



## ASSESSMENT OF LANGUAGE EXPRESSION IN EARLY CHILDHOOD: KINDERGARTEN TEACHERS' ATTITUDES AND PRACTICES TOWARD CHILDREN'S INCORRECT RESPONSES

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### Abstract:

This study investigates kindergarten teachers' attitudes and instructional practices toward children's responses that diverge from expected or desired answers within the context of everyday learning activities. The research adopts a quantitative approach and draws on data collected from a sample of 72 kindergarten teachers through a structured questionnaire. The analysis reveals that most teachers do not perceive such responses merely as mistakes or deficits but rather as valuable entry points for pedagogical intervention, opportunities to foster metacognitive awareness, and moments that stimulate children's creative expression. Particular emphasis is placed on the kindergarten teachers' preference for open-ended questions, which are recognized as instrumental in encouraging critical thinking, enabling children to articulate their ideas freely, and promoting dialogic forms of learning. Equally important is the creation of supportive and emotionally safe learning environments that normalize error as part of the learning process and prevent stigmatization. The findings also underscore the role of collaboration with parents, who are seen as crucial partners in reinforcing reflective and exploratory approaches to learning at home as well as in school. The study concludes by offering practical and theoretical recommendations aimed at strengthening kindergarten teachers' professional capacity to respond effectively to such pedagogical challenges. These include the systematic integration of reflective teaching practices, the cultivation of empathetic and flexible responses to children's unexpected contributions, and the promotion of professional development programs that enhance teachers' theoretical grounding and practical skills in managing errors as learning opportunities. By situating the discussion within contemporary educational theories and the broader framework of child-centered pedagogy, the study

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highlights the need for a shift from corrective to constructive practices in early childhood education.

**Keywords:** preschool education, incorrect answers, children, kindergarten teachers

## 1. Introduction

Early childhood education constitutes a cornerstone for children's cognitive, social, and emotional development. Kindergarten is not merely a place of care but a dynamic educational institution where children are exposed to diverse learning stimuli, develop their thinking, and interact with peers and teachers.

Moreover, verbal communication plays a crucial role in the learning process, with question-and-answer exchanges being among the most significant forms of classroom interaction (Cone & Hudgins, 1989; Gall, 1970). Through their interaction with kindergarten teachers, children are encouraged to respond to questions, articulate their opinions, and test their understanding of the world around them.

A frequent phenomenon observed in this context is the production of incorrect answers by children. These responses are not simply the result of ignorance or insufficient understanding but may serve as important indicators of children's thought processes and reasoning (Rapti, 2002). Rather than being viewed solely as mistakes, such answers can be pedagogically utilized to foster learning and support the developmental progress of young children (Kassotakis & Vamvouka, 2007).

Within this framework, the present study investigates the nature of children's incorrect answers in kindergarten, the ways teachers respond to them, and the potential for transforming these responses into constructive elements of teaching and learning. Furthermore, analyzing how kindergarten teachers manage incorrect answers can provide valuable insights for strengthening pedagogical practice and for promoting an approach that encourages creative and critical thinking among preschool pupils (Gabas, Cutler & Schachter, 2023).

Specifically, the primary aim of this research is to examine the role of incorrect answers in the kindergarten educational process and to explore how they can be didactically exploited. More concretely, the study's objectives include documenting the main types of incorrect answers produced by preschool children, analyzing the cognitive and linguistic mechanisms that lead to such responses, and understanding kindergarten teachers' attitudes and practices toward children's linguistic errors and the ways in which they address them in classroom practice.

The significance of this research lies in the need to understand how preschool children process information and construct their answers. Importantly, mistakes should not be regarded merely as failures but as natural steps in children's learning journey and developmental progression (Rapti, 2002). By recognizing their value, kindergarten teachers can adapt their teaching and create an environment in which children feel safe to attempt, experiment, and learn from their own mistakes (Seifried & Wuttke, 2010).

## 2. Literature Review

### 2.1 The Importance and Challenges of Questions in Preschool Education

Questions constitute a fundamental tool for learning in kindergarten, as they encourage children's critical thinking, curiosity, and language development (Bruner, 1983). Through questions, children express their views, test hypotheses, and construct new knowledge. However, the formulation and comprehension of questions can present challenges due to children's cognitive and linguistic immaturity (Tomasello, 2003).

A preschool child may respond spontaneously to questions based on personal experiences or literal interpretations of language, resulting in answers that may appear unrealistic or irrelevant (Bloom, 1973). For instance, when asked, "*Why does it rain?*", a child may respond, "*Because the sky is crying,*" reflecting metaphorical and imaginative thinking (Harris, 2000).

Moreover, questions posed to children can be either open- or closed-ended, with significant differences in their cognitive impact. Open-ended questions allow children to freely articulate their thoughts, experiment with language, and construct narratives, while closed-ended questions, although useful in certain contexts, may constrain creative thinking (Nystrand, 1997). Consequently, the strategic formulation of questions by kindergarten teachers is crucial for fostering active learning among young children.

In addition, questions contribute to the development of children's social skills, as they enhance cooperation and peer interaction. Children who actively participate in discussions learn to listen, respect others' perspectives, and develop both argumentative skills and competencies necessary for their future academic trajectories (Alexander, 2008).

### 2.2 The Issue of Errors in Preschool Children's Answers

Errors in young children's responses form an integral part of the learning process and reflect their stage of cognitive development. Understanding the causes of such answers is essential for teachers in order to address them constructively (Piaget, 1952). Instead of being treated as mistakes requiring immediate correction, deviations in responses can be leveraged as opportunities to explore children's cognitive and linguistic structures.

One primary cause of errors lies in the child's developmental stage. According to Piaget's (1952) theory, preschool children primarily function through concrete thinking and have difficulty grasping abstract concepts. As a result, their responses often incorporate personal experiences or imaginative interpretations (Harris, 2000). For example, a child may describe a cube as a "*toy box*" because of personal associations rather than identifying its geometric properties.

Furthermore, as Vygotsky (1978) suggests, cognitive development is directly shaped by social interaction and the "*zone of proximal development*". Errors may occur when children attempt to articulate a thought at the boundaries of their cognitive capacity without yet possessing the necessary tools to do so accurately. In such cases, appropriate scaffolding from an educator or a more capable peer can help the children formulate a more precise and complete response.

Language development is also a decisive factor in shaping responses. Children may use words differently from adults or invent new words to describe something they cannot yet express precisely (Tomasello, 2003). For instance, a child may say, "*The sun is sleeping*" instead of "*The sun is setting*," demonstrating creative use of language. Lexical gaps can likewise lead to descriptive rather than accurate answers. Bloom (2000) found that children often invent or adapt words to convey concepts they understand cognitively but lack the appropriate linguistic label for. This phenomenon is particularly evident in the creation of neologisms, such as when a child calls a fan a "*wind spinner*" because they do not know the correct word.

Another factor influencing children's responses is the impact of the social environment. Information absorbed from family and school contexts shapes children's interpretations, sometimes producing inaccurate or fragmented understandings (Rogoff, 1990). For example, a child raised in a community where folklore is emphasized may provide magical or mythological explanations for natural phenomena, such as claiming that "*thunder is angry*" because such imagery has been transmitted through stories or conversations with adults.

Children are also influenced by the language used in the classroom and by their peers' responses. Research shows that children often repeat information they hear from friends, even when it is inaccurate (Harris, 2000). This tendency helps explain why they sometimes reproduce ideas or opinions without fully understanding them.

Overall, children's errors should not be regarded as failures but as valuable indicators of their developmental trajectory. Appropriate pedagogical approaches can support children in developing more complex cognitive and linguistic skills while simultaneously strengthening their confidence in the learning process.

