Preschool Children's Drawings: Frequency and Theme Analysis

Jana Marie Havigerová*, Yveta Pohnětalová, Kateřina Strnadová, Karolína Kocourková, Dominika Podubecká

Faculty of Education, University of Hradec Králové, Hradec Králové, Czech Republic

Corresponding author: Jana Marie Havigerová, E-mail: jana.havigerova@uhk.cz

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ABSTRACT

The preschool age is called the golden age of drawing; drawing is a "golden" mediator of literacy development. In this article, we focus on the content the preschool children put into their drawings. The goal of study has been the comparison of preschool children's drawings with respect to the thematic categories of drawn object, and to identify differences between boys and girls. There were analyzed pictures (N=61) drawn by preschool children, from 5 years and 9 months to 6 years and 11 months. Pictures were drawn following the content-neutral (indifferent) instruction: "Draw, what is on your mind now." The obtained data were subjected to thematic and frequency analysis. Results: data shows that the average number of objects is higher in girls' drawings: girls drew 4±5 objects on average, while boys drew only 2±2. The number of drawn objects increases with age. Objects drawn could be divided onto 14 thematic categories; most popular are natural objects (sun, mammal, flowers, clouds etc.). The most popular theme in the group of boys are Vehicles, in girls group themes vary more. Practical impact: if we know what children like to draw, we have a strong motivating element for the development of communication literacy, especially writing.

Key words: Drawing, Preschool Children, Content Analysis, Theme Analysis, Sex Differences

INTRODUCTION

Literacy is viewed in many different ways in science and education. Customarily, literacy is contrasted with orality (oral tradition), which encompasses a broad set of strategies for communicating through oral and aural media (Foley, 2021). Literacy, in the narrower sense, means a capacity to communicate using inscribed, printed, or electronic signs or symbols for representing language (Pinker, 2010). *Drawing* is an essential part of developing *pre-writing skills*, developing literacy (Beaty & Pratt, 2003). The preparatory period for the development of literacy culminates in preschool age, sometimes referred to as "the golden age" of drawing (Saracho & Spodek, 2013).

The preschool developmental stage is typically defined as the period between 3 – 6 years of age (Vágnerová, 2005). In our study we use the following narrow definition: Preschool age as "the period of the last year in the kindergarten", respectively "the year when the child is enrolled in the elementary school first grade". That is, according to the Czech legislative, "the year when the child turns 6 years of age" (i.e. identically with the term "kindergarten" in the US English) (e.g., Daniela, 2018). For this period, a game in all its form is symptomatic, and drawing is also a kind of game for preschoolers.

Drawing is the most natural expression for children of this age. It is at the same time a game and an action developing the subtle motion skills and plethora of other mental functions (Pugnerová et al., 2019). "Children enjoy drawing because drawing stimulates the universal desire to express oneself" (Farokhi & Hashemi, 2011).

"Drawing involves many interacting components, including the perceptual system, fine and gross motor skills, perceptual feedback, interaction with the drawings of a culture, social interactions and motivations, emotional valence, and others" (Cohn, 2012). The preschool children fit all developmental conditions for drawing. Chiefly, both the rough and subtle motion skills are being developed rapidly (Langmeier & Krejčířová, 2006).

The cognitive functions are being gradually précised. Sensation and perception experience gradual differentiation (children distinguish between more and more colours, shapes, sounds, etc.), which they are able to express in drawing. Preschool children restore their experience a holistic and non-verbal way (Langmeier & Krejčířová, 2006, p. 84). Therefore, a drawing, a typical holistic non-verbal expression, allows the children to project their experience better than a verbal expression. According to Piaget, preschool children are going through the so called pre-schematic age. In this age, so called illustrative thought, immediately affected by ongoing events, is typical for thinking (Piaget & Inhelder, 2019). For this reason, the content of child drawing typically corresponds to content present in the child's mind at the given moment. Preschool children would not

