Chapter 5

Development of 21ˢᵗ Century Skills in the Preschool Period ᗞ

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Abstract

Today, the importance given to preschool education is increasing, and many studies support that acquiring knowledge and skills at an early age positively affects children's academic success in later stages. It is known that the foundations of many skills are laid during the preschool period, which plays a significant role in children's cognitive development. Skills such as scientific thinking, establishing cause-effect relationships, and problem-solving begin to be instilled at this stage. Research has shown that children are ready to acquire these skills in the early years of their lives and start school with a broad knowledge base (Clements & Sarama, 2011). The concepts and knowledge gained through preschool education are comprehensive and form the foundation of their future academic achievements (Ginsburg, 2006). Furthermore, rapid technological and social changes require individuals to continually renew themselves. The importance of acquiring competencies defined as 21st-century skills—such as collaboration, critical thinking, problem-solving, and digital literacy—at an early age is increasingly emphasized (OECD, 2018). In this context, supporting children's social, emotional, and cognitive development is seen as critical for them to grow into well-rounded individuals. Instilling these skills early not only increases the likelihood of success in social and professional life but also emphasizes the importance of laying the foundation for 21st-century skills during the preschool period (Robinson, 2015). While preschool education plays a critical role in preparing individuals for society, it is important to adopt student-centered and creative approaches as well as traditional methods in education.

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1. Introduction

Technology is advancing rapidly, occupying an increasing space in our lives. Developments in information and communication technologies, alongside economic and political changes, are also transforming social structures. In the 21st century, individuals are expected to adapt to changes, use knowledge and skills effectively, be productive, and play responsible roles as citizens in society (Maviş, 2014; Yenice & Ceren-Atmaca, 2017). The skills specific to this century are defined as a synthesis of competencies from various disciplines that meet the needs of the era. According to OECD studies, 21st-century skills are examined under categories like knowledge, communication, ethics, and social impact, including sub-skills such as critical thinking, responsibility, and media literacy. Additionally, Wagner (2008) categorizes 21st-century skills into areas like critical thinking, problem-solving, collaboration, and leadership. Curriculums are being adjusted in schools to instill these skills, utilizing technology-supported teaching methods. Research emphasizes the need to nurture generations that inquire, investigate, and are supported by technology rather than relying solely on rote learning (Ananiadou & Claro, 2009). During this period, preschool education plays a critical role in preparing individuals for society. Besides traditional methods, adopting student-centered and creative approaches in education is essential.

21st-century skills encompass the core competencies necessary for individuals to thrive in today's fast-paced and constantly changing world. These skills empower individuals in areas like accessing information, critically evaluating knowledge, problem-solving, creativity, collaboration, communication, and digital literacy (Trilling & Fadel, 2009). Although access to information has become easier in the digital age, skills like analyzing information accurately, critical thinking, and generating innovative solutions have become more valuable than ever for societies.

The "Turkey Century Education Model" aims not only to educate individuals but also to equip them with skills based on knowledge and the potential to contribute to societal development. In this context, 21st-century skills allow students to go beyond merely accessing information to analyze it, think creatively, and develop problem-solving competencies. These skills support individuals in succeeding in the global competitive environment in the future and contribute to societal progress. For example, strengthening creative thinking and critical analysis skills through new educational programs enables individuals to make knowledge-based decisions and produce innovative solutions to problems, thereby contributing to social transformation (Gürsan et al., 2021).

Figure 1: Skills associated with 21st Century Skills for Preschool Education

2. Integration of 21st Century Skills into Education

The integration of 21st-century skills into education supports students' analytical thinking and collaboration skills. Acquiring competencies like digital literacy, communication, and collaboration is essential for students to succeed in the information technology age. Education is emphasized not only to support students' academic success but also to foster lifelong learning and self-development skills (Partnership for 21st Century Skills, 2009). In this regard, incorporating innovative approaches in the Turkey Century Education Model aims to ensure that education programs enable individuals not just to access information but to use it effectively. 21st-century skills are essential for success in both academic and professional life. The Turkey Century Education Model targets early acquisition of these skills, aiming to equip individuals with competencies like critical thinking, problem-solving, and communication, thus enabling children to contribute to both individual and societal development. Emphasizing these skills in education is a strong

step toward supporting Turkey's future competitive strength and societal progress. This section addresses ten 21st-century skills considered to be particularly important for preschool education.

