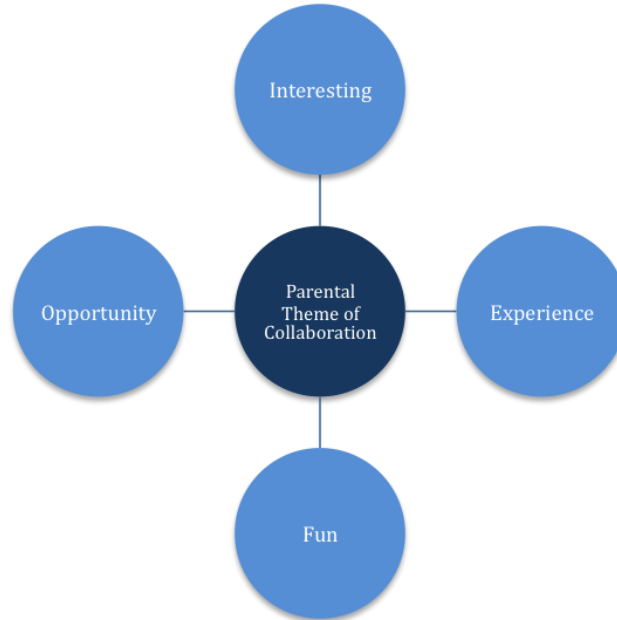
Figure 1. Frequent repetition of keyword search for parents

In addition, an analysis of keyword search for student journal entries resulted in the identification of the frequent repetition of the words *organize*, *plan*, *help*, and *think*. The use of these words referred to ideas, beliefs, and perceptions of students related to ideas associated with conditions related to support and efficacy development (Figure 2).
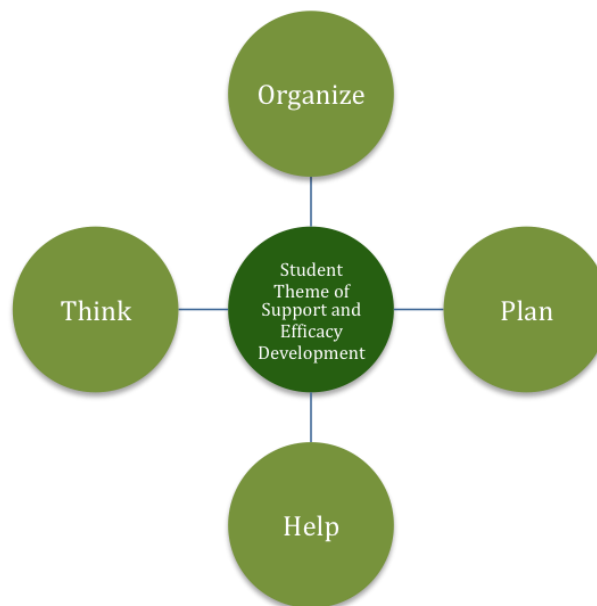
Figure 2. Frequent repetition of keyword search for students

Lastly, an analysis of keyword search for teachers who participated in this study resulted in the identification of the frequent repetition of the words *important*, *support*, *effective,* and *involve*. The use of these words referred to beliefs, feelings, and perceptions of teachers related to ideas associated with the conditions related to maintaining effective, interactive parental involvement during STEAM learning (Figure 3).
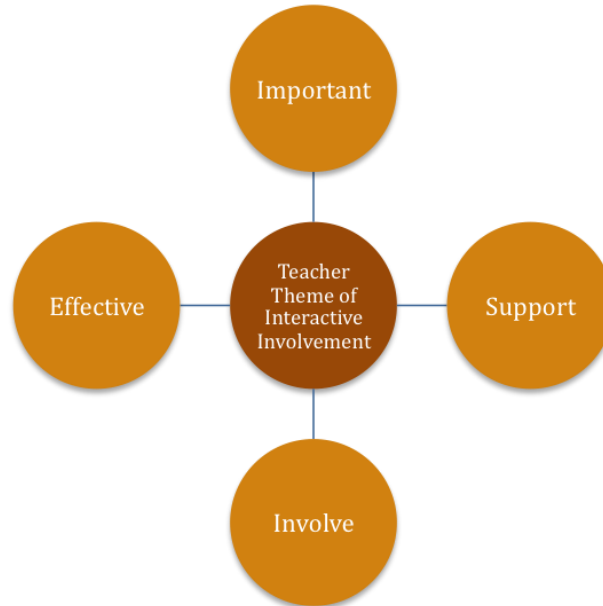
Figure 3. Frequent repetition of keyword search for teachers

Relationships Amongst Keyword Search Themes

Relationships between emergent themes and correlations between parents, students, and teachers were constructed to validate concepts and relationships. There was a clear relationship amongst all three themes. The relationships evident among all three themes were authentic communications (Figure 4). Parents enjoyed the opportunity to collaborate with their child. The inquiry activity provided parents with a *communicative*, learning experience. Students felt they were provided a supportive, *communicative* learning environment. Students self-assessed work and parents provided help and guidance. Students were able to take self-responsibility for their learning, which fostered acquisition of skills and improved efficacy. Teachers perceived the experiences of the study's participants to be supported by effective involvement strategies. These *communicative* involvement strategies (parental involvement, professional erudition, self-assessments and dialogue journals) led to an ownership of the learning not only in students, but also in parents and teachers.
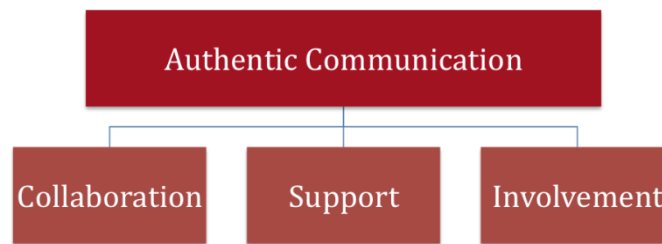
Figure 4. The relationship of authentic communication amongst emergent themes

The emergent themes were correlated by their use of consistent, communicative dialogue. The participants' experiences were unified by a collaborative, supportive, skill building, and self-motivating environment centered on authentic communication. Authentic communication was the common relationship amongst themes.

Discussion

Correlations between parent, student, and teacher data were utilized to validate themes and relationships (Figure 5). The relationships that were evident as a result of codification and triangulation of these data through inter-rater analysis and hierarchical coding were that parents, students, and teachers enjoyed the opportunity to be *proactively* connected to the instructional program. The environment this study provided afforded parents with direction, communication, and accessing skills they were able to utilize in collaborating with their child and classroom teacher. *Interactive* involvement led to a greater involvement in the learning. Parents and students utilized a variety of strategies in which they collaborated and controlled the learning. These involvement strategies (dialogue journals, student-constructed exams and rubric, and self-assessments) led to an ownership of the learning not only in students, but also in parents. Students effectively used questioning strategies to investigate phenomena and make self-reflections. The environment was *motivative* and supported students in developing a holistic mindset. This helped students find answers to questions they proposed related to their own natural curiosities and led to a more "natural" development of scientific inquiry and literacy skills.
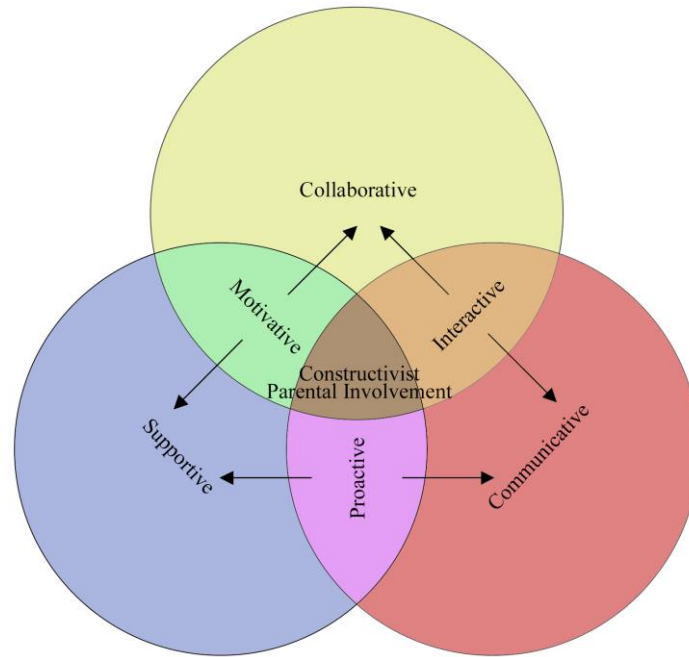
Figure 5. Relationships between collaborative, communicative, and supportive emergent themes

Conclusion

The common themes and relationships prevalent were examined by the researcher in relation to the study's research questions. Analysis of the themes provided the basis to respond to each of the study's questions in terms of the beliefs, perceptions, and feelings of the study's participants. In terms of the implications for teachers in STEAM disciplines, teachers felt they were positioned for success as a result of engaging in targeted professional erudition for professional growth. Teachers believed the professional erudition they engaged in was authentic and provided deep learning experiences that supported instructional delivery. Teachers also believed the professional erudition they participated in was relevant in terms of providing ongoing methodological development for delivering STEAM content and developing new technology skills.

Teachers also perceived professional erudition positively impacted parent-student-teacher communications for actively involving parents in high school science learning. Teachers identified much needed skills in terms of collaborating with parents and engaging in active, meaningful communications. Although teachers engage in regular communications with the home, they require professional erudition that is targeted and serves as professional growth for employing communications that forge participatory relationships. While the study employed interactive, constructivist inquiry for STEAM education via parent involvement, teachers require specific ongoing professional erudition when actively engaging and interacting with parents. Teachers believe the strategies employed during the study improved their communications skills for engaging stakeholders.

Attitudinal data was collected to discern not only teacher perceptions, but also parent and student perceptions regarding interactive STEAM teaching and learning. These data provided insight regarding positive impacts on student social, emotional development. Professional erudition resulted in improved communications during high school STEAM learning, which positively affected students' social, emotional learning. Parental involvement in inquiry activities resulted in a highly collaborative, reciprocal relationship and communications between all participants. The utilization of collaborative, communicative dialogue journals enabled and empowered all students and parents to actively engage and communicate with the school. These pro-social interactions resulted in student-improved efficacy.

In addition, English Second Language (ESL) parents and foreign language parents were actively engaged in dialogue with students and teachers. The parents of these students interacted in science activities by making dialogue journal entries in their native languages and having other family members write translations that followed. Parent involvement provided a forum for ESL and foreign language parents to be communicative, collaborative, and supportive. ESL and foreign language parents were provided a forum to share and learn about their child. These opportunities contributed to the robust nature of the study and increased involvement, which gave voice to individuals that would have otherwise not been involved nor heard.

Recommendations

Maintaining professional growth is central in supporting students. Empowering STEAM teachers to design and engage in targeted professional erudition creates layers upon layers of experiential learning atop canvases of practice. Targeted professional erudition results in an integration of professional capacity and communications to better support all learners and is analogous with the philosophical conceptualization of STEAM itself. There is an art and science to engaging in professional erudition and experiential learning is the layers of artistic medium upon scientific canvases of practice. When teachers design professional erudition, they engage in blending textural layers of STEAM pedagogy, methodologies, technology, and active involvement strategies to support student learning. A professional understanding of these critical areas is needed for supporting student learning and is connected to actively involving parents in STEAM learning. Educators require continual professional erudition for continually layering experiential learning upon canvases of practice. Professional growth results and affords educators with new instructional delivery methodologies and supports for sustaining pro-social relationships with the home and for supporting the cognitive and social, emotional needs of students. It is imperative school and district leaders provide teachers with professional erudite opportunities to not only support students and teachers, but to also contribute to and support the greater school community.

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Preparing for Life Beyond School: A Moderated Mediation Approach from the Perspective of Self-Determination, Self-Concept, Student Transition Planning, and Life Skills Development

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Article Info	Abstract
	The link between self-determination and life skills development, a crucial ability for the vocational future and career advancement of students with mild and moderate intellectual disabilities, has been explored in limited research. The present study aims to examine the patterns of relationships in terms of direct and conditional indirect effects on self-determination, life skills development, self-concept, and student transition planning regarding students with intellectual disabilities. The data were collected using standardized instruments from 304 adolescents with mild and moderate intellectual disabilities. The outcomes showed that self-concept has a moderating role in the relationship between self-determination and student transition planning. The study findings indicated that student transition planning mediates the relationship between self-determination and life skills development. The value of the index of moderated mediation indicated that self-concept moderated the conditional indirect effect of student transition planning on the relationship between self-determination and life skills. Future research and implications for practice are discussed.