look lengthily for a theme of their drawings. They would draw the first thing that comes to their minds. When children draw objects based on their past experience (main characteristics of what they have seen, lived through, drawn before), or based on what then see at the given moment (for example objects in the room). The children's mechanism of conceptualization is already fully developed (Cohn, 2012), therefore, the children are regularly capable of drawing from memory - drawing of an object in the mind in lieu of having it perceptually available. Similarly, their executive functions are sufficiently developed, so that they are able to follow the visual perception or memory recognition with planning and action production (see Marr's cognitive hierarchic model of drawing, as cited in Cohn, 2012). Put differently, children are principally able to draw what they wanted to draw. From the characteristics of this developmental stage it is apparent, the preschool children's psycho-motoric development enables the researchers to use child drawings as the optimal material for research.

Drawing as a research subject/tool has a longstanding tradition. Puglionesi (2016, p. 359) states that already at the turn of the 20th century, the drawing earned the credit of a scientific proof "as stable, reproducible signals from a hidden interior".

Gradually, researchers attempted to stabilise the use of subject-generated drawings as evidence by controlling the contexts in which drawings were produced. This study is based on the framework of the psychoanalysis tradition (in contrast to the neuropsychology tradition, which utilises drawings as material traces of cognitive functions). Drawing is often interrogated as being a type of language in the first sense--a system that can be analysed for its coding system, an intrinsically structured variety of communication (Blair, 2018). We perceive drawing as "graphic language," as a logical opposite or complement for a "conventional language" (MacLagan, 2001, p. 136).

The current pedagogical-psychological research knows a wide scale of psycho-diagnostic tools, methods, and techniques, based on the analysis of drawing. On the one side stand classical tests of the positivist tradition, with a clear instruction, score system and system for the interpretation of results (e.g. Draw a Person test, Draw a Man test, House-Tree-Person test, Joley, 2010; The Tree-drawing Test, Oster & Gould Crone, 2004, etc.). On the other side stand methods based on phenomenology and qualitative research design, aiming at understanding the process of the origin and individual specificity of a drawing (e.g. Participatory Drawing as a visual research method, Literat, 2013). Both tradition consent that the child drawing provides a testimony about the children's inner world, their imagination, creativity, degree of development etc. (Svoboda, 2009), their current contents and needs (Piaget & Inhelder, 2019). It may also provide a testimony about the problematic contents, fears, anxieties, and unsatisfied need, even about the mental disorders (Pugnerová & Kvintová, 2016). Both psychologists and educationalist can use the analysis of child drawing to better understand the child (Bednářová, 2014). In this study we employ the technique of free-memory picture (Strauss, 2007),

also called spontaneous drawing (Kolouchová, 2016 et al.). The term "spontaneous drawing" used to be understood as a drawing which "is as nearly spontaneous a behaviour pattern as it is possible to obtain" that appears developmentally and spontaneously without any extrinsic motivation (Frost, 1958). Today, however, the term is typically used in a broader sense: As a thematically unlimited drawing. "Spontaneous drawing "represents such task for children, which is not limited by rigid instruction (Kucharská, 2002, p. 58). The examiner offers a child the opportunity to draw something. The children, unless they have a negative attitude to drawing or bad experience with it, usually consent. The child draws, what is attractive for them or what interests them, which may be of a representative value (ibid.). Children can choose a topic well known for them, and their drawing can be very quick. They can alternatively choose a new topic, which usually requires a greater mental and physical effort, and the production takes longer. The result is a drawing innovative for the child, or a child with innovative element (for example, the child draws an elephant instead of a dog – an animal with four legs plus a trunk). Spontaneous drawing can be analyzed from many different perspectives. We focus on the analysis of themes which appear in the drawings. Developmental psychology tells us that during the pre-schematic age (Piaget & Inhelder, 2019), respective in the descriptive symbolism age (Burt), the motif of "man" appears first in the child drawing, subsequently the motifs 'tree' and 'house' (Strauss, 2007, p. 37). We therefore expect these three themes that will appear in our data. But what will the others be? Frost (1958) identified 14 of meaningful objects in these content categories: scenes, houses, boats, plant life, land vehicles, air vehicles, human figures, animal figures, still life, designs, the sun, moon and stars, weapons, letters. Kolouchová (2016) identified 5 thematic categories in the preschool children drawings: Figural, natural, technical, artificial, and fantastic objects. Will the same categories appear in our data, or are we about to detect any new ones?