2.1. Critical Thinking

Critical thinking is one of the fundamental elements of 21st-century skills, enabling individuals to analyze and evaluate the information and situations they encounter, understand different perspectives, and make informed decisions (Elder & Paul, 2013). It is generally defined as the process of reaching a judgment based on certain criteria (Elder & Paul, 2013) or evaluating an event by considering its pros and cons (Alkın & Gözütok, 2013). Critical thinking helps individuals reflect, think deeply, and reason logically about what they do or believe (Rudd, 2007). This process, involving steps such as organizing, analyzing, and evaluating, requires high-level thinking skills and is therefore also regarded as synthesis (Moore, 2001). Individuals who successfully engage in the critical thinking process are expected to have comprehensive behavior (Akınoğlu, 2003; Çokluk-Bökeoğlu & Yılmaz, 2005; Elder & Paul, 2013; Ennis, 1989; Halpern, 2013). Critically thinking individuals are skilled in questioning information, distinguishing between right and wrong, and developing an objective viewpoint on events. In today's information-dense world, this skill enables individuals to access accurate information and base their own thoughts on solid foundations. According to Pascarella and Terenzini (1992), it is necessary to approach information critically and inquisitively rather than accepting it as it is. Trilling and Fadel (2009) place problem-solving and critical thinking skills at the foundation of the 21st-century learning framework taxonomy.

2.1.1. The Importance of Critical Thinking in the Preschool Period

The preschool period is a time when children explore their surroundings, learn about the relationships between objects, and develop their initial thinking skills. Laying the foundations of critical thinking at this stage contributes to the development of an inquisitive mind in children. Critical thinking plays an important role in helping children understand different perspectives, express themselves, and view events from multiple angles. For example, when a child listens to a story and questions the characters' actions or tries to understand cause-and-effect relationships, they are employing critical thinking skills.

2.1.1.1. The Necessity of Critical Thinking from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model emphasizes a thinking, analyzing, and informed decision-making approach in education. In this model, critical thinking is an essential tool for nurturing individuals who not only access information but also interpret and evaluate it. Developing critical thinking skills at an early age will contribute to children becoming independent, inquisitive individuals throughout their educational journey and in their later lives. Structuring educational programs to encourage critical thinking paves the way for cultivating conscious and intellectually capable individuals, aligning with the goals of the Turkey Century.

2.1.1.1.1. Recommendations for Developing Critical Thinking in Children

Various methods and activities can be used to support the development of critical thinking skills in children during the preschool period. Some strategies to foster critical thinking at this age include:

- **Encouraging Curiosity and Questioning:** Encouraging children to question the events and objects around them can enhance their thinking processes. Asking them questions like "Why do you think this is so?" can help them explore different ways of thinking.

- **Problem-Solving Games:** Presenting children with simple problems and encouraging them to find their own solutions can develop their critical thinking skills. For example, when completing a puzzle, children learn to analyze pieces.

- **Understanding and Respecting Alternative Thoughts:** Teaching children different perspectives and fostering respect for others' thoughts support their empathy and critical thinking skills.

- **Providing Opportunities for Comparison and Evaluation:** Giving children the chance to compare two objects, stories, or solutions helps them deepen their thinking and make choices.

2.2. Creativity

Lipman (2003) define creativity as one of the 21st-century skills, referring to individuals' capacity for original thinking, problem-solving, and generating new ideas. In a world that is constantly changing and evolving toward becoming an information society, individuals are increasingly directed toward creative thinking. Creative thinking is essential for finding new solutions to problems encountered during the developmental process or

for developing new products. Creativity, which plays a crucial role in raising active and productive individuals, is a complex skill that allows individuals to generate unique, innovative, and alternative ideas (Ayyıldız & Yılmaz, 2023; Gokalp, 2016). In the literature, the concepts of creative thinking and creativity are often confused. While creativity encompasses both mental and performance-based activities and is broader, creative thinking focuses more on cognitive processes (Özkale, Kılıç & Yelken, 2020; Yılmaz & Yiğit, 2024).

Individuals with creative thinking skills are noted for their sensitivity to problems, their ability to produce unusual and functional ideas, their capacity to transition easily between different thoughts, and their ability to manage and evaluate complex relationships (Uçak & Erdem, 2020). In the 21st century, especially emphasized by the WEF (2017), the development of creative thinking skills requires attention to creative approaches and applications. Creative individuals are capable of developing new solutions and offering alternative perspectives by thinking outside the box.

