

Research Article

Same drawing, different readings: Professional vision and the limits of interpreting visual data in educational research

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Children's drawings are increasingly used as a source of data in qualitative research in education; however, their meaning derives not only from their visual characteristics but also from the professional perspective of the person interpreting them. Drawing on the concept of professional vision, this study aimed to examine how experts from different professional backgrounds interpret the same children's drawings and to identify the aspects in which their interpretations converge and those in which they differ. A qualitative study was conducted using semi-structured interviews with 20 experts representing six professional groups (teachers, early childhood educators, educationalists, psychologists, philosophers, and art experts), who independently interpreted four drawings produced by Year 5 and Year 6 primary school pupils without any additional information about the children or the circumstances in which the drawings had been created. The data were analysed using reflexive thematic analysis with combined deductive-inductive coding. The findings indicate that professional background shapes both the elements to which experts pay the greatest attention and the ways in which they attribute meaning to them. Teachers, early childhood educators, and educationalists primarily focused on the educational context and classroom relationships; psychologists on emotional indicators; art experts on the characteristics of visual expression; and philosophers on the limits of interpretation and the importance of dialogue with the child. At the same time, all professional groups acknowledged the limitations of their own perspectives and emphasised the need for an interdisciplinary approach and the inclusion of additional sources of information, particularly the child's own perspective, when interpreting children's drawings.

Keywords: Children's drawings; Interdisciplinarity; Interpretation; Professional vision; Qualitative research; Visual methodology

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1. Introduction

Scholarly interest in children's drawings dates back to the late nineteenth century and developed alongside the systematic study of childhood (Fabris et al., 2023; Farokhi & Hashemi, 2011). In educational and developmental research, drawing has been regarded as an important non-verbal medium through which children can communicate experiences, thoughts, and feelings that may be difficult to express fully in words (Fabris et al., 2023; Farokhi & Hashemi, 2011; Prayitno et al., 2024). During the first half of the twentieth century, a prominent strand of research approached children's drawings from a cognitive-developmental perspective, using characteristics of drawings

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to investigate intellectual development and children's developing conceptions of space (Fabris et al., 2023).

Goodenough (1926) regarded the human figure drawing as a measure of intellectual maturity, while Luquet (1927/2001) described the developmental stages of drawing that culminate in the transition from intellectual to visual realism, that is, the shift from drawing what the child knows about an object to drawing what the child actually sees. Lowenfeld and Brittain (1987) associated artistic expression with the child's overall creative and mental development.

Although these traditions differ in their theoretical foundations, they share a common assumption: a drawing is regarded as an indicator of what a child is, knows, or is capable of, while its meaning is determined by the adult expert who interprets it. Historically, developmental psychologists used the technical features of drawings to decode children's concepts of space (Piaget & Inhelder, 1956) or as an indicator of children's intellectual development through tests such as the *Draw-a-Man* test (Farokhi & Hashemi, 2011). Alongside the developmental tradition, a projective and clinical tradition emerged in which drawings were interpreted as expressions of children's socio-emotional lives.

The psychoanalytic perspective focuses on the projective approach, in which the drawing becomes a medium for communicating unconscious content that cannot be monitored as easily as verbal expression (Machover, 1949; Malchiodi, 1998). Koppitz (1968) sought to establish an empirically grounded set of emotional indicators in human figure drawings, while psychodynamic approaches searched for symbolic traces of unconscious content within drawings. Reviews of this literature, however, have pointed out that empirical support for projective interpretations is limited and that individual drawing elements do not possess stable diagnostic significance (Thomas & Silk, 1990). Even authors who advocate the clinical use of drawings emphasise that meaning cannot be derived from a fixed "dictionary" of symbols but only in relation to the individual child, their development, and the context in which the drawing was produced (Golomb, 2004).

A significant shift in the understanding of children's drawings emerged with the paradigm of the new sociology of childhood, in which children are viewed as competent social actors whose perspectives possess intrinsic epistemic value. Within this framework, the drawing shifts from being regarded as a diagnostic tool to becoming a form of visual data through which research is conducted with children rather than about them. The Mosaic Approach proposed by Clark and Moss (2001) identifies drawing as one of the methods through which children participate in the co-construction of knowledge about their everyday lives. Recent research further demonstrates that professionals' understanding of children's participation can be strengthened through participatory pedagogy training, leading teachers to involve children more actively in decision-making, provide meaningful choices, and integrate participatory principles into everyday educational interactions (Akyol, 2025). This supports the view that children's participation depends not only on the methods employed but also on the professional perspectives through which children's expressions are recognised and interpreted. Punch (2002) critically discusses child-centred research methods, arguing that their apparent appropriateness does not in itself guarantee validity, while Einarsdóttir et al. (2009) demonstrate that the meaning of a drawing emerges only through the interplay between the drawing itself and the child's narrative about what has been drawn. Within the educational literature, drawing is therefore understood as a socially and culturally situated practice: children draw within relationships, expectations, and conventions that they acquire at home, in early childhood settings, and at school (Anning & Ring, 2004).

The contemporary use of children's drawings in educational research is therefore situated within the broader field of qualitative visual methodology (Rose, 2016; Theron et al., 2011), and the methodological focus has shifted from asking what a drawing measures to asking how a drawing produces meaning, who attributes that meaning, and under what conditions. Contemporary research approaches, such as social semiotics, conceptualise drawing as an active process of *meaning-making*, in which children intentionally use visual resources to construct a text or narrative

(Deguara, 2015). Building on this shift, the present study focuses on the meanings attributed to children's drawings and on the processes through which they are interpreted from the perspectives of the professionals who interpret them.

1.1. The Epistemology of Interpretation: Professional Perspective as an Interpretative Lens

Guillemin (2004) goes a step further by conceptualising drawing as an act of knowledge production rather than a reflection of a pre-existing reality. Within the framework of visual methodology, Rose (2016) argues that the meaning of an image is generated not only at the moment of its production but also at the moment of its viewing, through the encounter between the image and the audience interpreting it. These insights point to a distinction that is central to the present study: the distinction between what is seen in a drawing and what is attributed to it. The boundary between description and attribution is not fixed; it is established by the interpreter, and where that boundary is drawn depends on the knowledge and values brought to the interpretative process. The same element, such as the size of a figure, the choice of colour, or the empty space on the page, may be interpreted as developmental evidence, an emotional indicator, a deliberate artistic decision, or simply a representational convention. For research in which children's drawings constitute the data, this means that researchers and professionals are not neutral observers but co-constructors of meaning.

The concept of *professional vision* explains how such interpretations emerge. Goodwin (1994) defines professional vision as the socially organised ways of seeing and interpreting phenomena that correspond to the characteristic interests of a particular professional community. Professional groups socialise their members into structured professional habitus and ways of seeing by teaching them to code phenomena through disciplinary categories, highlight what is considered professionally relevant, and produce representations that reinforce these forms of perception. As illustrated by Goodwin (1994), an archaeologist and a farmer do not see the same things when looking at the same piece of land. Applied to children's drawings, what a professional perceives is largely shaped by the conceptual categories of their discipline, acquired through education and professional practice. However, the question of where different professions draw the boundary between description and attribution has not yet been examined empirically. Different disciplines approach children's drawings through different theoretical frameworks and professional categories of interpretation. The following sections therefore present the six professional perspectives included in this study, beginning with traditions characterised by the most highly developed formal interpretative frameworks and progressing towards perspectives grounded primarily in everyday professional practice, before concluding with the philosophical perspective, which takes the very act of interpretation as its object of inquiry.

Psychology is the discipline with the longest and most formalised tradition of interpreting children's drawings. Its interpretative framework has developed along two main lines. The first is the developmental-diagnostic tradition, in which drawings are interpreted as indicators of cognitive maturity, ranging from Goodenough's (1926) use of the human figure drawing to assess intelligence to Piaget and Inhelder (1956), who examined children's representations of space as evidence of the development of spatial concepts. The second line may be characterised as the projective tradition of interpretation. Machover (1949) interpreted the human figure drawing as a projection of personality, while Koppitz (1968) sought to identify empirically verifiable emotional indicators. Consequently, the psychological perspective focuses on comparing drawings with developmental norms and identifying deviations that may indicate emotional difficulties.

At the same time, psychology has also produced the most substantial critique of this interpretative tradition. Reviews of these approaches have demonstrated the limited reliability and validity of projective indicators and have argued that drawings should be regarded only as an auxiliary source of information requiring triangulation with other forms of evidence (Thomas & Silk, 1990). More recent research has reinforced this critical position. Re-examining the empirical and conceptual foundations of the psychological assessment of children through drawings,

Thomas and Jolley (1998) concluded that individual graphic features do not possess stable diagnostic significance. Similarly, Imuta et al. (2013), evaluating the validity of a contemporary version of the human figure drawing test, found only weak correlations with standard measures of intelligence and a high rate of misclassification, concluding that drawings should not be used as a measure of intellectual functioning. Furthermore, a systematic review of controlled studies by Allen and Tussey (2012) demonstrated that projective drawings cannot reliably identify children who have experienced abuse. Contemporary developmental psychology also raises a question that mirrors the central concern of the present study. Burkitt et al. (2019) showed that children depict the same content differently depending on the intended adult audience, suggesting that interpretation is not only a matter of the person reading the drawing but also of the audience for whom the child creates it. For the present study, it is therefore of particular interest whether psychologists will draw upon developmental and emotional categories in their interpretations, adopt the caution advocated within their own discipline, or combine both approaches.

The pedagogical tradition approaches children's drawings from both relational and contextual perspectives. Its primary concern is what a drawing reveals about the child's understanding of their everyday life, relationships, and experiences within educational settings rather than about their internal psychological states. This relational orientation is consistent with pedagogies of trust and "with-ness," which emphasise supportive teacher-student relationships and understanding developed with children rather than imposed upon them (Mori, 2023). In educational contexts, drawings have been used as an independent tool for assessing the quality of teacher-child relationships, providing insight into relational closeness or "relational negativity" that teachers themselves may not recognise (Harrison et al., 2007). This perspective is rooted in the participatory paradigm, in which drawing is regarded as one of the ways through which children participate in the construction of knowledge about themselves and their environment (Clark & Moss, 2001) and forms an integral part of pedagogical documentation of children's perspectives. The pedagogical perspective therefore seeks the communicative intention and the meaning constructed by the child, considering joint interpretation with the child, rather than interpretation on the child's behalf, to be the methodological norm (Einarsdóttir et al., 2009). For this reason, the pedagogical literature also demonstrates a strong tradition of self-reflexivity, recognising that children's voices can easily be appropriated through drawings and that adults, when speaking on behalf of children, often speak from within their own conceptual frameworks (Eldén, 2013). It is therefore reasonable to expect that, when interpreting drawings without contextual information, pedagogues will be inclined to identify the absence of context itself as an interpretative challenge.