Objectives and Research Question

The goals of study are:
- to describe and analyze contents in the preschool children's spontaneous drawings,
- to compare our findings with respect to the gender, and
- to compare the results with the existing knowledge.
  The research questions are as follows:
1. What topics are in the content of spontaneous drawings of preschool children?
2. How many objects appear in spontaneous drawing in preschool children?
3. Do boys and girls differ in the number of objects in a spontaneous drawing?
4. Do boys and girls differ in their preferred topics?

METHOD

The research was conducted in a short period between the first and second coronavirus lockdown in the Czech Republic: Between May and September 2020. The researchers visited

3 kindergartens, where the collaboration had been agreed upon with the headquarters (the consent with the research, time schedule). At the meeting with parents, the parents' consents were obtained with the participation of their children in the survey.

The parents were informed about the strict anonymity of the survey (the respondent children and their drawings have been marked with a code only, it is not possible to identify the children again). The administrators of the research had seen the children several times before during the educational practice. The children were used to their presence and willingly followed their instructions. The drawings the children were sometimes giving to the administrators out of the test situation were not included in the research (drawings "for Mrs. teacher in remembrance").

Data Collection Method

Following a brief activity intended to calm the children down and empty their minds (a micro-meditation on the theme of "wiping our inner board clear"), where the children were lying on their playing carpet, the children sat down to their tables. Clean white sheets of the size A4 and sharpened pencils were already prepared for them. The children were given a content indifferent instruction: "Draw, what comes first to your mind". The administrators were making sure to arrange the conditions for calm and focused work. They were similarly making sure that any child does not copy others' drawing. When a child concluded their drawing, they brought the sheet to the administrator, who asked the question "what do you call this picture?" The answer was recorded at the back of the sheet.

Some of the children wrote their name instead of drawing. Those products were excluded from the analysis, since the aim was to analyses drawings, not characters (text).

The collected data were subjected to the thematic analysis of visual data and content analysis of the verbal data. Each child could choose their minor reward for the picture they delivered (stickers, balloon, reflective pendants, paper notebooks, wax crayons etc.). When the last child in the group finished their drawing, the common debriefing took place. The children were talking to the administrator about if and what they like to draw. Other activities of the class followed according to the education schedule. The teachers were regularly administrating them, while the research administrators took the role of observers of assistant teachers (according to the specific agreement) for the rest of the day.

Research Sample

The research sample consisted of currently present preschool children (in the narrow sense), i.e. children who were enrolled in the elementary school in the given school year (April 2020). The age of the children ranged from 5 years and 9 months to 6 years and 11 months, with the average of 6 years and 2 months. The number of the participants was n=61. Only the children, whose legal representative provided their consent with participation and which are present at the kindergarten on the day of the research examination, are included in the sample.

Data Processing

Each picture was scanned. In the file name, the child was coded with their ID code, age, gender, and the name of the picture. The collected data are processed with the content analysis method (Reichel, 2009, p. 127), specifically the thematic analysis method (Bold, 2012) and subsequently with frequency analysis. The differences between boys and girls are tested with classic comparative methods: Tests for comparing two independent files.

