UNIVERSITY OF SCIENCES PÉCS

DOCTORAL SCHOOL OF EDUCATION AND SOCIETY

THE POSSIBILITY OF IMPLEMENTING THE EVERYBODY IS INTELLIGENT IN DIFFERENT WAYS (EIDW) KINDERGARTEN EDUCATION METHOD

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Resume of the doctoral [Ph.D.] thesis

INTRODUCTION

Institutional upbringing and education of children - the currently effective 2011 CXC. it is mandatory by law - its first, most emphatic and decisive location is kindergarten education. My practice as a kindergarten teacher in the field of public education encouraged me to examine, interpret, analyze this field and actively contribute to the realization of the most perfect kindergarten education process.

My connection to the broader research topic can be traced back to 2014, when I became a second-year student of the Pécs University Faculty of Arts master's program in educational science, majoring in curriculum and program development. In 2014, I joined the relevant registered research mentored team conducted by Anna Renáta Dezső, which focused on the "educational relevance of plural intelligence concepts" (DEZSŐ 2015a). The experiences and studies gathered during the process inspired me to carry out an independent research - led by Anna Renáta Dezső - during which preschool education in the spirit of Montessori (MONTESSORI 1930) and the concept of multiple intelligences (GARDNER 1983, 1996, DEZSŐ 2011) were compared from a comparative perspective. I conducted an examination of his approach. The thesis entitled "Comparative approach of a plural intelligence and the Montessori pedagogy" got first place in the Early Childhood Education and Kindergarten Pedagogy section of the XXXII. National Scientific Student Conference, Learning and Teaching Methodology - Knowledge Technology section (SÁNDOR-SCHMIDT 2015). The idea of the practical implementation of the concept of multiple intelligences within the framework of kindergarten education in Hungary and the Carpathian Basin was formulated in 2015, with which research topic I was admitted to the "Education and Society" Doctoral School of Education at the University of Pécs, continuing my research. The research processes included in the dissertation were largely determined by the experiences gained during my doctoral studies and study grants, during which I was able to carry out numerous fieldwork in the Hungarian-speaking communities of the Carpathian Basin.

Regarding the sociological relevance of the research, I identify with the three markers of Lannert's triad (LANNERT 2004). The first is to increase the degree of effectiveness of education, the second direction is to increase the effectiveness of the teacher and the effectiveness of pedagogy, including the exploration of the typical conditions that ensure the effectiveness of the teacher, the basic personality traits, abilities, and other complementary

teacher abilities, the knowledge that affects effectiveness, including the practical skills, the exploration of the characteristics and peculiarities of pedagogical thinking, pedagogical decisions, as well as the importance of reflectivity. The third direction is the issue of increasing fairness (LANNERT 2004).

The educational methods used in domestic preschool education and the defining part of local preschool education programs use measurement and evaluation materials based on the deficit paradigm (DEZSŐ 2015a, ARMSTRONG 2009) and the singularistic intelligence approach (DEZSŐ 2021), which cannot necessarily be used to accurately determine the children's potential, skills and abilities. The expectations of the post-modern era impose requirements that make it inevitable to explore and strengthen the potential of the future generation. With the help of the method I am investigating (MIMI), a more diversified scale of children's intelligence can be revealed, which can lead to the expansion of opportunities and the discovery of hidden abilities and skills. With the MIMI method, children can benefit from a targeted educational environment with a growth mindset appropriate to their intelligence (DEZSŐ 2015a, ARMSTRONG 2009), which mobilizes their abilities, skills and intelligence. The novel value of research can be defined in the introduction of a method that has not been used so far in the field of domestic preschool education, and in the preparation of the assessment.

The research is an examination of its own adaptation of the Project Spectrum Method (GARDNER, FELDMAN, KRECHEVSKY 1998) based on the concept of Multiple Intelligences and Non-Universal Theory, which was named Everybody is Intelligent in Different Ways. The primary goal of the research is to evaluate the methodology, which I approach from the perspective of children. The main goal of the research topic is determined by the topicality of the transition from the teaching paradigm to the learning paradigm. The Everybody is Intelligent in Different Ways methodology carries the hallmarks of a growth paradigm, with therapeutic developments, thus completely ruling out the principles of the deficit paradigm. In the light of these principles, it meets the criterion of topicality.