Early childhood educators routinely encounter children's drawings as part of everyday educational activity, where drawings are often embedded in ongoing processes of observation, conversation, play, and learning rather than approached solely as isolated products (Hong et al., 2021; Prayitno et al., 2024). Because educators typically know the child and the circumstances in which a drawing is produced, and may also have access to the child's accompanying verbal commentary, their interpretations are ordinarily informed by contextual and interactional knowledge (Hong et al., 2021). This contextual orientation is particularly explicit in the Reggio Emilia philosophy, in which drawing constitutes one of the many "languages" through which children explore and express ideas, while pedagogical documentation makes learning processes visible and informs ongoing pedagogical planning and reflection (Edwards et al., 1998; Rinaldi, 2006). From this perspective, attention extends beyond the finished drawing to the processes of meaning-making, learning, and interaction through which it is produced (Anning & Ring, 2004; Hong et al., 2021). The strength of this approach lies in educators' sustained contextual knowledge of the child; however, adult responses to children's drawings are themselves interpretative and may be shaped by developmental expectations and conventional forms of evaluative feedback (Anning & Ring, 2004; Watts, 2010). More broadly, evidence from preschool teachers' interpretations of illustrated materials indicates that professional judgments of visual material can also be influenced by personal perceptions, assumptions, feelings, and prior understandings

(Öztürk & Erzen, 2023). In the present study, early childhood educators interpreted children's drawings without the contextual and conversational information on which classroom interpretation commonly relies. Their responses are therefore particularly informative for examining the assumptions and interpretative resources educators draw upon when contextual knowledge is unavailable.

Upon entering primary school, drawing changes its status, shifting from a spontaneous activity to a task defined by a prescribed topic, time limits, and criteria for success. From the teachers' perspective, drawing is also viewed as a constructive learning strategy that helps children organise and explain their developing knowledge and understanding of the world (Wood & Hall, 2011). Anning and Ring (2004) demonstrate that children quickly learn what is considered a "good" drawing at school and adapt their visual expression accordingly, while drawing gradually loses curricular relevance as children grow older. The teachers' perspective is therefore shaped by two complementary frameworks. The first is the task-oriented framework, which focuses on age-appropriate drawing schemas, neatness, effort, and successful completion of the assigned task. The second views drawing as a tool for thinking and meaning-making, through which children make their ideas visible, test them, and develop them in dialogue with others and with themselves (Brooks, 2005). The interpretative risk associated with this perspective lies in equating graphic skill with children's ability or engagement and interpreting conventional representations as indicators of successful performance. For the present study, it is particularly interesting to examine which of these two frameworks—the evaluative or the developmental-constructivist perspective—will prevail when the drawing is not linked to any formal school task.

The art education tradition approaches children's drawings from within the visual language itself, interpreting line, shape, colour, composition, and the representation of space as meaningful and developmentally significant features of children's visual expression. Its theoretical foundations include Arnheim's (1974) psychology of visual perception, according to which perception is already a form of thinking; Kellogg (1970), who identified universal graphic forms in young children's drawings; and Matthews (2003), who conceptualised early graphic representation as an intentional and meaningful representational activity rather than an imperfect preparation for realistic depiction. This perspective has been systematically developed within the Croatian literature. Belamarić (1986) describes children's visual language as an autonomous system governed by its own developmental logic and warns against imposing adult aesthetic criteria on children's work. Karlavaris (1991) emphasises the developmental and pedagogical role of children's visual expression within the educational process, while Grgurić and Jakubin (1996) relate the stages of artistic development to the didactics of visual arts education. Spajić (1989) likewise highlights the importance of evaluating children's artwork on the basis of its developmental and expressive characteristics rather than according to adult artistic standards.

From this perspective, the art expert notices aspects of a drawing that other professions often overlook, such as the quality of the line, the organisation of pictorial space, and the relationship between schematic and original forms of representation. The principal interpretative risk of this perspective lies in aestheticisation—that is, evaluating children's drawings according to the standards of adult art rather than those of children's visual expression (Spajić, 1989).

The philosophical perspective contributes to this study not by offering a framework for interpreting the child, but by providing a framework for reflecting on interpretation itself. The philosophy of images asks what constitutes an image and what it means to understand one. Goodman (1976) conceptualises representation as a symbolic system whose interpretation presupposes knowledge of conventions, thereby rejecting the notion that images are natural reflections of reality that can be read directly. The hermeneutic tradition extends this argument by emphasising that understanding never begins from a neutral position: the interpreter's pre-understanding, assumptions, and horizon of experience are not obstacles to be eliminated but conditions that make understanding possible (Gadamer, 2004). Applied to the present study, the professional lens is therefore not a source of interpretative distortion but a constitutive element of

interpretation itself. The question is not whether interpretation is possible without perspective, but rather what each perspective reveals and what it leaves unnoticed. Philosophers in the present study therefore occupy a dual role: as interpreters without discipline-specific knowledge of child development and as representatives of a perspective capable of questioning the very assumption that a children's drawing can be assigned a single, determinate meaning.

1.2. Aim of the Study and Research Questions

Although the literature has long recognised that children's drawings attract the attention of researchers, psychologists, teachers, and parents, empirical comparisons of how different professions interpret the same drawing remain scarce. Interpretative traditions have developed largely in parallel, each within its own publications, educational programmes, and professional practices, while their interpretations have rarely been brought into direct dialogue. It is this gap that the present study seeks to address. By comparing how different professional groups interpret the same set of children's drawings, the professional lens ceases to be a theoretical assumption and becomes the subject of empirical investigation.

The aim of this study was to examine how experts from different professional backgrounds interpret the same children's drawings and to identify the elements they perceive as most significant, how they construct their interpretations, and the extent to which their interpretations converge or differ according to their professional perspectives. Based on this aim, the following research questions were formulated:

RQ 1) Which elements of children's drawings do experts from different professional backgrounds notice first, and in what ways do their initial observations converge or differ?

RQ 2) How do professional perspectives converge and differ in the interpretation of the meanings of the same children's drawings?

RQ 3) Which professional knowledge and theoretical frameworks do experts from different professional backgrounds draw upon when interpreting children's drawings?

RQ 4) What strengths, limitations, and boundaries of their own professional perspectives do experts recognise when interpreting children's drawings?

2. Method

2.1. Research Design

The study adopted a qualitative research design using semi-structured interviews. All participants were presented with four children's drawings produced during a regular class teacher lesson in primary school. To minimise the influence of prior information, participants were not provided with any details about the children, including their gender, academic achievement, the circumstances in which the drawings had been produced, or the children's own interpretations of their drawings. They were given only two pieces of information: the school year attended by the child (Year 5 or Year 6 of primary school) and the instruction the child had received before drawing: *Draw your mathematics teacher teaching you and the other pupils in your class inside the rectangle*. This ensured that all participants interpreted the drawings under identical conditions, placing the emphasis on the professional perspective from which they approached the analysis of the children's drawings.

The interviews followed a semi-structured protocol containing the same questions for all participants. For each of the four drawings, participants were asked about their initial observations, the meaning of the drawing, the relationships between the depicted individuals, the organisation of space, possible emotional messages, developmental indicators, and the potential use of the information obtained in educational practice. After interpreting all four drawings, participants completed a second part of the interview focusing on their professional perspectives, the theoretical foundations of their interpretations, the boundaries of their own areas of expertise, and the perceived strengths and limitations of their professions.

2.2. Participants

The study involved 20 experts from different professional backgrounds whose work involves children or the study of child development. The six professional groups were selected because each approaches children's development, thinking, relationships, education, or visual expression from a distinct disciplinary perspective. Although their professional roles differed, all participants had received formal education addressing children, their development, ways of thinking, interpersonal relationships, or forms of expression, and their professional or academic work involved children or topics directly related to childhood and education. Purposive sampling was used to include participants from a range of professions in order to compare professional perspectives on the interpretation of the same children's drawings. The inclusion criteria were a relevant formal professional qualification and professional or academic experience related to children, education, child development, interpersonal relationships, or visual expression. Participants were selected as information-rich cases capable of contributing a theoretically and professionally relevant perspective to the interpretation of children's drawings.

The sample comprised five pedagogues, four teachers, four art experts, three early childhood educators, two psychologists, and two philosophers. Accordingly, the selection prioritised the diversity and relevance of professional perspectives rather than equal numerical representation of each professional group. The sample was not intended to represent the individual professions but to include a range of professional perspectives relevant to the interpretation of children's drawings. The number of participants within each professional group was not balanced because the aim of the study was not to compare professions statistically, but to explore the diversity of interpretative patterns and the ways in which different professional perspectives shape the understanding of the same children's drawings. As this was a qualitative and exploratory study, the sample size was considered in relation to the depth and diversity of the participants' accounts rather than the requirements of statistical representativeness. The findings should therefore be regarded as exploratory and cannot be generalised to all members of the respective professions.

The group of five pedagogues comprised professionals with diverse backgrounds and levels of professional experience. Two participants held doctoral degrees in pedagogy and regularly encountered children's drawings in their professional practice. One pedagogue was employed in secondary education and reported only limited experience with children's drawings, while another worked as a social pedagogue with additional training in psychotherapy and extensive experience working with traumatised children, using children's drawings as a complementary tool for understanding children's experiences. Collectively, these participants represented a range of pedagogical perspectives, extending from everyday practice in schools and early childhood settings to counselling and therapeutic work.

The group of teachers included professionals from different subject areas and with varied teaching experience. The participants represented primary teaching, mathematics, music education, and visual arts education. Although they differed in their teaching specialisations, they shared a common perspective in viewing children's drawings primarily through the lens of teachers who monitor pupils' learning, classroom participation, and development on a daily basis.

The four art experts comprised university academics and specialists in art education and the visual arts. The group included academics holding doctoral degrees in art education and visual arts, a university teaching assistant specialising in art education and the didactics of visual arts, and a practising artist professionally engaged in visual art, specialising in sculpture.

