

LEARNING THROUGH PLAY - THE EDUCATIONAL REFLECTION FOLLOWING COMPENSATORY ACTIVITIES CONDUCTED IN PRIMARY GRADES 1-3 USING PUS BLOCKS

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Abstract: Learning is an inseparable element of life accompanying every person in knowing the world. It can occur in various events, planned and spontaneous situations. In the school environment learning is mostly formalized into didactic classes, workshops, the development of skills, clubs etc. In the school year 2012/2013 I conducted workshops for children in one of the public elementary schools in Wrocław with the use of PUS bricks. Children from the first, second and third classes took part in them. I conducted my research in the qualitative interpretative paradigm. I used the research in action method. I described my conclusions arising from participatory observation, which I conducted in the group researching the engagement of children, their interest in the topics covered as well as the attitude of parents toward the workshops. Play, well guided by the teacher with the PUS educational bricks positively affects the development of students. It stimulates thinking, increases self-reliability and activity during the didactic process..

Keywords: *clearning, play, PUS bricks, early schooling, elementary school.*

INTRODUCTION

Preliminary play, is one of the basic forms of activity of all people regardless of age. It is analysed by a number of researchers representing areas as: biological, social and humanities. There are therefore a lot of viewpoints, theories, concepts and approaches related to this phenomenon (Brzezińska, Bątkowski, Kaczmarska, et al., 2011, p. 10). From the perspective of life, childhood is one of the stages, where fun is growing rapidly. With

irresistible force. „Thanks to that most of people consider their childhood as the nicest time of their life. However it is not only the nicest but also the most important time of life because from its length and how much we make of it depends the development of the individual” (Okoń, 1995, p. 30). During childhood most of basic biological and psychological functions are formed.

Quoting Johan Huizinga it could be said that „play is older that culture” (Huizinga, 1985, p. 11),

as well as it is an integral part of our life. Antoni Kępiński thinks play is very important in life. He sees that depriving child of ludic activities in groups is the source of many emotional, social and sexual disorders (Kępiński, 2002). „Through games children learn the world and themselves, broaden their mind and imagination, develop their own love life shape their own creative interests” (Okoń, 1995, p. 225). They learn at school and at home, in the environments where they reside to prepare for the social and cultural reality in which they will live. Play is one of those activities which compensates for the shortcomings of current life. When children in a real life cannot do the tasks as adults they can pretend to perform them while playing using their imagination in the world created by themselves during the game (Okoń, 1995, p. 225). „Moreover, elicitation games encourage children to talk in a situation that is as natural and relaxed as possible” (Eisenbeiss, 2009). Play compensates for the inability of living the life of adults and it provides pleasure as well as teaching (Okoń, 1995, p. 225). During the game „(...) social relationships between people are being played alongside the conditions of the direct utilitarian activity” (Elkonin, 1984, p. 23).

Game therefore constitutes one of the forms of human activity (Okoń, 1995, p. 13) for an adult it is entertainment and for children, especially the youngest, it supersedes everything – at the same time it is work, learning, and social activity (Okoń, 1995, p. 13). „Children want to learn to the degree that they are unable to distinguish learning from fun. They keep this attitude until we adults convince them that learning is not fun” (Doman, in: Painan, 2011, p. 110). All that helps in gaining experience and creating new behavioural matrices which positively influence the behaviour and the proper growth of children (Okoń, 1995, p. 13). We all learn from experience (Arends, 1998, p. 490) so creative ways of spending time in free and formalized learning (play) are so important.

THE IMPORTANCE OF PUS BLOCKS IN THE CLASSES WITH STUDENTS

Children’s games are extremely diverse in terms of content and the level of complexity. I accepted the division of the following types: structural, creative (topical), manipulative, kinaesthetic and educational (also called educational games) (Dudzińska, Lipina, & Właźnik, 1974, p. 17). When children have a game in front of them they do not need a good weather, plenty of space or expensive toys. „The only thing you need is really good play” (Fritz, & Flemming, 2011, p. 2). The Control Kit PUS is also included in educational play, called also educational game (Fritz, & Flemming, 2011, p. 2).

The Control Kit PUS consists of a small handy, plastic, flat box in which there are 12 flat blocks (Fig. 1).



Fig. 1. Photo of PUS blocks No. 1 (outside of the package), phot. M. Gniadzik. Source: Gniadzik, 2014.