Figure 2: Stages of Creativity

According to Bacanlı, et all. (2011), creative thinking includes both cognitive and affective aspects in the learning process and this way of thinking includes elements such as imagination, flexible thinking, analysis, questioning, originality and efficiency. Although creativity has traditionally been considered an innate characteristic and a talent specific to the arts, Lipman (2003) included creativity in the field of education. Today's standards see creativity and innovation as important not only in the arts but in a wide range of fields such as environmental issues, biotechnology, nanotechnology and renewable energy. According to Trilling and Fadel (2009, pp. 56-59), imagination is related to the richness of an individual's experience and should be supported through education.

2.2.1. The Importance of Creativity in the Preschool Period

The preschool period is when the foundations of children's cognitive, emotional, and social skills are laid. Developing creative thinking during this period enhances children's interest in learning and exploring, strengthens their self-expression, sharing of thoughts, and self-confidence. Additionally,

the development of creative thinking skills supports children's problem-solving abilities. For example, when a child wonders how a toy works and tries to discover it through trial and error, they are using both cognitive and creative skills.

2.2.1.1. The Necessity of Creativity from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model values the development of individual talents, emphasizing skills required by the era. Raising creative individuals is an important goal for the social and economic development of the country. Supporting creativity skills from an early age in educational programs structured to provide children with creative thinking opportunities is seen as effective in helping them reach their full potential.

2.2.1.1.1.Recommendations for Developing Creativity in Children

Several activities and teaching methods can be used to foster creativity in preschool-aged children. Here are some suggestions:

- **Play and Art Activities:** Providing environments where children can freely play, paint, mold clay, and explore various materials supports their creativity.

- **Encouraging Questioning and Exploration:** Keeping children's curiosity alive helps develop their creative thinking skills. It is essential to ask open-ended questions and encourage them to discover new things.

- **Presenting Problem-Solving Opportunities:** Giving children small problems to solve independently strengthens their thinking skills and encourages them to look for creative solutions.

- **Providing an Environment for Free Thinking:** Offering children an environment where they can freely express themselves, make mistakes, and try new things helps develop their imagination and creative capacity.

2.3. Communication

Communication is the process through which individuals express emotions, thoughts, information, and experiences through verbal or nonverbal means. People constantly communicate with each other in different contexts and forms in their daily lives. As social beings, humans must constantly use this skill. Communication is generally defined as the exchange of messages

between two parties (Cüceloğlu, 1997; Demirel & Yağcı, 2012). From another perspective, communication is explained as a process that aims to create behavioral changes by sharing thoughts, knowledge, attitudes, emotions, and skills (Koçak et al., 2014). The communication process gives individuals the opportunity to express themselves and understand others, providing them with an essential power (Gülbahar & Sıvacı, 2018). The communication process consists of five basic components: source, message, channel, receiver, and feedback (Cüceloğlu, 1997; Ergin, 2014).
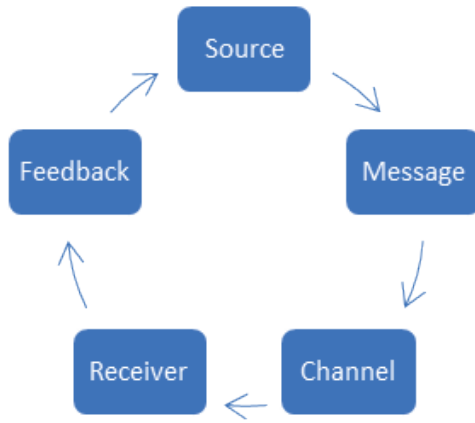

Figure 3: Key components of the communication process

The source is the person who initiates communication and aims to create a behavioral change in the receiver (Ergin, 2012). The message conveys the thoughts, feelings or information that the source wants to convey to the receiver through symbols (Memduhoğlu et al., 2014). The channel is the method or means by which the message is transmitted. The receiver is the person or group that receives the message (Demirel & Yağcı, 2012), and the feedback is the recipient's response to the message. Communication is effective only when these components function in a complete way. Effective communication enables understanding the feelings and thoughts of others, cooperating in harmony and establishing social bonds. In the 21st century, communication skills are one of the cornerstones of success not only in daily life but also in professional life and social environment. According to Johnson and Johnson (2010), the rapid increase in globalization with the 21st century has brought important challenges for countries, and one of the most important of these challenges is the need for communication that arises with the increase in local diversity and global differences. According to Trilling and Fadel (2009), the development of communication tools with

the advancement of technology increases interpersonal communication. In today's world, it has become increasingly important for individuals to be able to express themselves and to express their feelings and thoughts clearly. This skill is necessary for individuals to establish healthy relationships, solve problems and achieve social cohesion

2.3.1. The Importance of Communication Skills in the Preschool Period

The preschool period is when children lay the foundations for communication skills and learn social interaction. At this stage, children learn to express emotions and thoughts, listen to others, and engage in mutual understanding. Communication skills help children establish healthy relationships with friends and adults while increasing their self-confidence. Communication skills acquired early on enable children to grow into more successful and happier individuals later in life. Communication abilities also support children in expressing themselves in school, respecting others' rights, and participating in group activities.