Kindergarten teachers can employ several strategies to foster learning through errors, such as:

- Guided feedback: providing cues or posing additional questions to encourage children to reconsider their responses rather than rejecting them outright (Bruner, 1983).
- Dialogic teaching: using dialogue that prompts children to explain their reasoning, thereby helping them identify logical inconsistencies and refine their thinking (Mercer & Littleton, 2007).
- Use of visual and experiential activities: incorporating multisensory teaching methods, such as images, experiments, and storytelling, can help children form more accurate understandings of concepts that are otherwise abstract (Clark & Mayer, 2008).
- Creating a climate of acceptance: ensuring that children feel safe to express their ideas without fear of criticism fosters cognitive development and self-esteem (Dweck, 2006).

In conclusion, errors in children's answers serve as valuable tools for understanding their cognitive and linguistic development. With appropriate pedagogical guidance, these responses can be transformed into fertile ground for exploration, learning, and growth, thereby contributing to the holistic development of young children.

### **2.3 The Role of Kindergarten Teachers in Managing Young Children's Incorrect Responses**

Kindergarten teachers play a decisive role in managing children's incorrect responses, as their interventions can either foster learning or discourage exploration and personal expression. An

effective pedagogical approach requires sensitivity, adaptability, and the use of appropriate strategies that allow young children to understand their mistakes without experiencing shame, disappointment, or fear.

Recognizing the value of incorrect responses as a natural part of the learning process is vital. Research has shown that when children feel safe to express their ideas-even if they are not entirely accurate-they develop higher-order cognitive and metacognitive skills (Dweck, 2006). A positive and secure learning environment is essential for children to feel free to articulate their thoughts, even when these contain inaccuracies. Kindergarten teachers should encourage spontaneous thinking by fostering a climate of acceptance where failure is considered an inherent part of learning (Dweck, 2006).

To achieve this, it is important that kindergarten teachers:

- Praise children's efforts, regardless of the accuracy of their responses, in order to sustain and enhance their self-confidence.
- Encourage participation through open-ended questions and thought-provoking games that allow children to share ideas and perspectives without fear.
- Avoid abrupt correction, as this may discourage children and reduce their motivation for learning.

The role of the kindergarten teacher is not merely to transmit correct information but to support children in discovering knowledge through personal exploration. A child who feels accepted and supported is more likely to develop critical thinking and metacognitive skills, both of which are essential for future learning.

Managing children's mistakes requires targeted pedagogical interventions rooted in the principles of differentiated instruction and constructive feedback. Some key strategies include:

- Rephrasing responses: Kindergarten teachers may reformulate a child's answer in a way that gently guides them toward the correct understanding without dismissing their initial thought.
- Utilizing instructional tools: The use of visual stimuli such as images, models, or digital media can help children better grasp concepts and revise their original answers through experiential learning (Clark & Mayer, 2008).
- Dialogic teaching: Engaging in dialogue and asking open-ended questions helps children develop reasoning skills and identify logical gaps in their answers (Mercer & Littleton, 2007).
- Connecting with prior knowledge: Kindergarten teachers can strengthen learning by linking new information to children's previous experiences or knowledge, helping them achieve deeper understanding and integrate concepts into their existing cognitive structures (Bruner, 1983).

Kindergarten teachers should also attend not only to the correction of children's responses but equally to their emotional support. A negative reaction to an incorrect answer can undermine a child's self-confidence and discourage participation. It is therefore essential that teachers:

- 1) Recognize children's effort and creativity, even when their answers are inaccurate.
- 2) Encourage exploration and experimentation with new ideas without fear of criticism.

- 3) Promote collaborative learning, allowing children to share ideas and learn from their peers' responses.

Undoubtedly, children's learning does not occur solely within the school setting but continues at home as well. Therefore, collaboration with parents is critical in creating a coherent learning experience. Kindergarten teachers can:

- Inform parents of the importance of mistakes as part of children's cognitive development.
- Provide suggestions for at-home activities that promote learning through play and exploration.
- Encourage parents to avoid punitive reactions to incorrect responses and instead support their children's thinking processes.

In conclusion, the management of young children's mistakes is a multifaceted process requiring careful pedagogical practice. Through the creation of a supportive environment, the implementation of effective instructional strategies, and the provision of emotional reinforcement, kindergarten teachers can transform incorrect responses into valuable learning opportunities. Collaboration with parents further strengthens this process, building a coherent system of support that fosters children's cognitive, linguistic, and socio-emotional growth.

## **2.4 Incorrect Responses as Indicators of Cognitive Development in Preschool Children**

Errors in preschool children's responses are not merely mistakes that require immediate correction but provide valuable insights into their cognitive development and learning processes. Such responses reveal how children perceive, organize, and interpret the world around them. It is therefore important for kindergarten teachers to approach mistakes not as problems but as essential components of children's cognitive advancement (Piaget, 1952).

Piaget's (1952) theory offers a foundational framework for understanding this phenomenon.

According to Piaget, cognitive development unfolds in stages, each characterized by specific modes of thinking and perception. Preschool children (ages 3-6) are in the preoperational stage, where egocentric and concrete, rather than abstract, thinking predominates. At this stage, children struggle with reasoning that requires abstraction or hypothetical thinking. As a result, their responses may be overly simplistic, rooted in personal experience, or infused with elements of imagination (Harris, 2000; Piaget, 1952).

An illustrative example is when a child claims that the moon "*follows the car*" while traveling. Such a response does not indicate ignorance but rather the child's active effort to make sense of the phenomenon based on personal observation. By analyzing these answers, kindergarten teachers can gain valuable insights into children's reasoning and tailor instruction to their cognitive maturity level.

The significance of understanding mistakes is also highlighted by Vygotsky's (1978) theory, which introduced the concept of the "*zone of proximal development*" (ZPD). The ZPD refers to the gap between what a child can achieve independently and what they can accomplish with guidance from a more experienced individual. Mistakes can be seen as evidence that a child is attempting to operate beyond their current abilities. In other words, they indicate that the child is on the verge of grasping a new concept but requires additional support to do so (Wood, Bruner, & Ross, 1976).

Language development is another crucial factor shaping children's responses. According to Tomasello (2003), preschool children often use language in creative and experimental ways, producing neologisms or metaphorical expressions that reflect their attempts to articulate meanings for which they lack precise labels. For instance, a child might say that "*the flower drinks water*" instead of stating that the flower is watered. Such inventive uses of language are common and signal children's dynamic efforts to understand and communicate about their world (Tomasello, 2003).

Children's mistakes can also be linked to their limited working memory and attentional capacities, which are characteristic of early childhood. Young children often struggle to retain information that requires complex processing, leading to fragmented or seemingly illogical responses (Alloway, 2006).

Moreover, errors in children's answers may provide insight into difficulties with working memory and executive functions, key components in effective problem-solving. Research has shown that children with weaker executive functioning often produce superficial responses or fail to follow given instructions accurately (Diamond, 2013).

Understanding these factors enables kindergarten teachers to adopt a pedagogical framework that treats mistakes not as failures but as opportunities for learning. Mistakes can be leveraged to strengthen children's cognitive and linguistic skills while also building their confidence and positive attitudes toward learning.

In summary, mistakes are not only natural but also serve as valuable diagnostic tools. Kindergarten teachers who are able to interpret children's responses appropriately can provide tailored support and guidance, thereby enhancing the effectiveness of preschool education.

## **2.5 The Impact of Incorrect Responses on the Shaping of the Learning Process**

Incorrect responses of preschool children play a crucial role in shaping the learning process, as they allow teachers to understand children's cognitive pathways and adjust their teaching in ways that promote active learning. Contrary to the traditional perception of mistakes as failures, contemporary theoretical and empirical approaches recognize that errors constitute a natural part of development and learning (Bruner, 1983; Vygotsky, 1978).