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Introduction

The literature frequently indicated the strong connection between self-determination and academic achievement (Shogren et al., 2015), self-advocacy knowledge and skills (Mazzotti et al., 2016), and quality of life (Wehmeyer, 2020). Although the self-determination concept in the given context of disabilities has been in the attention of researchers as a topic for several studies, the link between self-determination and life skills development is little researched. In this framework, researchers have shown that student transition planning strategies and vocational interventions related to enhancing self-determination skills and actions contribute and have an influence on the development of life skills attributes that have a positive impact on the quality of life of young people with disabilities (Mazzotti et al., 2018). These attributes were described as positive post-school results, higher employment rates, access to post-secondary education, social and vocational inclusion, and a high level of well-being (Shogren & Plotner, 2012). Self-determination and self-concept are predictors of positive school engagement and adult outcomes (Agran et al., 2010; Zheng et al., 2014). However, little is known about the relationship between self-determination and self-concept in predicting life skills development in the context of intellectual disabilities and learning difficulties. Overall, new research is necessary to identify the relationship among self-determination, self-concept, student transition planning, and life skills development to ensure that schools focus efforts on the most important constructs for the vocational and social inclusion of students with disabilities. Student transition planning, educational strategies, and vocational intervention related to enhancing self-determination skills and actions contribute to the development of attributes that have a positive impact on the quality of life of young people with disabilities such as positive post-school results, higher employment rates, access to post-secondary education, social and vocational inclusion, and high level of well-being (Shogren & Plotner, 2012). Burke et al. (2020) in a meta-analysis of interventions that promote self-determination for students with disabilities suggested that self-determination interventions can be useful in the context of transition planning; practitioners can help students to set and achieve education- and transition-related goals, benefiting students in school and the real world.

Theoretical Framework

Self-Determination

In the last decades, researchers suggested that student self-determination affects both school and post-school outcomes, including access to the general education curriculum (Lee et al., 2008), postschool employment, and community participation (Shogren et al., 2015), and quality of life (Wehmeyer & Schwartz, 1998). The literature meta-analyses showed that when students with disabilities are provided with instruction, they can learn to engage in self-determined behavior (Algozzine et al., 2001; Cobb et al., 2009).

One of the commonly used theories in research and practice is the Functional Model of Self-Determination. According to this theoretical framework, self-determination was defined as "volitional actions that enable one to act as the primary causal agent in one's life and to maintain or improve one's quality of life" (Wehmeyer, 2005, p. 117). This model described four essential characteristics of self-determined behavior: (a) autonomy, (b) self-regulation, (c) psychological empowerment, and (d) self-realization.

Shogren et al. (2015) introduced the Causal Agency Theory, which defined self-determination as a general psychological construct within the organizing structure of theories of human agentic behavior. Causal Agency Theory builds on the functional model of self-determination (Wehmeyer, 1992), but also contains elements, and influences of positive psychology, and has a strengths-based focus in the disability field Causal Action Theory posits three essential characteristics of self-determined action—volitional action, agentic action, and action-control beliefs—that contribute to causal agency and the development of self-determination. These essential characteristics refer not to specific actions performed or the beliefs that drive action, but to the function, the action serves for the person, the action enabled the person to act as a causal agent and enhances the development of self-determination (Shogren, et al., 2017).

Field and Hoffman (1994) developed a model comprising five main components for the development of self-determination. The first two components (*knowing oneself* and *valuing oneself*) describe the internal processes that provide a base for acting in a self-determined manner. The next two components (*plan* and *act*) identify the abilities necessary to act in conformity with that base. The last component (*experience outcomes* and *learn*) enables the cycle to be closed, by celebrating the successes achieved or reviewing the efforts to become a self-determined individual. In addition, other research demonstrated that self-determination is influenced by the individual's values, knowledge, skills, and environmental factors (Field & Hoffman, 2001, 2007). Abery and Stancliffe (1996) proposed an ecological tripartite model of self-determination that defines this construct as "a complex process, the ultimate aim of which is to achieve the degree of personal control over his life that the person desires and in those areas that he perceives as important" (p. 27).

Mithaug et al., (2002), developed a theory of self-determined learning that focuses on the process of teaching students to become more self-determined. This model postulates that self-determination depends on the student's provided capacities and opportunities. According to these authors, self-determination is a product of both personal and environmental factors to obtain desired outcomes. As described by these definitions, self-determination always involves the self as the causal agent when making choices, and self-determination as a construct is multifaceted and is reflective of both a psychological trait (i.e., locus of control) and a behavioral skill set (i.e., communication abilities). For students with disabilities, it appears from the experimental evidence

that increasing their self-determination status correlates with increased quality of life in their future decision (Cobb et al., 2009).

Life Skills

Life skills conceptualized as "skills or tasks that contribute to the successful, independent functioning of an individual in adulthood" (Cronin, 1996, p. 54, Bouck, 2010), are considered by researchers to be essential to the success of individuals with disabilities out of school, especially students with intellectual disabilities (Bouck, 2010; Alwell & Cobb, 2009). Within the limited research on outcomes related to life skills and individuals with intellectual disabilities, Miller & Chan (2008) found a medium effect size for the relationship between life skills and life satisfaction and concluded this supported the provision of life skills instruction to individuals with intellectual disabilities. Despite limited research on the impact of receiving a life skills curriculum approach in general on postschool outcomes, research exists in which components of a life skills curriculum approach are connected to student outcomes: functional academics, vocational education, community access, daily living, financial, independent living, transportation, social/relationships, and self-determination (Bouck, 2010). Some studies indicated that life skills are a critical aspect of students' transition from school to successful adult life (Brolin & Loyd, 2004). In their review of evidence-based transition practices, Test et al. (2009) determined teaching life skills as an evidence-based practice in secondary transition with a strong level of evidence. Specific components within a life skills approach (e.g., functional academics, safety skills) were also rated as having a moderate level of evidence. The connection between life skills and the successful transition has prompted calls for increased integration of life skills instruction into secondary programs (Bouck, 2004).

Student Transition Planning as a Mediator

Transitioning to adulthood is a critical period in students' life. Due to its relevance for adolescents' future life, the transition activities must be very carefully prepared. In the Romanian educational system, students with intellectual and moderate disabilities go through a functional curriculum based on educational-vocational activities which include strategies for problem-solving and decision-making, acquisition of planning skills required during the transition stage to the next educational levels such as the transition from elementary school to gymnasium level, and after that, preparation of the most important transition stage, the integration into vocational schools: special technological high schools or special professional schools for young people with disabilities. Families and community support are essential parts of transition planning, a complex social dimension of this process. M. Wehmeyer referred to transition planning in the following terms: "Transition planning provides a powerful context in which to both teach and practice skills like goal setting, problem-

solving, effective communication, listening skills, assertiveness and self-advocacy, and decision-making." (Wehmeyer, 2002, p. 6) The transition process to adult life can be perceived as a challenging period for adolescents as they move from the education system to different educational environments (Shogren &Plotner, 2012). Adolescents with disabilities encounter additional challenges (Chambers et al., 2009; Wehmeyer & Palmer, 2003), including the transition from special education to adult services, post-secondary education disability services, and housing support. Given the emphasis on transition planning in disability policy and research and the empirical link between effective transition planning and postschool outcomes, including post-school education, employment, and independent living (Shogren & Plotner, 2012; Test et al., 2009), it is essential to understand the characteristics of transition planning (e.g., student involvement, active participation in transition planning, characteristics, and suitability of transition goals, postschool service needs and contacts) for students with disabilities, particularly for those with intellectual disability who struggle with achieving employment and community participation in adulthood (Shogren & Plotner, 2012; Wehmeyer & Palmer, 2003). Evans et al. (2018) in a study dedicated to the academic and psychological impact of the transition to secondary education showed that helping parents and schools could aim to provide more social support during and following the transition to increase the perceived support felt by adolescents. Schools could also provide transition strategies that focus on the worries of children such as being lost or being bullied. In addition, schools could teach topics that can be continued from primary to secondary education to help with the interruption of achievement. Furthermore, students with special educational needs should have additional support and provisions in place to ensure they transition with as few difficulties as possible.

Self-Concept as a Moderator

Shavelson, Hubner, and Stanton (1976) defined self-concept to be a multifaceted, hierarchical construct. Zheng et al. (2014) empirically explained how self-determination and self-concept affect academic achievement for adolescents with learning disabilities. They support the idea that it is difficult to find a unanimous and accepted definition of self-concept since researchers approached the construct from different theoretical perspectives. Sanchez and Roda (2003) consider self-concept "a set of knowledge and attributes that we have about ourselves, the perceptions that the individual assigns to himself and characteristics or attributes that we use to describe ourselves" (p. 97). Ahmed and Bruinsma (2006) adopted the self-concept model of Shavelson et al. (1976), which defines self-concept as "a person's perception of himself, formed through environmental experiences and significant others" (p. 554). Researchers agree that self-concept is multidimensional and hierarchical. Self-concept is multidimensional in that it comprises various components: social self-concept, physical self-concept, and academic self-concept. Hierarchical characters refer to a narrowly defined self-concept nested in a broader theory (Zheng et al, 2014). Children with intellectual disabilities follow similar sequences and have a similar structure of development to their regular age mates (Evans et al., 1995).

Adolescents with intellectual disabilities appear to possess a fairly realistic self-appraisal that is tied to actual competency (Widaman et al. 1992). Also, adolescents with intellectual disabilities use social comparison processes in academic and social self-appraisals, and they have an awareness of cultural age-role expectations. Mental age alone then, cannot fully explain the phenomenology of the self-concept in adolescents with intellectual disabilities (Evans et al., 1995). The studies on class placement, stigma, bullying, and normalization efforts sustained the importance of the social and educational context of the self (Burack et al., 1998). Despite the potentially strong influence of organismic factors, such as cognitive development, and life experience, social comparison plays a significant role in self-concept development (Ziegler & Hodapp, 1986). Because self-concept has not been the focus of much research in the developmental approach and intellectual disabilities field, major developmental issues remain open for debate, and the area of self-concept and its role in the lives of students with intellectual disabilities are vital in understanding the adolescent with disabilities as a whole person. In this study, we analyzed the role of self-concept in predicting life skills development, in a given frame of self-determination and student transition planning.

A Conceptual Model for the Present Study

Life skills training is an essential goal of educational programs for students with intellectual disabilities. Studies showed that self-determined behaviors and skills are related to life skills development. Research indicated the need to implement activities that promote student transition planning that has a positive impact on post-school outcomes of young people with intellectual disabilities. In the educational context, it is crucial to highlight the role of self-concept in obtaining functional academic results, particularly in improving life skills, which are critical competencies in the dynamic process of social and vocational integration of young people with intellectual disabilities in various communities.

In the present study, we aim to describe the type of relationships, in terms of direct and conditional indirect effects on self-determination, life skills development, self-concept, and student transition planning. The first goal of this study was to examine how student transition planning, as a mediator, had influenced the relationship between self-determination (defined as self-determined actions, skills, and attitudes), and life skills development. The second goal was to explore the psychological and social mechanisms through which self-concept, as a moderator, is a predictor of life skills development; the moderator role of self-concept was analyzed through the perspective of student transition planning as a mediator (moderated mediation). The investigation model for this research is illustrated in Figure 1.
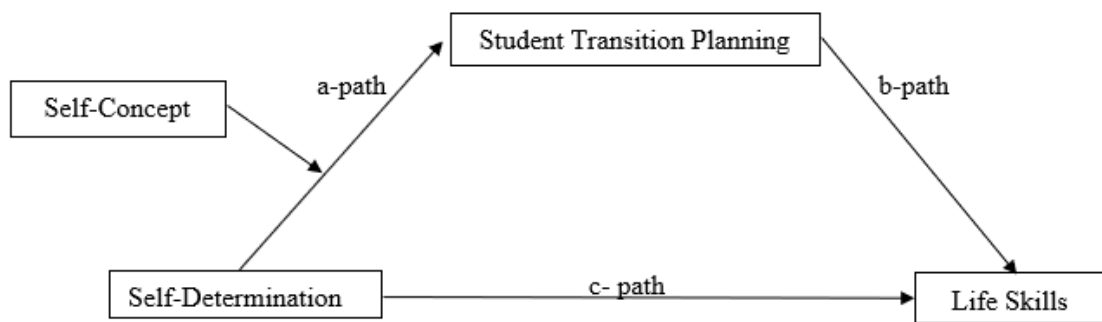
Figure 1. Moderated mediation research model

In a moderated mediation model, four hypotheses were examined. The assumptions are as follows:

H1: Self-determination has a direct effect on life skills development.

H2: Student transition planning has a conditional indirect effect on the relationship between self-determination and life skills.

H3: Self-concept has a moderating role in the relationship between self-determination and student transition planning.

H4: Self-concept has a moderating role in the relationship between self-determination and life skills, a relationship mediated by student transition planning.

This research should not only be useful in clarifying the understanding of the relationship between self-determination and life skills development in adolescents with intellectual disabilities, the role of self-concept, and the part of transition planning in this mechanism, but it should also contribute to the development of more effective educational and intervention program.

