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# The Importance of Didactic Toys in Kindergarten Educational Process

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**Abstract.** The aim of this study is to identify preschool children's strategies in choice and play with didactic toys. The research was based on participatory observation of children with the set of original didactic toys. In total, 77 children aged 2 to 6 years from four different kindergartens were observed, with children always in small groups. The data obtained in the form of video recordings and field notes was then transcribed and analyzed using qualitative methods. The results point out the teacher's influence, usually determined what the toy serves or what task have to accomplished. We also point out the possible conditionality of the child's interest in the toy. Findings highlights the child's strategy in the play, especially the modification of the toy that arises just when the child has the opportunity to independently explore the toys. The importance is to support the didactic thinking of kindergarten's teachers including pre-service teachers.

*Keywords:* Didactic toys • Kindergarten • Observation

## 1 Introduction

Preschool teachers are significant actors of play initiation, support and development of children in kindergarten. An inspiring environment is one of the basic assumptions of play opportunities for children planned and implemented solely according to their imagination. And yet, play and learning are not mutually exclusive at all [1]. The essence of child play developing the child's personality is based on terms like creativeness, adaptation, exploration, experiment, learning, socialization, enculturation and skill [2]. The teacher is a partner and assistant to the child in this. Utilization of play means not only giving instructions for activities, but also providing a natural space for various activities and forms of play between which the child moves freely. This space is incited by the kindergarten teacher in a spontaneous but still targeted manner by preparing the environment for play and inspiring the child's independent creative activity. Despite the number of empirical studies, the potential of play as a learning strategy still remains largely unused.

### 1.1 Games and Toys

Play is a basic phenomenon in the child's life, and yet there is no clear definition or accurate specification of it [3, 4]. The definition, causes, value, meaning, nature and influence differ largely and they even are controversial [5]. Although forms of play are similar, they are hard to define [6]. Play is supposed to be a spontaneous activity of a child which is representing a reflection of its life, bringing satisfaction and expressing the current needs [7]. Rogers [8] defines play in a wider sense as a natural activity springing out of children cognitive need and the necessity to become mainly part of the social world around them. In the context of play, teachers use didactic games with the main share of a

didactic objective governed and reflected by the teacher's direct or indirect guidance, oriented towards the development of individual skills and the ability to cooperate, explore, try or create. The purpose of didactic games is development or fixation of a certain skill [9]. Benefits of didactic games include their stimulating charge, for they evoke interest, inspire creativeness, spontaneity, cooperation and competition, making children use various knowledge and skills and engage their life experience [10]. The play of preschool children is certainly connected with toys, considered the instrument of play, for toys, according to Rogers [8], stimulate and extend play. Didactic toys and their use in the process of learning thus support motivation for learning, communication, cooperation and individual cognitive, affective and social levels of the child's development. A toy is at the same time a possible space for social-centered play with the peers [11].

## **1.2 Preschool Teacher's Position in Children Play**

The learning of children in kindergarten is implemented through various educational programs or concepts of the given kindergarten, with the teacher as the principal figure or the activator and implementer of the educational process. Fehessa and Pyle [12] emphasize the importance of the role of the teacher in play, especially as the teacher is aware of the purpose of the play. Effective play-based learning begins if and when the teacher creates conditions for facilitative and scaffolding learning. Involvement of the teacher in a child's play is a supportive tool for the child's learning. The teacher performs the key role in the creation the conditions of a child's play [13].

- Professional knowledge of the teacher is required in the following areas:
- Pedagogical with a focus on the content and management of the educational process;
- Didactic in the specification of the particular taught subject, including knowledge of the environment;
- Curriculum with the knowledge of planning, implementation and evaluation of the key documents;
- Value with an accent on the knowledge of objectives, purposes and values of education and upbringing;
- Pedagogical-psychological in the sense of knowledge of the child and their characteristics;
- Professional development in the sense of knowing and developing oneself [14].

Teachers' interventions in play can take several forms, from assistance in problem solving, asking questions and rectification of undesirable behavior to involvement of children in thematic games. One of the significant teacher's roles is development of understanding of the specific knowledge and skills of the children and their need to develop [15].

To plan a game for a group of children that is acceptable for them and meets their current needs and interests is not an easy task for a kindergarten teacher. Part of the teacher's planning of the opportunities for involvement of the child in play, following a certain target of the child's development, is prior consideration of the desirable framework for play and setting of an environment that is comfortable for the involved child to play in. An inevitable component should be fixed rules of the game, serving for setting certain boundaries for the play and for the teacher's expectations. The teacher's preparation of play should, however, be first of all focused on the children themselves. To plan a game means first of all to create encouraging atmosphere [16]. Through observation of children, the teacher acquires significant information to specifically organize the playroom and activities for the children. Certain freedom of the structure in the preparation of play then allows the children:

- To choose from several variants of the game;
- To negotiate these options;
- To make use of their own ideas;
- To be physically and mentally active overall;
- To experiment, explore and investigate.