The significance of incorrect responses lies in the fact that they reveal the structure of a child's thinking. Through them, kindergarten teachers can identify how children process information, what alternative interpretations they form, and which cognitive strategies they employ to answer questions. Moreover, errors often indicate the point at which a child stands in the process of conceptual understanding, thereby enabling the teacher to adjust instruction accordingly (Fischer, 2008).

Active learning, according to Bruner's (1983) theory, is grounded in the principle that children must be actively engaged in the process of acquiring knowledge. When a child provides an incorrect response, it demonstrates that the information has been cognitively processed, but that the child has either not yet acquired sufficient knowledge or is relying on faulty reasoning strategies. At this juncture, the kindergarten teacher can intervene to guide the child toward a more accurate understanding.

Various methods, such as guided discovery, reinforce this process by offering young children's opportunities to experiment, discuss, and revise their misconceptions through interaction with teachers and peers (Mercer & Littleton, 2007). For example, if a child says, "*fish fly in the water*," the teacher can use images and videos to help the child refine their understanding of movement in water.

Metacognitive thinking -the ability of a child to reflect on and evaluate their own thought processes- can also be fostered through the analysis of mistakes. According to Flavell's (1979) theory, metacognitive development enables children to identify cognitive errors, recognize their limitations, and improve their learning strategies. To cultivate metacognition, kindergarten teachers may employ techniques such as:

- 1) Exploratory questioning: e.g., "How did you think about that?" or "What else could be true?"
- 2) Self-correction: encouraging children to reconsider their responses and explore alternative explanations.
- 3) Comparisons between different answers: allowing children to listen to and discuss various perspectives in order to recognize which elements are more accurate.

Peer interactions are also highly beneficial, as children develop deeper conceptual understanding through discussion and mutual correction (Rogoff, 1990). Cooperative learning can be structured so that incorrect answers are used as points of discussion. For example, if one child provides an incorrect response in a group activity, the teacher may invite peers to propose ideas and argue for the correct answer. In this way, learning becomes a social process, and children learn not only from their own answers but also from those of their peers.

The way in which kindergarten teachers handle incorrect responses has a significant impact on children's confidence and willingness to engage in learning. If errors are treated as failures, children may develop a fear of participation and self-expression. Conversely, if mistakes are viewed as natural and essential to learning, children feel safe to experiment and explore new ideas (Dweck, 2006).

Kindergarten teachers can foster this positive stance by:

- Praising effort, not only the correctness of answers.
- Highlighting mistakes as learning opportunities, showing that even adults learn from errors.
- Encouraging curiosity, so that children perceive mistakes as part of their exploration of the world.

Therefore, incorrect responses should not be regarded merely as errors to be corrected but as valuable tools for understanding children's cognitive development. With appropriate pedagogical strategies, kindergarten teachers can transform mistakes into opportunities for active learning, enhancement of metacognitive thinking, and the development of cooperative peer interaction.

Proper management of incorrect responses leads to a learning environment in which young children feel secure in expressing ideas, questioning, revising their thoughts, and developing a meaningful and positive relationship with knowledge. In this way, learning



transcends the simple memorization of information and evolves into a dynamic journey of discovery and growth.

## **2.6 The Utilization of Incorrect Responses in Improving Teaching Practice**

Children's incorrect responses are not merely indicators of insufficient knowledge. They can also serve as valuable tools for improving teaching practice. When kindergarten teachers approach mistakes as opportunities for learning rather than as failures, they create conditions that foster children's cognitive development, enhance instructional strategies, and encourage creative thinking.

Differentiated instruction is one of the primary methods of utilizing incorrect responses. According to Tomlinson's (2001) theory, tailoring the learning experience to the individual needs of children contributes to better comprehension and strengthens active participation in the learning process. Incorrect responses allow kindergarten teachers to understand differences in learning pace, thinking styles, and conceptual understanding.

Through this process, kindergarten teachers can identify each child's difficulties, provide individualized support, and implement alternative teaching methods such as play-based learning, visualizations, and experiential activities. In this way, all children can actively engage in the learning process and progress according to their abilities.

In addition to enriching children's learning experiences, incorrect responses can function as a form of feedback for teachers themselves. Reflection on such responses helps kindergarten teachers evaluate the clarity of their questions, adapt teaching materials to learners' needs, and seek new approaches for presenting challenging concepts (Black & Wiliam, 2009). Continuous evaluation and adaptation of instructional practices enable teachers to become more effective, ensuring a more meaningful and enriched learning experience (Hattie & Timperley, 2007).

Another means of utilizing incorrect responses is through formative assessment, which aims not only to document learning progress but also to continuously improve the educational process (Black & Wiliam, 1998). Effective management of errors in formative assessment can be achieved by:

- using open-ended questions that encourage children to explain their reasoning,
- implementing reflective activities in which children analyze their mistakes and propose improvements, and
- organizing collaborative discussions where learners consider different viewpoints and search for more accurate solutions.

Overall, leveraging incorrect responses in teaching practice contributes to the creation of a supportive learning environment in which young children feel safe to experiment, make mistakes, and learn from them. Effective management of errors helps children build self-confidence, develop critical thinking, and actively engage in learning, while also providing kindergarten teachers with valuable insights for improving their instruction.

### 3. Methodology

#### 3.1 Research Problem

The present study focuses on how kindergarten teachers manage preschool children's incorrect responses within the learning process. Traditionally, incorrect responses were regarded as signs of failure or lack of knowledge, interpreted by teachers as obstacles to achieving learning objectives (Boaler, 2013). However, contemporary learning theories -particularly those grounded in constructivism- recognize mistakes as valuable indicators of cognitive processing, active learning, and deeper understanding of content (Hattie & Timperley, 2007; Vygotsky, 1978). Within this framework, incorrect responses are treated as opportunities for diagnostic assessment, reflection, and the development of metacognitive skills. The teacher's attitude toward these responses significantly influences children's self-concept and learning confidence (Dweck, 2006).

In Greek early childhood education, the utilization of incorrect responses remains limited and often depends on individual kindergarten teachers' beliefs and pedagogical training. Research has shown that many teachers tend to immediately correct young children's errors, or even discourage their expression, without capitalizing on their potential as triggers for reflection or dialogic exchange (Moumoulidou & Sofou, 2022). Although many kindergarten teachers acknowledge the pedagogical value of mistakes, in practice they often adopt a more "*traditional*" teaching stance, focusing on correct answers rather than exploring the reasoning processes of the child (Rapti, 2002).

Furthermore, the lack of systematic professional development concerning the metacognitive use of mistakes and formative assessment limits kindergarten teachers' ability to effectively manage incorrect responses. Nevertheless, within the framework of contemporary early childhood pedagogy, there is a growing recognition of the need for educational practices that encourage open-ended questioning, reflection, and active child participation in learning through the interpretation and processing of their errors (Vamvouka, 2008).

The investigation of strategies employed by kindergarten teachers -whether they reject, ignore, or creatively integrate incorrect responses into their teaching- constitutes a central focus of this study. Recording teachers' attitudes and practices also highlights the pedagogical values that underpin the educational process in early childhood (Sfard, 1998).

#### 3.2 Purpose of the Study, Objectives, and Research Questions

This study seeks to highlight the importance of preschool children's incorrect responses within the kindergarten context and to examine teachers' attitudes and practices toward them. Rather than being interpreted as indicators of weakness or failure, incorrect responses are recognized in the contemporary literature as expressions of active cognitive processes and as starting points for learning progress (Boaler, 2013; Hattie & Timperley, 2007). The focus lies on understanding how kindergarten teachers perceive these responses and how they pedagogically incorporate them into their daily instructional practices.