On one side each block has a red number from 1 to 12 and on the other side two colour portion of a pattern. „This reduces the learning curve and lowers the barriers of access to those interested in playing these sorts of games” (Farrow, & Iacovides, 2012). The inscription which appears on the packaging says - „think • place • check”. From the first letters of these words in Polish was established the name of the game: “P” from think [in Polish “pomyśl”], from, „U” from place [in Polish “utóż”], „S” from check [in Polish “sprawdź”]. The words on the packaging inform a player that there is intellectual work waiting for him, according to the clues

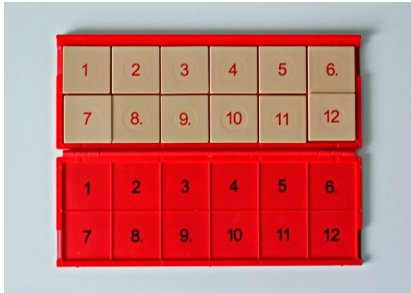


Fig. 2. The photo of PUS blocks No 2 (inside of the packaging – correct set-up before starting the game), author M. Gniadzik. Source: Gniadzik, 2014.

above. To use The Control Kit correctly it should be used together with the a series of PUS books. Only the books contain specially prepared tasks and instructions where numbers on the blocks correspond with the exercise number in the books. After opening the PUS Control Kit the player should put all the blocks on the top part of the packaging numbers facing up (Fig. 2).

The PUK books (Fig. 3), as the manufacturer presupposes, consist of “32 or 24 pages of thematic study (mathematic exercises, Polish, science/environment, foreign language), adjusted to the age and perceptive abilities of the child. With affordable and ludic form it stimulates the growth of basic intellectual skills. Its unique look makes the child eager to play PUS block alone. All the PUS books have an interesting and colourful layout” (Gniadzik, 2014). Every PUS Control Kit book consists of thematic exercises such as.: seasons, mathematics, reading, developing certain skills like concentration, logical thinking, language skills. You can also improve hearing, learn the rules for cycling cards, learn the clock and the calendar, music notes and keys, subtract fractions. The choice is wide (so far more than 100 different copies have come out). These PUS kits are for pre-schoolers and also for elementary school pupils.

Depending on the needs it is possible to use



Fig. 3. Photo of PUS books, author M. Gniadzik. Source: Gniadzik, 2014.

a wide variety of publications on selected areas of expertise e.g.: exercise your attention – „Focus”, counting – „Mathematics with fun”, reading – „easy exercise to teach reading”, general knowledge – „I am going to school”, fairy tales, imagination world – „From the star to the fairy tale”, perceptiveness, logical thinking – „Use your loaf”, „ summer guessing game”, „spring guessing games”, „Easy puzzles for Jack and Agatha” and exercise in English - „Happy English”.

The principle of using this game is as follows. After opening the book please read the instructions and proceed to do the presented exercise (Fig. 4).

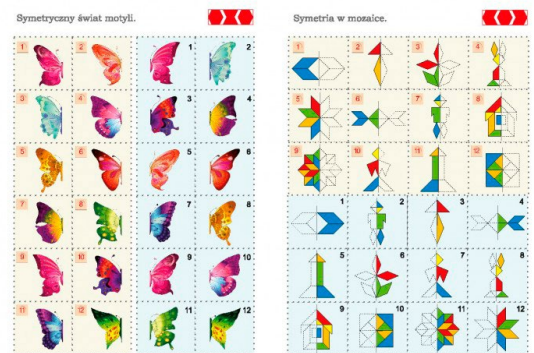


Fig. 3. Photo of PUS books, author M. Gniadzik. Source: Gniadzik, 2014.

After finishing the exercise all the blocks should be in the lower part of the Control Kit in the order of the results from the answers. After finishing the exercise the PUS Control Kit should be closed and then upturned and opened again. This time the payer can notice a pattern created from colourful pieces (the back of the blocks), in which is created a certain sentence – this sentence should be identical with the model pattern in the book. Identical patterns prove that the exercise has been solved correctly. Different patterns indicate an error so one of the exercises has to be repeated. The students always have the right to make a mistake and seek their own ways to solve problems. Through making mistakes the process of learning is continued and the development is still carried out. The blocks are designed for children between 4 and 12 years old. Children can work individually or in groups – doing exercises with their peers. As the result children can see for themselves whether the exercise has been solved correctly.