The three early childhood educators were employed in kindergartens and encountered children's drawings regularly as part of everyday educational activities. All participants emphasised that observing children's visual expression formed an integral part of monitoring children's development and planning educational practice.

The study also included two psychologists with different professional backgrounds. One participant worked as a developmental psychologist, while the other had experience in career counselling, psychotherapy, and working with individuals with special educational needs.

Although children's drawings were not a primary method in their professional practice, both participants possessed theoretical expertise in developmental psychology and the psychological interpretation of children's drawings.

The two philosophers, one of whom held a doctoral degree in philosophy, specialised in philosophy with children and used children's drawings as prompts for dialogue, reflection, and non-verbal expression of children's ideas. Their professional perspective was not grounded in assessing children's development or the artistic quality of drawings, but in understanding the meanings that children themselves attribute to their drawings through dialogue and shared reflection.

2.3. Data Collection and Analysis

The study was conducted in two phases. During the first phase, children's drawings were collected during class teacher lessons in four classes from two primary schools (one Grade 5 class and one Grade 6 class from one school, and two Grade 6 classes from another school, with each class taught by a different mathematics teacher). All children whose parents had provided written informed consent and who had given age-appropriate assent participated in the drawing activity, which lasted approximately 30 minutes.

The authors purposively selected one drawing from each class, resulting in a total of four drawings. The selection was guided by the aim of including drawings that represented different visual depictions of the same teaching situation. Accordingly, the selected drawings differed in their spatial organisation, perspective, level of detail, and representation of the individuals depicted, enabling the experts to interpret a visually diverse set of children's drawings. Before being presented to the participants, all drawings were anonymised by removing any information that could reveal the identity of the children or provide additional contextual information about the circumstances in which the drawings had been produced.

During the second phase, individual semi-structured interviews were conducted with experts from different professional backgrounds. Each participant was presented with the same four drawings individually and in the same predetermined order, and all interviews followed a pre-prepared interview protocol. Participants were allowed to examine each drawing for as long as they wished, without a predetermined time limit. They provided their interpretations orally and were not interrupted while explaining their observations. Before proceeding to the next drawing, they were given an opportunity to reflect further and add anything they considered relevant. Participants first interpreted each drawing independently and were subsequently asked follow-up questions designed to explore and elaborate on their interpretations. The interviews typically lasted approximately 30 minutes, although some lasted longer when participants wished to provide additional observations or elaborate further on their interpretations. All interviews were audio-recorded with participants' informed consent and were transcribed verbatim.

The transcripts were analysed using reflexive thematic analysis (Braun & Clarke, 2006). Both authors first read the transcripts independently on several occasions to become thoroughly familiar with the data, after which combined deductive-inductive coding was undertaken. The deductive phase of the analysis was guided by the research questions, which served as the initial analytical categories, while the inductive phase identified new patterns and themes emerging from the data within those categories. The resulting codes were then compared, grouped according to conceptual similarity, and organised into broader themes, which were repeatedly reviewed against the original transcripts. Particular attention was paid to comparing interpretations across the different professional groups, with the responses of each professional group analysed collectively rather than as isolated individual accounts. The two authors analysed the data independently and subsequently reached consensus on the final themes and their interpretation through discussion. All data were treated confidentially and anonymously, and both the drawings and interview transcripts were anonymised prior to analysis.

3. Results

3.1. Similarities and Differences in the Initial Observations of Children's Drawings among Experts from Different Professional Backgrounds

Although all participants examined the same drawings, the elements they noticed first differed according to the professional perspective from which they approached the interpretation. Four dominant patterns emerged: attention to the teacher as the central figure in the drawing, the spatial relationships between the figures, the depiction of the teaching situation, and the formal visual characteristics of the drawings.

The most prominent shared pattern concerned the prominence of the teacher. Teachers, pedagogues, psychologists, and philosophers were among the first to notice the teacher's size, position, or central placement within the composition. Their responses included descriptions such as "the size and position of the teacher" (Philosopher 2), "an enormous teacher" (Philosopher 1), "the disproportion in size between the teacher and the pupils" (Psychologist 2), "the teacher's figure is dominant" (Teacher 2), and "the dominance of the teacher in the drawing" (Pedagogue 4). Although these professional groups noticed the same visual feature, the way they described it differed. Teachers and pedagogues generally associated the dominant figure with the organisation of the teaching situation, whereas psychologists immediately began to consider its possible psychological significance, while philosophers remained at the level of descriptive observation.

The second pattern concerned the spatial relationships between the teacher and the pupils, particularly the distance separating them. Philosophers described this feature in neutral terms, referring, for example, to "a large distance between the child and the teacher" (Philosopher 1), whereas psychologists associated the same feature with possible emotional meanings, suggesting that "the distance between the teacher and the pupils may indicate emotional distance or fear" (Psychologist 1). By contrast, art experts viewed the spacing between the figures primarily as a compositional feature, referring to "the empty space between the pupils and the teacher" and "the considerable distance between the pupils and the female teacher" (Art Expert 2). Teachers and pedagogues also noticed the distance between the figures but generally described it as a characteristic of the depicted teaching situation without attributing any additional meaning to it.

The third shared pattern was a focus on the teaching situation and the classroom atmosphere, which was particularly evident among teachers, pedagogues, and early childhood educators. Their initial observations were directed not only towards individual figures but also towards the educational context as a whole. Pedagogues referred to "a comprehensive depiction of the classroom" (Pedagogue 2), "a dynamic representation of the classroom as a space of interaction" (Pedagogue 5), and "the richness of colours and details" (Pedagogue 2). Teachers described "a calm and well-structured teaching situation" (Teacher 3), "a realistic, lively classroom scene" (Teacher 4), or the arrangement of pupils within the classroom, while early childhood educators highlighted "the depiction of an educational situation" (Early Childhood Educator 1), "a realistic school environment" (Early Childhood Educator 1), and the neatness of the drawing. In contrast, psychologists and philosophers were considerably less likely to identify the teaching situation itself as the first aspect that attracted their attention.

The greatest difference between the professional groups emerged in relation to the observation of the drawings' formal visual characteristics. Such observations were made almost exclusively by the art experts. Their attention focused on composition, perspective, proportions, the use of space, and colour, referring, for example, to "a composition appropriate to the task" (Art Expert 1), "the proportional relationship between the figures within the composition" (Art Expert 4), "the use of colour and perspective" (Art Expert 4), and "space in the child's drawing" (Art Expert 1). Table 1 provides an overview of the elements that participants noticed first, summarised by professional perspective.

Table 1

Elements Most Frequently Noticed in the Initial Observation of Children's Drawings

<i>Professional group</i>	<i>Elements most frequently noticed during the initial observation</i>
Pedagogues	Teaching situation, teacher-student relationships, classroom atmosphere, spatial details, and the dynamics of classroom interaction.
Psychologists	Physical distance between teacher and student, figure size and placement, possible emotional relationships, and the teacher's dominance within the drawing.
Art experts	Composition, perspective, proportions, spatial organisation, use of colour, and other formal visual characteristics.
Teachers	Organisation of the teaching situation, arrangement of pupils, representation of teaching, the dominant teacher figure, and classroom content.
Early childhood educators	School environment, neatness and richness of detail, the teacher's central position, and the overall organisation of the teaching situation.
Philosophers	Figure size and position, distance between figures, and individual visual features, generally without immediately attributing meaning.
Professional group	<i>Elements most frequently noticed during the initial observation</i>

3.2. Similarities and Differences in the Interpretation of the Meanings of Children's Drawings among Experts from Different Professional Backgrounds

3.2.1. Drawing 1

The first drawing is presented in Figure 1, followed by an analysis of the participants' interpretations.

Figure 1

Drawing by a Sixth-Grade Student



The first drawing prompted participants to reflect in detail on the organisation of the teaching situation, the teacher's role in the instructional process, and the way in which the child structured the classroom space.

The most prominent pattern in the responses of teachers, pedagogues, and early childhood educators was the interpretation of the drawing as a depiction of a typical classroom situation, with emphasis placed on the activities of the teacher and pupils, the organisation of the classroom,

and the elements reflecting the teaching process. Teachers pointed out that the drawing depicted "the relationship between the child as a pupil and the teacher rather than the content of mathematics or classroom activities", highlighting "the considerable distance between the pupil and the teacher" and the blackboard labelled "Mathematics" as its most significant features. Pedagogues likewise emphasised that the drawing represented "a typical teaching situation in which the teacher is teaching while the pupil is listening" (Pedagogue 1) and that the child demonstrated an understanding of "the roles and sequence of the teaching process". Similarly, early childhood educators interpreted the drawing as depicting "a school activity", arguing that the teacher, the blackboard, and the pupil constituted sufficient elements for understanding the situation.

The second shared pattern concerned the spatial relationship between the teacher and the pupil. Although this feature was noticed by all professional groups, they attributed different meanings to it. Teachers and pedagogues generally regarded it as a feature of the organisation of the drawing or as an indication of what the child considered important to depict. For example, Teacher 1 stated that "the empty space should not be interpreted as emotional distance but as an important organisational element," while Pedagogue 2 argued that "the relationship between the size and position of the figures does not necessarily carry emotional meaning." In contrast, psychologists were more likely to associate the same spatial arrangement with possible emotional relationships, referring to "distance, the absence of other pupils," "a sense of coldness and alienation," or "emotional insecurity within the school environment." Philosophers also noticed the spatial distance but remained cautious in drawing conclusions, emphasising that they "could not state with certainty" what such an arrangement actually signified.

A third pattern, characteristic primarily of the art experts, concerned the formal visual elements as an integral component of the drawing's meaning. Whereas the other professional groups focused mainly on the content of the depicted situation, art experts consistently emphasised the importance of composition, the arrangement of visual elements, and the use of space. One participant noted that it was "important to consider the composition and the positioning of the figures within the image" (Art Expert 2), another drew attention to "the underutilised drawing space" (Art Expert 1), while a third argued that "depending on the aim of the research, visual interpretation should not neglect the formal visual elements" (Art Expert 3).

Unlike the other professional groups, psychologists structured most of their interpretations around the possible emotional meanings of the depicted elements. In their accounts, the spatial arrangement, the dominance of the teacher, the absence of other pupils, and the relatively simple visual execution were associated with possible feelings of distance, insecurity, or emotional reserve. Psychologist 1 suggested that the drawing might indicate "emotional insecurity within the school environment," while Psychologist 2 proposed that "the child may feel isolated from those around them." At the same time, both psychologists emphasised that such conclusions could not be drawn without additional information about the child.