The general purpose of this quantitative study is to record kindergarten teachers' perceptions and views regarding young children's incorrect responses, as well as to capture the pedagogical strategies employed for their management in everyday kindergarten life.

Specifically, the objectives of this study are:

- To document kindergarten teachers' views and perceptions regarding children's incorrect responses.
- To investigate the frequency and types of pedagogical practices that kindergarten teachers apply in managing such responses in everyday classroom settings.

The research questions that guided this study were the following:

- 1) What are kindergarten teachers' views regarding preschool children's incorrect responses in everyday classroom life?
- 2) What pedagogical practices do kindergarten teachers employ in managing children's incorrect responses expressed in their classrooms?

Addressing these questions is essential for understanding how educational practice is shaped in a framework that incorporates mistakes as part of learning rather than as obstacles to it (Sfard, 1998; Vygotsky, 1978). Through the study's findings, the aim is to promote a culture of pedagogical acceptance, dialogue, and support for children's cognitive development.

### 3.3 Research Method

The research approach adopted in this study is quantitative, as it seeks to measure and interpret kindergarten teachers' views and practices concerning the management of incorrect responses in early childhood education. The quantitative method was selected in order to collect reliable and objective data that can be subjected to statistical analysis and lead to generalizable conclusions (Creswell & Creswell, 2018).

Quantitative methodology is particularly appropriate in cases where the aim is to record trends, correlations, or differences between variables, based on the use of standardized measurement tools and structured data collection procedures. In the present study, a structured questionnaire was employed, designed to cover the range of issues related to kindergarten teachers' management of young children's incorrect responses. The choice of questionnaire is justified by its capacity to gather information from a large sample within a short timeframe, ensuring anonymity, clarity, and accuracy (Dörnyei, 2007; Muijs, 2011).

This methodological approach was deemed the most suitable for achieving the aims of the study. Through quantitative analysis, the study seeks to provide evidence-based insights into how early childhood educators understand and utilize preschool children's incorrect responses within the learning process.

### 3.4 Description of the Sample

The sample of this study consists of 72 kindergarten teachers working in public kindergartens in the Region of Crete. More specifically, 9,7% of the participants were male, while 90,3% were female. With regard to age, 37,5% were between 23-33 years old, while 36,1% were between 34-44 years old. Concerning teaching experience, the majority of teachers (43,1%) had between 1

and 10 years of service, whereas regarding the highest educational level attained, most participants (58,3%) were graduates of the Department of Early Childhood Education.

The selection of participants was conducted through convenience sampling, based on availability, willingness to participate, and relevant professional experience in the field of early childhood education. Convenience sampling is widely employed in research designs where the aim is to collect data from specific populations under limited temporal or logistical conditions (Cohen, Manion & Morrison, 2018). Despite its limited potential for generalization, this method is suitable for exploratory studies such as the present one, which seek to capture teachers' views, beliefs, and pedagogical practices. Table 3.1 below provides a summary of the demographic characteristics of the kindergarten teachers who participated in the study.

**Table 3.1: Demographic Data**

		<b>n</b>	<b>Percentage (%)</b>
<b>Sex</b>	Male	7	9,7
	Female	65	90,3
	Total	72	100,0
<b>Age</b>	23-33	27	37,5
	34-44	26	36,1
	45-55	19	26,4
	≥ 56	0	0,0
<b>Years of teaching experience</b>	1-10	31	43,1
	11-20	19	26,4
	21-30	17	23,6
	≥ 31	5	6,9
<b>Highest educational level</b>	Department of preschool education	42	58,3
	Postgraduate studies	25	34,7
	Doctoral studies	5	6,9

### 3.5 Data Collection

The collection of research data was carried out in a manner that ensured the anonymity, impartiality, and voluntary participation of respondents. The chosen instrument was a structured questionnaire, designed specifically for the purposes of this study and comprising both closed- and open-ended questions. The questionnaire was distributed and completed online, thereby facilitating accessibility and ease of participation (Bryman, 2017).

#### 3.5.1 Data Collection Procedure

The data collection process lasted for two months and was conducted via an electronic form (Google Forms), which was disseminated by the researchers through email to kindergarten teachers in public kindergartens. Participation was anonymous and voluntary, adhering to the fundamental principles of research ethics (Cohen, Manion & Morrison, 2018). Prior to completing the questionnaire, participants were informed about the purpose of the study, the use of the data exclusively for academic and research purposes, the guarantee of anonymity and confidentiality, as well as their right to withdraw at any time without consequences.

### 3.5.2 The Questionnaire

The questionnaire was designed with the aim of collecting measurable data while also capturing participants' pedagogical perceptions and experiences. It consisted of four thematic sections, structured to address the core dimensions of the study. The use of a questionnaire as the primary data collection tool was deemed appropriate as it ensured anonymity, accuracy, and time efficiency, while enabling kindergarten teachers to express their views clearly and honestly without the pressure of direct interaction.

Furthermore, this instrument provides the researchers with the possibility of reliable quantitative analysis, as the data obtained are standardized and comparable (Bryman, 2017). The questionnaire included both closed-ended questions (using Likert-type scales and multiple-choice items) and open-ended questions, in order to collect qualitative data as well. The inclusion of open-ended questions enriched the depth of understanding, offering interpretive insights into quantitative findings. The Likert scale was selected to measure the intensity of participants' attitudes and beliefs (Dörnyei, 2007).

The structure of the questionnaire comprised the following sections:

- 1) Introduction and participant information regarding the study.
- 2) Demographic characteristics of the sample.
- 3) The role of questions in the educational process.
- 4) Management of incorrect responses in the daily practice of the kindergarten.

Both the formulation and organization of the questionnaire were evaluated in terms of clarity, relevance, and comprehensibility through a pilot implementation with five kindergarten teachers, in order to ensure the functionality of the instrument prior to its final distribution.

### 3.6 Method of Data Analysis

The analysis of the data was carried out using a mixed-methods approach, combining both quantitative and qualitative techniques to achieve a more comprehensive understanding of kindergarten teachers' perspectives and practices regarding the management of incorrect responses in the educational process.

Specifically, the closed-ended items of the questionnaire were analyzed with the statistical package SPSS (version 25.0). Responses were numerically coded, followed by the calculation of descriptive statistics such as absolute and relative frequencies ( $f$ , %), means ( $M$ ), and standard deviations ( $SD$ ). The quantitative analysis aimed to depict general trends in kindergarten teachers' use of questions, their attitudes toward mistakes, and their strategies for managing them.

With respect to the open-ended questions, thematic analysis was employed following the framework proposed by Braun and Clarke (2006). Initially, all responses were read for familiarization with the content, followed by the coding of key expressions and phrases, and subsequently their grouping into thematic categories. The resulting categories reflect common patterns of perception and practice regarding error management, the enhancement of thinking, and the pedagogical utilization of divergences.

### 3.7 Research Ethics

The present study was conducted in strict adherence to the principles of research ethics, as outlined in both Greek and international literature. The primary concern was the protection of participants' rights, the safeguarding of their anonymity, and their free and voluntary participation in the research process (BERA, 2018; Cohen, Manion, & Morrison, 2018).

Participants were fully informed about the purpose of the study, the methodology, the use of data, as well as their right to withdraw from the study at any stage without consequences. Special care was taken to avoid any form of harm -physical, psychological, or professional- to participants. To this end, the questions were formulated in a neutral and non-directive manner, avoiding any potential discomfort or awkwardness (Wellington, 2015). Moreover, no personal information (such as names, school names, or addresses) was collected, ensuring complete anonymity and protection of participants' identities.