RESULTS

The thematic analysis has been processed first, consisting of two steps. In the first step, the pictures were scanned coded *in vivo* in the Atlas.TI 8.0 software (specific names were given to individual elements on the pictures). In the second step, the "in vivo" codes were clustered thematically. 14 thematic clusters on the same level of generalization were thus created, which covered all analysed elements. The 14 categories are the following:

- Vehicle – Car, limousine, caravan, bus, tractor, tank, scooter, plane,
- Person -Human figure of a child of an adult, princess,
- Symbols – heart, cup,
- House – House with a roof, cottage, block of flats, castle,
- Sun – Nothing else but the sun,
- Natural objects – Stone, rainbow, hill, lake,
- Tools and products – Balloon on a string, key, bone, antenna, cake,
- Mammal – Dog, horse, rabbit (also with eyelashes),
- Clouds – just clouds,
- Flowers and grass – Common meadow flower with petals, water lilies, tufts of grass.
- Ground – A line representing the ground.
- Tree – Broadleaf tree in general, apple tree,
- Birds – A bird in general, peacock, and
- Insect – Butterfly.

We show the actual appearance of the individual categories in the Appendix. Stylized typical representations of the most frequent object of the drawings are pictures.

Secondary codes were assigned to the object in the Atlas.TI software, representing the identified thematic categories. The obtained material was transferred into the SPSS software. Each respondent's drawing has been supplied with the information about what thematic categories in contained (binary coding: 0=non present, 1=present at least once). Finally, all elements on each drawing were counted. The information about the frequency of the objects was input into the SPSS database as a total score.

Preconditions for the calculation of parametric tests have been verified: Kolmogorov-Smirnov normality test for the number of the object on an image showed that the variable has abnormal distribution (P<.001). For this reason, it is suitable to use nonparametric methods.

The frequency analysis of the number of the object on the images identified 159 objects on 61 images (Table 1). Subsequently, the gender comparison was conducted. The

Table 1. Themes of objects in the picture: frequency analysis (n=61)

Sex	n	Sum	Min	Max	Mean	SD	Mode	Median
Boys	34	66 (41.5 %)	1	8	1.94	1.79	1	1
Girls	27	93 (58.5 %)	1	23	3.44	4.85	1	1
Total	61	159 (100 %)	1	23	2.61	3.54	1	1

results show that girls generally draw more objects than boys.

The results were subject to a more detailed analysis. We examined indicators of dispersion: the minimum and maximum values and standard deviation reveal significant differences between boys and girls. Indicators of central tendency were also considered: mean, median and mode show that central tendencies in the two groups are almost identical or at least very similar: most of the boys as well as girls drew a single object, the value of median is also 1. However, the mean value suggests differences between the groups (boys drew two objects on average while girls drew four) and the difference is not due to the presence of outliers (there were 3 outliers in each group and the difference between the groups remains observable even with outliers excluded, see Figure 1).

The difference in the number of objects between the two groups was subject to non-parametric tests: Mann-Whitney U test comparing distributions across groups (results: U=511, p>.05), Median test comparing central tendency across groups (results: median =1, df=1, $\chi 2$=0.029, p>.05), and Moses extreme reactions comparing ranges across groups (results: OCG span=40, TCG span =37, outliers trimmed from each end =1, p<.001). Tests of distribution and central tendency confirm our observations: data distribution is the same in both groups (the majority of boys as well as girls drew a single object). Moses test results say that extreme values are more likely to occur in the population from which the sample with the larger range was drawn, i.e. in girls.

The frequencies of objects in the individual thematic categories are given in Table 2 (some of the children drew more than one object, which is why the sum in the column "Percentage of children who used the theme in their drawing" is greater than 100).

The results show that, overall, the most popular categories of objects represented in the spontaneous drawings were Vehicle, Person and Symbols (they account for 43 % of the total number of objects and they were chosen by 21.3-29.5% of children).

The last step of the analysis consisted in the identification of gender differences in the choice of themes for spontaneous drawings. The results presented as percentages are found in Table 3. Statistical significance of the differences was determined using the tests $\chi 2$ and Eta. The value of $\chi 2$ measures the correlation in the crosstab. Null hypothesis of this test is that there is no relationship on the examined variables (i.e. the number of objects in a specific category and gender). The values of Eta multiplied by 100 is interpreted as the percentage indicating to what extent is the dispersion within individual categories dependent on the division into groups.