My research goal is to show that the proficiency test performed during the application of the Everybody is Intelligent in Different Ways method supports the validity of the applicability and the validation of the activities and game devices. The exploration of the possibility of the method, the mapping of individual abilities, individual and group intelligence profiles (GARDNER 1993) mark the examination of its feasible application in

Hungarian kindergarten education. My intention is to point out that this approach can lead to getting to know children in a positive direction, describing their intelligence profile. It can create a new path in the unfolding of a child's personality, making the image of them and their abilities even more complete.

In multimethodological research, I use a mixed methodology, thus realizing a kind of methodological pluralism. I use both qualitative and quantitative (combined) methods. Existing video materials were analyzed during the study. I examine the multicoded data with the help of a computer program (Atlas.Ti®). During the coding, I focus primarily on the emotional manifestations of the children. I process the obtained results from several aspects. During the quantitative study, I present the existing codes in a cloud view as well as in a diagram, thus presenting the frequency of the displayed codes. The code map shows the connection points of each code, the result of the correlation test. The dynamic chart display makes the changes in children's emotions during activities visually perceptible. After grouping and analyzing the obtained results, a negative or positive predominance of emotions becomes observable, which in this case would provide the answer to the admission test. In case of grouping emotions, I apply the theory of basic emotions created by Plutchik and the corresponding emotion wheel classification (PLUTCHIK, 1980). Quantitative results can only be interpreted in conjunction with qualitative results. The validation of the codes is given by the process of intracoding.

Theoretical and practical frameworks of the research

My work is built on one of the US „Project Zero" Project Spectrum methods, it is called EIDW (Everybody is Intelligent in Different Ways). I adopted games and activities in different locations in the Carpathian Basin and observed different children's intelligence profiles. I also investigated prechool teachers

I explore the possibilities of implementing the method in Hungarian preschool education. EIDW approach allows us to observe the different types of children's intelligences. In my PhD research I investigate the games, activities, analyze the introductions, the curriculum, scoring criteria, observation sheets, summary sheets, and profiles.

The activities belonging to the methodology, as well as the intelligences related to them, are represented as follows.

1. Logical-mathematical intelligence – Dinosourus, and Bus Game
2. Naturalistic intelligence – Treasure Hunt game, Sink or swim activity
3. Musical intelligence – Music Product and Perception activity
4. Visual-spatial intelligene – Art portfolios
5. Bodily-kinestethic intellligence – Creative movement, Athletic movement
6. Interpersonal, Intrapersonal intelligence – Classroom Modell Activity, Peer Interaction Cheklist
7. Verbal – linguistic intellicence – Storyboard Activity

In the course of my research, I carried out tests at several locations in the areas of the Carpathian Basin. I will summarize below which locations were directly related to the research.
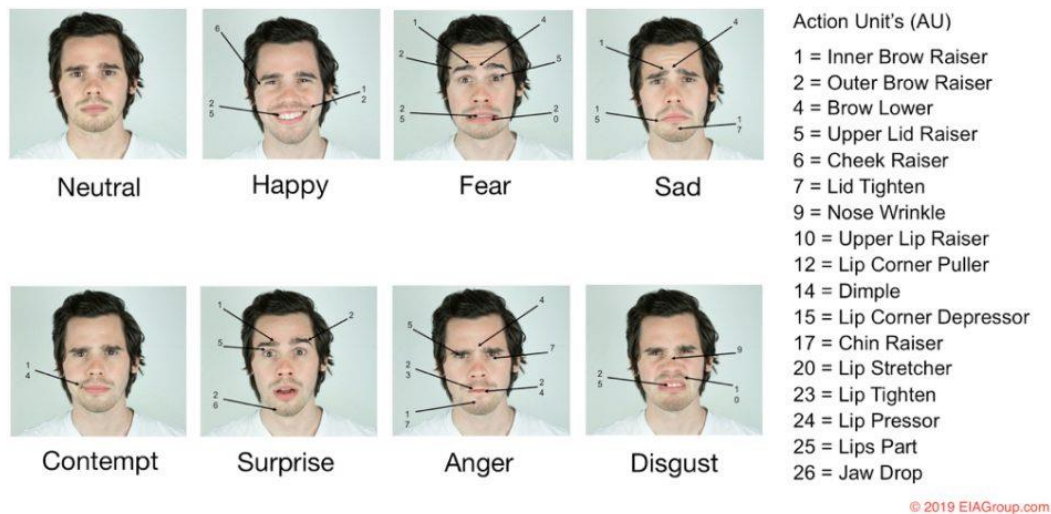
- *Hungary*
  - University of Pécs,
  - Grammar School, Primary School and Kindergarten of the Pécs Reformed College
- *Ukraine*
  - Ferenc Rákóczi II Transcarpathian Hungarian Institute
  - Kindergarten No. 18 in Beregszász
- *Croatia*
  - Josip Juraj Strossmayer University of Osijek
- *Slovakia*
  - János Selye University,
  - Bóbita Kindergarten, Komárom