This study aligns with the Code of Ethics of the British Educational Research Association (BERA, 2018), as well as with the institutional framework on data protection applicable in the European Union and Greece (General Data Protection Regulation – GDPR). The observance of scientific and ethical principles constitutes a fundamental prerequisite for ensuring the validity and reliability of the study. Ethical consistency on the part of the researchers is essential not only for legal reasons but also for establishing trust with the educational community, whose members willingly participated in the study.

## 4. Research Findings

### 4.1 Quantitative Analysis of Kindergarten Teachers' Views on Incorrect Responses

The quantitative analysis examined kindergarten teachers' attitudes and perceptions regarding the role of questioning in the learning process and the management of incorrect responses.

According to the findings, all kindergarten teachers acknowledged the importance of questioning: the mean score for the item *"How important is questioning in the educational process?"* was very high ( $M=4,56$ ,  $SD=0,67$ ), indicating that kindergarten teachers consider questioning to be highly significant in classroom practice.

Furthermore, the results revealed that questioning constitutes an integral part of kindergarten teachers' daily practice. Specifically, 70,8% of the respondents reported using questions "always," while an additional 27,8% stated they use them "often." Only a small proportion (1,4%) indicated that they use questions "sometimes." Table 4.1 presents the frequency of question use by kindergarten teachers in their daily educational practice.

**Table 4.1:** Frequency of Questioning in Daily Practice

Frequency of questioning	n	Percentage (%)
Never	0	0,0%
Rarely	0	0,0%
Sometimes	1	1,4%
Often	20	27,8%
Always	51	70,8%
<b>Total</b>	<b>72</b>	<b>100,0%</b>

With regard to kindergarten teachers' attitudes toward children's incorrect responses, the majority of the sample considered that such responses should be corrected in the context of everyday educational practice. Specifically, 77,8% of teachers indicated that incorrect answers should be corrected, compared to 22,2% who believed they should not.

In addition, kindergarten teachers were asked about the importance and frequency of using questioning in a preschool setting. The high mean scores confirmed their positive stance toward questioning, as they evaluated it as highly significant ( $M=4,56$ ) and reported frequent use of questions ( $M=4,69$ ).

Kindergarten teachers also largely agreed that an incorrect response can serve as a learning opportunity ( $M=3,68$ ), reflecting a contemporary pedagogical perspective that views deviation not merely as error but as a starting point for further exploration. At the same time, they regarded the allocation of time within an activity to correct an incorrect response as moderately to considerably important ( $M=3,56$ ), suggesting that while they acknowledge correction as part of the process, they do not perceive it as absolutely necessary in every instance. Interestingly, kindergarten teachers assigned relatively lower (though still above average) importance to the role of question formulation in influencing whether a child provides an incorrect response ( $M=3,78$ ). In other words, although they recognize that the phrasing of a question can affect children's answers, they do not view it as the most decisive factor.

More specifically, concerning the extent to which time should be allocated for correction within the flow of the lesson, kindergarten teachers' responses varied. Approximately 48,6% of the sample considered it "very" or "extremely" important, 36,1% assessed it as "fairly" important, while about 15,3% rated it as "slightly" or "not at all" important. This distribution is presented in Table 4.2, which illustrates that although most kindergarten teachers attribute significance to providing time for correction, not all agree on its maximum level of importance.

**Table 4.2:** Significance of providing time for error correction

Significance of providing time for error correction	n	Percentage (%)
Not at all	0	0,0%
Slightly	11	15,3%
Moderately	26	36,1%
Very	17	23,9%
Extremely	18	24,7%
<b>Total</b>	<b>72</b>	<b>100,0%</b>

A similar pattern emerged regarding the perception of incorrect responses as learning opportunities. Specifically, 30,6% of kindergarten teachers considered it “extremely important” to pedagogically utilize incorrect answers, while an additional 26,4% regarded it as “very important.” Overall, 83,0% of the kindergarten teachers viewed incorrect responses positively in terms of their learning value, whereas only a very small proportion downplayed this dimension altogether (just 2,8% of the sample considered it “not at all important”). Table 4.3 presents the degree of kindergarten teachers’ agreement with the notion that an incorrect response can serve as a learning opportunity for preschool children.

**Table 4.3:** Importance of utilizing incorrect responses as opportunities for learning

<b>Importance of utilizing incorrect responses as opportunities for learning</b>	<b>n</b>	<b>Percentage (%)</b>
Not at all	2	2,8%
Slightly	10	14,2%
Moderately	19	26,0%
Very	19	26,4%
Extremely	22	30,6%
<b>Total</b>	<b>72</b>	<b>100,0%</b>

The questionnaire also explored the specific circumstances and causes underlying incorrect responses. As shown in Table 4.4, kindergarten teachers observed that incorrect answers tend to occur more frequently when children are approaching break or mealtime—moments during which their attention may shift to other needs.

More specifically, 34,7% of the kindergarten teachers reported that children are most likely to give incorrect answers when mealtime is approaching, while 25,0% indicated that this occurs more often just before recess. Additionally, 29,2% of the kindergarten teachers noted the end of the school day as another moment when such responses are likely to appear. Furthermore, a considerable proportion of teachers (31,9%) stated that these answers sometimes occur throughout the day, without being exclusively associated with a particular time.

**Table 4.4:** Time periods where incorrect responses are observed

<b>Time periods where incorrect responses are observed</b>	<b>n</b>	<b>Percentage %</b>
When mealtime approaches	25	34,7%
Several times a day	23	31,9%
When it's time to leave school	21	29,2%
When break time approaches	18	25,0%
A few times a day	22	30,6%
During the all-day program	7	9,1%
After 3 hours	9	12,0%
After 2 hours	8	11,0%
After 1 hour	6	9,0%
It depends on the child (not generalizable)	1	1,4%
None of the above options	1	1,4%

The findings suggest that children’s fatigue and reduced concentration toward the end of an activity or the school day may be associated with an increase in incorrect responses. However,



a very small proportion of kindergarten teachers (approximately 1,4%) reported that no general patterns could be identified or that none of the predefined options applied, thereby emphasizing that each child may differ and that incorrect answers are often situational or dependent on individual factors.

With regard to the main causes leading preschool children to provide incorrect responses, as shown in Table 4.5, kindergarten teachers primarily referred to external or situational factors rather than insufficient knowledge. Fatigue emerged as the most frequently cited reason (55,6% of the teachers included it in their responses), followed by lack of concentration (54,2%) and reduced interest in the topic (51,4%). Moreover, 47,2% of the sample indicated that many incorrect answers occur when children do not fully understand the question, while 43,1% attributed them to possible individual characteristics or learning difficulties. The difficulty of organizing one's thinking (e.g., structuring a coherent response) was also mentioned by 40,3% of the kindergarten teachers. By contrast, only a very small percentage (approximately 1,0%-2,0%) attributed incorrect responses to sheer lack of knowledge or to children's tendency to focus exclusively on their personal experiences.

**Table 4.5:** Causes of children's incorrect responses

Reasons leading to incorrect answers	n	Percentage (%)
Fatigue	40	55,6%
Lack of concentration	39	54,2%
Lack of interest	37	51,4%
Difficulty in understanding the question	34	47,2%
Learning difficulty/ special needs of the child	31	43,1%
Difficulty in the child's thinking	29	40,3%
Ignorance of the answer or an irrelevant answer	1	1,9%

These data indicate that most kindergarten teachers perceive incorrect responses as stemming from the child's immediate condition (fatigue, distraction, lack of interest) or from difficulties in comprehension or expression, rather than from ignorance. This perspective emphasizes the child's emotional and cognitive state at the moment of responding rather than a deficit in knowledge, thereby reflecting a compassionate, child-centered pedagogical approach on the part of the kindergarten teachers.