2.3.1.1. The Necessity of Communication Skills from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model offers an educational approach aimed at developing students into effective individuals in a global world. In this context, communication is seen as an essential skill for individuals to contribute to society, collaborate effectively, and live in harmony with diverse cultural structures. The Model's curricula support activities to develop children's abilities to express themselves, recognize their emotions, and understand others' feelings. Communication is regarded as a crucial skill in this model for fostering social cohesion, understanding cultural diversity, and developing empathy. Therefore, supporting communication skills in children during the preschool period contributes to Turkey's educational vision and aids in raising individuals who are compatible, respectful, and responsible.

2.3.1.1.1. Recommendations for Developing Communication Skills in Children

To support the development of communication skills in children during the preschool period, teachers and parents can implement various strategies. Here are some suggestions:

- **Supporting Expressive Skills Through Games and Activities:** Games, drama activities, and role-playing exercises are effective tools to help children express themselves. In these activities, children find opportunities to express themselves in various ways by taking on different roles.

- **Developing Listening Skills:** Good communication is built on listening. Teaching children the importance of listening to others fosters empathy. Organizing activities like storytelling and story time helps children learn active listening.

- **Expanding Vocabulary and Language Skills:** Enriching children's vocabulary allows them to express themselves better. Songs, rhymes, and reading activities can develop children's language skills. Teaching children words to describe emotions also strengthens their emotional communication.

2.4. Collaboration

Collaboration, which holds a significant place among 21st-century skills, refers to individuals' capacity to come together and work effectively toward a common goal. A team is defined as a small group of individuals who focus on a shared objective, share responsibilities, and complement each other (Straub, 2002). Teamwork, on the other hand, is a process where individuals who are willing to solve problems together act collaboratively, sharing responsibility within an environment of trust (Avan, Gülgün, Yılmaz & Doğanay, 2019; Kaldırım, 2003). According to the Turkish Language Association (TDK), collaboration is a working partnership established in line with shared goals. When examining teamwork and collaboration, it is observed that these two concepts carry similar meanings. Both teamwork and collaboration are essential in 21st-century skills and play a critical role in advancing modern sciences. Therefore, it is crucial to use methods and techniques in education that offer students opportunities for teamwork and collaboration. These approaches give students both teamwork experience and help them develop their collaboration skills (Bozan & Anagün, 2019; Öztürk & Altun-Yalçın, 2020; Sari & Wardhani, 2020)). Individuals capable of collaborating work harmoniously within a group, value others' ideas, share responsibilities, and seek solutions to problems together. In today's world, bringing together individuals with different knowledge and skills to work in teams plays a key role in achieving social and professional success.

2.4.1. The Importance of Collaboration in the Preschool Period

The preschool period is a critical phase where children develop social skills and experience their first interactions with their surroundings. Laying the foundations of collaboration during this period supports children's communication skills, ability to work with others, and respect for others as they grow older. While learning to collaborate, children experience acceptance of different perspectives, acting in harmony with others, and displaying patience. For example, during a group activity, children learn to work together, distribute tasks, speak in turn, and achieve a common goal. These skills strengthen children's social relationships, making it easier for them to adapt to society.

2.4.1.1. The Necessity of Collaboration from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model is an approach that aims to nurture individuals who are not only knowledgeable but also active and harmonious members of society. In this context, collaboration should be at the core of education programs, as strong collaboration skills enhance social solidarity and develop individuals' capacity to work together. Educational programs that support collaboration prepare children for successful teamwork both in education and in the professional world.

2.4.1.1.1. Recommendations for Developing Collaboration in Children

Teachers and parents can apply various strategies to foster collaboration skills in children during the preschool period. Here are some suggestions:

- **Group Games and Activities:** Involving children in group games and activities teaches them to work together and share. Especially games that require teamwork allow children to interact with each other and produce solutions together.

- **Shared Tasks and Responsibilities:** Assigning children small responsibilities can encourage them to work together. For example, cleaning up the classroom after an activity or sharing toys in a game teaches children to collaborate.

- **Developing Empathy and Tolerance:** For children to collaborate, they need to have empathy and tolerance. Therefore, it is essential to teach children to respect others' feelings and opinions and encourage them to support their friends.