Method

Participants

The present study was based on a convenience sampling method. The participants were recruited from five middle schools for students with disabilities, and two vocational high schools for disabled students across two counties in Romania. A total number of 304 students with mild and moderate intellectual disabilities were included in a sample for the testing process. The student's disabilities categories were obtained from the schools' administrations, with parents' written permission. Participants were classified according to their primary disability - mild intellectual disability or moderate intellectual disability. Regarding the socio-demographic characteristics of the participants, the number of boys ($n = 142$; 46,7%) was lower than the girls' number, although it indicated a uniform distribution by gender. Ages ranged from 12 and 19 years

(*M* =14.93; *SD* =1.42) and more than half the sample (*n* = 217; 71,3 %) were aged between 14 and 16 years. Table 1 provides further descriptive information regarding the educational setting and disability label for the subset of students with disabilities, and other important socio-demographic aspects, such as family type and socioeconomic status. To be included in this study, parental consent for participation and assent from the student were obtained.

Table 1. Participants socio-demographic characteristics

Participants Characteristics	N	%
Disability		
Mild intellectual disabilities	140	46 %
Moderate intellectual disabilities	164	54%
Gender		
Female	162	53,3 %
Male	142	46,7%
Age		
12-15	204	67 %
16-19	100	23%
Educational setting		
Special education middle schools	192	63,15%
Vocational high schools for disabled students	112	36,84%

Measures

Self-Determination Measure

To measure self-determination, we use the ARC's Self-Determination Scale adapted for Romanian adolescents, validation process of the scale was discussed in a previous study (Cristea & Ghergut, 2022). The preliminary study results indicated the factorial structure of the culturally adapted ARC's Self-Determination Scale for Romanian adolescents with mild and moderate intellectual disabilities is similar to the original version, the ARC's Self - Determination Scale (Wehmeyer, 1995). The results of the exploratory and confirmatory factor analysis suggested that the original factorial structure of the ARC's Self-determination Scale with the three domains - Autonomy, Psychological Empowerment, and Self-Realization were replicated in a validated and reliable assessment tool applicable in the Romanian educational setting and research context. The adapted ARC's Self-Determination subscales demonstrated good to high internal consistency, Cronbach's α coefficients indicated very good reliability for the entire scale (*Cronbach's α* = .927), and acceptable to high scores for three subscales: Autonomy (*Cronbach's α* =.950), Psychological Empowerment *(Cronbach's α = .790)*, and Self-Realization (*Cronbach's α = .764*).

Self-Concept Measure

For this study, the Five-Factor Self-Concept questionnaire was used to measure the self-concept construct in Romanian adolescents (AF5, Garcia et al., 2014). Theoretically, the AF5 questionnaire is based on assumption that self-concept is a multidimensional construct, the academic, social, family, emotional, and physical areas compose this multifaceted construct. The academic dimension refers to measuring the perception of the self-efficacy of learning; the social dimension is related to the significance that the individual's behavior has for others; family, concerning the family dynamics and relationships; emotional, concerning the most subjective and intimate components; and physical, measuring the fundamental incidence of the individual's aptitudes and general appearance. To adapt this instrument to measure self-concept construct in Romanian students, in the first stage, 20 items were translated and adapted into the Romanian language by following the guidelines for the adaptation of self-report measures concerning linguistic, semantic, cultural, and conceptual equivalence proposed by the International Test Commission (Hernández et al., 2020). Exploratory factor analysis was performed, and the pattern matrix indicated factor loadings onto two factors and the variances explained for each component were ranging from .346 to .902. The confirmatory factor analysis was performed within the structural equation modeling approach, and the model was estimated with several goodness-of-fit indices: *p*-value for the model was significant ($p = .000$), *chi-square* = 74.425, *df* = 36, *AGFI* = .824, *RMSEA* = .059, *CFI* = .970, *TLI* = .954, *SRMR* = .042. Reported to Hu and Bentler's parameters (1999), these indices supported an acceptable fit for the model. The scale demonstrated very good reliability; *Cronbach's alpha* coefficient was .921.

Student Transition Planning Measure

To evaluate this construct, we utilized the Student Questionnaire Transition Planning (Connecticut Transition Task Force, 2008). The questionnaire was designed to measure the transition skills of students with disabilities. In the construction of this instrument are included 18 self-reporting items with answers reported to a 5-point Likert scale from strongly agree to strongly disagree. In the scale construction, three dimensions of the transition planning construct were taken into consideration: vocational domain, personal and social autonomy, family, and interpersonal relationships. To use this evaluation tool to assess transition planning skills in Romanian students it was necessary to adapt and validate the scale for Romanian adolescents. The items were translated and culturally adapted into the Romanian language. In the next stage of scale adaptation and validation for adolescents with mild and moderate intellectual disabilities, an exploratory factor was performed. The pattern matrix indicated the factor loadings onto two factors, and the variances explained for each component ranged from .313 to .916. The items with factor loading are lower than. 500 were discarded. The model resulting from the exploratory analysis was tested using a structural equation modeling approach, and

the model of the two-factor solution has the following goodness-of-fit indices: *chi-square* = 35.170, *df* = 13, *p* = .001, *AGFI* = .929, *RMSEA* = .075, *CFI* = .972, *TLI* = .954, *SRMR* = .036. Compared to the threshold established by Hu & Bentler (1999) the results of the confirmatory factor analysis demonstrated an acceptable fit for the model. The scale proved very good reliability, *Cronbach's alpha* coefficient for this scale was .931.

Life Skills Measure

To assess the life skills development level in Romanian students with mild and moderate intellectual disabilities we used the Pediatric Evaluation of Disability Inventory (PEDI-CAT, Haley, et al., 2011). This assessment life skills tool was built on the following dimensions: communication, community volunteering, critical thinking, decision-making, leadership, problem-solving, responsible citizenship, self-esteem, self-responsibility, and teamwork. The evaluation instrument was a self-reported measuring scale of life skills attitudes, actions, and behaviors reported on a 4-point Likert scale. After items translation and linguistic and cultural adaptation, the 19 items were examined in exploratory factor analysis. The confirmatory factor analysis was performed within the structural equation modeling, the tested model comprised 3 latent variables and 15 observed variables. The model was estimated with goodness-of-fit indices: *p*-value for the model was significant (*p* = .000), *chi-square* value = 80.256, *df* = 38, *AGFI* = .922, *RMSEA* = .061, *CFI* = .954, *TLI* = .933, *SRMR* = .042. The parameters of the model indicated a good fit for the model. The *Cronbach's alpha* coefficient for the scale was .889.

Procedures

This study involved 304 students with mild and moderate intellectual disabilities. The testing process was organized in small groups of a maximum of 7-10 students at a time, or as needed, in a 1:1 interview. Before starting the assessment tools administration process, participants were assured that their privacy, confidentiality, and anonymity would be protected. Informed written consent was sought from each participant before the interview began. All participants were fully informed of their autonomy and the voluntary nature of their responses in the interview process and were told they could withdraw at any time. For those below the age of 18 years, informed parental/guardian consent was obtained beforehand. The Research Ethics Committee approved this research.

Data Analysis

Statistical analyses were performed with IBM SPSS Statistics, version 28 for descriptive statistics and exploratory factorial analyses. The structural equation modeling (SEM) approach provided by IBM SPSS AMOS 28 Graphics was used to conduct the confirmatory factor analyses for adapted instruments to measure

self-concept (Five-Factor Self-Concept questionnaire), student transition planning (Questionnaire Transition Planning, Connecticut Transition Task Force, 2008), and life skills development (Pediatric Evaluation of Disability Inventory, Haley, 2011). The analysis of the moderated mediation model (Model 7) was carried out within PROCESS Macro for SPSS version 4.0 (Hayes, A.F., 2021).

Results

Descriptive statistics, multivariate correlations, and influential outliers

The means, standard deviations, skewness, kurtosis values, and correlations among variables are displayed in Table 2. The Pearson correlations among study variables were positive and statistically significant. We found that self-determination was positively correlated with students' transition planning ($r = .52$, $p < .001$), self-concept ($r = .47$, $p < .001$), and life skills ($r = .42$, $p < .001$). The correlation analysis indicated a high positive correlation between student transition planning and self-concept ($r = .78$, $p < .001$), and life skills ($r = .69$, $p < .001$). We performed a Cook's distance analysis to determine if any multivariate influential outliers existed. We did not observe a Cook's distance value greater than 1, most cases have values less than .05.

Table 2. Descriptive statistics and correlations

Variables	Mean	Standard deviation	Skewness	Kurtosis	1	2	3	4
1. Self-determination	120.177	24.939	.050	-.539	1			
2. Student transition planning	56.082	16.852	-.228	-.861	.528**	1		
3. Self-concept	63.085	17.395	-.454	-.613	.472**	.787**	1	
4. Life skills	35.457	10.101	-.352	-1.089	.428**	.694**	.691**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Direct Effects Analysis

Preliminary data in the model summary for the direct effects of self-determination on life skills development, as an outcome variable, indicated $R = .698$, $R^2 = .487$, F (143.200), and p-value $= .000$. Analyzing the direct effect of self-determination on life skills development (c' path), we observed that self-determination had a direct effect on life skills development, $\beta = .134$, $t = 1.761$, $p = .050$, $CI = [.041; .073]$, with the zero not included. The results supported the idea that global self-determination influenced life skills development. Taking into consideration these observed parameters, the first hypothesis of this study is supported.

Conditional Indirect Effects Analysis

The b -path illustrated the relationship between student transition planning and life skills, the outcome indicated that student transition planning has an impact on life skills development, $\beta = .389$, $t = 13.369$, $p = .000$, and the values of the confidence interval were ranging [.331; .446]. In terms of the conditional indirect effects of students' transition planning on life skills development, the results indicated the conditional mediating (indirect) effect is high at low self-concept, reduced at the self-concept average, and further reduced at higher self-concept. The conditional indirect effects of student transition planning in the presence of the self-concept as a moderator, at the mean level are .060, and bootstrapping confidence interval = [.037;.085], the zero not included. The supporting data about the student's transition planning conditional indirect effects are shown in Table 3. The second hypothesis of the study was supported by these data.

Table 3. Conditional indirect effects

Self-concept	Effect	Boot SE	BootLLCI	BootULCI
-17.395	.091	.019	.054	.129
.000	.060	.012	.037	.085
17.395	.029	.010	.010	.050

Moderation Analysis

Analyzing the summary outcome for a-path, we observed that self-determination affects student transition planning, $\beta = .155$, $t = 5.881$, p-value = .000, confidence interval (CI) = [.103; .207], and the zero not included. Self-concept has a significant impact on student transition planning, $\beta = .628$, $t = 16.046$, p-value = .000, $CI = $ [.551; .705]. The interaction between self-determination and self-concept has a significant effect on student transition planning, $\beta = -.004$, $t = -3.200$, p-value = .001, confidence interval with the zero not included = [-.007; -.001]. The test of the highest order unconditional interaction indicated R^2-*chng* = .011, F (10.241), $p = $ .001.

Conditional effects of self-determination as a focal predictor of values of the self-concept as a moderator are presented in Table 4. Taking into consideration the mean values of self-concept as a moderator (average, one standard deviation above the mean level, and one standard deviation below the mean level), the conditional effect of self-determination on student transition planning with the moderator role of self-concept ranged from a significant small effect ($\beta = .076$, $p = .016$) to significant higher effect ($\beta = .234$, $p = .000$). These results support the third hypothesis of this research that self-concept has a moderating role in the relationship between self-determination and student transition planning.

Table 4. Conditional effects of focal predictor at values of the moderator

Self-concept (moderator)	Effect	p	LLCI	ALSO
-17.395	.234	.000	.155	.313
.000	.155	.000	.103	.207
17.395	.076	.016	.014	.138

Moderated Mediation Analysis

To evaluate the fourth hypothesis a moderated mediation analysis was conducted, we assessed if the conditional indirect effect of student transition planning on the relationship between self-determination and life skills was moderated by self-concept. The results indicated the value of the index of moderated mediation was -.018, bootstrapping confidence interval = [-.029; -.017], with 0 not included. The outcome indicated a moderated mediation effect, the conditional indirect effect of student transition planning on the relationship between self-determination and life skills development is moderated by self-concept. We concluded that the fourth hypothesis was supported.

Discussion

The purpose of the present study was to describe the type of relationships, in terms of direct and conditional indirect effects, among self-determination, life skills development, self-concept, and student transition planning. The first goal of this study was to examine how student transition planning, as a mediator, had influenced the relationship between self-determination (defined as self-determined actions, skills, and attitudes), and life skills development. The second goal was to explore the psychological and social mechanisms through which self-concept, as a moderator, is a predictor of life skills development; the moderator role of self-concept was analyzed through the perspective of student transition planning as a mediator (moderated mediation).