Interestingly, teachers, more than in relation to the previous drawing, emphasised the limits of interpretation. Although they provided detailed descriptions of the teaching situation, several explicitly stated that the drawing was "not sufficiently rich in detail to support far-reaching conclusions" (Teacher 1), that they would use it "as a starting point for conversation" (Teacher 3), or that certain aspects would need to be explored further through discussion with the child. In this respect, their perspectives became closer to those of the philosophers and art experts, who likewise stressed that meaning cannot be inferred unequivocally from the visual representation alone.

Tables 2 and 3 provide a summary of the identified interpretative patterns and their distribution across the different professional groups.

3.2.2. *Drawing 2*

The second drawing is presented in Figure 2, followed by an analysis of the participants' interpretations.

Table 2

Dominant Interpretative Patterns Identified in Drawing 1

<i>Interpretative pattern</i>	<i>Professional groups</i>	<i>Characteristic emphases</i>
representation of a typical teaching situation	teachers, pedagogues, early childhood educators	teacher instructing, pupil listening, organisation of the mathematics lesson
organisation of space and spatial relationships	all professional groups	distance between teacher and pupil, arrangement of elements, positioning of figures
emotional interpretation of the spatial arrangement	psychologists (dominant), philosophers (partially)	distance, detachment, insecurity, loneliness
formal visual elements as the basis for interpretation	art experts	composition, use of space, visual elements, artistic development
caution in drawing conclusions	philosophers, art experts, some teachers and psychologists	need for discussion with the child and additional contextual information

Table 3

Matrix of Interpretative Patterns Identified in Drawing 1

<i>Interpretative pattern</i>	<i>Pedagogues</i>	<i>Psychologists</i>	<i>Art experts</i>	<i>Teachers</i>	<i>Early childhood educators</i>	<i>Philosophers</i>
teaching situation	✓✓	○	○	✓✓	✓✓	○
spatial relationships	✓	✓✓	✓	✓	✓	✓
emotional interpretation	○	✓✓	○	○	○	○
formal visual elements	○	-	✓✓	○	○	○
caution in drawing conclusions	○	✓	✓✓	✓	○	✓✓

Note. ✓✓ = dominant pattern; ✓ = frequently observed; ○ = occasionally observed; - = rarely observed or not observed.

Figure 1

Drawing by a Sixth-Grade Student

This drawing was most frequently interpreted as a depiction of everyday school life and the organisation of the classroom environment.

The most prominent pattern among teachers, pedagogues, and early childhood educators was the interpretation of the drawing as a realistic representation of a teaching situation. Their responses repeatedly described it as "the child depicting an everyday classroom situation" (Pedagogue 1), "representing the classroom as the child experiences it" (Teacher 2), "depicting a situation from the school environment" (Early Childhood Educator 1), and "the lesson taking place between the teacher and the pupils" (Teacher 3). These participants particularly emphasised the blackboard, the teacher, and the organisation of the classroom as elements that enabled the child to communicate the educational context clearly. Pedagogues highlighted that the drawing reflected the child's understanding of school roles and the teaching process, whereas teachers more frequently emphasised that the classroom was depicted from the child's own perspective and that the drawing captured elements of the child's everyday school experience.

The second shared pattern concerned the perspective from which the child viewed the classroom. Teachers and pedagogues were the professional groups most likely to observe that the drawing had been produced from the pupil's perspective, considering this an important aspect of its interpretation. One pedagogue commented that the drawing reflected "an adult perspective, as if the child were not present," while another suggested that "the child drew the classroom as it is usually experienced at school." Teachers likewise emphasised that the drawing depicted "the classroom from the pupil's perspective" and that the arrangement of its elements reflected the way in which the child organised their own experience of the classroom. This pattern appeared much less frequently in the responses of psychologists and early childhood educators, whereas art experts interpreted it primarily as an issue of compositional organisation.

The third pattern concerned the absence of pupils and peer relationships, which attracted particular attention from psychologists and some teachers. Psychologists referred to "the absence of children and a teacher separated from the class" (Psychologist 1) and concluded that there was "no sense of connection or openness" (Psychologist 2). Similarly, some teachers observed that "the absence of pupils (despite the instruction to include them) is the dominant visual element" (Teacher 2) or that "the adult is depicted standing only beside the blackboard, facing away from the class" (Teacher 5). Unlike the psychologists, pedagogues and early childhood educators generally did not associate this feature with emotional relationships but interpreted it as a simplification of the depiction or as an indication that the child had focused on what they considered to be the most important aspects of the teaching situation.

Once again, art experts differed from the other professional groups by linking the meaning of the drawing to its formal visual characteristics. Their responses consistently referred to concepts such as composition, colour, dynamism, contrast, spatial organisation, and perspective. One participant stated that "colour, composition, the representation of space, dynamism, and line contrast" were the most important aspects for understanding the drawing, while another observed that "the space is organised sequentially, which is appropriate for the child's age." Unlike the other professional groups, art experts repeatedly emphasised that individual features, such as the size of the figures or the presence of empty space, could not be assigned a single meaning without knowledge of the child's artistic abilities and the circumstances in which the drawing had been produced.

A further pattern, which appeared considerably more frequently than in the first drawing, concerned caution in drawing conclusions. Philosophers and art experts were almost unanimous in emphasising that reliable conclusions about a child could not be drawn from a single drawing. Philosophers stressed that they were "not interested in the aesthetic value of the drawing, but in what it depicts," while at the same time acknowledging that "the drawing would be easier to interpret if it had been executed more clearly." Tables 4 and 5 summarise the identified interpretative patterns and their distribution across the different professional groups.

Table 4

Dominant Interpretative Patterns Identified in Drawing 2

<i>Interpretative pattern</i>	<i>Professional groups</i>	<i>Characteristic emphases</i>
school routine and the teaching process	teachers, pedagogues, preschool educators	mathematics lesson, teacher teaching, classroom organisation
student's perspective	teachers, pedagogues, art expert	classroom view, viewpoint from the student's desk, spatial organisation
absence of peers and teacher-student relationships	psychologists, some teachers	absence of other pupils, distance, relationship with the teacher
formal visual features	art expert	composition, perspective, colour, spatial organisation, visual development
caution in interpretation	philosophers, art expert, some teachers	importance of context, limitations of interpreting a single drawing

Table 5

Matrix of Interpretative Patterns Identified in Drawing 2

<i>Interpretative pattern</i>	<i>Pedagogues</i>	<i>Psychologists</i>	<i>Art experts</i>	<i>Teachers</i>	<i>Early childhood educators</i>	<i>Philosophers</i>
teaching process	✓✓	○	○	✓✓	✓✓	○
student perspective	✓	○	✓	✓✓	○	○
teacher-student relationship	✓	✓✓	○	✓	○	✓
absence of peers	○	✓✓	○	✓	○	○
visual features	○	-	✓✓	○	○	○
caution in interpretation	○	✓	✓✓	✓	○	✓✓

Note. ✓✓ = dominant pattern; ✓ = frequently observed; ○ = occasionally observed; - = rarely observed or not observed.

3.2.3. Drawing 3

The third drawing is presented in Figure 3, followed by an analysis of the participants' interpretations.

Figure 3

Drawing by a Sixth-Grade Student



Unlike the previous two drawings, the third elicited a considerably higher degree of agreement among the experts in their interpretations. All professional groups recognised a teaching situation in which the teacher actively led the lesson while the pupils participated in classroom activities. Most responses were characterised by positive descriptions of the classroom atmosphere, the relationship between the teacher and the pupils, and the child's perception of mathematics. Differences between the professional groups were evident less in their overall interpretation of the drawing than in the aspects on which they based their conclusions.

The most prominent pattern concerned the positive portrayal of the teacher and the classroom atmosphere, which was emphasised by all participants, although from different professional perspectives. Pedagogues, teachers, and early childhood educators described the teacher as someone who actively guided the lesson and directed the pupils' learning. For example, one pedagogue stated that the drawing depicted "the teacher in an active role during a mathematics lesson," while another referred to "a positive and stimulating classroom atmosphere." Early childhood educators likewise highlighted "a positive atmosphere without tension" and suggested that the teacher "inspires trust and creates a pleasant environment." Teachers described the teacher as "a positive figure who guides the lesson" and argued that the child perceived the teacher as an important person in the learning process. Similarly, philosophers concluded that the child viewed the teacher as "cheerful, entertaining, and an important figure in the classroom" and that the teacher "has a positive influence on the pupils."

The second shared pattern concerned the teacher's dominant role. Unlike the first drawing, however, this feature was generally not interpreted as an indication of hierarchy or emotional distance. Pedagogues and teachers associated the teacher's size with their importance in the teaching process, noting that "the size of the teacher's figure emphasises their dominant role in leading the lesson" (Pedagogue 2) and that "the large blackboard and the teacher connect the child with the explanation of the lesson content" (Teacher 3). Psychologists also identified the teacher as the dominant figure but more frequently related this to the way in which the child perceived the teacher's authority. One psychologist referred to "a dominant figure that leaves a strong impression," while another described the teacher as "the main protagonist of the drawing." Art experts, by contrast, interpreted the teacher's dominant size primarily as a compositional solution and cautioned that differences in the size of figures should not necessarily be interpreted as having psychological significance.

The third pattern concerned pupil engagement and the child's experience of the lesson, with teachers, pedagogues, and philosophers standing out most clearly. Their responses frequently suggested that the child appeared interested in the lesson and held a positive view of mathematics. Pedagogues argued that the child was "actively engaged in everyday school life" (Pedagogue 1) and "demonstrated an interest in mathematics" (Pedagogue 3), while teachers concluded that the drawing suggested the child "enjoys attending lessons and participating in classroom activities" (Teacher 1). Philosophers expressed similar views, stating that they "assumed the pupil liked mathematics" and that "the teacher was very important to them." In contrast, psychologists adopted a more cautious position, emphasising that a positive classroom atmosphere did not necessarily reflect the child's actual emotional relationship with mathematics or with classroom learning.