#### **4.2 Qualitative Analysis of Kindergarten Teachers' Views on Incorrect Responses**

The qualitative analysis was based on the open-ended questions of the questionnaire, where kindergarten teachers were invited to describe, in their own words, the purposes for which they employ questions in their classroom, as well as to articulate their preferences and perspectives regarding the use of open- or closed-ended questions and the handling of incorrect responses. From their answers, several thematic categories emerged, reflecting the multidimensional pedagogical role of questioning in the learning process.

In relation to the question concerning the reasons why kindergarten teachers employ questions in everyday classroom practice, many respondents emphasized that questions are not used merely as a means of knowledge assessment but, more importantly, as a tool for

stimulating thinking, fostering inquiry, and facilitating communication. As they noted, questions help preschool children think critically, recall prior knowledge, and express themselves verbally. Several teachers stressed that through questioning, children assume an active role in the learning process by articulating their opinions, connecting new information to their experiences, and engaging creatively in dialogue.

Moreover, questions were reported to serve as a means of enhancing interest and motivation— “...to capture the pupils' attention,” as one kindergarten teacher stated —while also providing opportunities for formative feedback, enabling the teacher to assess children's understanding and adapt instruction accordingly.

Regarding the question of whether and how kindergarten teachers respond to children's incorrect answers, multiple reasons were identified explaining why most teachers choose to engage with them. These reasons were organized into thematic categories, which are summarized in Table 4.6.

**Table 4.6:** Thematic categories of the question  
 “Do kindergarten teachers respond to children's incorrect answers?”

Thematic categories
1. Encouraging participation and respecting the child's opinion
2. Guidance towards the correct answer
3. Depending on the content, the child or the condition
4. Comprehension check – Investigation
5. Psycho-emotional approach/acceptance
6. Recognizing the child's thoughts and feelings
7. Rewarding and respecting the child's efforts
8. Personalized approach / depending on the child and the situation
9. Dealing with dialogue/reframing and guidance
10. Educational role & pedagogical responsibility

According to the first thematic category, several kindergarten teachers reported that they respond to children's incorrect answers out of respect for the child's views and in order to encourage participation. The responses of some kindergarten teachers are characteristic:

*“...I always respond because whatever a child says, even if irrelevant, is important for them, and we are obliged to show interest in their answer.”*

*“...Yes, I respond so that they do not feel uncomfortable.”*

*“...I respond because I believe it is pedagogically appropriate to listen to whatever children have to say, whether accurate or not, and with the right handling you can redirect their thinking in the correct direction.”*

*“...I reward the child's effort by saying that this too is a valid thought.”*

According to the second thematic category, many kindergarten teachers choose to guide children toward the correct answer, while avoiding direct rejection of the incorrect one. Through questions, examples, or rephrasing, they attempt to scaffold the child's thinking and encourage them to reconsider their response in a supportive way. For example, some kindergarten teachers report:

*"...I respond in such a way that still guides the child toward the intended answer."*

*"...I do not tell the child that their answer was wrong... instead, through examples and explanations I try to help the child find the correct answer with me - and certainly not simply at the answer I consider correct."*

*"...I respond by trying to bring them back onto the path from which they may have deviated."*

According to the third thematic category, some kindergarten teachers noted that their responses to incorrect answers vary depending on the specific situation. Their approach is shaped by factors such as the content of the child's response, the child's personality, or the instructional context. Consequently, there is no single uniform practice, but rather a case-by-case adjustment to best support both learning and the child's emotional well-being. Some kindergarten teachers typically report:

*"...It depends on the response. In most cases, I reply and encourage the child to rethink the question and, if they wish, to modify their answer."*

*"...It depends. Sometimes, yes, I respond by reformulating the question so that the pupil understands it. Other times, no, I do not respond, especially when there is a chance the child might feel uncomfortable."*

*"...I do not always follow the same practice. It depends on each case."*

According to the fourth thematic category, a number of kindergarten teachers respond to incorrect answers with the aim of checking the child's understanding of the question and probing their level of comprehension. This practice often involves reformulating the question or providing clarifications and examples in order to determine whether the incorrect response was due to misinterpretation or lack of knowledge. The responses of some kindergarten teachers are characteristic:

*"...Yes, I respond because I repeat the question to assess the extent to which the child understands what I am asking."*

*"...I respond to see whether they understood the question, and I try, through my reply, to show them that their answer was not aligned with the topic of the question."*

*"...At first, I ask again in a different way or provide an explanation so that they understand better."*

In the fifth thematic category, kindergarten teachers emphasized the importance of emotional safety and the acceptance of every answer, even when incorrect. Their responses focus on supporting children's self-esteem and promoting participation, while avoiding rejection or correction in ways that might lead to discouragement. Special emphasis is placed on acknowledging both the intention and the effort behind the child's answer, with guidance offered respectfully and empathetically. For example, some kindergarten teachers report:

*"...I always respond because whatever a child says, even if irrelevant, is important for them, and we are obliged to show interest in their answer."*

*"...Yes, I respond so that they do not feel uncomfortable."*

*"...It is not necessary to correct a child with low self-confidence who decided to participate in the discussion, especially if they had not participated before."*

*"...There is no wrong answer. All answers are acceptable and meaningful for each child. Nevertheless, we always help the child gradually reach the correct answer and clarify it in their mind."*

*"...I do not tell the child their answer was wrong. With a few examples and some explanation, I try to help them reach the correct answer together-and certainly not just the answer I personally consider correct. These are, after all, educational techniques dating back to ancient Greece."*

*"...I reward the child's effort, stressing that 'this too is a valid thought.'"*

In the sixth thematic category, kindergarten teachers' responses highlighted the importance of recognizing the thinking process behind a child's incorrect answer. Rather than focusing exclusively on correctness, teachers attempt to understand the child's reasoning, provide feedback, and gently guide them toward reconsidering their response. This approach promotes dialogue, pedagogical tact, and the gradual development of critical and reflective thinking. Some kindergarten teachers typically report:

*"...I respond because I consider it pedagogically appropriate to listen to whatever children have to say, whether right or wrong, and simply, with the right handling, to guide their thinking in the correct direction."*

*"...I respond in order to explain why what they answered was not related to the question that was posed."*

*"...Many times, a question asked by a child reflects a topic of personal importance; thus, it deserves a response that addresses their concern before bringing them back to the topic under discussion. If they do not receive an answer, they may continue to reflect in isolation, risking distraction or forming an incorrect conclusion. Therefore, it is preferable, in my view, to answer children sincerely and then attempt to redirect them to the main subject."*

The seventh thematic category emphasizes rewarding children's effort regardless of whether their answer is correct. Kindergarten teachers show respect for children's participation, acknowledge their contribution to the discussion, and avoid labeling responses as "wrong." Instead, they prefer to rephrase the question or provide guiding examples, thereby keeping the child actively engaged in the learning process. The responses of some kindergarten teachers are characteristic:

*"...I respond to every question addressed to me..."*

*"...I respond by stating that what was said was not related to what I asked, and then I repeat the question."*

*"...Initially, I ask the children again in a different way or give them an additional explanation to help them better understand."*

*"...I reward the child's effort by acknowledging that they were right to think in that way."*

In the eighth thematic category, kindergarten teachers stressed the need to adapt their pedagogical approach according to the child, the type of question, or the situational context. They recognized that no single strategy is universally applicable; instead, they select the method most appropriate to the characteristics of the response or the classroom dynamics. This flexibility reflects both professionalism and pedagogical sensitivity. For example, some kindergarten teachers noted:

*"...I do not always follow the same practice. It naturally depends on the situation."*

*"...It depends. Sometimes, yes—for example, if I ask for a word beginning with /a/ and they answer 'seal,' I explain that it begins with /s/. Other times, I let children discover on their own whether their answer was correct or not."*

*"...Mostly, I request or provide clarifications and then repeat the question."*

*"...Sometimes, if these incorrect answers can be used pedagogically."*

The ninth thematic category underscores the value of dialogue and rephrasing the question as essential tools for enhancing understanding and providing proper guidance.