The Mediating Role of Student Transition Planning

We attempted to examine the assumption that student transition planning has a conditional indirect effect on the relationship between self-determination and life skills development in intellectually disabled students. The results of assessing students' transition planning's mediating effect on a given relationship between self-determination components and life skills showed that student transition planning plays a mediating role in the relationship between the self-determination components and students' life skills. The evidence indicated the mediating role of student transition planning in this relationship is supported statistically by the data. Also, we

found that student transition planning has a significant impact on life skills development. Transition planning skills taught to students with disabilities in the specific period of pre-vocational education led to the improvement of self-determined actions, abilities, and attitudes as well as the optimization of life skills. The self-determined competencies formed under the influence of specific interventions during the transition stage positively affect the optimal development of students' life skills. To support our results, a study conducted by Lee et al. (2012) sustained the same statement, given the evidence that instruction to promote student involvement in educational planning can lead to enhanced transition knowledge and skills, these findings suggested that the benefit is reciprocal. By promoting student involvement in transition planning, educators can enhance self-determination, and by promoting self-determination educators can promote student involvement in their planning. Researchers have suggested that transition planning can have a positive impact on postschool outcomes (Shogren &Plotner, 2012; Test et al., 2009) and that families who are actively involved in transition planning report greater satisfaction with transition outcomes for their children (Shogren &Plotner, 2012; Neece et al., 2009). Best practices in transition planning emphasize student and family involvement, the development of an individualized transition plan focused on developing student skills linked with desired life outcomes, and coordination with adult service agencies (Shogren &Plotner, 2012; Alwell & Cobb, 2006; Test et al., 2006).

The Moderating Role of Self-Concept

In our study, we investigated the role of self-concept as a moderator on relationships among self-determination, student transition planning, and life skills development in students with mild and moderate intellectual disabilities. The emphasis on self-concept as a moderator was examined through direct and conditional indirect effects. Firstly, the results indicated the interaction between self-determination and self-concept had a significant effect on student transition planning. This data supported the assumption that self-concept had a moderating role in the relationship between self-determination and student transition planning. There were described three levels of the effects of self-determination at the values of self-concept as a moderator, the conditional effects ranging from higher to lower values. Secondly, the analyses of self-concept conditional indirect effects showed that the indirect effect of transition planning of life skills development is high at a low self-concept, reduced at the self-concept average, and further reduced at a higher self-concept level. The conditional indirect effect on the life skills development in the presence of self-concept (moderator) at the mean level is significant. Thirdly, the results indicated that conditional indirect effects of student transition planning within our model are moderated by self-concept, the value of the index of moderated mediation sustained this statement. Overall, based on the data, we sustained the assumption that self-concept has a moderating role in the relationship between self-determination and life skills, a relationship mediated in conditional terms by student transition planning. We did not find in the literature studies developed on the association of self-

determination, self-concept, and life skills. However, little research in this field has suggested that self-determination and self-concept positively affect factors associated rather with academic achievement for students with learning disabilities, and students with mild disabilities (Goldberg et al., 2003; Lackaye & Margalit, 2006). Zheng et al (2014) highlighted that the direct relationship among self-determination, self-concept, and academic achievement is not fully understood; there were significant correlations among self-determination, self-concept, and academic achievement, with self-determination being a potential predictor of academic achievement for students with learning disabilities.

Limitations and Future Research

This study has several limitations. The first limitation referred to the missing analysis of socio-demographic participants' characteristics, such as family prototype and socioeconomic status, household, and location settings. These groups of variables were not included in the current study and could be considered for multi-group effects analyses in future research. The second limitation is represented by sample characteristics. Our sample size was small and contained students with mild and moderate intellectual disabilities only. This study did not include and analyze students with developmental disorders, emotional and behavioral disorders, and autistic spectrum disorders. Additional research is needed with a larger sample to further examine the dynamism and patterns of the conditional direct, and indirect effects directly explored within moderated mediation models and a large spectrum of disabilities groups. Taking into consideration the findings of our study, we recommend designing future research centered on the role of self-concept components – social, physical, academic self-concept, and student transition planning in relationships between self-determination and quality of life in the Romanian contextual framework of intellectual disabilities.

Implications for Practice

For the educational field and practice, it is essential to include in the functional curriculum dedicated to students with intellectual disabilities, objectives and learning activities related to autonomy skills and behaviors, self-regulation actions, acting in a psychologically empowered manner, and self-realization attitudes. Applying educational strategies to improve self-determination skills and behaviors plays a vital role in carrying out the effect of school-based interventions. The emphasis placed on self-determination in research and practice highlights the ongoing need to support the implementation of evidence-based strategies to promote self-determination in schools and classrooms as a component of transition support (Shogren et al., 2018). With the shift in emphasis to college and career readiness for all students, the focus within schools should expand beyond academic preparation to include self-determination instruction and opportunities to practice self-determined behavior (Zheng et al, 2014).

As an implication for educational practice, we emphasized the necessity of evidence-based strategies implemented in educational settings that have an essential role in enhancing self-determination and student transition planning skills. Also, therapeutic activities and educational strategies to increase the self-confidence and improve the self-esteem of students with intellectual disabilities have an essential role in educational practice, and these interventions have a strong impact on the life skills development of students with mild and moderate intellectual disabilities. Research suggested the implementation of educational programs such as *Whose Future Is It Anyway?* (Lee et al., 2011), *Beyond High School* (Palmer et al., 2012), ME*! Curriculum* (Mazzotti et al., 2018) and *Self-Determined Learning Model of Instruction* (Shogren et al., 2018) to teach self-advocacy, self-awareness, self-regulation, and problem-solving skills in service of educational goals to youth with intellectual disabilities resulting in positive outcomes related to enhanced transitions skills. Overall, vocational, and educational research and practitioners can support students by implementing evidence-based self-determination instruction for students with intellectual disabilities to enhance their academic achievement and self-concept, life skills development, and transition planning for a high quality of life.

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The Attitudes of EFL Teachers in Kazakhstan towards Continuous Professional Development

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Article Info	Abstract
	This research looks into Kazakhstani EFL teachers' attitudes towards continuous professional development (CPD). It looks at both the beneficial and challenging aspects of their CPD involvement. The study analyzed the attitudes of nine EFL teachers who participated in continuous professional training within the last year. The study aimed to understand teachers' perceptions of their ability to self-control their learning, their needs, and their relatedness to colleagues and course instructors. The qualitative method was utilized in the study, which implied thematic analysis and the interpretation of the findings. Overall, the participants have a positive attitude toward CPD, but they have trouble accessing a wider variety of professional development activities that suit their interests and specific professional needs. The study also highlights how crucial it is to develop and establish policies and programs that foster professional development and deal with these issues. The results can direct the creation and implementation of CPD initiatives in Kazakhstan and other comparable settings.

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Introduction

The purpose of this research is to explore the attitudes of EFL (English as a Foreign Language) teachers in Kazakhstan towards continuous professional development (CPD). In addition to examining general opinions regarding CPD, the challenging and positive aspects of EFL teachers' participation in CPD are described in this article. The insights into the attitudes, needs, and expectations of EFL teachers represent important information that can be used to guide the creation and execution of CPD programs in Kazakhstan and other countries with comparable contexts.

Teachers uphold and expand their expertise through a lifetime learning and practice called continuing professional development. For teachers to stay informed about developments in the field and give their students the best education possible, they should be involved in ongoing professional development activities. There are many different ways to access CPD, including conferences, workshops, online learning, and official training programs. In addition, attending networking events, collaborating with professionals in education, and reading books and magazines authored by subject-matter experts are examples of informal CPD activities for teachers.

Regarding the context of the study, participation in professional development courses is a requirement for schoolteachers in Kazakhstan to be awarded a higher professional qualification (Yakavets, et al., 2022). To assist teachers in their professional growth, the government of Kazakhstan established the National Center for Teacher Professional Development. Teachers of English as a Foreign Language (EFL) also need to grow as professionals to meet the high standards of modern foreign language teaching.

Within secondary school education in Kazakhstan, children are encouraged to learn a foreign language. In the present day, English is the most widely taught foreign language in Kazakhstan. Moreover, at the secondary level, some subjects are studied in English in different schools throughout the country. School graduation exams, university entry requirements, and tertiary-level education demand knowledge of the foreign language at a sufficient level. Some students opt to apply for a university program abroad, which adds to the greater expectations of society for high-quality language teaching. Therefore, EFL teachers may need support and guidance on how to best meet the demands of their students. Continuous professional development programs may well serve such purposes.

Literature Review

Within the past few years, a significant body of research on teachers' perspectives on CPD has been undertaken worldwide. Notwithstanding, advanced countries were the locations under the investigation. Kazakhstan and

Central Asia still lack sufficient thorough analysis concerning Continuous Development among teachers, including teachers of foreign languages.

A recent study by Bouaissane and Mourchid (2022) explored Moroccan EFL teachers' views about CPD events. The irrelevance of the training content to the remaining problems was identified by the researchers. The authors recommended improving the quality of professional training by allowing attending teachers to express their needs and perspectives. The significance of expert teacher involvement in designing the content of the development program was highlighted as well. This would prompt more efficient CPD participation.

In contrast, an Indonesian study discovered a beneficial relationship between teachers' involvement in professional training and EFL students' achievements (Ayu & Ningsih, 2023). The participants said that their teaching abilities had improved as a result of the seminars and courses on crucial pedagogical problems. Therefore, it can be concluded that the content of professional training should correspond to the needs of teachers so that beneficial and positive experiences are provided.

Chernobay and Tashibayeva (2020) investigated the topic of teacher professional development in Russia and Kazakhstan. The authors highly recommend taking into account teachers' professional needs along with updating educational standards and content, especially when it comes to digital technology use and critical and creative thinking. According to their findings, enhancing teachers' abilities when working with students who have special education needs should be the primary objective. To remove obstacles to teacher development, resources such as opportunities for practice and financial incentives, need to be allocated. The research highlighted on the necessity of observing teachers' professional interests and requests at local, state, and education levels to guarantee coherent and enhanced educational activities.

A recent study conducted in Kazakhstan agreed with the necessity of using needs analysis (Ismagulova et al., 2023). It draws attention to the challenges secondary teachers have when putting together curricula and changing existing content. The findings emphasize the significance of evaluating teachers' expectations and interests to support efficient teaching and learning. The study also accentuates the need for inviting highly professional colleagues to assist less experienced teachers in gaining new knowledge in teaching foreign languages.

Thus, the review of the relevant recent studies revealed several aspects that contribute to teacher attitudes toward CPD:

- Correspondence to or incongruity of trainees' needs and expectations (at individual, school, region, and country levels)

- Provision or lack of support and guidance from school administration, course instructors, colleagues, and field experts

- Capability to voice opinions regarding the selection of types of CPD activities and course content

- The proficiency and expertise of the course instructors

- Impact on teaching skills and student performance

- Other external factors such as rewards, barriers, resources, professional environment, and regulations

- Internal factors such as motivation, values, and psychological needs

To systematize further analysis, such factors can be categorized into three major facets that determine one's attitudes. Since this research focuses on the experiences and feelings of a few participants, the detailed consideration of the positive attitudes and negative experiences was made possible. The following section provides the theoretical background for this investigation.

Theoretical Background

Considering the aforesaid, the self-determination theory (SDT) framework serves as the theoretical basis for analysis in this work (Ryan & Deci, 2017). According to the SDT, teachers' attitudes towards CPD depend on their interests and relevance to their needs (Yang, 2021). As the theory suggests, if teachers can control their learning, choose the activities pertinent to their needs and expectations, and are provided with sufficient support, they will be more motivated to participate in CPD (Figure 1).
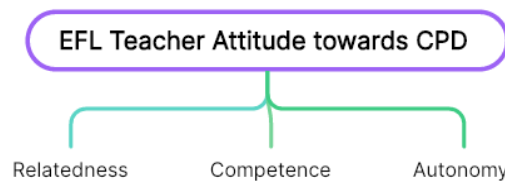
Figure 1. EFL Teacher Attitude towards CPD

Teachers' attitudes toward professional development are based on how their basic psychological needs are satisfied (Kao et al., 2020). The three needs are known as relatedness, competence, and autonomy (Ryan & Deci, 2017). Positive or negative attitudes, in turn, may impact teachers' decisions about their development activities (Chiu et al., 2021). *Relatedness* is the search for connection to other people. Teachers need to feel connected to their colleagues and field experts to collaborate, share best practices, and seek advice. *Competence* is a belief that one can meet challenges and undertakings. Teachers need to maintain assurance in their own capacity to grow as educators. This means having access to challenging but realistic, excellent CPD opportunities. It also implies the opportunity to reflect on and apply what they have learned in

their classrooms. The need for *autonomy* is satisfied when teachers feel they can make their own decisions regarding professional development. This implies that individuals ought to be free to select the CPD activities that most closely match their needs and areas of interest, as well as flexible enough to fit their participation around other commitments.