The results show that differences between boys and girls as to frequency distribution of the objects in the drawings
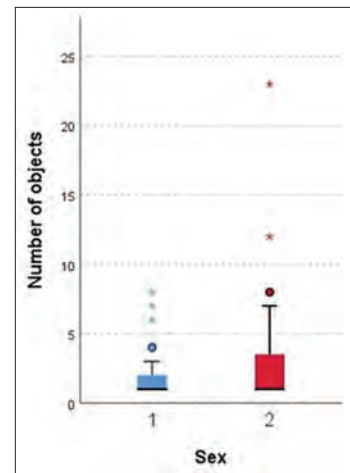
Figure 1. Outlier detection (Sex 1 = boy, 2 = girl)

appear with six themes: Vehicle, Sun, Clouds, Flowers, Natural objects, and Birds.

The percentages for the individual groups indicate that in their spontaneous drawings, boys clearly chose objects from the category Vehicles statistically more often, while objects from the categories Sun, Clouds, Flowers, Natural objects and Birds appear predominantly in girls' drawings.

Table 3 further shows that girls' spontaneous drawings cover a much wider range of themes (they used 13 out of the 14 examined categories while boys used "only" 10).

Ethical aspects: all the children participated in the research by consent of their legal representatives. Personal data about the respondents was limited to basic information (age, sex) and the drawings were processed anonymously. The drawings are stored temporarily as digital images marked with a code (the original drawings were returned to the children). The images are going to be deleted two years after the publication of the results.

The authors collected the data within their practical training, which means that they were not strangers to the children when they conducted the research. Actual drawings produced by the children were not included in any of the publication outputs and none of the children from the research group can be identified retroactively. The publication only presents quantitative data characterizing the drawings and pictures provided by an adult artist, who created prototypical drawings based on an examination of the actual children's' products and who is a co-author of this text. No one suffered or can suffer any harm in connection with the present research.

DISCUSSION

The objective of the present project was to describe and analyze the content of preschool children's spontaneous

Table 2. Themes of objects in the picture: frequency analysis (N=61, N_o=107)

THEME	Frequency	Percent of all objects drawn (n / 107)	Percent of children who used it (n / 61)
Vehicle	18	16.82	29.50
Person	15	14.02	24.60
Symbols	13	12.15	21.30
House	12	11.21	19.70
Sun	10	9.35	16.40
Natural objects	6	5.61	9.80
Tools	5	4.67	8.20
Mammal	5	4.67	8.20
Clouds	5	4.67	8.20
Flowers	5	4.67	8.20
Ground	5	4.67	8.20
Tree	4	3.74	6.60
Birds	3	2.80	4.90
Insect	1	0.93	1.60
Total	107	100.00	---

Table 3. Themes of objects in the picture: chi square and ETA (n_b=34, n_g=27)

THEME	Percentage of Boys	Percentage of Girls	χ^2	p	Eta (sex dep.)
Vehicle	52.9	0.0	20.278	.000	0.577
Sun	2.9	33.3	10.142	.001	0.408
Clouds	0.0	18.5	6.086	.009	0.335
Flowers	0.0	18.5	6.858	.009	0.335
Natural objects	2.9	18.5	4.118	.042	0.260
Birds	0.0	11.1	3.973	.046	0.255
Mammal	2.9	14.8	2.820	.093	0.215
Tree	2.9	11.1	1.639	.200	0.164
Insect	0.0	3.7	1.280	.258	0.145
Person	29.4	18.5	0.963	.326	0.126
Symbols	17.7	25.9	0.615	.433	0.100
House	20.6	18.5	0.041	.840	0.026
Ground	5.9	7.4	0.400	.841	0.026
Tools	5.9	7.4	0.400	.841	0.026

The data is ordered by the size of the difference (the theme in the first row is the one with the greatest difference between boys and girls in normalized frequencies of objects from the drawings)

drawings with regard to gender differences. The total number of children involved in the research was 61 (27 boys and 34 girls) and they were aged from 5 years, 9 months to 6 years, 11 months. The 61 drawings contained a total of 107 objects.