Research methodology

The exploration includes both qualitative and quantitative research procedures. In the fields of the qualitative aspect, it contains 72 preschool teachers' intelligence profiles, 51 individual profiles from Croatia and 21 individual profiles from the Ukraine. It also contains 25 video program assisted multi-coded data analyses, which focus on preschooler's multiple intelligences.

Qualitative research

In the implementation of the convenience targeted-layered quality sampling procedure, the element of accessibility played a dominant role. The issue of accessibility of research venues, the host institutions greatly influenced the sampling strategy. I examine the multicoded data using a computer program. (ATLAS.ti). In coding, I focus primarily on the emotional manifestations of children. I use the FACS (Facial Action Coding System) to observe the components of the action units of basic emotions.

Action Unit's (AU)
1 = Inner Brow Raiser
2 = Outer Brow Raiser
4 = Brow Lower
5 = Upper Lid Raiser
6 = Cheek Raiser
7 = Lid Tighten
9 = Nose Wrinkle
10 = Upper Lip Raiser
12 = Lip Corner Puller
14 = Dimple
15 = Lip Corner Depressor
17 = Chin Raiser
20 = Lip Stretcher
23 = Lip Tighten
24 = Lip Pressor
25 = Lips Part
26 = Jaw Drop

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Jordan Lansley, The Emotional Intelligence Academy -
https://www.eiagroup.com/knowledge/facial-expressions/

Coding and intra-coding methodology

During the inductive coding process, I coded certain defining elements of the examined materials (in our case, the video materials). During the procedure, the children's emotional reactions to the activity formed the codes themselves. I explain the system of criteria for coding in detail below. Coding is represented on two levels that build on each other. On the first level, the children's emotions are marked with their names, while after that, in order to make the coding process more focused and clear, I linked the emotions to emoticon codes. In order for the coding process to become valid and its reliability index to be satisfactory, I performed intra-coding. Coding and intra-coding were based on the same logical principle and system. During the procedure, I coded each video at two different times. Coding and intra-coding took place 3 months apart on average, thus excluding "memory" coding. Of course, there were moments that felt familiar or were perfectly recallable, but these appeared in small

numbers. The obtained results ensured the final codes. The classic Dafinau-Lungu calculation formula is the procedure used during intra- and intercoding, with the help of which I want to meet the expectations of personal triangulation. If we conduct computer-assisted qualitative research, the reliability indicators of the codes can also be calculated using the following procedure. Coding reliability index: *Km*, further notations: number of identical situations: *n*; the number of codes received for the first time by the first coder or by the same coder: *i*; the number of codes received by the second coder or the same coder for the second time: *j*. After describing the individual elements, the following formula can be used to calculate the reliability index of the codes, which is essential for validation (SÁNTHA 2012).

$$Km = \frac{n \cdot 2}{i + j}$$

Technical details

The average encoding time per video took an hour and a half, and the total encoding time was 38 hours (including the intracoding process, the entire process took approximately 76 hours). The code set used consisted of a total of 32 codes. During the coding process, the coding process took place 679 times. The average amount of code was 38 codes / video. The total number of notes for all videos is 43.