Kindergarten teachers aim to sustain children's engagement, redirect them when they digress, and provide honest responses to their endless questions. This approach fosters participation, concentration, and trust in the educator. Some kindergarten teachers typically report:

*"...I respond in order to explain why what they answered was not related to the question that was asked."*

*"...In my opinion, it is preferable to answer children sincerely to whatever they ask and then, when we return to the topic, to attempt to redirect them accordingly."*

*"...Initially, I ask them again in a different way or provide explanations to help them understand."*

In the tenth and final thematic category, kindergarten teachers highlighted their multifaceted role as educators with a responsibility toward children's thinking. Responding even to the most irrelevant or incorrect contributions is perceived as a duty, since it helps to correct misconceptions and to shape accurate understandings. Everyday teaching in kindergarten is thus understood as a co-constructive process of knowledge, in which the teacher acts with consistency, respect, and guidance. The responses of some kindergarten teachers are characteristic:

*"...I respond because I consider it pedagogically appropriate to listen to what children have to say, whether right or wrong, and, with the right approach, guide their thinking in the correct direction."*

*"...I respond because I want to explain that what they answered was not connected to the question posed."*

*"...I respond in order to help them understand on their own what is correct and what is incorrect..."*

*"...I do not tell the child that their answer was wrong. With examples, clarifications, and explanations, whenever necessary, I try to help the child reach the correct answer along with me..."*

The above categories illustrate that questions in kindergarten serve multiple pedagogical purposes. Teachers emphasize both their educational role -fostering critical thinking, probing children's knowledge, encouraging oral expression, and strengthening language skills- and their psychological/social role -providing children with a voice, promoting interest, collaboration, and trust within the group. As kindergarten teachers characteristically commented, questions addressed to preschool children can transform a simple activity into a valuable interactive learning experience in which young learners become co-explorers and co-constructors of knowledge.

With regard to the preference between open- and closed-ended questions, the majority of kindergarten teachers expressed a clear preference for open-ended questions. Their responses suggest that such questions are more suitable for kindergarten-aged children, as they allow greater freedom of thought and expression. As one kindergarten teacher noted, she preferred open-ended questions *"...so that children can respond without being restricted..."*, while another emphasized that *"...they allow for more interpretations and connections with personal experiences..."* By contrast, many kindergarten teachers described closed-ended questions as limiting. Several pointed out that closed-ended questions *"...restrict children's capacity for processing information and knowledge..."* and usually serve only specific, *"functional"* purposes (e.g., quick knowledge review or comprehension check). Some teachers reported that they resort to closed-ended questions only when strictly necessary, for example, when time is limited or when a very specific piece of information is required.

Nevertheless, a small number of kindergarten teachers expressed different views, noting that a combination of open- and closed-ended questions can be pedagogically beneficial, depending on the instructional goal, the timing, and the child's needs. Overall, however, the majority of the sample demonstrated a clear inclination toward open-ended questioning as a means of promoting creative expression, critical thinking, and active engagement of children in the learning process of the preschool setting.

Another issue explored concerned kindergarten teachers' attitudes toward incorrect answers and how they choose to manage them. The responses revealed a coherent yet flexible approach. In particular, most teachers reported handling incorrect answers with respect and encouragement, adapting their reactions to the specific situation.

*"...I respect their opinion, I listen carefully and respectfully, just as I do with the other children..."*, one kindergarten teacher wrote, reflecting a stance that does not dismiss mistakes outright but regards them as part of the child's expressive process. Many kindergarten teachers stressed that they avoid immediate correction, especially when children appear insecure or shy, so as not to discourage them. Instead, they adopt more indirect or collaborative correction strategies. Some kindergarten teachers typically report:

*"...I give them time to think again."*

*"...I ask the other children to help."*

*"...if some children are shy or reserved, then I wait and give them a second chance to think again."*

Finally, some kindergarten teachers reported turning incorrect answers into opportunities for whole-class discussion. For instance, teachers may ask additional questions to better understand the child's reasoning, or they may incorporate the imaginative element of the response to reconnect it with the topic under discussion.

## 5. Discussion

### 5.1 The Significance of Questioning in the Learning Process

The analysis of kindergarten teachers' responses highlights the high value they attribute to oral language and, in particular, to questioning as a key tool in the learning process. Teachers recognize that questions enhance children's active participation, foster their linguistic expression, and substantially contribute to the development of critical and creative thinking. Specifically, they prefer open-ended questions, which they consider more suitable as they allow children to express their views freely, engage their imagination, and participate meaningfully in learning. This stance reflects the principles of sociocultural theory and child-centered approaches in contemporary early childhood education.

The findings of the present study are fully consistent with the international literature. According to Opiyo, Asesa, and Olel (2025), students' active engagement is enhanced when teachers strategically employ questions to encourage interaction and learner autonomy. Similarly, the study of Bytyqi-Damoni and Metaj-Macula (2025) underscores the value of open-ended questioning in fostering higher-order thinking skills within the framework of the revised Bloom's Taxonomy.

Moreover, Jeon, Shin, and Ryu (2025) analyze how questioning shapes classroom communication patterns and emphasize that its appropriate use can significantly improve the quality of teaching and learning. The research of Krisdiawan, Husen, and Asikin (2025) confirms that questioning in teaching strengthens critical thinking and metacognitive skills even from early childhood. Finally, Tegler (2025) and Al Azam (2025) underline that educators who integrate questioning techniques into their everyday practices enhance students' sense of self-efficacy and cultivate a learning culture grounded in reciprocal communication.

Consequently, the findings of this study align closely with contemporary research, confirming that questions -particularly open-ended ones- constitute a cornerstone of a dynamic, child-centered, and participatory approach to teaching and learning in preschool education.

### 5.2 Strategies for Managing Incorrect Answers

The interpretation of the qualitative data shows that kindergarten teachers develop and apply a variety of flexible strategies to manage children's incorrect answers, aiming to sustain their interest and promote the learning process. Rather than resorting to traditional, immediate correction, most teachers adopt more supportive and indirect approaches such as rephrasing the question, creating opportunities for group discussion, or encouraging the child to reconsider and reflect on their response.

Quantitatively, 77,8% of the sample stated that incorrect answers should be corrected; however, the qualitative analysis revealed that teachers find it acceptable to delay correction when this serves broader pedagogical purposes. This stance often depends on the child's emotional state, level of understanding, or the intent to promote self-regulation and autonomy. Kindergarten teachers weigh each case individually in order to ensure children's emotional safety and to avoid stigmatization or diminished self-confidence.



These strategies reflect a child-centered philosophy that acknowledges the value of mistakes as part of the natural learning process rather than as failures. This practice resonates with Vygotsky's concept of the "*zone of proximal development*", whereby a child can achieve higher levels of understanding with the support of an adult or peer. At the same time, Bruner's theory of scaffolding reinforces the need for an educational environment that provides adaptive support tailored to each child's needs and capacities.

This approach is also supported by contemporary literature. For instance, Egamkulovna and Isamaddinovna (2025) confirm that creating a learning environment in which mistakes are not punished but used as a springboard for reflection strengthens children's self-esteem and fosters creativity and critical thinking. Abrami, Bernard, Borokhovski, Wade, Surkes, Tamim, and Zhang (2008) emphasize the importance of metacognitive strategies and reflection in enhancing the critical thinking of young children, particularly when children interact within exploratory learning contexts.