The results show that most of the children drew only a single object (mode as well as median equaled 1). The general developmental tendency is that the number of drawn objects increases with age. According to Frost (1958), for instance, a single discrete object typically appears in 13 % of drawings produced by 5-year-olds, but only in 6 % of 6-year-olds and 1 % of 7-year-olds. The percentage of single object drawings in our study is significantly higher. A possible explanation is that this is due to the specifics of our time – the current generation of children spend a greater proportion of time engaging in "passive" leisure activities (such as watching TV, YouTube and similar media, playing computer games etc.), which are less demanding as to fine motor skills (manipulation with the mouse or finger movements on touchpad or screen are less complex and less challenging than movements with the pencil on the paper). It has been proved, for example, that an earlier age of media use onset, greater cumulative hours of media use, are significant independent predictors of poor executive functioning in preschoolers (Radesky et al., 2017) and we know that executive functioning is an important condition of drawing. The lower number of objects in the drawings may be an effect of our media/digital age, in which children increasingly rely on technology instead of their brain (in popular terms, symptoms of digital dementia, as stated by Manfred Spitzer, as cited in Jarrett, 2015).

The results of our study also suggest that the average number of objects is higher in girls' drawings: girls drew 4±5 objects on average, while boys drew only 2±2. The difference might reflect the generally known gender differences in development: girls' graph motor skills develop faster than boys' (Langmeier & Krejčířová, 2006). Henderson and Pehoski (2005) specify that representative drawing typically begins by the age of 4 for girls, and between 4.6 and 5 for boys, i.e. girls naturally tend to be 6-12 months "ahead" of boys. We may further assume that more mature graph motor skills allow girls to make their drawings richer without excessive effort. This is in line with the experience that pre-school girls are generally fonder of drawing as an activity, which may be a natural consequence of their superior skills – greater success at drawing leads to a stronger feeling of satisfaction (girls seem to gain a greater sense of achievement and self-esteem through their work, Cook et al., 2004). As a result, they spend more time an energy drawing and include more objects in a single picture than boys. Robert (2012) is more specific in his findings, pointing out that girls experience a greater satisfaction when drawing human topics (person), while boys prefer drawings of non-human objects (house, tree, car). More advanced graph motor skills and satisfaction from drawing could also account for the relatively higher level of detail in girls' drawings (see e.g. Frost, 1958). It is important to note that gender differences of this sort are typical of preschool age and they gradually diminish later on.

We defined 14 thematic categories which covered all the analyzed objects. We chose a lower degree of generalization (compared to previous studies) to avoid loss of information. The study by Kolouchová (2016), for instance, uses only 5 categories with high degree of generalization. Our categorization can be mapped on to hers if we collapse some of our

categories into one as follows: natural objects (sun, natural objects, mammal, clouds, flowers and grass, ground, tree, bird, insect), fantastic (symbol), technical (vehicle, tools and products), buildings (house) and figures (person). The mapping alone suggests that none of the objects in our study was outside the already existing categories. The differences in results are restricted to the ratio of the individual categories: the most frequent theme in the research of Kolouchová (2016) is natural objects (54 %) and the same is true of our study except the percentage is "only" 38 %. Similarly, the percentage of fantastic objects is slightly higher in Kolouchová (2016) (16 % × 12 %). Contrarily, our study has a higher percentage of technical objects (12 % × 22 %) and figural objects (8 % × 14 %); the percentage of buildings is almost identical in both studies.