Profiles

An important question during the research was the examination of the multiple intelligence profiles of practicing teachers and teacher candidates. With this step, it is possible to help teachers get to know the EIDW method more closely, as well as their own intelligence profile and its potential.

In addition to the domestic kindergarten teacher training, the partial researches at the Babeș–Bolyai University; the Josip Juraj Strossmayer University and the János Selye Universit. I undertake to process the results of the questionnaires (n = 233) filled out by the students in 2016, 2018 and 2019. The questionnaire is based on a five-point Likert scale self-assessment questionnaire (MIPQ III, IV TIRRI - KOMULAINEN 2002; TIRRI - NOKELAINEN - UBANI, 2006; TIRRI - NOKELAINEN, 2007).

The sample was collected with the 56-item multiple intelligences questionnaire between 2016-2019. The questionnaire was based on the theoretical framework of a

previously created series for a similar purpose (DEZSŐ 2014). The number of the sample (n = 233), which is divided as follows: kindergarten teacher students participating in domestic higher education (n = 83), students of Babeş–Bolyai University (n = 38), students of Josip Juraj Strossmayer University (n = 56), students of János Selye University (n=56). The information we receive will be partial about the entire base population, however, the analysis of the profiles of the groups and the entire profile can contribute to a future targeted representative research.

Research questions

During the research, I am looking for answers to four main questions and nine additional sub-questions:

1. Can the Everybody is Intelligent in Different Ways method, be used in Hungarian-speaking (domestic and Carpathian Basin) kindergarten education?

1.1. If so, how can it be applied?

1.2. If not, why?

2. Does the application of the concept increase the effectiveness of kindergarten education?

2.1. If so, how does the concept increase the effectiveness of preschool education?

2.2. If not, why?

2.3. What are the factors influencing effectiveness?

3. Can fairness be increased by applying the concept?

3.1. If can, how?

3.2. If cannot, why?

4. Can equal opportunities be increased during the application of the concept?

4.1. If can, how?

4.2. If cannot, why?

RESULTS, CONCLUSION

The main research, the pilot research, and the introductory research, albeit from different perspectives, supported the role of the Everybody is Intelligent in Different Ways preschool education method and the concept of multiple intelligences in preschool education and its applicability. The main research clearly discusses the possibility of introduction, the introductory research sheds light on the advantages that can be obtained from the multiple intelligences profile that can be used among kindergarten teachers. With the help of the questionnaire, it is possible to introduce the concept and the educational method based on it among the teachers, in addition to developing basic self-knowledge and reflective skills. The pilot research reflected, among other things, on which activities are considered important and prioritized by kindergarten teachers, and which factors are, in their opinion, essential for a good game. During the pilot research, it became clear that although it is an important factor to examine the quality of an activity from the perspective of the teachers, it is an essential condition from the point of view of the children. The research results reinforce each other and give the answer to the main question of the thesis.

RESULTS ACHIEVED DURING THE RESEARCH

The premise of the dissertation, an answer to a researcher's question, according to which the EIDW kindergarten education method can be used in domestic kindergarten education, the acceptance among children can be supported by an investigation, has been proven. The activities belonging to the method were positively received by the children, they corresponded to their age characteristics, they used and applied the tools both during planned and spontaneous activities. The results of the main research clearly revealed that with the help of games, the areas related to the multiple intelligences of preschool-age children and the corresponding games mobilize the children's abilities, skills, and intelligence, and reveal their inherent potential.

1. It can be said that the conducted research proved to be productive in light of the results obtained. It was confirmed that the chosen method is suitable for mapping and analyzing children's emotional expression. The revealed results confirmed that among the children participating in this research, the chosen activity resulted in a positive emotional shift in all cases, and the game worked well for the children. It was also proven that the EIDW preschool education method and its activities - by modifying the appropriate elements and conditions,

after the production of the tools - can be used in the kindergarten education implemented in Hungary and in the investigated locations in the Carpathian Basin - the independent adaptation proved to be successful. During the investigation, following the personal triangulation, the obtained results support the applicability process.