Once again, art experts differed from the other professional groups by directing most of their attention to the formal visual organisation of the drawing. Whereas the other experts based their interpretations primarily on the content of the depicted situation, art experts related its meaning to the organisation of space, the proportions of the figures, the use of colour, and the composition. One participant stated that "colour, proportions, and the organisation of space" were the key elements for interpreting the drawing, while another observed that "the child's visual expression is richer than in the previous drawings."

Interestingly, in relation to this drawing, philosophers, teachers, and some pedagogues were more likely than in the previous examples to associate its content with a positive attitude towards

mathematics. Philosophers suggested that the drawing indicated that "mathematics is important to the pupil" and that the child "likes mathematics," while teachers argued that the child "enjoys mathematics lessons" and perceived the teacher as someone who motivated them. Pedagogues likewise concluded that the drawing reflected a positive attitude towards both the school subject and school more generally. By contrast, psychologists and art experts more frequently cautioned that such conclusions could not be drawn solely on the basis of a single drawing. Tables 6 and 7 provide a summary of the interpretative patterns and their distribution across the different professional groups.

Table 6

Dominant Interpretative Patterns Identified in Drawing 3

<i>Interpretative pattern</i>	<i>Professional groups</i>	<i>Characteristic emphases</i>
positive teaching atmosphere	all professional groups	positive atmosphere, supportive environment, active teaching
active and important role of the teacher	all professional groups	teacher leading the lesson, authority, central figure
positive student attitudes towards teaching and mathematics	pedagogues, teachers, preschool educators, philosophers	interest in mathematics, motivation, engagement in lessons
formal visual features	art experts	composition, colour, proportions, spatial organisation
caution in drawing conclusions	art experts, psychologists, some philosophers	need for context, caution in psychological interpretations

Table 7

Matrix of Interpretative Patterns Identified in Drawing 3

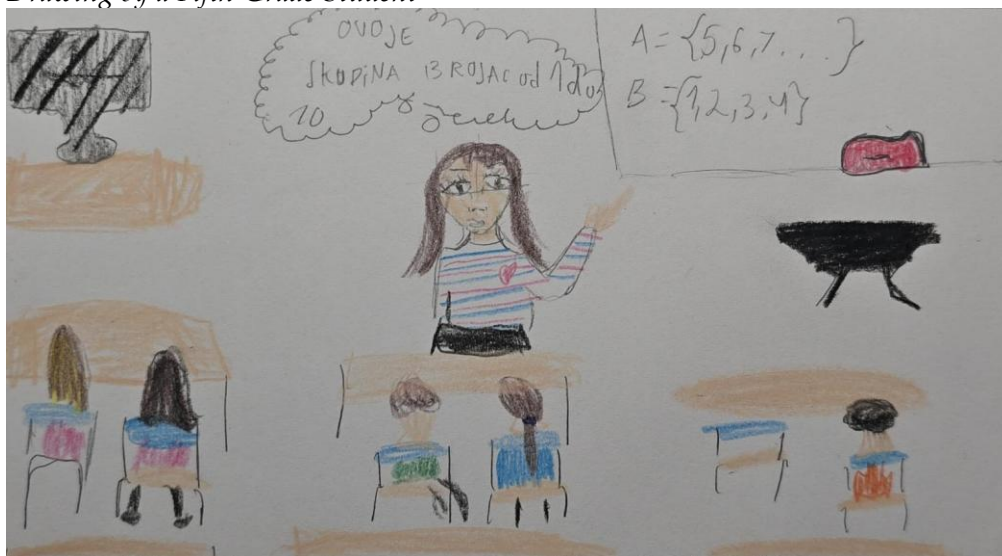
<i>Interpretative pattern</i>	<i>Pedagogues</i>	<i>Psychologists</i>	<i>Art experts</i>	<i>Teachers</i>	<i>Early childhood educators</i>	<i>Philosophers</i>
positive atmosphere	✓✓	✓	○	✓✓	✓✓	✓
active teacher role	✓✓	✓✓	✓	✓✓	✓✓	✓✓
positive attitudes towards mathematics	✓	○	○	✓✓	✓	✓✓
formal visual features	○	-	✓✓	○	○	○
caution in interpretation	○	✓	✓✓	○	○	✓

Note. ✓✓ = dominant pattern; ✓ = frequently observed; ○ = occasionally observed; - = rarely observed or not observed.

3.2.4. *Drawing 4*

The fourth drawing is presented in Figure 4, followed by an analysis of the participants' interpretations. The drawing was interpreted almost unanimously as a depiction of a well-structured teaching situation in which the teacher leads the lesson while the pupils participate in classroom activities. Unlike the third drawing, where participants' responses were characterised by descriptions of a positive emotional atmosphere, the present drawing prompted considerably greater attention to the organisation of the teaching process, the arrangement of elements within the classroom, and the clearly defined roles of the teacher and the pupils. Once again, differences between the professional groups stemmed from their distinct interpretative perspectives rather than from differences in recognising the content of the drawing.

Figure 4

Drawing by a Fifth-Grade Student

The most prominent pattern concerned the clearly organised teaching situation, which was recognised by all professional groups. Pedagogues described the drawing as "an everyday teaching situation involving both the teacher and the pupils" (Pedagogue 1), emphasising that the arrangement of the pupils, the blackboard, and the teacher clearly illustrated the organisation of the teaching process. Teachers likewise noted that the child depicted "a mathematics lesson in the classroom" (Teacher 1) and "a realistic representation of everyday school life" (Teacher 2). Early childhood educators referred to "a situation from the teaching process in which the teacher occupies the central role" (Early Childhood Educator 1), while philosophers suggested that the drawing reflected "an orderly classroom in which authority is viewed positively" (Philosopher 2). Psychologists also associated the drawing primarily with the teaching process, commenting that the child depicted "the closeness of the children and the teacher, together with the classroom content and details" (Psychologist 1).

The second shared pattern concerned the teacher's prominent role. Unlike the first drawing, however, the dominant figure was generally not interpreted as reflecting emotional distance but rather as an integral feature of the organisation of teaching. Pedagogues noted that "the teacher and the blackboard occupy the central part of the space because they emphasise the importance of the lesson content" (Pedagogue 3), while teachers suggested that "the teacher is drawn in greater detail than the pupils because the child perceives the teacher as an important person" (Teacher 1). Early childhood educators likewise argued that "the teacher's central position reflects her important role in leading the class" (Early Childhood Educator 1). Psychologists associated the teacher's dominant figure with perceptions of authority and security, whereas philosophers referred to "the teacher's dominant position while teaching," adding that they interpreted it as an expression of professionalism rather than strictness (Philosopher 2).

A third pattern, particularly evident in this drawing, concerned the organisation of space and the richness of detail. Pedagogues and teachers frequently noted that the space was organised logically and that the arrangement of the pupils, the blackboard, classroom furniture, and teaching materials demonstrated the child's familiarity with the school environment. One pedagogue commented that the child "recognises the important elements of the school environment and the relationships between the teacher and the pupils" (Pedagogue 4), while a teacher observed that "the page has been used to its full extent, and the space is organised clearly" (Teacher 2). Early childhood educators likewise highlighted "a logically organised space and clearly arranged classroom elements" (Early Childhood Educator 2). Art experts interpreted the same pattern through the lens of composition and spatial organisation, referring to "the contrast in scale, perspective, and the organisation of the depiction" (Art Expert 1).

Unlike the previous drawings, this one prompted considerably more comments regarding the child's abilities and developmental level, particularly among teachers and pedagogues. Teachers suggested that the drawing indicated "a relatively high level of maturity for the child's age" (Teacher 1) and "well-developed observational skills and spatial organisation" (Teacher 2), while pedagogues referred to "an understanding of the school context and the ability to identify its important elements" (Pedagogue 5). Early childhood educators likewise concluded that the child demonstrated "good spatial organisation and observational skills" (Early Childhood Educator 1). In contrast, psychologists and art experts adopted a more cautious stance, emphasising that developmental judgements should not be based solely on a single drawing.

Once again, art experts distinguished themselves by emphasising the limitations of visual interpretation. Several participants stated that "it is impossible to draw definitive conclusions from a single pupil's drawing" (Art Expert 3) and argued that meaningful interpretation would require knowledge of the child's developmental level, the purpose of the drawing task, and a conversation with the child before any conclusions could be reached. Similarly, some psychologists also emphasised that, if any concerning features were identified, they would "talk to the child before drawing any conclusions" (Psychologist 2). Tables 8 and 9 provide a summary of the identified interpretative patterns and their distribution across the different professional groups.

Table 8

Dominant Interpretative Patterns Identified in Drawing 4

<i>Interpretative pattern</i>	<i>Professional groups</i>	<i>Characteristic emphases</i>
organised teaching situation	all professional groups	teacher leading the lesson, students following, clearly structured lesson
dominant teacher role	all professional groups	central position, leading the lesson, authority
spatial organisation and richness of the school context	pedagogues, teachers, preschool educators, art experts	student seating arrangement, classroom resources, logical spatial organisation
assessment of the child's abilities	pedagogues, teachers, preschool educators	attention to detail, spatial organisation, developmental appropriateness
caution in interpretation	art experts, psychologists, philosophers	importance of context, talking to the child, limitations of visual interpretation

Table 9

Matrix of Interpretative Patterns Identified in Drawing 4

<i>Interpretative pattern</i>	<i>Pedagogues</i>	<i>Psychologists</i>	<i>Art experts</i>	<i>Teachers</i>	<i>Early childhood educators</i>	<i>Philosophers</i>
organised teaching situation	✓✓	✓	○	✓✓	✓✓	✓
dominant teacher role	✓✓	✓✓	✓	✓✓	✓✓	✓✓
spatial organisation	✓✓	○	✓✓	✓✓	✓✓	✓
assessment of child development	✓	○	○	✓✓	✓	○
caution in interpretation	○	✓	✓✓	○	○	✓✓

Note. ✓✓ = dominant pattern; ✓ = frequently observed; ○ = occasionally observed; - = rarely observed or not observed.

3.3. Professional Knowledge and Theoretical Frameworks Underpinning the Interpretation of Children's Drawings across Different Professional Backgrounds

The experts' responses to the question, "Which professional knowledge, concepts, and/or theories do you draw upon when interpreting children's drawings?", indicate that the interpretation of children's drawings was not intuitive but was largely grounded in the theoretical knowledge and professional experience characteristic of each profession. Although participants referred to different theories and concepts, their responses could be grouped into several shared patterns: developmental psychological perspectives, theories of children's artistic development, pedagogical theories and the school context, the psychodynamic approach, and the emphasis placed on dialogue with the child and the avoidance of premature interpretations.