These three facets contribute to the willingness, readiness, and determination to partake in ongoing professional learning. SDT fits into assessing teacher attitudes toward CPD since it addresses teachers' fundamental needs that lead to particular attitude development. The three-faceted model used in the current research is based on the Self Determination Framework by Ryan and Deci (2017), see figure 2.
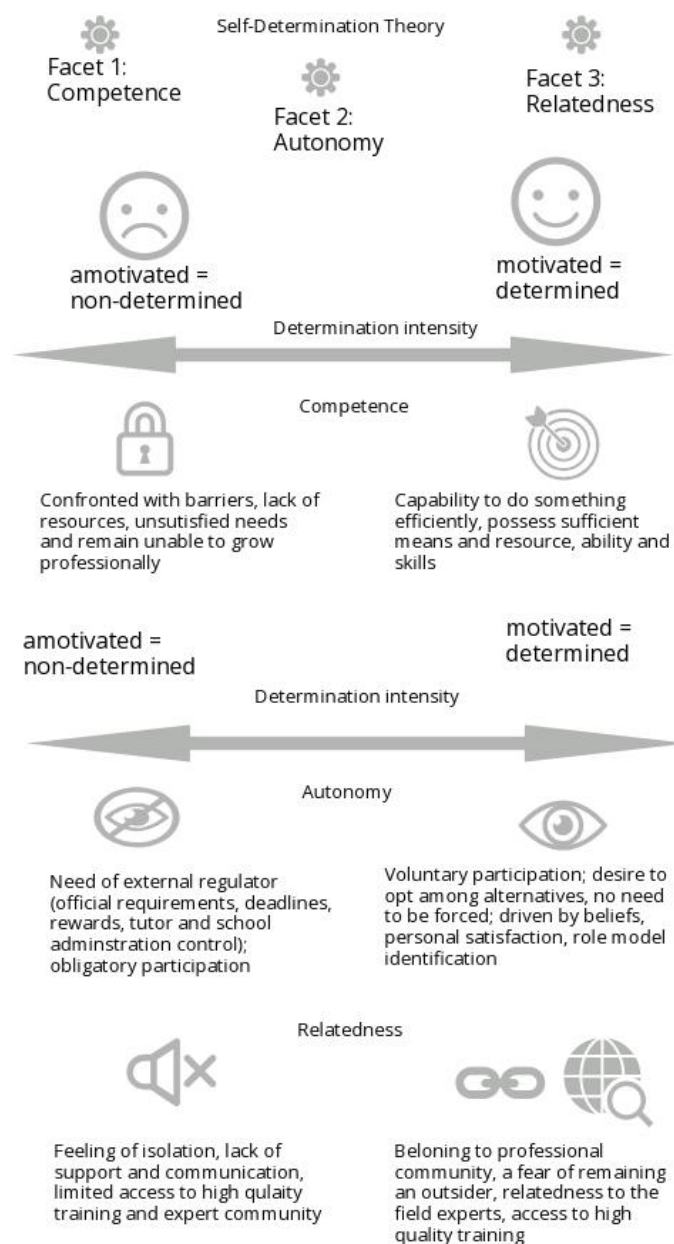

Figure 2. The Three-faceted Model of Teacher Self Determination

Method

Research Design

This research was conducted using a qualitative method. It is a case study of nine EFL teachers from the same suburban school in Kazakhstan, three male and six female teachers. They have all participated in a CPD course in the summer of 2023. Upon completion of the training, the participants were interviewed using semi-structured interviews. The following questions were included:

General background and opinion:

- Could you briefly describe your teaching experience and current responsibilities?

- What is your overall opinion about participating in CPD?

Autonomy:

- How much control do you have over choosing what professional development activities to participate in (e.g. online/offline mode, paid courses/MOOCs, formal/informal activities)?

- How much flexibility do you have when deciding how to complete your training?

- What kind of external regulation do you feel you need to successfully complete training?

Competence:

- How would you rate the quality of CPD training you have participated in?

- To what extent do CPD training help you improve the knowledge and skills you need at work?

- To what extent does the content of the CPD course reflect your current professional needs?

- What expectations do you have about the content and activities of CPD?

Relatedness:

- How can collaboration with colleagues help you develop professionally?

- What motivates or discourages you from participating in CPD?

The interviews were transcribed and then analyzed thematically. The common themes were identified and coded to gain comprehension of the teachers' attitudes toward CPD. The themes were categorized into challenges they face and supportive features to evaluate what contributes to teachers' positive or negative feelings about their ability to self-control their learning (correspondence to their needs and expectations), competence (motivation to improve their skills), and relatedness (support from peers, instructors, and school administration).

Results

Based on the data, teachers have largely favorable views about continuing professional development (CPD). Social recognition, qualification development, salary rises, and network growth were among the benefits

mentioned by the participants. However, some of the barriers impacted participants' autonomy. For example, the interviewees expressed a preference for flexibility in their CPD engagements. For instance, two teachers mentioned the advantages of informal activities, such as observing other colleagues' lessons. However, they felt challenged when had to demonstrate their lessons. Demo-lesson planning and purchasing materials for the lesson activities were a huge burden. In addition, anxiety due to discrepancies in student abilities and needs led to demotivation toward lesson demonstration practices.

When it comes to course attendance, the teachers expressed some interest in distance courses since their school is located in a suburban area and daily commuting to a training center would cause a serious barrier. Therefore, online courses could be a solution. However, distance training is mainly provided by private organizations, and the cost of such courses is often exorbitant, according to the interviewees. As for the free-of-charge MOOCs (massive open online courses), only one of the participants used them actively. Two teachers reported being aware of such opportunities but were not determined to complete MOOCs due to a lack of external regulations. According to one of the respondents, massive online courses offer limited training. Some teachers recommended that such courses should be organized by local training centers to suit particular contexts and circumstances. Teachers need to be able to use the acquired knowledge in a real classroom setting. Therefore, high self-determination depends on participants' beliefs that the professional course will apply to the local context and their actual needs. Access to training activities should be more flexible as well. A wider variety of course content, access to video-recorded sample lessons, workshops on activities for learners with special education needs, and training organized by in-service expert teachers were some of the recommendations. Another suggestion was a series of short seminars. Therefore, such activities can be used to promote teachers' autonomy and motivation toward further professional growth.

Regarding the teachers' need to improve their competence, the following information was gathered: the participants have a positive attitude toward expanding their knowledge and abilities. All the participants believe professional training should help them become effective and resourceful teachers equipped with practical tools to adapt their teaching methods and approaches. However, there are constraints, such as the obligation to follow the pace, content, and lesson organization predisposed by the curriculum and state regulations:

"I would be more than willing to put in more work in the classroom. I can tell from experience that something needs to be modified, or even entirely omitted to better meet the needs of students. Nonetheless, the time allotted restricts the choices and actions of teachers. So, sometimes it appears to be useless to learn something new."

Almost half of the participants think the initiatives that are successful abroad may not always be suitable for Kazakhstani settings. They assume that professional development programs typically do not include contextual factors that influence teaching environments. It means that copying the models employed in other circumstances can be ineffective unless adaptations are made. One of the participants with six years of teaching experience clarified:

"In my class of 11 final year school students, only three of them are active, motivated English learners. They are eager to implement challenging and creative activities, communicate in English, and learn to be independent learners. The others prefer to listen to the teacher explain a new theme in their first language and simply do some exercises. The reason behind that can be the students' focus on other subjects of specialization. Therefore, I am unable to fully apply modern, innovative methods in my practice."

As regards the sense of relatedness, the teachers value the opportunity to access training since this is beneficial for their growth. The teachers in the country are periodically invited to participate in professional development courses, which the participants consider an excellent way to build a professional network:

"School teachers in my town tend to be supportive of each other and ready to share their materials and knowledge. The more colleagues I meet, the more support I can receive».

"Teachers also need to learn. Students can learn from each other, and I learn a lot from my colleagues. Therefore, I believe professional development provides us with many opportunities, although we need to sacrifice much time and energy. That is worthy».

"Most seminars I attended were delivered by qualified educators. Although I am often aware of many things presented at the seminars, I enjoy the change in routine and attending events with other teachers. I can still review what I might have forgotten".

To sum up the findings, the teachers have encountered significant obstacles although they all find professional development activities beneficial. Among the challenges most frequently mentioned were a lack of time, financial burden, and insufficient support from the school. Moreover, they need more opportunities for practice and the provision of more detailed feedback from the course instructor. Time restrictions were also identified as a barrier by the majority of the interviewees. Having to commute to a training center, dealing with personal affairs, and still implementing schoolwork were cited as very exhausting. Furthermore, the participants find it challenging to access CPD courses that suit their specific needs, such as implementing the assessment or

dealing with students with special educational needs. A novice teacher who recently started working at the school expressed her anxiety about a lack of experience in document preparation.

Discussion

The analysis of barriers has demonstrated that teachers' motivation for professional development can be stimulated by drawing on aspects of SDT theory (Purwanti & Octavia, 2022). To begin, EFL teachers should be financially supported by the government. Although teachers are entitled to salary supplements for achievement and career development, the cost of quality professional courses can be very high. The Kazakhstani Ministry of Education has been supporting teachers over the past few years. Yet, the need for various forms of continuing professional development programs is far from being met. This is evident from the findings of this study. Therefore, the content of educational programs should be expanded according to the specific educational requests of language learners as well as teachers' professional needs. In other words, specific, learning-by-doing programs should be promoted (Liu, 2022). The CDP Framework developed by the British Council (2015) identifies twelve elements of teaching practices. The elements include managing lessons and resources, planning, promoting 21st-century skills, ICT integration, practicing inclusive education, and other aspects. Accordingly, EFL teachers may need support in any of the diagnosed areas. Moreover, online professional courses have the potential to solve the issues of time limits or geographical locations (Morrison-Smith & Ruiz, 2020). MOOCs could serve as an alternative to costly professional development courses.

The suggested measures bear the character of external factors that influence intrinsic motivation in terms of SDT theory. The effectiveness of intrinsic motivation in the educational context has been proven by empirical studies (Niemiec & Ryan, 2009). Nonetheless, teachers' interest should be stimulated not only by government rewards but also by school and teacher initiatives. In other words, educational institutions should guide teachers in planning for career achievements and provide methodological recommendations and resources.

The current study revealed that teachers are likely to possess a natural need to be part of a community, surrounded by people with the same interests. Consequently, by stimulating this need positive attitudes toward continuous development can be supported. This will help them to share their experiences, seek help, and discuss their teaching practices. Regarding the availability of quality training and the reluctance to interrupt professional employment, the recent pandemic has opened up the possibilities of online approaches to improving knowledge and skills (OECD, 2020). Nowadays, online and face-to-face forms of continuing professional education are available and language teachers should be encouraged to practice lifelong learning. Teachers who adhere to this philosophy are more likely to be intrinsically motivated to fulfill their potential in

education. All of the above will help to counteract the weakening of teachers' motivation for professional development.

Recommendations

This study examined the barriers that EFL teachers face when participating in continuous professional development activities. In addition, the investigation uncovered some stimulating practices that could promote teachers' determination toward active, lifelong learning. Both an in-depth analysis of the recently published literature and evidence from the lives and experiences of nine EFL teachers from Kazakhstan are provided.

Although this study was conducted in a particular setting with a small number of participants, it presents a valuable contribution. The experiences and attitudes of EFL teachers from a suburban school in Kazakhstan were deeply explored to obtain insights into what needs to be improved. The following are some recommendations derived from the analysis:

- Stimulate the three facets of teacher determination to active professional growth (competence, autonomy, and relatedness)

Competence

- Provide support on subject-related aspects as well as on teaching methods. Among the needs can be language proficiency, methodology, document administration for novice teachers, support during curriculum reorganization, ICT skills, 21st-century skills, planning for students with special educational needs, etc.
- Improve the quality of training. Since some concern is raised regarding the quality of local programs and applicability of modern, trendy teaching approaches within the existing actuality and demands of the local community, the training could be organized by local training centers in co-operation with well-known international educational institutions.
- Inform about the multiple existing educational resources.
- Equip teachers with tools that can assist in their work (ICT tools, applications, programs, etc.).

Ensure the theoretical knowledge is practiced within the development programs followed by feedback and recommendations.

Autonomy

- Develop and put into action CPD programs that are relevant to teachers' needs and areas of interest.
- Make professional development opportunities more accessible, free of charge, or low-priced for teachers.
- Allocate time and resources needed for teachers to participate in CPD.

- Stimulate teacher motivation by addressing their needs and providing a variety of course forms and content.
- Provide alternative opportunities for professional development, such as MOOCs and voluntary participation in different activities.
- Ensure rewards and external regulation since some individuals may need some control and direction.

Relatedness

- Ensure in-service expert teacher participation in workshops or seminars so that they share best practices and knowledge.
- Provide opportunities to build a professional network and cooperate with colleagues.
- Assist in achieving professional goals.

In addition, the researchers recommend further investigation of this topic including a larger population from different regions of Kazakhstan. This will allow testing the applicability of these findings in other settings. A deeper analysis should be conducted on MOOCs as an opportunity for teachers' continuous professional development.

Conclusion

The research questions explored the EFL teachers' attitudes towards continuous professional development in the context of suburban secondary school in Kazakhstan. The results indicate that despite difficulties experienced by the teachers, they view professional development positively. For continuous development activities to be more beneficial and engaging, it is necessary to assess the needs and expectations of participants.