DIDACTIC – COMPENSATORY CLASSES WITH CHILDREN OF GRADES I-III ELEMENTARY SCHOOL USING PUS BLOCKS.

At the end of the first term of the school year 2012/2013, twice a week, I conducted classes in one of the public primary schools in Wrocław with children from early childhood education (grades I-III primary school). For these classes, among the

others, I used PUS blocks (PUS The Control Kit).

These were compensatory classes for children with special difficulties in reading and writing¹, including children at risk of dyslexia (I had two groups of 8 students), classes for children with difficulties in acquiring mathematical skills (I had one group of 8 students) and special classes with a student in the field of psychological and pedagogical therapies (with one girl who was under a lot of stress whose family doctor suspected disease of Alopecia Areata²), the group altogether consisted of twenty five students.

Didactic – compensatory classes with children from the first stage of education tend to look like regular lessons. The main difference is the fact that there are less students and the teacher can pay more attention than during the lesson where the whole group is present. (usually 25 students during one didactic lesson). The teachers tend to use similar methods and tools. They mainly relate to the content contained in:

- core curriculum (the range of general and specific content which has to be implemented in the classes defined by the Ministry of Education (*Ministerstwo Edukacji Narodowej*, 2012),
- education program (how to execute the content of a certain group which is written in the core curriculum),
- teaching Plan (also called output plan which shows in detail what is implemented in each unit) and

¹ Learning difficulties can appear differently in each child. (in. Gruszczyk-Kolczyńska, 1997, p. 6). There are two difficulties distinguished: ordinary and specific. When a child encounters a new situation which needs a new approach and solution then we are talking about ordinary difficulties. It is normal if a child while learning encounters difficulties and should be able to manage to overcome them alone. Specific learning difficulties appear when students despite the effort they put cannot deal with easy tasks.

² The girl was a first grade student and every time when she left home to spend the day at school she experienced a lot of stress because she was not used to be separated from her mother. One day her stress level reached fever pitch because when she came back from school (during her absence at home) her mother was taken to the hospital as a result of feeling bad. The child was terrified. Her mother was fine nevertheless the girl spent a very bad time at school since she was afraid that go back home and not find her mother. The girl started losing her hair. The doctor surmised she suffered from Alopecia Areata and enjoin to contact specialists at school (psychologist/pedagogue) in order to reduce the tension.

- the set of entire Education Pack (textbooks, which are the recommendation for the content).

The teachers use elements of play and game during the lesson but due to insufficient time they are not able to devote enough attention to each child, his individual abilities and pace of work. Extra activities are organised to ensure the optimal development. These activities can be devoted to correct the lack of education (didactic - compensatory classes), or to master the knowledge (classes for gifted children, interest clubs). Teachers working with a smaller group of children have a better opportunity to pay enough attention to each child. The tools that the teacher uses to work with can be more varied because he can fully control their use. The didactic game the PUS Control Kit was used by me as one of the main tools.

The didactic - compensatory classes are treated as the source of knowledge and correcting the shortcomings of education and to enhance self-assessment and comfort of children. The course had a dual character - teaching and

research. Therefore the classes were planned based on the learning objectives (to improve children's reading, writing and counting skills and also raise the level of emotional comfort), at the same time they meet cognitive objectives clarified in the following table (Table 1). I used a qualitative approach in the interpretative paradigm. I accepted the method of action research (Greenwood, 2012, p. 115-139). I analysed the results of the research referring to: (I) the involvement of children in the lesson, (II) increasing the knowledge and skills in the area of discussed topics and also (III) parents attitude to classes.

Analysing the involvement of children in classes using PUS blocks I noticed that it usually took place in an atmosphere of silence and concentration. The children were happy when I put the kits on their tables. They showed indignation when it turned out that a person who used them before did not leave them in order (numbers facing up on the upper part of the box). At the beginning the children suspiciously looked at the game because they did not know how to use it and they

Table 1. Learning and cognitive objectives analysed during the didactic - compensatory lessons with children from I-III grade elementary school using PUS blocks. Source: own elaboration.