- **Setting Common Goals and Dividing Tasks:** Setting a common goal with children and dividing tasks to achieve it helps them learn to work together. Children understand the importance of their contributions as well as the value of others' efforts.

2.5. Curiosity

Curiosity, one of the 21st-century skills, refers to individuals' intrinsic motivation to learn, explore, and understand the world around them (Engel, 2013). Curiosity underlies the desire to reach knowledge, question surroundings, and follow innovations (Kashdan & Silvia, 2009). Curious individuals enrich the learning process by looking at events from different angles and enhancing their creativity (Grossnickle, 2016). This skill is of critical importance for both personal development and lifelong learning in today's rapidly changing world (Yazıcı & Kartal, 2020).

2.5.1. The Importance of Curiosity in the Preschool Period

The preschool period is when children start to explore their surroundings and themselves, beginning to make sense of the world. Supporting curiosity during this period increases children's motivation to learn and strengthens their desire to explore. Curiosity plays an important role in children's cognitive development and their interactions with their environment. For instance, when a child asks questions about the objects, plants, or animals around them, it enables them to understand nature, scientific events, and social relationships better. Through curiosity, children learn to observe, ask questions, and actively participate in the learning process.

2.5.1.1. The Necessity of Curiosity from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model aims to raise inquisitive, research-oriented individuals who are eager to learn. In this model, curiosity is seen as the cornerstone of education, as curious individuals go beyond simply acquiring information, questioning and deepening their understanding of it. Structuring educational programs to nurture children's curiosity supports their active engagement in research and learning processes, preparing them to become critical and analytical thinkers in the future.

2.5.1.1.1. Recommendations for Developing Curiosity in Children

To keep children's curiosity alive during the preschool period, teachers and parents can use various methods. Here are some suggestions:

- **Providing Exploration-Oriented Activities:** Organizing outdoor activities, experiments, and nature trips that allow children to explore their surroundings contributes to their understanding of the world.

- **Encouraging Questioning:** Children asking questions speeds up their learning process. Parents and teachers should be open to all their questions, creating a supportive environment to encourage them to keep asking.

- **Offering Activities and Experiences in Different Fields:** Allowing children to engage in activities across various fields increases their interest in different topics. Organizing activities in areas such as art, science, and sports helps children discover their interests.

- **Enhancing the Desire to Explore Through Stories and Fairy Tales:** Stories and fairy tales nurture children's imagination and curiosity. Reading books provides them with an opportunity to ask questions, enhancing their creativity.

2.6. Entrepreneurship

Entrepreneurship is a 21st-century skill that represents individuals' ability to think innovatively, seize opportunities, and develop creative solutions. According to the Ministry of National Education (MEB, 2018a), entrepreneurship is defined as the ability of individuals to turn their ideas into actions and is often regarded as a process born from dreams that create value (Arpacı, 2015). While entrepreneurship is defined as discovering and evaluating opportunities and taking action to turn these opportunities into profit (De Soto, 2013), it also includes the desire of individuals to deal with obstacles in creative and innovative ways (Yurtseven, 2020). Emphasizing the importance of developing entrepreneurship skills from an early age, it is understood that individuals with entrepreneurial skills are characterized as creative, risk-taking, opportunity-seizing, independent, adaptable, and success-oriented individuals (Hisrich, Manimala, Peters & Shepherd, 2005). Therefore, entrepreneurship is an essential part of 21st-century skills (Bybee, 2010). Entrepreneurship-focused practices have been shown to enhance this skill in students (Şirin, 2020; Turgutalp, 2021), highlighting the importance of incorporating entrepreneurship education at all educational levels. Integrating entrepreneurship practices into all types of education models, including distance learning, is necessary. Entrepreneurial individuals possess the ability to generate new ideas, take risks to bring these ideas to life, and find solutions to challenges they encounter. Entrepreneurship not only

fosters independence and originality in individuals' thinking but also enables them to initiate change in both the business world and daily life.

2.6.1. The Importance of Entrepreneurship in the Preschool Period

The preschool period is when children begin to develop self-confidence, think independently, and make decisions. Instilling the basics of entrepreneurship at this stage supports children's creative thinking and solution-oriented approaches. Early exposure to entrepreneurial thinking allows children to develop their imagination, enhance their ability to seize opportunities, and build self-confidence. For example, when a child sets new rules for a game or creates different solutions to a problem, they are engaging in entrepreneurial thinking.