Violette (2025), in a qualitative descriptive study, concludes that teachers' empathy, the maintenance of a positive climate, and strategic alternative responses to incorrect answers are essential foundations for building trust in the classroom. The work of Rezaei Manesh et al. (2024) further highlights the importance of ideological sensitivity when addressing errors or divergent meanings, thereby creating safe spaces for critical learning. Finally, Kampeza and Sfyroera (2016) stress that innovation in early childhood pedagogy is intrinsically linked to the creative handling of mistakes and their acceptance as valuable learning tools for young children.

In sum, the findings of this study align with contemporary pedagogical theories and practices, affirming that flexible and supportive management of incorrect answers is a fundamental component of effective early childhood education.

### **5.3 Interpretation of Kindergarten Teachers' Attitudes toward Incorrect Answers**

The participants' responses indicate that kindergarten teachers adopt a positive, empathetic, and empowering stance toward young children's incorrect answers. Rather than perceiving them as failures, they acknowledge mistakes as natural and useful elements of young children's learning trajectories. Their willingness to respond supportively and to use mistakes as opportunities for discussion, reflection, and deeper learning reflects pedagogical maturity and alignment with contemporary theories such as positive psychology, metacognition, and empowering pedagogy. Teachers in the sample largely attributed children's mistakes to factors such as fatigue, lack of interest or concentration, or misunderstanding of the question. This observation suggests both an awareness of the underlying causes of errors and the pedagogical sensitivity with which kindergarten teachers approach them. They do not interpret mistakes as evidence of inability, but as indicators of children's temporary state and the need for instructional adaptation.

This orientation is echoed in the international literature. For instance, Blessing (2025) shows that in contemporary kindergarten contexts, mistakes are utilized to strengthen children's autonomy and self-regulation. Addressing the issue of feedback in relation to errors, Mushin, Gardner, and Gourlay (2021) demonstrate that incorporating metacognitive questioning into daily practice fosters dialogue and empathy in the classroom.

The connection to positive psychology is also evident in the research of Whitebread et al. (2009), who argue that the acceptance of mistakes supports the development of self-regulation and empowerment in children. This pedagogical orientation not only advances cognitive growth but also nurtures emotional intelligence, psychological resilience, and social sensitivity.

Thus, the findings of this study are strongly corroborated by international research, which converges on the conclusion that the constructive management of mistakes is a key pillar of high-quality early childhood education.

#### **5.4 Overall Interpretation and Educational Implications**

A comprehensive review of the findings indicates that kindergarten teachers approach the learning process with respect for children's thinking and a deep awareness of the role of language mediation. Questions and pedagogical responses to incorrect answers are not merely communication techniques but reflect a deliberate and theoretically grounded educational philosophy rooted in interaction, empowerment, and reflective learning.

This stance incorporates elements of Vygotsky's sociocultural theory, where language and teachers' mediation play a central role in cognitive development. It is further supported by positive pedagogy, which promotes a learning environment characterized by emotional safety, trust, and acceptance of diversity. Contemporary research affirms that the quality of teacher-child interaction—particularly through the use of metacognitive questioning and supportive feedback—has a decisive impact on the development of self-regulation and reflective thinking (Blessing, 2025).

The educational implications of these findings are clear: there is a need for systematic and continuous teacher training, not only in dialogue techniques but also in deeper theoretical frameworks that enhance empathy, pedagogical flexibility, and the ability to guide learning through reflective feedback. Establishing a pedagogical environment where every child feels safe to experiment, articulate their thinking, and reconsider ideas through dialogue is foundational for meaningful, sustained, and autonomous learning.

Strengthening this pedagogical orientation can significantly promote metacognition, social learning, and emotional development, particularly in early childhood, where the foundations of children's future cognitive and social identities are established.

#### **5.5 Professional Awareness and Pedagogical Reflexivity**

The interpretation of results also highlights the importance of professional awareness and reflective practice. Kindergarten teachers do not respond to children's incorrect answers impulsively but rather through deliberate pedagogical choices aimed at fostering children's trust and exploring their thinking. This approach reflects an ethic of education that transcends the technical aspects of teaching, emphasizing instead the quality of teacher-child relationships and the genuine empowerment of children as active learners.

Reflective teaching, as described by Donald Schön (1983), entails the teacher's ability to think "*in and about*" action, continually evaluating pedagogical discourse and the effects of interventions. Within this framework, an incorrect answer is not regarded as a static event but as a dynamic indicator of the child's learning needs and an opportunity to differentiate or even

redirect instruction. Thus, mistakes become tools for reflection, both for the child and for the teacher, within a reciprocal learning process.

Furthermore, the pedagogical use of such responses fosters a collaborative learning environment, where teachers act more as co-learners than as evaluators. This stance is grounded in respect for children's internal logic, resonating with Vygotsky's sociocultural theory and contemporary child-centered pedagogies. In such environments, every incorrect answer serves as a foundation for knowledge construction rather than a point of termination.

## **6. Conclusions, Limitations and Recommendations**

This research study highlighted essential aspects of how kindergarten teachers perceive and manage children's incorrect answers in early childhood education.

The analysis of the data revealed that the majority of participating teachers adopt a pedagogical approach that does not treat incorrect answers merely as deviations from "correct" knowledge, but rather as valuable indications of children's thinking. Such responses are interpreted as starting points for dialogue, for redefinition of teaching objectives, and for strengthening pupils' active participation in the learning process. This stance enhances children's self-confidence, fosters agency, and cultivates creative and reflective thinking, constituting a key element of an environment where learning is grounded in acceptance and encouragement.

Particular emphasis was also placed on kindergarten teachers' preference for open-ended questions, which underscores the importance of allowing children to freely articulate their ideas, activate their critical thinking, and engage in dialogic learning. These types of questions contribute to the formation of a learning environment that respects the child's voice and strengthens initiative and autonomy. In contrast, closed-ended questions appear to be used primarily in specific instructional contexts, such as assessment or confirmation of knowledge. The findings of this study point to a shift in preschool education toward more open, democratic, and holistic pedagogical models, where incorrect answers are not stigmatized but are instead utilized as learning tools and as windows into the cognitive trajectory and development of the child.

Despite the encouraging results, certain limitations of this study should be acknowledged. The sample was restricted to a specific number of kindergarten teachers, primarily from urban contexts, which limits the generalizability of the findings to a wider population. Moreover, the reliance on self-reported questionnaire data may contain elements of socially desirable responses. Finally, the study focused exclusively on kindergarten teachers' views and was not complemented by direct observation of classroom practice, which would have allowed for confirmation or differentiation of the reported perspectives in authentic educational settings.

For a more comprehensive understanding of the issue, future research should employ qualitative methods, such as participatory observation and interviews, to capture more accurately how incorrect answers are managed in everyday classroom practice. Additionally, extending the investigation to other educational stages, such as the early grades of primary

school, could provide comparative insights and identify both differences and continuities in the handling of children's mistakes.

Equally important is the exploration of the impact of initial and ongoing teacher training, as this could highlight the need for professional development programs that strengthen theoretical and practical expertise regarding the pedagogical use of mistakes. Furthermore, incorporating the perspectives of children themselves, as well as those of parents, would be of particular interest in order to bring forth all voices involved in the learning process.

In conclusion, the findings of this study confirm that when incorrect answers are approached in a positive and reflective manner, they can be transformed into meaningful learning tools. The creation of a learning environment where mistakes are understood not as failures but as natural and creative components of the educational process is a fundamental prerequisite for the development of children's self-regulation, emotional resilience, and cognitive maturity. The pedagogical use of incorrect answers is not simply a technique but reflects a broader educational and value-based stance toward the child, knowledge, and learning.

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### **Conflict of Interest Statement**

The authors declare no conflicts of interest.

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