Some CPD opportunities are available nowadays due to government education policies in Kazakhstan and a growing demand for higher professionalism in EFL teaching. Social rewards, qualification promotion, and belonging to the professional community act as intrinsic motivations to participate in CPD. Regarding the availability of peer support, they feel satisfied with opportunities for cooperation. However, they would like more feedback and assistance from course instructors. Overall, teachers view the content and activities in CPD workshops positively. However, they want to access a wider variety of topics and areas for development. For instance, some teachers indicated their interest in improving their language proficiency.

In summary, initial pedagogical education and training constitute the first step to professional growth. The development may not be feasible unless teachers feel determined to continuously improve their skills and knowledge. Therefore, educational policymakers and stakeholders should further encourage and assist educators in learning and applying the best practices.

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Stressors and Coping Mechanism Strategies of Islamic Boarding School Students

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Article Info	Abstract
	The study aimed to explore how students at an Islamic boarding school in Tangerang, Indonesia perceived various pressures and the strategies they employed to deal with them. It included the sample of 150 students from the first, second, and third grades enrolled in the school. The data were analyzed using Lazarus and Folkman's (1984) theory to identify recurring themes related to students' stress-coping strategies. The findings indicated that the majority of stressors stemmed from non-academic sources, encompassing issues such as interpersonal relationships, environmental factors, and health-related concerns. Interestingly, despite a substantial female representation in the sample, exceeding 60% of the total participants, a significant proportion of students employed problem-based coping strategies to address these stressors. The study suggests further exploration of coping strategies within the framework of human development theories and their potential contributions to future educational interventions, policies, and practices.

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Introduction

In the human life span, adolescence serves as a transitional stage between childhood and adulthood. This period involves a range of biological, cognitive, and socioemotional changes. Dealing with biological change, puberty becomes the main difference among other periods which is characterized by a growth surge, hormonal changes, and sexual development. Meanwhile, there is an increase in abstract, idealistic, and logical thinking which are among the cognitive alterations. Then, the socioemotional changes that adolescents experience which include a search for independence, disagreement with parents, and a desire to spend more time with peers. (Santrock, 2016, p. 418).

Alongside the changes mentioned above, adolescence is also the transition from primary school to secondary school. Whyte et al., (2008) claimed that this transition is the most challenging period for students, especially for those who leave home to enter boarding school environments (p. 2). It must be admitted that students face several issues by having such a new life, particularly being far away from their family. They do not only have to adjust to the new level of academic performance but also need to adapt to a different environment. In fact, Leonard et al., (2015, p.1) states that adolescents often experience a variety of common, long-term stressors, such as academic and social obligations, which may impact their learning and well-being. Therefore, adolescent students who study at boarding schools mostly experience double stressors specifically with adjustment to unfamiliar cultural norms, disparities in educational systems, loneliness, homesickness, and the loss of existing support.

Many parents in Indonesia consider Islamic boarding schools as the best place for their children to learn especially in shaping their attitudes and strengthening their religious values. The report from the Directorate of Diniyah Education and Islamic Boarding Schools of the Ministry of Religion noted that there were 4.37 million students spread throughout Indonesia in the 2020/2021 academic year. The students are spread over 30,494 Islamic boarding schools. Specifically, with the amount of increasingly diverse problems that occur among adolescents, parents are more convinced to put their children in Islamic boarding schools. The Indonesian Child Protection Commission (KPAI) noted that during the 2016-2020 period, there were 655 children who had to face the law for being perpetrators of violence. In detail, 506 children committed physical violence and 149 children committed psychological violence (Pahlevi, 2022).

Given the facts above, plenty of approaches are needed to improve Islamic boarding school students' managing their stress. Coping strategies are instrumental in how adolescents contend with stress and navigate the challenges of this developmental period (Lazarus & Folkman, 1984). Although research on general adolescent populations has identified diverse coping strategies, such as problem-focused, and emotion-focused

approaches, and cognitive appraisal (Compas et al., 2001), further studies are needed to specifically examine the coping strategies employed by Islamic boarding school students in response to their distinct stressors.

Literature Review

The period of adolescence is a crucial phase of development characterized by notable alterations in physiological, psychological, and social domains. The alterations frequently result in heightened levels of stress, which can have negative effects on an individual's mental health and overall state of being (Compas et al., 2001). The existing literature has primarily concentrated on stress among adolescents. However, there has been a relative lack of emphasis on the distinct stressors encountered by boarding school adolescents and their corresponding coping strategies, particularly within diverse cultural settings.

The significance of comprehending how adolescents manage stress and the function of coping in averting mental health issues is underscored in a thorough examination of coping techniques during childhood and adolescence (Compas et al., 2001). Grant et al. (2004) identified that various stressors, such as academic pressure, social stress, and family-related stress, are associated with the emergence of psychopathology in children and adolescents. This highlighted the importance of investigating the moderating and mediating influences of these stressors.

Suldo et al. (2014) conducted a study to investigate the correlation between perceived stress and mental health outcomes in adolescents. The results of the study indicated that elevated levels of stress were significantly linked to heightened internalizing symptoms, including anxiety and depression. This research offered valuable insight into the stressors encountered by adolescents in a general context. However, it highlighted the necessity for additional inquiry into the distinct stressors confronted by adolescents enrolled in boarding schools.

Rueger et al. (2016) conducted a study to investigate the impact of social support on stress and mental health among adolescents. The study revealed that constructive associations with peers and adults, including teachers and parents, functioned as a safeguard against the adverse effects of stress. The proposition implied that the cultivation of amicable relationships within the boarding school milieu could potentially alleviate the stress encountered by the students.

Apart from the stressors previously cited, boarding school adolescents may encounter difficulties associated with homesickness and the lack of parental support (Thurber & Walton, 2012). The experience of homesickness among boarding school adolescents may result in negative emotional states such as loneliness, sadness, and anxiety, potentially intensifying the stress levels of these individuals. While certain adolescents may adapt to

their novel surroundings with relative ease, others may encounter difficulties coping with prolonged separation from their kin. This underscores the significance of devising tactics aimed at bolstering the emotional welfare of students in boarding school environments.

The correlation between stress experienced during adolescence and disruptions in sleep patterns has also been established in literature. Such disturbances in sleep have the potential to exacerbate the individual's overall state of wellness (Roberts, Roberts, & Duong, 2009). Students who attend boarding schools may encounter disturbances in their sleep patterns as a result of alterations in their living conditions, heightened academic obligations, or social stressors. Facilitating access to resources that foster healthy sleep habits could be a crucial component in bolstering the mental well-being and stress-coping abilities of boarding school students.

Various studies demonstrated the role of physical activity in alleviating stress among adolescents, as noted by Gerber et al. (2014). Consistent participation in physical activity has been shown to have a positive impact on an individual's stress levels, emotional state, and overall sense of health and happiness. Boarding schools could potentially derive advantages from the implementation of well-structured physical activity programs or by offering avenues for students to participate in sports or other forms of recreational activities, which could facilitate the reduction of stress. The potential impact of the digital age on adolescent stress warrants consideration. The study conducted by Woods and Scott (2016) suggested that the frequent exposure of young individuals to social media and the incessant influx of information may potentially lead to heightened levels of stress. Boarding school students may face the challenge of balancing their academic and social lives while also maintaining connections with friends and family members. Exploring the impact of digital technology on the management of stress among adolescents is a crucial area of inquiry for future research and the development of interventions.

Within the realm of coping strategies, scholars posited diverse theoretical frameworks to elucidate the mechanisms by which individuals navigate and mitigate stress. Lazarus and Folkman (1984) proposed two prominent coping strategies, namely problem-focused and emotion-focused coping; furthermore, the authors proposed the cognitive appraisal theory as a theoretical construct to elucidate the cognitive processes involved in the perception and response to stressors by individuals. The coping strategy of problem-focused coping entails confronting the stressor head-on by actively seeking remedies or implementing measures to modify the circumstances (Lazarus & Folkman, 1984). This strategy is commonly utilized when individuals perceive that they possess agency over the stressor and can undertake measures to modify or eradicate it. Problem-focused coping strategies encompass problem-solving, time management, and seeking information or advice, among others. Research indicated that the utilization of problem-focused coping mechanisms could be efficacious in

the management of stress and is frequently linked with improved mental health outcomes (Penley, Tomaka, & Wiebe, 2002).

In contrast, emotion-focused coping pertains to the regulation of the emotional reaction to the stressor, as opposed to the stressor itself, as posited by Lazarus and Folkman (1984). Individuals may resort to emotion-focused strategies in situations where they perceive the stressor to be outside their control or when they require emotional regulation to effectively cope with the stressor. Emotion-focused coping strategies encompass seeking emotional support, engaging in distraction activities, and utilizing relaxation techniques. According to Garnefski, Kraaij, and Spinhoven's (2001) findings, emotion-focused coping could be advantageous in certain circumstances, but an overreliance on this strategy may result in unfavourable mental health consequences.

According to the cognitive appraisal theory, the emotional and behavioural reactions of individuals towards stressors are influenced by their cognitive assessments or appraisals of the situation (Lazarus & Folkman, 1984). The cognitive appraisal process comprises of two stages: primary appraisal, wherein individuals evaluate the stressor's significance and potential impact, and secondary appraisal, which involves assessing one's ability to cope with the stressor. According to Folkman and Lazarus (1985), the perception of a stressor as a threat, challenge, or harm/loss is determined by the interplay between primary and secondary appraisals, which subsequently affects the coping mechanisms employed.

Comprehending the distinctive stressors encountered by pupils in boarding schools and devising focused interventions to bolster their psychological welfare and overall wellness is of paramount importance. The existing body of literature indicated that various elements can be attributed to the stress experienced by adolescents. These factors include but are not limited to academic and social stressors, feelings of homesickness, disruptions in sleep patterns, and the influence of digital technology. Through identification and mitigation of these stress-inducing factors, educational institutions and scholars can collaborate to foster the fortitude and welfare of teenage students residing in boarding schools.

The scholarly discourse surrounding coping strategies emphasized the significance of problem-focused and emotion-focused coping, in addition to cognitive appraisal, in comprehending how individuals cope with stress. Additional investigation is required to examine the utilization of these coping mechanisms by adolescents, specifically those who attend boarding schools, in order to effectively manage the distinctive stressors that they encounter. Moreover, previous studies on stress and coping among students primarily focused on Western populations, which limits the generalizability of the results to other cultural settings, such as Indonesia (Compas et al., 2001; Melnick & Meister, 2008). It is imperative to conduct further research to investigate the

relationships between cultural factors, stress, and coping mechanisms in diverse cultural environments, given the cultural heterogeneity of students in boarding schools.

The existing body of literature highlighted the importance of understanding stress and coping mechanisms among students, specifically those who are enrolled in boarding schools. The research gaps in this area of study concern the distinct stressors that are experienced by students in boarding schools, the coping mechanisms that they employ, and the potential impact of cultural factors on these dynamics. The identification and resolution of these gaps can provide significant contributions to the improvement of the welfare and achievement of boarding school students. This can be beneficial for educators, parents, and policymakers in developing interventions and support systems. (Redman-MacLaren, 2017).

Consequently, in order to optimize the welfare and achievement of adolescents in boarding schools, it is imperative to comprehend the distinct stressors they encounter and establish specialized interventions to bolster their psychological well-being. This calls for additional investigation into the efficacy of diverse coping mechanisms in addressing unique stressors and examining the influence of cultural elements on the encounter with stress and the adoption of coping mechanisms among boarding school adolescents across diverse cultural settings. The identification and exploration of these research voids can provide significant contributions to the knowledge base of educators, parents, and policymakers. This, in turn, can inform educational practices and policies aimed at fostering resilience and well-being among adolescents in boarding schools.

Therefore, this study aims to assess the perception of stress among Islamic boarding school students and their coping strategies by attempting to answer the following research questions:

1. What pressures do Islamic boarding school students face?
2. What are the strategies that the students use to cope with those pressures?

Method

This study employed descriptive quantitative research. A descriptive quantitative design is one that collects quantitative data at one point in time (Roni et al, 2020). In more detail, the focus of this design was to explore the pressures faced by Islamic boarding school students which were divided into two categories: academic and non-academic stressors. After that, the researchers also examined the strategies that students used to cope with the pressures. The strategies were classified into the three theories of copying stress by Lazarus & Folkman (1984), namely, problem-focused, emotion-focused coping, and cognitive appraisal. This research approach provided an in-depth understanding of the participant's experiences and perspectives in their natural setting (Sandelowski, 2000).

Population and Sample

In statistics and other areas of mathematics, a population is a complete collection of entities or items that have at least one characteristic in common (Rouse, 2015). For this study, a random sampling method was used, ensuring an unbiased representation of the target population (Levy & Lemeshow, 2013). There were 150 participants from one of the Islamic boarding schools in Tangerang who participated for the voluntarily. They were students from the first, second, and third graders of junior high level. The research participants included both males and females to ensure a diverse and rich data set. The final sample size was determined based on data saturation, where no new insights emerged from the data.