2.6.1.1. The Necessity of Entrepreneurship from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model aims to cultivate creative, innovative, and independent decision-making individuals with high problem-solving skills. In this model, entrepreneurship is an essential requirement for encouraging original thinking in education and enabling children to develop independent problem-solving skills. Educating entrepreneurial individuals contributes to the social and economic development of the country, while also preparing children for future success in education and work life. Thus, it is crucial that educational programs include activities that foster an entrepreneurial spirit.

2.6.1.1.1. Recommendations for Developing Entrepreneurship in Children

Teachers and parents can implement various activities and methods to support the development of entrepreneurship skills in preschool children. Here are some suggestions:

- **Providing Opportunities for Free Play and Exploration:** Creating environments where children can create their own games and activities develops their innovative thinking and independent decision-making skills.

- **Problem-Solving Activities:** Presenting children with simple problems and encouraging them to find their own solutions fosters entrepreneurial thinking. For example, encouraging them to try different materials while building a tower helps improve their problem-solving skills.

- **Encouraging Alternative Ideas:** Asking children questions like, "How else could we do this?" or "What other game could we play?" encourages them to explore alternative ways of thinking, supporting their creativity.

- **Supporting Experiences of Success and Failure:** Acknowledging children's achievements and encouraging them to learn from their mistakes help them build confidence. Understanding that making mistakes is a natural part of the learning process empowers children to try new things.

2.7. Perseverance

Perseverance is a 21st-century skill that enables individuals to persist in reaching a goal, continue working with determination in the face of challenges, and remain focused on their objectives until they achieve them (Duckworth & Gross, 2014). Persistent individuals overcome obstacles to stay motivated despite the difficulties they face (Miller, 2017). This skill plays a significant role in personal success and contributes to societal well-being, as perseverance supports both personal growth and resilience (Dweck, 2006). Developing perseverance during education has a positive impact on students' long-term success (Shechtman et al., 2013).

2.7.1. The Importance of Perseverance in the Preschool Period

The preschool period is when children begin to take on tasks independently and learn to deal with challenges on their own. Supporting perseverance at this stage teaches children to exhibit determination and work hard toward their goals. For instance, when a child tries to complete a puzzle despite facing difficulty, they are developing perseverance. This skill increases children's self-confidence, enabling them to grow into resilient and successful individuals as they mature.

2.7.1.1. The Necessity of Perseverance from the Perspective of the Turkey Century Education Model

In the Turkey Century Education Model, not only acquiring knowledge but also showing determination and perseverance in achieving goals is valued. Perseverance is essential in this model, as it aids children in overcoming challenges throughout their educational journey. Structuring educational programs to support perseverance encourages children to develop a strong will and work persistently toward their goals. Raising individuals with perseverance contributes to Turkey's vision of a society that values resilience, determination, and self-reliance.

2.7.1.1.1. Recommendations for Developing Perseverance in Children

To support the development of perseverance in preschool children, parents and teachers can use a variety of strategies. Here are some suggestions:

- **Encouraging Task Completion:** Encouraging children to finish tasks they start helps reduce the tendency to leave things unfinished. Instilling this habit at a young age assists in raising determined individuals.

- **Providing Positive Feedback:** Acknowledging the effort children put forth in facing challenges and giving positive feedback boosts their courage, encouraging them to approach new tasks with determination.

- **Encouraging Different Approaches to Overcome Challenges:** Allowing children to try different methods when they encounter a problem, such as suggesting "You could try starting from another spot," fosters perseverance by prompting them to find alternative solutions.

- **Supporting Experiences with Failure:** Explaining that failure is a natural part of life and helping children learn from their mistakes encourage them to keep trying, even when faced with setbacks.

2.8. Leadership

Leadership is the ability of individuals to guide, take responsibility, and bring others together to achieve a common goal within a group (Northouse, 2018). Leadership skills include not only guiding others but also recognizing their strengths, fostering team spirit, and solving problems (Yukl, 2013). In the rapidly changing world of the 21st century, leadership is considered an important skill for individuals to succeed both in social and professional life (Goleman, 2000). Individuals with leadership skills inspire those around them, gaining the power to initiate change (Kotter, 2012).

2.8.1. The Importance of Leadership in the Preschool Period

The preschool period is when children start to recognize their identity, begin to think independently, and establish social relationships. Developing the foundation for leadership during this time contributes to children's self-confidence, communication skills, and their ability to work with others. Assigning responsibilities in small groups, giving children opportunities to express themselves, and allowing them to guide others are essential for developing leadership. For example, when a child shows their friends how to play a game or creates a new game, they are exercising leadership skills.