The most prominent shared pattern concerned developmental psychology, which informed the interpretations of pedagogues, psychologists, teachers, and early childhood educators. Pedagogues stated that they based their interpretations on "knowledge of developmental and educational psychology, theories of child and socio-emotional development, and the importance of the context in which the drawing is produced." Similarly, teachers explained that they relied on "knowledge of developmental psychology and pedagogy," considering the child's age, developmental characteristics, and spatial organisation as indicators of their learning experiences. Early childhood educators emphasised the developmental stages of children's drawing and the ways in which children organise space, while psychologists related their interpretations to "theories of child development and the relationship between drawings and children's internal emotional experiences." These responses indicate that a developmental perspective constitutes a common theoretical foundation shared by most professionals, regardless of their disciplinary background.

The second pattern concerned theories of visual development and children's artistic expression, which were particularly characteristic of the art experts. They explained that their interpretations were based on "the theory of the development of children's visual expression and artistic creation," "knowledge of visual arts, art education, the methodology and didactics of visual arts education, and the psychology of drawing," as well as "concepts from art theory." Unlike the other professional groups, art experts consistently emphasised that children's drawings should primarily be understood through the principles of visual development and the language of visual expression rather than as direct indicators of children's emotional states or personal characteristics.

The third pattern concerned the importance of the school and educational context, which was particularly emphasised by pedagogues, teachers, and early childhood educators. Their responses frequently stressed that a drawing cannot be understood independently of the context in which it was produced. Pedagogues explained that "the context of the school environment in which the drawing was created is important," while teachers emphasised that they considered "the pupils' active participation, the organisation of teaching, and relationships within the classroom." Early childhood educators likewise stated that, when interpreting drawings, they take into account the contemporary view of the child, the school environment, and any potential additional educational needs, thereby situating their interpretations within a broader educational framework.

A distinct pattern emerged among the psychologists, who were the only professional group to refer explicitly to projective approaches and psychodynamic theories. One psychologist explained that their interpretation was based on "knowledge of drawing as a projective psychological technique rooted in psychoanalytic and psychodynamic approaches," while another identified developmental psychology and children's internal emotional processes as the principal basis for interpretation. Nevertheless, the psychologists did not advocate a straightforward projective reading of children's drawings but instead combined this perspective with developmental knowledge and other sources of information about the child.

The most distinctive pattern emerged among the philosophers, who differed from all other professional groups by questioning the very possibility of a theoretically grounded interpretation. Rather than relying on a single theoretical framework, they stated that their perspective was only partially informed by Jungian thought or psychoanalysis while simultaneously warning against

premature conclusions. One philosopher remarked that "when doing philosophy with children, overly hasty interpretations such as 'this means the child is insecure' should be avoided," emphasising that the interpretative process should instead proceed as follows: "the child draws, the child explains, and the adult asks questions." This perspective therefore views interpretation primarily as a dialogical and hermeneutic process rather than as a search for hidden meanings within the drawing itself.

The participants' responses are summarised in Table 10.

Table 10

Professional differences in theoretical foundations

<i>Professional group</i>	<i>Theoretical foundations most commonly drawn upon</i>
Pedagogues	developmental and educational psychology, socio-emotional development, school context
Psychologists	developmental psychology, projective techniques, psychodynamic approaches
Art experts	theories of children's artistic development, art education, visual language
Teachers	developmental psychology, pedagogy, developmental stages and teaching experience
Early childhood educators	developmental psychology, children's drawing development, contemporary image of the child
Philosophers	hermeneutics, philosophy with children, dialogue, and critique of premature interpretations

3.4. Strengths, Limitations, and Boundaries of Different Professional Perspectives in the Interpretation of Children's Drawings

The experts' responses to the question, "What do you see in these drawings that someone without your professional background would be unlikely to notice?", indicate that the participants were aware that professional training shapes the interpretation of children's drawings. Most did not believe that one profession could provide a more complete or more accurate interpretation than another. Instead, they emphasised that each profession notices different aspects of the same drawing. The most prominent patterns concerned attention to different elements of the drawings, the distinction between aesthetic and professional interpretation, awareness of the boundaries of one's own professional expertise, and the importance of an interdisciplinary approach.

The most prominent shared pattern reflected the belief that different professions focus on different aspects of children's drawings. Early childhood educators explained that they notice "the organisation of space, the relationships between the figures, and developmental appropriateness," whereas they believed that someone without educational training would primarily see "what has been drawn rather than how the child has organised the space." Teachers suggested that "a psychologist or a visual arts teacher would pay greater attention to emotional indicators or artistic development," whereas they themselves focused more on "the educational context and the depiction of the teaching situation." Pedagogues likewise emphasised that they paid particular attention to "the relationships between the figures, the teacher's role, pupils' participation, and the organisation of space," whereas a person without professional training would be "more focused on the artistic execution than on the educational meaning of the depicted relationships and activities."

Art experts drew a clear distinction between aesthetic and professional interpretation. They argued that individuals without specialist training are more likely to judge the attractiveness or neatness of a drawing, whereas experts analyse its developmental and artistic characteristics. One art expert stated that "the analysis of a child's drawing requires the examination of numerous elements rather than simply an aesthetic impression," while another remarked that "I see the work and the effort involved, whereas someone else might judge only the aesthetics or the value of the depiction itself." At the same time, they emphasised that even from their own professional

perspective, reliable conclusions could not be drawn without additional information about the child and the context in which the drawing had been produced.

Awareness of professional boundaries was particularly evident among psychologists and philosophers. Psychologists explained that their interpretations were grounded in psychological training and that they "would not feel confident interpreting these drawings from the perspective of visual arts." Philosophers likewise acknowledged that they were not certain they had interpreted the drawings with sufficient precision and commented that they "would like to discuss them with a child psychologist, particularly the first drawing."

The importance of an interdisciplinary approach emerged in the responses of almost all professional groups. Early childhood educators suggested that a specialist in children's drawings "could learn much more about a child than someone without professional training," while teachers argued that lay people would primarily notice "whole-class teaching and a teacher giving instruction," whereas experts would identify the emotional, developmental, artistic, or educational dimensions of the depiction. Pedagogues likewise maintained that different professions contribute to understanding different aspects of children's experiences of school.

Participants generally believed that someone without professional training would focus primarily on the content of the drawing, its aesthetic appearance, or its overall impression, whereas experts would notice the organisation of space, the symbolic significance of the figures' size, developmental appropriateness, emotional indicators, and the relationships between the individuals depicted in the teaching situation. In doing so, they confirmed that professional knowledge enables the recognition of aspects that are not immediately apparent through superficial observation. Table 11 summarises the participants' responses to the question: "From the perspective of your own profession, what aspects would you pay particular attention to when interpreting children's drawings?"

Table 11

Elements of Drawing Interpretation Across Professional Groups

<i>Professional group</i>	<i>Theoretical foundations most commonly drawn upon</i>
Pedagogues	teacher-student relationships, classroom atmosphere, school environment, students' roles
Psychologists	emotional meanings, interactions, developmental perspective, psychological symbolism
Art experts	artistic development, composition, use of visual elements, visual language
Teachers	students' experience of teaching, teacher's role, students' position in the classroom, organisation of the teaching process
Early childhood educators	school environment, drawing content, spatial relationships, emotional atmosphere
Philosophers	the message of the drawing, relationships among figures, and the symbolic meaning of space

The experts' responses to the question, "Is there anything in these drawings that you would not feel qualified to comment on and would instead leave to another profession?", demonstrate a high level of awareness of the boundaries of their own professional expertise when interpreting children's drawings. Regardless of their professional background, participants emphasised that there were aspects on which they would not draw conclusions solely on the basis of the drawings but would instead refer to professionals from other disciplines or verify through additional methods. The dominant patterns concerned avoiding conclusions about the child's emotional and psychological functioning, exercising caution when interpreting hidden meanings, recognising the limitations of one's own professional expertise, and emphasising the importance of interdisciplinary collaboration.

The most prominent pattern involved avoiding conclusions about the child's emotional and psychological functioning. Pedagogues stated that they "would not draw conclusions about emotional relationships without involving a psychologist and obtaining additional information"

and that they "would not infer anything about mental health, personality characteristics, or possible difficulties solely on the basis of a drawing." Teachers likewise emphasised that they "would not draw conclusions about a child's emotional state, family relationships, or possible psychological difficulties on the basis of the drawings alone," while early childhood educators explained that they would "leave the interpretation of a child's deeper psychological state to a psychologist or another specialist." Art experts also stressed that they would leave the interpretation of emotions and behavioural difficulties to psychologists.

Caution regarding the interpretation of hidden meanings was particularly evident among the art experts, who stated that they did not wish to engage in "narrative interpretation or the interpretation of meaning" and believed that emotional interpretations should remain within the domain of psychology. Similarly, early childhood educators emphasised that they spoke only about "what can actually be seen in the drawing itself," while leaving anything beyond the immediately visible to professionals with additional knowledge about the child. Philosophers likewise suggested that they would involve a psychologist only where there were clear indications of more serious difficulties requiring "a professional analysis of the child's psyche."

The experts' responses to the question, "What do you consider to be the strengths and limitations of your own professional perspective when interpreting children's drawings?", revealed a high degree of professional self-reflection. Participants clearly recognised the areas in which their professional expertise provided an advantage when interpreting children's drawings, while at the same time openly acknowledging the limitations of their own profession.

The most frequently identified strength concerned the specialist knowledge associated with each profession. Art experts emphasised their understanding of children's artistic development, the language of visual expression, and the methodology of visual arts education. They explained that they were "competent to analyse children's drawings according to the principles of visual expression" and able to recognise developmental stages and the quality of artistic execution. One participant remarked that their particular strength lay in "analysing visual elements and visual syntax, whereas interpreting meaning does not fall within my academic field."

By contrast, pedagogues, teachers, and early childhood educators identified their greatest strength as their knowledge of the educational context. Pedagogues argued that their familiarity with the school system enabled them to understand "the school context, the learning process, and the relationships between teachers and pupils," while teachers emphasised that they "know teaching from the inside, recognise different teaching approaches, and can relate the drawing to real classroom events." Early childhood educators highlighted their understanding of child development and contemporary perspectives on childhood, explaining that this enabled them to distinguish between developmentally expected behaviours and those requiring additional attention. Such knowledge allows them to interpret children's drawings within the context of everyday school life and learning.