The most common natural object in Kolouchová (2016) as well as our research is the sun. A number of authors agree that sun (or smiling sun) is a standard accessory in many children's art (Labitsi, 2007), but why does it have such a prominent position among other natural objects? We can offer three explanations. First, the anthropological significance of the sun as the life-giving object (it is the source of heat and light for the plants, which provide nourishment, for other organisms and people, to whom it also gives the feeling of safety), well known to the children from everyday life (Anjos et al., 2019). Second, the child's immediate environment provides a number of models for indirect everyday observation learning of graphical representation of object (the sun appears practically in every magazine for children, in a number of children's books and websites, mother often draw it for the children or show them pictures of it, it is included in the didactic materials and the process of preschool education, both indoor and outdoor learning, Anjos et al., 2019; McLeod & Giardiello, 2019), observational learning as a function of symbolization and incentive set (Marzocchi et al., 2020). Third, the simplicity of the graphic scheme, whose shape corresponds to the naturally developed graph motor skills of preschool children, because there are only two basic components: a circle and radiating lines, which children manage to draw already at the age of four (Garner, 2012, 94), i.e. it is usually very easy for a 6-year-old to draw the sun. Developmental tendencies concerning the sun as a motif in spontaneous drawings were documented by Frost (1958), who found out that the sun regularly appears in children's drawings since the age of 5, its incidence culminates at the age of 7 (61 % of girls and 46 % of boys draw the sun) and it subsequently drops (at the age of 10, it appears in drawing of 30 % of girls and 12 % of boys). The same reasoning can also explain the popularity (exposition of the object in drawings) of clouds, flowers, mammals, birds or insects (e.g., Anderson et al., 2017), although the respective percentages are lower.

The most popular theme in our study was Vehicles, however, objects from this category appeared only in boy's drawings. None of the girls drew a vehicle, not even as a non-central object of drawing. The question suggests itself, what makes Vehicles so popular with boys? This fact illustrates a more general tendency described by Dyson (1986, as

cited in Garner, 2012, p. 97) in her long-term kindergarten study: "boys chose to draw 'explosions, battles, and display power and motion', with an emphasis of narratives characterized by action. Girls drew 'happy little girls and cheerful small animals'." Analogically, the longitudinal study of Golomb (1992) revealed the gendered nature of children's drawings: "the spontaneous production of boys reveals an intense concern with warfare, actions of violence and destruction, machinery and sports contests, whereas the girls depict more tranquil scenes of romance, family life, landscapes and children at play." More recent studies, for example Wolpert (2014) state that "flowers, butterflies and women in bright clothing tend to be drawn by girls aged five to six years old, but boys tend to draw more mechanical subjects like cars or trains or soldiers and fighting". The explanations of these differing tendencies can be found in developmental psychology and neuropsychology. Many studies suggest these differences are related to the specificity of brain development, which is affected by differing ratios of sex hormones: the development of boy's brains is influenced by high doses of testosterone, which has crucial effects on brain lateralization, specific for the brain areas or networks involved. As a consequence, boys and girls differ in their abilities associated with mental rotation, word generation (Beking et al., 2017) as well as drawing, for example in status line drawing or the size of objects drawn (Barendse et al., 2018). Other factors which cannot be overlooked are social ones: differences in parenting or education process may increase the development of differing skills and interests (Wolpert, 2014).

CONCLUSION

Preschool age is key for the development of pre-writing literacy. Drawing is an ideal medium for the development of partial skills, which will later be "transformed" into classical literacy. In this study, we analyzed what the object of drawing is when children are given the content-neutral (indifferent) instruction: "Draw, what is on your mind now." Results of the theme analysis shows that the most natural theme of children's drawings in general is natural objects, boys much more often draw some vehicles. Girls tend to fill the area with more objects, boys most often draw one object (but, it can be bigger and more elaborate). The knowledge gained can be valuable material for teachers: when planning teaching activities aimed at developing pre-writing literacy, children can be better motivated by knowing the topics that are natural for their drawing. At the same time, the results may contribute to further research towards trans-cultural comparisons.

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APPENDIX

Our court artist drew pictures modelled on children's drawings and representing the basic thematic categories.