Research Instrument

The primary instrument in this research was a questionnaire. The questionnaire contained two open-ended questions which investigated students' stress and their coping strategies. As a starting point, the researchers also put questions regarding students' personal information, such as gender, and grades in the questionnaire. The questionnaire was constructed in the participants' preferred language i.e., Bahasa Indonesia.

Data Collection

The data collection primarily involved online questionnaires through Google Forms. It consisted of open-ended questions and prompts related to the research questions, encouraging participants to share their experiences, feelings, and perspectives. To make sure that the questionnaires were easy to be understood by the students, the researchers did a pilot study on several Islamic boarding school students. As Hartono (2010) stated pilot tests are used to test the effectiveness of survey instruments (questionnaires) as a means of communication between researchers and respondents.

Data Analysis

The data collected from the open-ended questionnaire were analyzed using a thematic analysis approach. Thematic analysis was employed to analyze the data, following the six-step process proposed by Braun and Clarke (2006). This method involves familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. The iterative process allowed for the identification of patterns, themes, and categories related to the research questions. To ensure trustworthiness and rigor, various strategies, such as member checking and reflexivity, were implemented throughout the study.

The chosen methodological approach, coupled with a rigorous data collection and analysis process, aimed to provide valuable insights into the pressures experienced by boarding school students and the coping strategies they utilize. The findings from this study can contribute to a better understanding of the unique challenges faced as well as common coping strategies used by this population, and also inform future interventions, policies, and practices in the educational context.

Results

The research findings are arranged based on the research questions which consist of general information about the students, and two subsections of open-ended questions. There are three tables depicted in the findings, the first describes students' characteristics, the second explains the pressures of boarding school students, and the last is about how the students cope with stressors.

Table 1. Students' Characteristics

Characteristic	F	%
Gender		
Male	57	38
Female	98	62
Total	150	100
Grade		
1st	85	56.7
2nd	29	19.3
3rd	36	24
Total	150	100

Table 1 illustrates the proportion of students' characteristics, including gender and grade that were involved in this study. We can see that more than half of the participants were female, exceeding 60 per cent of the total sample (98 students). While males reach almost 40 per cent of the sample students which is 57 students. In addition, the first-grade students dominated in volunteering for this research, they almost reach 60 per cent of the total sample.

Table 2. Pressure Frequency Distribution

Stressor	F	%
Academic	54	36
Non-academic	79	52.7
No pressures	17	11.3
Total	150	100

As it is presented in table II, most of the common stressors faced by the students were related to non-academic matters which placed just over half of the total response (52.7 %). There was nearly a third of the total response considered academic issues as their major stressor, 36 % accordingly.

Table 3. Coping Mechanism Frequency Distribution

Coping Mechanism	F	%
Problem Focused	90	60
Emotion Focused	39	26
Cognitive Appraisal	15	10
No Action	6	4
Total	150	100

According to Table III, over half of the students used the problem-focus approach as their coping strategy, reaching 60%. While students who used emotional-focus strategies touched roughly one-quarter of the total sample, which was 26%. The cognitive appraisal approach got a small portion of the total sample, 10%. The rest are tiny students who do not have any coping mechanism which was 4%.

Discussion

The study sought to understand the stressors experienced by students in Islamic boarding schools and the coping mechanisms they use to handle stressors. As indicated by the research questions posed in this study, the study aimed to concentrate on the stressors confronting Islamic boarding school students and the coping strategies they employ to confront them.

Pressures Faced by Islamic Boarding School Students

Table 2 demonstrated that most of the school students (52.7%) acknowledged dealing with non-academic stressors. The types of answers that showed non-academic categories varied starting from the relationship matters, the environment, and the health issues. While 36% noted that their main pressure came from their academic stressors. The problems were also ranging from the teaching materials, teachers' performance, and the abundant work that they have to finish. These results line up with the findings of Grant et al (2004), who found that various types of stresses, such as academic stressors, social pressure and familial-related stresses, are connected to the appearance of psychological issues in adolescents. Furthermore, the findings of this investigation match up with those of Thurber & Walton (2012). They pointed out the struggles resulting from homesickness and the lack of guidance from parents faced by students in boarding schools. Interestingly, the

findings also showed that there were small portions that believe they did not have any stressors living and learning in a boarding school, reaching just over 10 % of the total sample.

Coping Strategies Employed by Islamic Boarding School Students

Table 3 outlined the coping mechanisms used by the students to deal with the pressures they faced. Around 60% of students said they used problem-focused strategies for dealing with pressures, while 26% chose emotion-focused coping strategies. 10% of the participants reported using cognitive appraisal as a coping strategy, and only 4% reported did not report any coping mechanisms to deal with the pressures. These results fit in line with the idea put forward by Lazarus and Folkman (1984) - that people use problem-focused and emotion-focused coping as primary coping strategies, along with cognitive appraisal as a critical component for dealing with different stressors.

Moreover, these findings are congruent with those of Penley, Tomaka, & Wiebe (2002), who determined that problem-focused coping can be useful for coping with stress and often results in improved mental well-being. In brief, this study reveals the special difficulties Islamic boarding school students encounter, as well as the tactics they use to address them. Notably, 26% of the students employed emotion-focused coping approaches. This suggests that some students may consider these pressures to be beyond their control---a conclusion affirmed by Lazarus and Folkman (1984).

The findings demonstrated the necessity of crafting specific interventions and aid systems to aid students in coping with their stress levels and improving their overall health. Future investigations could investigate how cultural backgrounds influence the mental pressures adolescents experience and the ways they manage them, as well as the consequences of digital technology on teenage stress management, as suggested by Woods and Scott (2016).

Implications
Practical Implications

This research has some legitimate uses that can be put into practice by teachers, parents, and government officials. Since a noticeable percentage of students deal with stressors like loneliness and social stress, it is vital to have coping strategies in place to assist these adolescents.

In order to create a supportive atmosphere for boarders, an intervention which could relieve homesickness and a sense of isolation would be to put in place mentorship programs (Thurber & Walton, 2012). This would involve those who are older - be it students or faculty members - offering guidance, support and friendship to

new entrants. In doing so, it would enable them to become more settled and acclimatize to the Islamic boarding school setting. Schools could also consider providing regular chances for students to communicate with their families, such as planned video calls or visits for families to attend, to keep and foster family connections (Rueger et al., 2016).

Moreover, to tackle social tension, schools could bring in extracurricular activities that would foster social interaction and the building of friendships among students, for example, clubs, athletics teams, or groups of shared interests (Gerber et al., 2014). In addition, schools could organize workshops for students to handle disagreements and enhance communication, so they are better able to develop healthier relationships with their classmates.

Taking into account the effect of digital tools on student anxiety as outlined by Woods & Scott (2016), courses in digital education and responsible social media use could be incorporated into school curricula. This could aid students in striking an equilibrium between virtual communication and tangible personal connections, promoting a more positive relationship with digital technology.

Theoretical Implications

This research added to the current body of knowledge on stress and coping mechanisms among Islamic boarding school students. Through scrutinizing both academic and non-academic sources of stress and the strategies utilized by these learners, this work broadens on the ideas of Lazarus and Folkman (1984) providing a better comprehension of how Islamic boarding school students tackle the particular issues they confront.

The results of the study support the theoretical framework proposed by Lazarus and Folkman (1984), primarily the predominance of problem-focused and emotion-focused coping strategies among Islamic boarding school students. The high percentage of students employing problem-focused coping strategies aligns with the findings of Penley, Tomaka & Wiebe (2002), who associated problem-focused coping with improved mental health.

Moreover, this study emphasizes the need to take into account cultural factors when researching the stress and coping strategies of Islamic boarding school students. Compas et al. (2001) and Melnick & Meister (2008) largely focused on Western populations which limits the extent to which their findings can be applied across different cultures. By analyzing stress and coping mechanisms among students within the context of the Islamic boarding school in Tangerang, this study provides valuable insights into the experiences of Islamic boarding school students in diverse cultural environments, paving the way for further research in this area.

Limitations

There are limitations and shortcomings in this research about coping with stress in the world of education. An important limitation is the chance of partiality in the sample, considering that the individuals were chosen from one specific Islamic boarding school in Tangerang, which probably may not be indicative of a larger population of students living in Islamic boarding schools (Bryman, 2016). This precise setting may impede the generalizability of the results to other Islamic boarding schools with varying cultures, religions, or regions.

Additionally, the use of self-reported data introduces the possibility of response bias, such as social desirability bias or recall bias (Podsakoff et al., 2003). There is also the possibility that students may give responses they think are most preferable instead of accurately portraying their real-life scenarios or they could have difficulty remembering past events or emotions. The possible repercussions of this could be an uncertain reliability of results and an impediment to the research's ability to make strong conclusions regarding the nature and types of pressures and strategies among students residing in an Islamic boarding school.

Conclusion

The study was conducted on students at the Junior High School level at an Islamic boarding school in Tangerang consisting of male and female students. It revealed that the pressures and problems which are most often faced by students are the problems related to non-academic rather than problems in the academic field. This study used the theory of coping stress by Lazarus and Folkman (1984), namely problem-focused coping, emotion-focused coping, and cognitive appraisal. Among the three coping strategies, the researchers found that problem-focused coping was the coping strategy which is mostly used by students as a form of solving problems and pressures by 60%. Furthermore, 26% used emotion-focused coping, and 10% used cognitive appraisal. Meanwhile, as many as 4% of the total said they did not have any pressure so there was no coping strategy. A quantitative descriptive research design was used for this study. The data were collected online via google form documents, consisting of a questionnaire and open-ended questions. It was found that even though a big portion of the participant was female exceeding 60% percent of the total sample, a large proportion used problem-based strategies to cope with the pressures.

Recommendations

There are several suggestions for future research that can build upon the findings of this study. Firstly, longitudinal studies can be conducted to try and determine the causes of the observed patterns in stressors and coping mechanisms among Islamic boarding school students. This investigation could help pinpoint any risks

that bring about heightened stress levels and develop specific actions to address these stressors. Additionally, experiment designs could be conducted to see how well different coping strategies work for different sources of stress, with the aim of finding the most successful coping mechanisms for different situations. Secondly, further research could be conducted on the development of coping skills in adolescents, particularly those in Islamic boarding school systems. Such studies could explore the effectiveness of different approaches, such as mindfulness techniques or cognitive-behavioural therapy, to increase coping skills and reduce stress levels.

Additionally, further research could investigate the part of social support networks in the progress of coping mechanisms among Islamic boarding school students. Lastly, it is noteworthy that the amount of research on stress and coping mechanisms among Islamic boarding school students is confined, particularly in non-western societies. Consequently, additional research must be conducted in order to take into account the diversity of culture among Islamic boarding school students and assess how culture affects stress and coping mechanisms. Investigations of this kind could help create interventions and assistance that are sensitive to different cultures in order to raise the standards of living and academic performance of Islamic boarding school students around the world.

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An Analysis of the 5th Grade Social Sciences Questions in the Non-Paid Boarding Scholarship Exam According to Value Classification

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Article Info	Abstract
	In this study, it was aimed to analyze the 5th grade social studies test items of the Ministry of National Education Non-Paid Boarding Scholarship Examination (PYBS) held between 2018-2023 according to the value classification by using the document analysis method. Within the scope of the research, 100 social studies test items asked at the 5th grade level in PYBS were analyzed by taking a 5-year section between 2018-2023. For the classification of the items, it was determined that the national and universal values within the purpose of the study were present in the test items. Accordingly, 33 of the 100 items included items with national and universal values (33%). Of these items, 22 were universal values (66%) and 11 were national values (33%). It was observed that national and universal values were not homogeneously distributed while preparing exam questions in central exams such as PYBS, whose results enable disadvantaged groups to receive a more equitable education, and that the items related to value education were homogeneously distributed in the test items according to the current social studies course curriculum. In the future PBYS exams, studies can be conducted to increase the items that include national values.

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Introduction

It is seen that some researchers prioritize social and individual values, while others prioritize individual values. Classification will be useful for values, like many abstract phenomena. In his classification, the German philosopher Scheler divided the values he compared comparatively into simple and sacred values (Effert, 2015). In 1928, Spranger stated that theoretical, aesthetic, political, social and religious values would have an important role in the personality development of individuals (Daci, 2013; Parlak, 2011). Hessen, on the other hand, grouped them as sensory and spiritual values. Rokeach grouped 36 values as objective and instrumental values (Avcıoğlu, 2011; Daci, 2013; Fırat, 2007; Türkyılmaz, 2012).