Psychologists identified their background in psychology and their understanding of child development as their principal strengths, while at the same time acknowledging that they lacked more extensive practical experience in interpreting children's drawings. Philosophers regarded their principal strength as their ability to identify issues that were important to the child through dialogue and to encourage reflection without reaching premature conclusions. As one philosopher explained, they could "identify a topic that is meaningful to the pupil and focus on the child's thinking rather than engaging in psychological interpretations."

Particularly noteworthy was the shared belief, expressed by almost all professional groups, that no single profession is sufficient to achieve a comprehensive understanding of children's drawings. Participants did not regard their own expertise as a substitute for other professional perspectives but rather as complementary to them. Teachers believed that they could recognise the educational context but not deeper emotional processes. Pedagogues understood relationships and the organisation of school life but avoided making psychological judgements. Art experts considered themselves competent to analyse the language of visual expression but not

psychological functioning. Psychologists understood developmental and emotional processes but left the evaluation of artistic execution to specialists in visual arts. These responses demonstrate that the participants did not view their own profession as self-sufficient but rather as one component of a broader interdisciplinary interpretation of children's drawings.

4. Discussion

The principal finding of this study is that professional perspective shapes the interpretation of children's drawings at every stage of the interpretative process: in what experts notice first, the aspects to which they attend, the meanings they attribute to what they observe, and the degree of confidence with which they draw their conclusions. Although the findings are exploratory rather than representative, each professional group may be broadly characterised in the following way.

Philosophers generally remained at the level of descriptive observation. Psychologists moved rapidly towards possible emotional interpretations. Pedagogues, teachers, and early childhood educators primarily focused on the teaching process, interpersonal relationships, and the organisation of the classroom, whereas art experts devoted most of their attention to the formal characteristics of visual expression. This finding is particularly important because it suggests that professional vision does not operate as a retrospective filter applied to objectively perceived visual information; rather, it shapes perception itself. This is precisely what Goodwin (1994) meant when arguing that an archaeologist and a farmer do not see the same things when looking at the same piece of land, and our findings support this proposition even more convincingly than we had anticipated.

Professional background, however, was not the only factor shaping interpretation. Had this been the case, participants would have applied the same interpretative framework to all four drawings, which they clearly did not. The first drawing, characterised by the large teacher figure and the empty space separating the figures, produced the greatest divergence between professional groups. The same disproportion was interpreted by some as an organisational feature of the drawing, by others as a possible indication of emotional distance, and by others still as a compositional decision. By contrast, the third drawing generated almost complete consensus, with all professional groups interpreting it as depicting a positive school experience, differing only in the reasoning underpinning their conclusions. Interpretation therefore emerged from the interaction between the observer's professional perspective and the characteristics of the individual drawing, which is consistent with Rose's (2016) argument that the meaning of an image is created not only at the point of its production but also at the point of its viewing. For visual methodology, this suggests that the question of the interpreter's perspective cannot be resolved once and for all but must be reconsidered with every new visual dataset.

Our primary interest was to identify where different professions draw the boundary between what is visible in a drawing and the meanings attributed to it. The findings indicate that these boundaries differ across professions, but also that professionals are aware of them. Psychologists crossed this boundary earlier than the other groups, although almost every such interpretation was accompanied by the explicit qualification that no firm conclusions could be drawn without additional information about the child. This reflects the history of psychology itself, a discipline that both developed projective approaches to drawing interpretation and subsequently subjected them to some of the strongest empirical criticism (Allen & Tussey, 2012; Imuta et al., 2013; Thomas & Jolley, 1998; Thomas & Silk, 1990). Art experts resisted the psychological interpretation of visual elements; for them, figure size and empty space were primarily compositional and developmental characteristics, thereby introducing into the interpretative process the caution advocated by Belamarić (1986). Philosophers, consistently with their disciplinary perspective, questioned the very assumption that a drawing should be assigned a single interpretable meaning. Among teachers, we observed both interpretative frameworks discussed in the introductory section of this paper: the evaluative perspective, reflected in judgements concerning neatness and developmental maturity (Anning & Ring, 2004), and, perhaps more unexpectedly, a frequent reluctance to draw

definitive conclusions, viewing the drawing instead as a starting point for dialogue rather than as evidence from which firm inferences should be made.

The responses concerning the theoretical foundations of interpretation demonstrated that professional background shapes not only what experts focus on but also the conceptual frameworks on which their interpretations are based. Developmental psychology emerged as the common theoretical foundation shared by most professional groups, but beyond this point their perspectives diverged. Art experts remained within theories of children's artistic development, pedagogues, teachers, and early childhood educators situated their interpretations within the educational context, psychologists were the only group to refer explicitly to projective approaches, while philosophers, rather than invoking a particular theory, emphasised a process: "the child draws, the child explains, and the adult asks questions." This statement, made by one of the philosophers, perhaps best encapsulates the position reached through the participatory paradigm (Clark & Moss, 2001; Einarsdóttir et al., 2009).

Against this background, one aspect of the findings proved somewhat unexpected and concerns the boundaries of interpretation. We anticipated differences between the professional groups, and these were indeed evident in their interpretative narratives. What was unexpected, however, was the degree of consensus regarding the limits of interpretation. Across all professional groups, regardless of disciplinary background, participants repeatedly expressed the same view: a drawing is not a diagnosis, a single drawing is insufficient, interpretation requires contextual information, and the child should be involved in the interpretative process through conversation. Equally striking was the fact that no professional group overestimated the scope of its own expertise. Participants spoke more spontaneously about the limitations than the strengths of their own professional perspective and frequently referred to the expertise of other professions. Such professional humility cannot be taken for granted, particularly within traditions that have historically interpreted drawings on behalf of children rather than with them. It also resonates with Eldén's (2013) observation that adults who speak on behalf of children inevitably do so through the lens of their own conceptual categories.

When these findings are considered together, they point towards a fundamentally hermeneutic conclusion. Professional perspective proved to be both the greatest strength and the greatest limitation of interpretation: what enables one profession to notice particular aspects of a drawing simultaneously obscures others, and vice versa. Gadamer (2004) would argue that this is inevitable, as pre-understanding is not an obstacle to be removed but a necessary condition for understanding itself. Professional vision cannot simply be set aside. The central question, therefore, is not which profession interprets a drawing correctly, but rather what each profession is able to see in the same image. The participants in this study, it should be acknowledged, addressed this question with a greater degree of self-awareness than we had anticipated.

The findings also have important practical implications for research in which children's drawings are used as data. If the professional background of the interpreter shapes even the initial act of observation, reports of such studies should explicitly state who interpreted the drawings and what their professional background is. The credibility of interpretation could also be strengthened by involving interpreters from different professional disciplines. Recent work by Sjöberg (2024) suggests that this is still uncommon practice: different disciplines use children's drawings for their own purposes, guided by their own assumptions about childhood, while rarely engaging with one another's interpretative perspectives. Our findings indicate that such dialogue—an interdisciplinary interpretation of the same visual material—would represent the most appropriate response to the inherently interpretative nature of visual data.

Finally, it is worth remembering that perspective operates on both sides of the paper. Burkitt et al. (2019) demonstrated that children draw the same subject differently depending on the intended audience. In other words, children draw **for** someone, while experts interpret drawings **from** a particular professional standpoint. The meaning that researchers ultimately record as data emerges

between these two perspectives, and visual methodology should acknowledge this reality rather than assume that it can be eliminated.

5. Limitations and Directions for Future Research

The findings should be interpreted within the limitations of this study, which are not insignificant. First, the sample was small and unevenly distributed across the professional groups, comprising five pedagogues but only two psychologists and two philosophers. Consequently, when we refer to *psychologists* throughout the paper, we are referring to the perspectives of only two individuals, who cannot be considered representative of the profession as a whole. This was an exploratory study designed to identify and describe interpretative patterns rather than to produce generalisable conclusions. The purpose of this qualitative study was not to achieve statistical representativeness or generalise the findings to entire professional groups, but to identify and explore diverse interpretative patterns among participants with different professional backgrounds. The findings therefore illustrate possible professional perspectives rather than stable characteristics of the respective professions. Whether the patterns identified here would be replicated in larger and more balanced samples remains an empirical question for future research. Second, all four drawings were produced in response to the same drawing instruction, within the same school context, and by children from a relatively narrow age range. Even within such a homogeneous set of drawings, the characteristics of individual drawings influenced the interpretative patterns observed. It is therefore reasonable to expect that drawings based on different themes, created by younger children, or produced without a prescribed topic might elicit different professional perspectives. Future studies should therefore vary not only the professional background of the interpreters but also the type of drawings being interpreted.

Third, withholding contextual information about the children enabled us to isolate the influence of professional perspective. However, this also deprived teachers and early childhood educators of the contextual knowledge on which their interpretations normally rely in everyday practice. Their interpretations in this study should therefore not be regarded as equivalent to those they would make in a classroom or early childhood setting. Comparing interpretations of the same drawing with and without contextual information would represent a logical next step for future research.

Finally, we did not interview the children whose drawings were interpreted. This was a deliberate methodological decision because our focus was on the interpreters rather than on the children themselves. Consequently, the study makes no claims regarding the *accuracy* of the interpretations, nor was this its objective. Comparing experts' interpretations with children's own explanations of their drawings appears to be one of the most promising directions for future research and, at the same time, the only approach capable of fully realising the participatory principle that participants themselves so consistently advocated throughout this study.

6. Conclusion

This study was based on an assumption that has long been taken for granted in the literature on children's drawings but has rarely been examined empirically: that different professional groups interpret the same drawing in different ways.

The findings confirmed this assumption but also revealed something more fundamental. Differences between professional groups did not begin at the level of interpretation; they emerged already at the level of perception, influencing what professionals noticed before they began to interpret it. At the same time, the study identified an equally important finding that is rarely acknowledged. The participants were highly aware of these differences, recognised the boundaries of their own professional expertise without prompting, and almost unanimously agreed that the interpretation of children's drawings is not a task that any single profession can accomplish independently.