2.8.1.1. The Necessity of Leadership from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model aims not only to raise knowledgeable individuals but also to develop responsible, confident, and guiding members of society. In this context, leadership is viewed as an essential skill for children to actively contribute to societal progress. Incorporating group activities and collaborative exercises into educational programs nurtures leadership skills, helping children grow into individuals who can inspire others and take on roles in societal change. For Turkey's future, it is crucial to raise confident, responsible, and effective communicators as leaders.

2.8.1.1.1. Recommendations for Developing Leadership in Children

To support the development of leadership skills in preschool children, teachers and parents can use different methods. Here are some suggestions:

- **Assigning Responsibilities:** Giving children small tasks encourages them to take responsibility, enhancing their leadership skills. For instance, assigning roles during activities allows children to experience leadership.

- **Teamwork and Group Games:** Group games help children collaborate and act harmoniously within a team. Allowing children to take turns leading in group activities helps them experience leadership.

- **Involvement in Decision-Making Processes:** Involving children in decision-making by encouraging them to share their ideas builds their confidence and teaches them to respect others' opinions.

- **Introducing Role Models:** Providing children with information about individuals who exhibit leadership qualities helps them understand the concept of leadership. For example, introducing characters with leadership qualities in storybooks encourages positive perceptions of leadership.

2.9. Problem-Solving

Problem-solving is the ability to develop analytical, creative, and constructive approaches to the challenges individuals face. In the rapidly changing world of the 21st century, this skill is essential for adapting to and overcoming complex situations. Problem-solving skills enable individuals to analyze difficulties and produce effective solutions, using critical thinking, creativity, and flexibility throughout the process (Kaptan & Korkmaz,

2001). Individuals with problem-solving skills tend to succeed and perform effectively in various areas of life.

Problem-solving skills are valuable not only for addressing encountered issues but also for supporting cognitive development and enhancing overall life performance (Açık, 2013). This skill comprises mental processes required to overcome obstacles and involves a logical, systematic approach (Smith & Kosslyn, 2008). The ability to solve problems efficiently boosts personal growth and builds self-confidence, facilitating success across different aspects of life (Dweck, 2006; Zimmerman, 2000). Early education in problem-solving skills prepares individuals to learn and apply problem-solving strategies, impacting not only academic achievement but also general life skills (Açık, 2013).

Incorporating problem-solving skills into educational systems supports students in developing this important competence, forming a solid foundation for future challenges. Developing problem-solving skills equips individuals to handle problems constructively and solution-orientedly, making them more capable and adaptable.

2.9.1. The Importance of Problem-Solving in the Preschool Period

The preschool period is the first stage where children gain basic skills, learn to think independently, and handle tasks alone. Laying the foundation for problem-solving skills at this age helps children tackle challenges, think independently, and pursue goals with determination. For instance, when a child tries to place a piece in a puzzle or complete it, they begin the problem-solving process. This process contributes to their cognitive and emotional development, teaching them patience and solution-focused thinking.

2.9.1.1. The Necessity of Problem-Solving from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model aims not only for students to acquire knowledge but also for them to use it effectively. The model emphasizes the importance of students developing critical thinking, innovative approaches, and problem-solving skills. Structuring educational programs to foster problem-solving allows children to grow into independent thinkers capable of making decisions. Problem-solving skill development contributes to Turkey's aspirations for societal, scientific, and economic growth.

2.9.1.1.1. Recommendations for Developing Problem-Solving Skills in Children

To develop problem-solving skills in preschool-aged children, teachers and parents can use specific methods and activities. Here are some suggestions:

- **Allowing Exploration and Trial-and-Error Processes:** Encouraging children to solve problems independently promotes their problem-solving skills. Giving them opportunities to play with various materials, explore objects, and make different attempts encourages independent thinking.

- **Supporting the Questioning and Solution-Seeking Process:** Asking children questions like "How else could we solve this?" or "Can we try a different way?" helps them develop different perspectives, supporting analytical thinking.

- **Encouraging Solutions to Everyday Tasks:** Providing small responsibilities in daily situations helps children develop practical solutions. For instance, asking a child how to clean spilled water encourages them to find practical solutions.

- **Using Puzzles, Mazes, and Strategy Games:** Activities like puzzles and mazes enhance children's problem-solving abilities. These games teach children step-by-step solution production and strategy development.

2.10. Adaptability

Adaptability is the ability of individuals to quickly adjust to changing conditions, show flexibility in new situations, and adapt to different environments. In today's fast-changing and constantly renewing world, this skill is essential for individuals to cope with challenges, be open to innovations, and succeed in various settings. Individuals with strong adaptability are more resilient and flexible in the face of uncertainty, developing a positive attitude toward new experiences.