Research problem:	I. The involvement of children in the lesson	II. Increasing the knowledge and skills in the area of discussed topics	III. Parents attitude to classes
Detailed research questions:	<ul style="list-style-type: none"> • How are the children involved during the lesson? • What is the children's behaviour during and at the end of the class.? 	<ul style="list-style-type: none"> • What is the educational progress the children achieved from the beginning of the lesson until the end (diagnosis)? 	<ul style="list-style-type: none"> • What information did I teach (directly and indirectly)?
The reference of this concept was:	<ul style="list-style-type: none"> • the sounds that the children made during activities or lack of them; • new awareness of general knowledge which they are willing to share - knowledge taken from their parents or its lack; • interest of the topics discussed in the class or its lack; • asking, sharing own experiences within the discussed topic or passive participation in lesson without demonstrating curiosity. 	<ul style="list-style-type: none"> • a child shows better efficiency, lack of difficulty in performing tasks which he struggled with at the beginning; • performing tasks with growing self - confidence; • a child receives the acquisition of knowledge as fun rather than unsatisfactory necessity 	<ul style="list-style-type: none"> • oral information from a parent or a child's opinion on classes; • presence or absence of children in the classes.

thought that it is going to be difficult to learn how to play – I based my opinion on short questions: „What’s this?“, „How do I play it?“, „Will I learn how to play!“, „Who would think of something like that?“. After a short explanation on how to use the game children started to enjoy and wonder when after first cooperative attempts at the exercises were solved correctly.

The children in classes showed great commitment. They were happy to ask questions, talk, showed excitement while using the PUS Control Kit. They joy of correctly solved tasks encouraged further attempts. There were such moments where children were silent because they were focused and needed time alone to think. The children were focused on playing and seeking answers and, matching.

The students in class told me that they talked with their parents about the PUS blocks. They praised the well solved tasks and correctly received patterns. They happily attended the classes. Absence occurred only when a child was sick or other important reason for which it was not sent to school at all. Despite the initial hesitation, discouragement and remoteness after classes ended – which was also noticed by parents and other teachers – the children showed greater efficiency or lack of difficulties in performing tasks which at first were a challenge. Children have gained considerable self- confidence because children found the learning fun, they begun to enjoy it and discover it again.

The children participating in classes conducted by me increased the range of their knowledge and skills in the area of Polish language, mathematics and knowledge of themselves. After the diagnosis at the beginning and at the end of the lesson I noticed that the children had become more fluent in reading out loud and comprehension, counting, associating instructions in special imagination, calculi. The classes I conducted I used with children different books for the PUS Control kit related to learning Polish, mathematics, and puzzles

(consisting of varied techniques – exercising logical thinking and associating dependences).

During the first diagnosis at the beginning of the lesson the children refused to cooperate, confused directions and letters. They read separate digits, had problems with joining simple words with corresponding pictures located on the same card. They could not focus, were annoyed and flustered when a child intervened in their statement and were quickly discouraged after a failure.

The second diagnosis that was ran at the end of the second term during the last classes went differently from the previous one. The students approached the tasks I gave them as they were challenges that they wanted to face. They were cheerful, talkative, excited because – like when working with the PUS Control Kit – they wanted to test their skills. Despite working at their own pace they could distinguish the directions and letters accurately. They read the words separating syllables. They distinguished the words and matched them to the images that depicted them. Without trouble they could stop and think, they learnt not to disturb and interrupt each other (which was pretty difficult). When something went wrong they tried to correct themselves and find the error so they could relate to it.

I have observed a significant increase in knowledge and skills of all children. Regardless of their level at the the beginning. After some talks with their teachers I was informed that the children who attended my classes have improved their results. The girl with whom I had private lessons, became accustomed to the school, its specificity, a situation she found herself, she understood her reactions, gained confidence and calmed emotions. These were not the only activities, of this type, she attended. She took part in other classes conducted by her teachers and psychologist. At the same time there were other activities carried out at the school aimed at generally understood educational support.

All children need positive reinforcement from family and school to learn how to live and function

in society. The value of play is to satisfy people and create „(...) positive, interesting change in the reality” (Znanięcki, 1974, p. 262).

Positive reinforcement and learning through play helps to overcome the difficulties in the process of learning. It is important that the child enjoys being part of the whole educational process and develops to the best of their own ability. Didactic support is as important as psychological. The PUS Control Kit helps to work with the students so that they feel internally motivated and encouraged to do the exercises. Students develop when they encounter challenges they have to face.

When analysing parents attitude towards the classes I noticed that at the beginning they did not have sufficient information about the Control Kit because the name children used when talking with them was „PUS” and it did not tell them anything. Adults taking their children after classes asked them what exactly they are playing with in the classes. Parents also wanted to know where they could buy those blocks, books and if they were expensive. On the following classes it turned out that some of the children had already had their own sets of blocks at home because their parents purchased them. Parents thought that if the blocks help their children to learn it means it is important to have a set for their own use at home. It also happened that children brought their own sets of blocks and books for my classes.