### 1.3 Research Participants

The research involved 77 preschool children (age 2 to 6 years) from four particular kindergartens in the Czech Republic. Detailed figures of participating children per age and gender are mentioned in the Table 1 below. We observed smaller groups (with approx. 6 children per group) from each preschool classroom during the play with the original set of didactic toys. These toys were specially designed and manufactured by the preservice preschool teachers based on their decision of a didactic aim to be fulfilled in a selected field of children development (social, cognitive, motoric etc.).

**Table 1.** Data of children participating in the study

Age of child	Boys	Girls
2 years	1	1
3 years	3	2
4 years	10	9
5 years	8	17
6 years	14	12
Total	36	41

### 1.4 Procedure

The main research method of data collection was based on using the participatory observation of the children. This method belongs to actually preferred practices in research with young children in pedagogical and psychological sciences. Participatory observation helps the researcher (as well as the teacher) get to know better the children and thus profit from valuable awareness of their independent and group behavior [17]. Video recording enabled to observe the different moments in repeated replay, returning to the recorded play situations with the option to identify progressively what one cannot notice in the course of a single observation. Despite the possible limitation in camera influence on children behavior, our data suggest that the children acted in play as usually. They were more interested in presented toys than in video camera in the corner of their playroom.

All kindergartens participating in the research allowed us to realize the observation in a separate playroom with enough space which the children knew as a standard area for play with their peers. The small groups of preschool children had a possibility to use and play with given toys as much time as they wanted. The mean length of one recording was 30 min. Data were collected in four state kindergartens in the Zlín region during three months. The data obtained in the form of video recordings and field notes were transcribed and subjected to qualitative analysis.

## **2 Results**

We used a set of didactic toys as a means for observation of pre-school children in play. The observations focused on the toy selection and subsequent play with the toy. At the same time, we focused on the factors that conditioned the toy selection.

### **2.1 Toy Selection**

Part of the approach to the playing child in the kindergarten may be the very moment of the toy selection by the child. In the first stage of the research, the children were attracted by the researchers entering the classroom and the new toys they brought in. Most children were interested in the toys, and the final selection was governed by the visual attractiveness of the toy (color, shape, similarity to another toy, originality of the toy). The comments of the children on their choice were interesting: I visit dancing and painting lessons, there we always create something new; I also like creating and drawing, which clearly distinguished between the children who simply wanted to play without purpose and those who followed a goal of creation or reconfiguration of something.

The very beginning of the research result description reveals that the children mostly do not name the toys, pointing to them with their fingers and saying give me this, that... In another observation, one girl said: Hey, come and look at this funny game. One boy said: Look here! We have a strange thing, come and see the strange thing.

The children did not feel like naming the toys accurately, they even didn't need to ask for it. They instead asked about the purpose of the toy: I want to see what it is; I want that box (Meaning the glove puppet theatre). Neither in the course of the toy selection nor during the play did the children show interest in the name of the toy, which is documented by a sad statement of one of the girls at the end of the play: I could not figure out at all what it was.

As the purpose of the study was verification of a set of toys and whether they fulfilled their didactic goal and a description of the way the kindergarten children played with them, the research workers intentionally avoided interference in the play and explanations of how to play with the toys while observing the children. We observed that many children first wanted to investigate the offering of toys before selecting one, and thus they moved among the toys, sitting down at each of them for a couple of moments, shorter or longer, and then leaving them and approaching others. Basically, the group showed spontaneous immediate selection, i.e. a direct approach to the selected toy. The selection was affected not only by the selecting child but also by the other children around them. Thus there were numerous moves from one toy to another. After a while, the observed children devoted more time to a single toy. B: The football is totally good, I will not give it up so soon. It is really good. What was interesting was observation of the children who focused on a single toy from the beginning and spent most of their play time with it.

### **2.2 Pleasure of Toy and Shadow of Teacher**

The child was pleased with the toy when they could reconfigure it into something else. The first choice of a toy was commenced by the toy discovery after opening the lid of the box, accompanied by a surprised look in the face of the child, voice expressions of surprise, body language, jumping around etc. However, we also noticed unpleasant surprise, disappointment of the child's expectations, as well as doubt and misunderstanding. Fontana [18] confirms the role of emotions in the early childhood age,

where pleasure is to be perceived as desirable by itself. The children expressed themselves spontaneously if they were indulged in the game and perceived it emotionally, then their emotionality was expressed not only by voice but also by body movements.

The children were used to asking their teacher for help whenever they needed it, and also at the moment when they needed to boast of their achievement. The teacher as the originator and inspirer of the child's play in preschool education is an ever more frequently discussed theme. More emphasis in the recent theory of play is placed on playful pedagogy, including both the teacher and the child as active actors in the process of common learning [19]. In child's play, the adult takes up the role of encourager of the child's self-control, with the pedagogical strategies focusing on stepwise decentralization of the child. In child's play the teacher should propose solutions for controversial situations and resolve conflict situations among the children, but should not intervene if it is not yet necessary. If the teacher is able to understand and appreciate the spontaneity of the event helping to understand the child's intentions, then the teacher can assist in the development and extension of play.