2.10.1. The Importance of Adaptability in the Preschool Period

The preschool period is when children begin to learn about social adaptation, meeting different people and environments. Supporting adaptability during this stage contributes to children's emotional and social development. For example, when a child starts preschool and has to adapt to a different environment away from their family, it strengthens their adaptability. Developing this skill early makes it easier for children to adjust

to new situations and form social relationships as they grow. In professional life, success and stability are often supported by adaptability and flexibility skills, as these improve time management, reduce workload, distribute responsibilities, and allow quick solutions to problems. Savickas (2012) suggests that employees will work in various jobs throughout their careers, noting that staying within a single organizational structure is becoming less important. With technological advancements, flexible, temporary, and independent work forms are becoming more widespread, and workplace loyalty is diminishing. According to Trilling and Fadel, individuals who want to succeed in the evolving job market must continuously improve themselves, solve daily problems, address future needs, and possess adaptability and flexibility skills.

2.10.1.1. The Necessity of Adaptability from the Perspective of the Turkey Century Education Model

The Turkey Century Education Model emphasizes not only equipping children with knowledge but also cultivating a flexible mindset to adapt to a changing world. This model encourages students to develop innovative thinking, open-mindedness, and flexibility in the face of new situations. Enriching educational programs with activities that support adaptability helps children succeed in their future educational journeys and social lives. Flexible and adaptable individuals contribute to social development while promoting social cohesion and solidarity.

2.10.1.1.1. Recommendations for Developing Adaptability in Children

To support the development of adaptability in preschool children, parents and teachers can use various activities and methods. Here are some suggestions:

- **Exposing Children to New Environments and Situations:** Encouraging children to participate in different playgroups, activities, or environments supports their ability to adapt to new social settings. This practice enhances their ability to quickly adjust to various surroundings.

- **Providing Emotional Support:** It is essential to offer emotional support so children feel secure in the face of changes. Providing reassurance when they encounter new situations eases their adjustment process and helps them develop a positive attitude toward new experiences.

- **Supporting Problem-Solving and Flexible Thinking Skills:** Asking questions like, "How else could we approach this?" or "Can we think of other solutions?" helps children explore alternative ways of thinking, supporting their adaptability.

- **Using Games and Simulations:** Providing children with opportunities to assume different roles in games helps develop their adaptability to various situations. For example, role-playing in group games allows children to practice adapting to different scenarios.

3. Conclusion

When examining the associated skills for the development of 21st-century skills in the preschool period:

Critical thinking plays an important role in children's cognitive development and decision-making. Supporting this skill from an early age in the Turkey Century Education Model is seen as essential for raising independent, inquisitive, and self-aware individuals. **Creativity** is highlighted in children's expression, problem-solving, and imagination. Supporting this skill early on in the Turkey Century Education Model contributes to laying the foundation for social development. Developing **communication skills** in the preschool period prepares children to succeed in their future social, academic, and personal lives. In line with innovative educational approaches like the Turkey Century Education Model, fostering this critical skill enhances social cohesion and raises children as contributors to society. **Collaboration** is vital for children's social development and societal adaptation. Early support of this skill in the Turkey Century Education Model encourages children to grow into cooperative individuals both in social life and in educational processes. **Curiosity** is essential for children's understanding of their surroundings, desire for continuous learning, and active participation in exploration. Supporting this skill from an early age in the Turkey Century Education Model allows children to develop critical perspectives, preparing them to be individuals who contribute to society. **Entrepreneurship** supports children in growing as creative, confident, and solution-oriented individuals. Supporting this skill early on contributes to raising independent, innovative thinkers who provide benefits to society. **Perseverance** is a core value that helps children reach their goals, gain self-confidence, and build self-belief. Supporting this skill from an early age in the Turkey Century Education Model fosters resilient individuals who are determined to succeed in both education and life. **Leadership** fosters self-confidence, responsibility, and effective communication. Supporting

this skill from an early age in the Turkey Century Education Model helps raise individuals who contribute to society, inspire others, and lead change. **Problem-solving** enhances children's capacity for independent thinking, tackling challenges, and generating solutions. Supporting this skill from an early age in the Turkey Century Education Model prepares children to become independent, analytical thinkers who contribute to society. **Adaptability** is a fundamental value that strengthens children's social relationships and promotes emotional resilience and social harmony. Supporting this skill from an early age in the Turkey Century Education Model contributes to raising adaptable individuals who thrive in social unity and harmony.

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