The principal scientific contribution of this study lies in empirically demonstrating that professional vision shapes not only the meanings attributed to children's drawings but also the

initial act of noticing visual elements. By comparing six professional perspectives under identical interpretative conditions, the study extends existing visual methodology beyond a general recognition of researcher subjectivity and shows how disciplinary knowledge directs attention towards particular aspects of the same visual material. The findings therefore position the professional background of the interpreter as an integral part of the analytical context that should be explicitly reported and critically reflected upon in research using children's drawings as data. Although exploratory, the study provides a foundation for further research examining how interdisciplinary interpretation and children's own explanations may strengthen the credibility of visual-data analysis.

These findings also connect professional vision with the participatory principles of visual methodology. A drawing enables children to communicate experiences that may not be expressed fully through words, but its pedagogical meaning does not reside in the visual product alone. Rather, it is constructed within a triadic relationship between the child, the teacher or professional interpreting the drawing, and the educational context in which it was produced. The child contributes their perspective, the professional contributes a disciplinary and pedagogical lens, and the context provides the conditions necessary for understanding the drawing. Therefore, a child's drawing should not be regarded as a finding in itself but as an invitation to dialogue-first with the child and then across professional disciplines.

For research using children's drawings as visual data, the implications are primarily methodological. Researchers should explicitly report who interpreted the drawings and describe their professional background because the interpreter's perspective forms part of the analytical process. Professional vision cannot be removed, but it can be acknowledged and critically reflected upon. Where appropriate, bringing together different professional perspectives and the child's own explanation may support a more contextualised and credible interpretation. It is in this dialogue, rather than in the search for a neutral observer, that further methodological development in the interpretation of children's drawings may be found.

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Ethics declaration: Formal institutional ethical approval was not required for this study because the research involved a non-interventional drawing activity conducted within regular school settings and did not include any experimental manipulation or collection of sensitive personal data. Permission to conduct the drawing activity was obtained from the participating schools. Written informed consent was obtained from all expert participants, while written parental consent and age-appropriate child assent were obtained for the collection and research use of the children's drawings. All drawings and interview transcripts were anonymised prior to analysis.

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References

- Akyol, T. (2025). The effect of participatory pedagogy and children's participation training on early childhood teachers' views on children's participation. *Journal of Pedagogical Research*, 9(4), 102-118. <https://doi.org/10.33902/JPR.202533781>
- Allen, B., & Tussey, C. (2012). Can projective drawings detect if a child experienced sexual or physical abuse? A systematic review of the controlled research. *Trauma, Violence, & Abuse*, 13(2), 97-111. <https://doi.org/10.1177/1524838012440339>
- Anning, A., & Ring, K. (2004). *Making sense of children's drawings*. Open University Press.
- Arnheim, R. (1974). *Art and visual perception: A psychology of the creative eye* (The new version). University of California Press.
- Belamarić, D. (1986). *Dijete i oblik: Likovni jezik predškolske djece: Knjiga za odgajatelje, roditelje, pedagoge, psihologe, psihijatre* [The child and form: The visual language of preschool children: A book for educators, parents, pedagogues, psychologists, and psychiatrists]. Školska knjiga.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Brooks, M. (2005). Drawing as a unique mental development tool for young children: Interpersonal and intrapersonal dialogues. *Contemporary Issues in Early Childhood*, 6(1), 80-91. <https://doi.org/10.2304/ciec.2005.6.1.11>
- Burkitt, E., Watling, D., & Message, H. (2019). Expressivity in children's drawings of themselves for adult audiences with varied authority and familiarity. *British Journal of Developmental Psychology*, 37(3), 354-368. <https://doi.org/10.1111/bjdp.12278>
- Clark, A., & Moss, P. (2001). *Listening to young children: The Mosaic approach*. National Children's Bureau.
- Deguara, J. (2015). *Meaning-making in young children's drawings* [Doctoral dissertation, University of Sheffield]. White Rose eTheses Online. <https://etheses.whiterose.ac.uk/9980/>
- Edwards, C., Gandini, L., & Forman, G. (Eds.). (1998). *The hundred languages of children: The Reggio Emilia approach - advanced reflections* (2nd ed.). Ablex Publishing.
- Einarsdóttir, J., Dockett, S., & Perry, B. (2009). Making meaning: Children's perspectives expressed through drawings. *Early Child Development and Care*, 179(2), 217-232. <https://doi.org/10.1080/03004430802666999>
- Eldén, S. (2013). Inviting the messy: Drawing methods and 'children's voices'. *Childhood*, 20(1), 66-81. <https://doi.org/10.1177/0907568212447243>
- Fabris, M. A., Lange-Küttner, C., Shiakou, M., & Longobardi, C. (2023). Editorial: Children's drawings: Evidence-based research and practice. *Frontiers in Psychology*, 14, 1250556. <https://doi.org/10.3389/fpsyg.2023.1250556>
- Farokhi, M., & Hashemi, M. (2011). The analysis of children's drawings: Social, emotional, physical, and psychological aspects. *Procedia-Social and Behavioral Sciences*, 30, 2219-2224. <https://doi.org/10.1016/j.sbspro.2011.10.433>
- Gadamer, H.-G. (2004). *Truth and method* (J. Weinsheimer & D. G. Marshall, Trans.; 2nd rev. ed.). Continuum. (Original work published 1960)
- Golomb, C. (2004). *The child's creation of a pictorial world* (2nd ed.). Lawrence Erlbaum Associates.
- Goodenough, F. L. (1926). *Measurement of intelligence by drawings*. World Book Company.
- Goodman, N. (1976). *Languages of art: An approach to a theory of symbols* (2nd ed.). Hackett Publishing.
- Goodwin, C. (1994). Professional vision. *American Anthropologist*, 96(3), 606-633. <https://doi.org/10.1525/aa.1994.96.3.02a00100>
- Grgurić, N., & Jakubin, M. (1996). *Vizualno-likovni odgoj i obrazovanje: Metodički priručnik* [Visual arts education: A methodological handbook]. Educa.
- Guillemin, M. (2004). Understanding illness: Using drawings as a research method. *Qualitative Health Research*, 14(2), 272-289. <https://doi.org/10.1177/1049732303260445>
- Harrison, L. J., Clarke, L., & Ungerer, J. A. (2007). Children's drawings provide a new perspective on teacher-child relationship quality and school adjustment. *Early Childhood Research Quarterly*, 22(1), 55-71. <https://doi.org/10.1016/j.ecresq.2006.10.003>
- Hong, S. B., Broderick, J. T., & McAuliffe, C. M. (2021). Drawing to learn: A classroom case study. *Early Childhood Education Journal*, 49(1), 15-25. <https://doi.org/10.1007/s10643-020-01041-9>
- Imuta, K., Scarf, D., Pharo, H., & Hayne, H. (2013). Drawing a close to the use of human figure drawings as a projective measure of intelligence. *PLoS ONE*, 8(3), e58991. <https://doi.org/10.1371/journal.pone.0058991>

- Karlavaris, B. (1991). *Metodika likovnog odgoja 2* [Methodology of visual arts education 2]. Hofbauer.
- Kellogg, R. (1970). *Analyzing children's art*. Mayfield Publishing.
- Koppitz, E. M. (1968). *Psychological evaluation of children's human figure drawings*. Grune & Stratton.
- Lowenfeld, V., & Brittain, W. L. (1987). *Creative and mental growth* (8th ed.). Macmillan.
- Luquet, G.-H. (2001). *Children's drawings: (Le dessin enfantin)* (A. Costall, Trans.). Free Association Books. (Original work published 1927)
- Machover, K. (1949). *Personality projection in the drawing of the human figure*. Charles C. Thomas.
- Malchiodi, C. A. (1998). *Understanding children's drawings*. Guilford Press.
- Matthews, J. (2003). *Drawing and painting: Children and visual representation* (2nd ed.). Paul Chapman Publishing.
- Mori, L. H. (2023). Woke in the dark: Embracing diversity and trust through social and emotional learning in education in the age of artificial intelligence. *International Journal of Didactical Studies*, 4(2), 21482. <https://doi.org/10.33902/ijods.202321482>
- Öztürk, H., & Erzen, E. (2023). Teaching death in Türkiye: The theme of death in illustrated children's books. *Journal of Pedagogical Sociology and Psychology*, 5(3), 28–46. <https://doi.org/10.33902/jpsp.202319688>
- Piaget, J., & Inhelder, B. (1956). *The child's conception of space*. Routledge & Kegan Paul.
- Prayitno, P., Harun, H., Syamsudin, A., Purwoko, R. Y., & Setiana, D. S. (2024). Animation-based learning model to stimulate drawing work in children aged 5–6 years. *Journal of Pedagogical Research*, 8(3), 163–175. <https://doi.org/10.33902/JPR.202427516>
- Punch, S. (2002). Research with children: The same or different from research with adults? *Childhood*, 9(3), 321–341. <https://doi.org/10.1177/0907568202009003005>
- Rinaldi, C. (2006). *In dialogue with Reggio Emilia: Listening, researching and learning*. Routledge.
- Rose, G. (2016). *Visual methodologies: An introduction to researching with visual materials* (4th ed.). Sage.
- Sjöberg, J. (2024). Children's pictures in research practices across academic disciplines. *Child Studies*, 6, 121–142. <https://doi.org/10.21814/childstudies.5768>
- Spajić, V. (1989). *Vrednovanje likovnog djela: Pristup pedagogiji umjetnosti* [Evaluating works of art: An approach to art pedagogy]. Školske novine.
- Theron, L., Mitchell, C., Smith, A., & Stuart, J. (Eds.). (2011). *Picturing research: Drawing as visual methodology*. SensePublishers. <https://doi.org/10.1007/978-94-6091-596-3>
- Thomas, G. V., & Jolley, R. P. (1998). Drawing conclusions: A re-examination of empirical and conceptual bases for psychological evaluation of children from their drawings. *British Journal of Clinical Psychology*, 37(2), 127–139. <https://doi.org/10.1111/j.2044-8260.1998.tb01289.x>
- Thomas, G. V., & Silk, A. M. J. (1990). *An introduction to the psychology of children's drawings*. Harvester Wheatsheaf.
- Watts, R. (2010). Responding to children's drawings. *Education 3–13*, 38(2), 137–153. <https://doi.org/10.1080/03004270903107877>
- Wood, E., & Hall, E. (2011). Drawings as spaces for intellectual play. *International Journal of Early Years Education*, 19(3–4), 267–281. <https://doi.org/10.1080/09669760.2011.642253>