### **2.3 What Conditions the Child's Interest?**

When observing toy selection, we identified factors significantly affecting the children's interest.

Choice of a Toy or a Peer. Observing peer relations and strategies brought the evidence of mutual influence of child and his/her peer on play in the group. Children mostly learn social skills in cooperation but also and above all by observation and imitation of others. Actions working for one child are tried by other children on themselves and on others. We observed children subordinating to other children and being voluntarily influenced by them:

G<sup>1</sup>: I do not want to play with this anymore.

G<sup>2</sup>: Neither do I.

I'd Have to Learn This First. Toy selection was also conditioned by the child's conviction that they would be able to understand the principle of the game. As the children did not receive any direct instructions about how to play, some children simply did not choose any toy and others developed their own way, thus creating modifications. Other children verbalized the choice conditioning on the basis of whether they could play or not. This approach corresponded to the initial inquiry of the children about the rules and limits of the toys, therefore we believe this is an adopted mechanism given by the approach of the teacher or the parents.

B: I will try to play with this

G: We will play with this if we can figure out how.

Poznámka pod čarou:

<sup>1</sup>G = girl; B = boy.

Partner in Play. The observed groups of children revealed that regular kindergarten attendance led them to a certain degree of socialization and adaptation to play in groups.

G: K, come here!

G2: L, play with me.

B: Hey, let us play football.

G, B: Let us take the theatre! F, come with me (Waves at his friend with a glove puppet in his hand).

Toy selection by the child is conditioned by multiple factors. The research clearly shows that the quality, appearance and didactic goal of the toy is not the most important for a child. The circumstances, phenomena and real children entering the toy selection in our study show that it is more than necessary to see the issue of use of toys in kindergartens as a complex phenomenon.

#### **2.4 Course of Play Activities with a Toy**

In addition to toy selection, we also observed subsequent progress of play with the toy. We mainly focused on modifications of the toy and of play. The children obviously first perceived the chosen toy as a whole, but then they began to focus on its uses and the individual elements it consisted of. Discovery of the principle of play was mainly interesting in the case of the toys where the children themselves had to identify what the toy might be used for.

G: Look, animals (opening the box with the game). I will take the dolphin. (turning the engraved animal) Magnet! (Beginning to look at the other animals) They are magnets!

The girl first tries to join the animals together with their magnets, but then she discovers the boards with landscape motifs typical of individual continents where the animals can be placed.

In accordance with the research interest in possible toy modification invented by the preschool children, all the toys were offered to children in simple form (closed boxes with no examples of final solution to be fulfilled). The track for marbles was presented as a plain board where the particular paper obstacles needed to be placed to create many possible forms of lanes for the marbles. Participating researcher intentionally avoided interfering with the play unless the children asked for help (for example when they need someone to read the instructions they've discovered in the box). This strategy was found as strongly confusing for many children who are used to wait for teacher's instructions in play. In this particular case, a gender-conditioned difference in play was manifested. While all boys immediately placed the obstacles in the track with various levels of difficulty, the girls did not pay attention to a "boy" strategy. The girls preferred to modify this toy according their actual needs and interests. In this case, the track became quickly a home for invisible guinea pigs.

Some children preferred activities other than play. They were focused and interested as long as they could create something. Many of the offered toys allowed for modifications, and when the children completed them they began to look for new ones. If they could not find any other modification, they lost interest in the toy.

The course of the play with presented toys was visibly influenced by peer interactions. Particularly in peer groups of older preschoolers (5-6 years of age), the children often changed toys and play buddies or they moved from one toy to another. However, these quick shifts in play with more toys at the same time led to less detailed concentration on each toy. The children didn't focus on one toy to find out all opportunities to play. For other children in the group, this interrupted their play and distracted their attention. One of the boys wanted his friend to play the hide-and-seek game with him, while the latter was concentrated on another game. Another case was represented by children who tried to obtain one of the toys for themselves alone. One of the observed boys did not want to lend the marble track to anybody and invented various rules to prevent others from playing with it. The research by Fler [20] showed that children not liking the offered scenario or partner in the game chose to abandon the game altogether. We also observed such cases, but at the same time, our children tried more active solutions than retreat, asserting their interests and views of the game and use of the toy.

### 3 Conclusions

We found out that it was not enough to concentrate on the toy alone, but in accordance with the finding of [21], it was possible to observe impact of play on the development of social, emotional and educational skills of the playing children. The child's development is mainly the task of the teacher - a professional whose didactic thinking must be supported. The research based on children's participation opened currently supported ways of analyzing and interpreting children's own perspectives represented in their micro social worlds as compared to previous predominance of adult's views and understanding of children play (based on play with didactic toys). In accordance with [12], we found out that kindergarten teachers were not yet open or prepared to adopt teaching through play and implement it in the educational program of the kindergarten.

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