1.1. The games/methods belonging to the EIDW method can easily be introduced into the activities of kindergarten education, however, the methodology differs from the general domestic approach.

1.2. 1. and 1.1. according to the answers to the question, the possibility of applying the method has been proven, so 1.2. the question formulated in point 2 is not considered relevant.

2. With regard to the answers to the question, it can be said that the effectiveness of preschool education can be increased by utilizing the opportunities arising from the exploration of the diverse potentials inherent in the method, by getting to know and mobilizing the inherent strengths of children, which can also make the education effective. Increasing the educational effectiveness of teachers, in the light of the results obtained in the experimental research, provides help on many points, the precise description of which is in 2.1. is included in the answer.

2.1. With regard to the answers to the sub-question, it can be said that the teacher can promote the realistic implementation of self-reflexive processes by mapping the abilities, skills and intelligence of their colleagues. They can meet a new approach to design and satisfy their professional-methodological curiosity by getting to know a concept for children's multifaceted learning. The hidden individual potentials and talents in every child must be grasped and revealed, through which the effective mobilization of their abilities can be realized.

2.2. 2. and 2.1. according to the answers given to the question, the increase in the educational effectiveness of the teachers has been proven, so the 2.2. the question formulated in point 2 is not considered relevant.

2.3. When examining the factors affecting effectiveness, the aim was primarily to examine the basic pedagogical programs of the given countries, as well as the SWOT research. Here, I primarily focused on the comparative approach of subjective and objective elements, which can act as influencing factors when achieving effectiveness.

3. At this point, issues of fairness are connected, by getting to know the child as fully as possible, we can provide a wider opportunity to develop their abilities, skills, and intelligence.

3.1. In terms of fairness, it can be said that the method focusing on children's individuality focuses on the mobilization of the individual's unique abilities, skills, and intelligence, which ensures fairness for the child and the full development of personality. It validates the interpretation of fairness, according to which the method creates equal access to educational services, everything for children (LANNERT 2015).

3.2. 3. and 3.1. according to the answers given to the question, the realization of fairness has been proven, so the 3.2. the question formulated in point 2 is not considered relevant.

4. In terms of getting to know the children, the method provides a wide-spectrum opportunity, so the children's chances increase by leaps and bounds.

4.1.Curricula and standards used in preschool education focus on the highlighted competencies, but they do not show in depth the components of, for example, intra- and interpersonal competencies, which are also important for the development of children's complete personality. The uniqueness of children, the diversity of their abilities, skills, and intelligence require us to see them as unique, unrepeatable beings who are all different, each of them has a different path and each of them is intelligent in a different way. By exploring these possibilities, we ensure that children have a greater chance of continuing their journey in education and everyday life.

4.2. 4. and 4.1. according to the answers to question 4.2, the increase in equal opportunities has been achieved. the question formulated in point 2 is not considered relevant.

POSSIBILITIES OF CONTINUING THE RESEARCH

The broadening of international relations in the Carpathian Basin, would offer an additional opportunity to spread the method even more widely, to exchange ideas, to receive and process reflections and criticisms.

The continuation of the research, the development of the already ongoing Everybody Intelligent in Different Ways methodical manual and digital support material, as well as the conduct of a comprehensive evaluation study, with which the introduction and applicability of the method can be established. Cooperation with the Faculty of Psychology and Education of

the Babeş-Bolya University, as well as the Faculty of Education of the University of Belgrade, according to which the previously conducted examinations would also be carried out at the above-mentioned locations. Research carried out as widely as possible can establish an even deeper embeddedness. Beyond educational science, I have used the method many times in the social sphere. The kindergarten-school social assistance activity, which takes place at the cross-section of the pedagogical and social spheres, served as an extremely fertile ground for the application of the method. Whether it's about building the intelligence profile of children and young adults aged 3-18, career guidance questions, expanding various play activities, promoting effective learning strategies for children, deepening social relationships, or mobilizing specific intelligences.

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