Schwartz (1992) examined the values of people with basic dimensions with the Rokeach values list in 1973 and made a study on the fact that these values consist of 10 value types. Accordingly, he formed value groups with 10 value types. Schwartz (1992) classified value grouping according to "power, achievement, hedonism, stimulation, self-direction, universality, benevolence, traditionalism, conformity, security" (Demirutku & Sumer, 2010). He divided these values into three groups: conservatism, self-transcendence and self-improvement-openness to change. There are conformity and tradition value types in the main group of conservatism. Examples of these are orientations such as adherence to culture and respect. In the second group, self-transcendence, there are universalism and benevolence value types. The universalism value type is characterized by tolerance and concern for the well-being of nature, while the benevolence value type is characterized by sensitivity to kindness. The third main group is divided into two as self-improvement and openness to innovation.

Openness to innovation is divided into power achievement value types, while self-improvement is divided into stimulation and self-orientation value types. The hedonism value type is the common value type of these two main groups (Biçer, 2013; Daci, 2013: Fırat, 2007). Güngör (1998) defines values as "moral, aesthetic, theoretical, religious, political, economic and social values". According to Türkkahraman (2014), intrinsic values are values based on knowledge, transcendent values are feelings based on faith, and normative values are values based on our relationships. Fellsches (2009) categorizes values as "content (aesthetic, scientific, educational, economic, political and social), pervasiveness (social, national and global) and process (modern and traditional)." (Türkkahraman, 2014, p. 634)

Core Values

The core values accepted by society are accepted individually and socially and are held superior to other values. Basic values and social values are the same, which is why they have become increasingly important (Özkan,

2011). Since core values are agreed upon, they can play an important role in building a culture of living together in today's culture of consensus.

It is recognized that there are different perspectives on core values in Turkey due to regional, class and economic factors. Differences in income levels and attitudes affect core values. Although the correct behavior and preference varies in societies, it should be possible to talk about values that are accepted in the whole society.

Our appropriate attitude towards events is important in the construction of core values. According to Kan (2010), these values should be "loyalty, duty, respect, selfless service, honor and personal development". Core values should be regulated by the influence of moral and religious values and consist of five values such as "truth, love, inner peace, right behavior and avoidance of violence" (Dilmaç, 1999).

In a study conducted with teachers and prospective teachers, studies were conducted on which values should be prioritized in the social studies course, and it was seen that the value of "patriotism" ranked first, followed by "honesty", "independence", "fairness", "giving importance to family unity" and "tolerance" (Yılmaz, 2013). In a study conducted with classroom teachers, it was concluded that the value of patriotism should be included in the curriculum (Tay & Yıldırım, 2009).

Due to Germany's immigration, traditional values have deteriorated and the inability of immigrant societies to adapt, segregate and culturally adapt has prevented the German society from establishing a bond with the German society. This is why common values have gained importance for Germany. It can be said that the emphasis should be on the creation of common values through human behavior and attitude, and that human will should be at the center (Kerstiens, 1980, p. 59). It is also stated that this theory is in line with the liberal German approach. According to Bucher (1984), fundamental values correspond to fundamental rights and fundamental responsibilities. They can also be seen as a consequence of human dignity. In the constitution of the Federal Republic of Germany, values such as "human dignity, peace, freedom, justice, equality, sustainability, truthfulness and cooperation" are among the fundamental rights or values that the state sets as goals (Fellsches, 2009b, p. 41). According to Behle 2012, equality, freedom and dignity, which are important in many countries, are also important values in Germany. Political parties in Germany base their programs on freedom, justice and cooperation. This understanding, influenced by the French revolution, is always in favor of freedom and justice. Thus, a greater emphasis on freedom and equality is an indispensable political orientation in Germany. (Kerstiens, 1980, p. 58)

Ethical Values

The word ethics, which comes from the Greek word "Ethos", is the rules formed by individuals and society that are taken into consideration in the formation of action (Balcı & Yanpar Yelken, 2013, p. 155). Ethics, which is the inspiration of science's search for truth, is also effective in our decision-making process (Konuk & Bayram, 2009, p. 43). One of the most notable functions of ethics is to define appropriate ways for individuals to work together in a social or school environment (Haynes, 2002, p. 24). Ethics is about finding the right way to work together. They are written norm systems or norm codes that define these ways in settings and school communities. Ethical values can be of two types. The first is called "Ethical person values" which include being honest, trustworthy and respectful, and the second is called "Ethical relationship values" which include values such as love, respect, gratitude and trust.

Moral Values

The individual and social values that we internalize as a society and as individuals show that people are moral or immoral in life. In addition, the value given to constructs is also related to whether they are moral or not (Gündüz, 2010, p. 20). Although morality and value are different phenomena, the behavior of moral people in daily events can be predicted. On the other hand, individuals who do not have moral values may exhibit unpredictable behaviors in the face of events (Güngör, 1998). Good, true and beautiful moral values are very important on the road to success (Soykan, 2004, p. 52). Moral values are also effective in personality formation. Therefore, it is essential for the peace, tranquility and happiness of individuals and society that children do not grow up with negative values and adopt moral values in a healthy social environment (Kızıler, 2014, p. 15). Teachers and family play a major role in moral attainment (Bakioğlu & Sılay, 2013, p. 37).

Religious Values

Raising good human beings is the common goal of the Abrahamic religions and other faiths. None of the religions and beliefs aim to raise immoral individuals who have no value. Religion and beliefs are effective and functional in human life. Religion is not a subject in itself, but rather a set of rules that determine our value judgments (Schweitzer, 2004). The scope of religion is a subject that determines both the material and spiritual life of human beings and includes various values. These values have been greatly influenced by historical processes, social movements and movements of ideas. For example, as of the Age of Enlightenment, the influence of religion on moral and ethical values has diminished and thus the influence of religious values has decreased. During this period, values such as reason, science and individual freedom became more prominent. However, religion still remains a fundamental source of guidance for many people and is experienced in

different ways in different societies. Religious values help individuals to establish a deep connection with their beliefs and values and shape their lives (Bakioğlu & Sılay, 2013, p. 37). Jewish and Christian values played a major role in the construction of Western civilization, so it can never be said that religious values will disappear, even though humanistic and rational values are on the rise (Oktay, 2004, p. 132).

Aesthetic Values

'Aisthesis', which means sensation, has come to our day from Greek (Tunalı, 2008). The word aesthetics is defined in the dictionary of the Turkish Language Association (TDK, 2005) as "the theoretical science of art and life with the general laws of artistic creation, beautiful sense". Historical artifacts, clothes, local arts and geographical beauties belonging to the civilizations of societies that have survived to the present day are aesthetic values (Budak, 2012). With aesthetic value education, it is aimed for people to acquire a sense of aesthetics and to improve their satisfaction in this direction. In this way, the imagination of the person can increase and they can easily express their feelings about beauty. In the Social Studies Curriculum (MoNE, 2018a), it is emphasized that aesthetic sensitivity and aesthetic education are very important for the personal development of students.

National and Universal Value

National values are the values that come from a country's life, geography, language and customs and keep the society together. National values are the elements that bind the society together, form its national identity and form its common denominator. Universal values, on the other hand, are values accepted by all humanity. They include universal principles such as equality, respect, honesty and human rights. Universal values are the basic values that people share in common, despite the differences between different cultures. Both national and universal values are important concepts that regulate and guide people's lives. However, while national values are based on a nation and a community, universal values are accepted values for the whole world. Both types of values are important for the development and well-being of societies and people and embody the basic principles that enable them to co-exist.

Method

Research Design

Since this study was conducted by in-depth analysis of a document, it was conducted using the document analysis method. This method involves the analysis of documents about the topics to be researched. Hancock et al. (2007) stated that all kinds of written documents can be used in document analysis. Document can be

defined as the recording of facts related to social life in the form of written texts. These written texts or documents may consist of personal records or official documents (Hıtchcock & Hughes, 1995). "Document analysis involves the analysis of written materials containing information about the facts and phenomena targeted to be investigated" (Yıldırım & Şimşek, 2018). Considering the purpose of the study, it is clear that the method of document analysis will be appropriate for conducting the research. In the study, the Social Studies course questions of the ÖDSGM 5th Grade Scholarship Examination published on the website of the General Directorate of Measurement, Evaluation and Examination Services (ÖDSGM) in the 2018 (MEB, 2018b), 2019 (MEB, 2019), 2020 (MEB, 2020), 2021 (MEB, 2021) and 2022 (MEB, 2022) academic years were examined. Detailed information about the questions analyzed in the study is given in Table 1.

Table 1. Number of Questions Analyzed in the Scope of the Study and Their Distribution According to Publication Dates

Year	Study Material	Date	Number of the Questions
2018	PBYS 5th Grade A Booklet	03 June 2018	25
2019	PBYS 5th Grade A Booklet	03 June 2018	25
2020	PBYS 5th Grade A Booklet	05 September 2020	25
2021	PBYS 5th Grade A Booklet	05 September 2021	25
2022	PBYS 5th Grade A Booklet	04 September 2022	25
		Total	100

Data Collection Process and Data Analysis

The study consists of 100 PBYS 5th Grade Social Studies questions listed in Table 1. In this study, content analysis method was used to examine the national and universal values of the values in the 5th grade PBYS Social Studies questions published in 2018-2019-2020-2021 and 2022. Content analysis is used in cases where it is necessary to systematize and quantify information that has been previously collected and organized for a purpose (Fraenkel & Wallen, 2000). In the analysis process, the distribution of national and universal values mentioned in Ercan (2001) was examined and the distribution of the items in terms of national and universal values was discussed in Table 2. In order to ensure the reliability of the article, the reliability formula suggested by Miles and Huberman (1994) was not used.

Table 2. Universal and National Values in 5th Grade PBYS Social Studies Questions

	Social Studies Questions	Universal Values	National Values
2018	PBYS 5th Grade A Booklet	5	3
2019	PBYS 5th Grade A Booklet	4	2
2020	PBYS 5th Grade A Booklet	3	3
2021	PBYS 5th Grade A Booklet	4	2
2022	PBYS 5th Grade A Booklet	7	1

Result

In our study, 100 Social Studies course questions asked to 5th grade students in PBYS between 2018-2022 were analyzed. For the classification of the questions, it was determined that the national and universal values mentioned in Ercan (2001) were included in the test items, taking into account the purpose of the study. Accordingly (Table 3), 33 of the 100 items included items with national and universal values (33%). Of these items, 22 were universal values (66%) and 11 were national values (33%). When analyzed in terms of years, it was observed that national and universal values were homogeneously distributed in 2018, 2019, 2020 and 2021, while there was no homogeneous distribution in 2022

Table 3. Distribution of National and Universal Values in the Study Materials

Study Material	Test items with national values	Test items with universal values
2018 Grade 5 PBYS A Booklet	item 3, item 16, item 5	item 14, item 17, item 13, item 18, item 24
2019 Grade 5 PBYS A Booklet	item 2, item 16	item 1, item 13, item 21, item 19
2020 Grade 5 PBYS A Booklet	item 21, item 11, item 8	item 1, item 2, item 3
2021 Grade 5 PBYS A Booklet	item 12, item 1	item 21, item 15, item 2, item 3
2022 Grade 5 PBYS A Booklet	item 7	item 25, item 21, item 24, item 12, item 14, item 13, item 2

Conclusion and Discussion

 In our study, it was aimed to examine the social studies course questions asked in the 5th grade PBYS between 2018-2022 within the scope of value education and to examine the distribution of these values. As a result of the analysis, it is seen that the most measured values in the exams are universal values. According to the current

social studies course curriculum, in which national and universal values are not homogeneously distributed, it is seen that the items related to value education are homogeneously distributed in the test items. In future PBYS exams, studies can be conducted to increase the number of items that include national values.

Although many studies have been conducted in other countries on the impact of value education on political, educational and social welfare, there are no comprehensive studies in our country (Tatto et al., 2001). Aydın (2003) points out that the relationship between youth and values is bidirectional. According to Aydın, value phenomena have an important role in the formation of individuals' personalities and the development of problem-solving styles. To summarize, it can be said that values education to be given in the social studies curriculum in schools should be aware that it will be positive not only for young people but also for the future in many ways.

In order for value education in Turkey to be more successful, a planned value education program can be prepared by identifying the values that students have and should have at each grade and age level. Within this program, the level of achievement of the outcomes in the exams applied in Turkey should be determined. Value the prioritized values of the family and society while determining their orientations can be done. For this, a unit within MEB to coordinate the work can be established. In terms of the methodology of the research, it is important to orientation or determination of students' core values, these Qualitative studies such as this study can be recommended. Because a certain number of students the orientation work to be performed on the given list of values will only be performed on that will be limited to values.

In value education, rather than value classifications, the material and moral values of society, the state and individuals needs should be identified through large-scale research and values education should be emphasized. Value classifications should also be revised in accordance with our own social structure and according to today's conditions.

Recommendations

In order for value education in Turkey to be more successful, a planned value education program can be prepared by identifying the values that students have and should have at each grade and age level. Within this program, the level of achievement of the outcomes in the exams applied in Turkey should be determined. Value the prioritized values of the family and society while determining their orientations can be done. For this, a unit within MEB to coordinate the work can be established. In terms of the methodology of the research, it is important to orientation or determination of students' core values, these Qualitative studies such as this study

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