Other teachers that I talked with also recommended using the Control Kit. Parents personally admitted that they found time to learn through play with their children using the blocks. Their opinion of this game was positive. They concluded that it is also an interesting way to spend free time after the mandatory classes.

CONCLUSIONS

The first place the child becomes acquainted with formal education is in school which has to provide a thorough education. A student shapes his attitude towards learning with the help of

the school and parents. Therefore the first step of education is fundamental and should be an inspiration for a child for further learning.

Using the Control Kit in classes is a great variety to a standard form of class based on worksheets. Movable blocks with red numbers on one side and a pattern on the other side that you can move from one place to another are attractive for a player. Working individually with children where each has a different PUS book and individual set of blocks I noticed that each player is focused on himself, the work and the game which determines his actions. The whole attention is focused on work. When children need they ask for help of a teacher who monitors their effort. My work was also aimed at disciplining children, reacting when one of the participants acted loudly disturbing others.

Traditional didactic – compensatory classes are similar to regular lessons and using games or PUS blocks lets the children to have a break from writing, standard reading or doing exercises.

Satisfactory diagnosis and visible improvement in productivity of children’s work during their didactic classes as well as regular lessons was caused by the use of the Control Kit. Thanks to the educational games such as the one discussed by me the PUS blocks is perceived as game and, puzzle that must be solved.

The PUS Control Kit is an educational game which gives children satisfaction with the results of independent actions. It is also important to shape a child’s personality by teaching him perseverance and self-reliance when solving an exercise. Working with the kit actively enables extension and consolidation of knowledge.

After conducting didactic – compensatory classes (and in the field of psychological – pedagogical therapy) using the PUS blocks I noticed a big improvement in children’s skills such as: counting, reading, writing, memory, association, using the ability of logical and analytical thinking and concluding . The studies at the beginning and at the end of classes show that skills in the diagnosed

areas appeared. The girl with whom I had a pleasure to have special classes in the field of psychological and pedagogical therapy also succeeded which was proved by her parents observations and those of her doctor. She stopped tearing her hair in alarming amounts because the tension was minimised. Both she and the other children approached the tasks with more confidence which only confirms the effectiveness of using this tool with children.

Playing with the PUS Control Kit triggered positive reinforcement between peers attending the classes. Students after solving the task in groups exchanged insights and opinions on questions which were more difficult or where the solution was very simple. Exchanging information caused both laughter and indignation which showed that the students came to the task seriously engaging at the same time their feelings and emotions. Sometimes students working individually used different books of the Control Kit. The atmosphere created a sense of security and peace (they could work at their own pace), respect and understanding (they could choose a particular set and sequence of exercises). The simple form of the game can give the feeling that they learn in an interesting and attractive way.

Participation in didactic - compensatory classes do not affect the children in a negative way, what is more, they satisfy their need for greater appreciation, to gain knowledge that they are lacking and at the same time thanks to play it makes the children to feel joy and variety of the proposed form of teaching. During games“ the child’s development is carried out through active

thinking, simulating doubts and cognitive conflict. The experience leads to gaining knowledge to »active change in patterns of thinking« (Neckar-Ilnicka, 2007, p. 19).

Unfortunately the changes taking place nowadays mean that fun is disappearing (Banaszkiewicz, 2012, p. 7). „Most of the time games make us happy, but sometimes they are frustrating or make us feel sad. They allow us to experience pleasure, success and joy, but they can also yield feelings of frustration, failure, or sorrow as a result of darker themes. In games, we can experience the full range of emotions - both positive and negative” (Birk, Iacovides, Johnson, et. al., 2015).

As already noted participation in classes conducted by me was highly popular with children. The children willingly attended lessons. During the classes children showed huge interest in PUS blocks and the variety of books that I brought with me. Such lessons create an interesting opportunity to satisfy the natural cognitive curiosity of children.

Satisfying also „(...) the need of respect makes the child create a sense of self- worth and self- confidence” (Pielkova, 1980, p. 17). Therefore you should encourage the young alumni to work better, notice their efforts and implement attractive forms and methods of work - including use of games as a natural support in acquisition of all the skills. By providing children an interesting educational game such as the PUS Control Kit, there is a good chance that students will be open for learning process and will enjoy it.

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