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- To assemble all who are interested in these fields for an exchange of ideas and experiences;
- To disseminate research findings;
- To provide a database for members and researchers.

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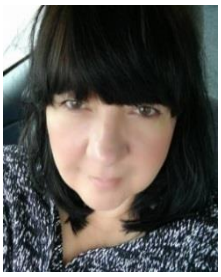

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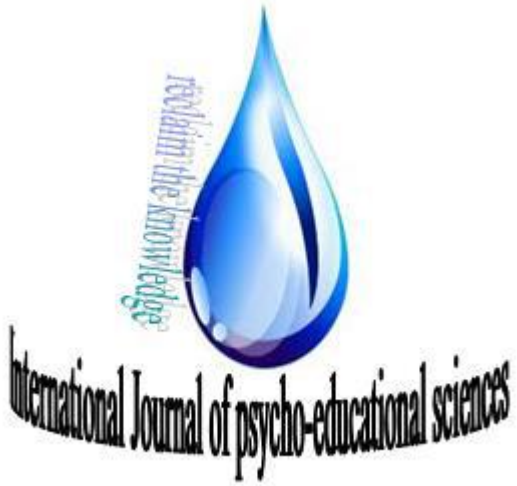

The Potential of Interactive Media and Their Relevance in the Education Process

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Abstract:
The article discusses the importance of interactive media in the teaching-learning process in the light of selected educational theories and research. The potential of social media to initiate and develop interactive learning communities was also demonstrated. Attention was drawn to the need for an appropriately prepared teacher, ready to creatively initiate educational situations involving interactive media and supporting student activities.

Keywords: education, interaction, interactivity, information skills, social media

Introduction

In education, we can see increasingly evolving trends, manifested by the rapid development of interactive media and their use by a human being, taking into account his active participation. Narration has been transferred to an interactive environment in cyberspace or applications enabling exploration and multi-sensory learning in a fuller and more conscious way. Traditional tools do not appeal to today's students, who rely on modern technology. They have become insufficient to adequately meet their needs while stimulating their thinking (Kwiatkowska, 2013, pp. 256-259). We are witnessing educational and socio-cultural changes with a focus on learning from digital resources, the implementation of education programs in various forms, the creation of interactive environments for the education of different groups of people, and the development of learning communities. Due to the new needs and expectations, educational practitioners are increasingly eager to seek inspiration in theories of education, media education, and even cognitive science, propagating the ideas of active cognition, experimentation, experiential learning, mutual communication and their cognitive role in knowledge creation (e.g. J. Dewey, E. Claparede, J. Piaget, L. Wygotski, J. Bruner et al.).

The right foundation for the ideas discussed here may be the concept of *symbolic interactionism* which is based on reciprocal human communication with symbols, and its effectiveness is conditioned by the ability to reconcile their meaning and sense (cf. Sipińska, in: Pilch 2003, pp. 404-412). There are two main assumptions here, namely: 1) the reciprocal action takes place with a variety of verbal symbols, language, non-verbal symbols, signs, sounds; 2) the individual is not only an imitator, but also a creator; he creates actions, is aware of himself, makes choices, makes decisions, is capable of self-reflection and self-evaluation (Ibid., p. 411). Nowadays, people both in the real and virtual world communicate with a recognized canon of symbols, expand it, interact with each other, read the message, and thus create its next meaning. The theory of symbolic interactionism can be used to explain and describe the problem of interactive media potential and its role in education.

Interactive Media in the Light of Selected Theories and Research

The term *interactive media* has been a very trendy and meaningful concept for a long time (Majewska, 2015). Interactivity, in the terms adopted here, means the potential of technical devices for maintaining a human-digital relationship with the required aspect of participation and interaction[2]. In turn, the concept of *interaction* in the teaching process itself is understood as "the kind of interaction between a teacher-educator and a student or a group

[2] Understanding is reflected in literature in various ways, cf. Z. Wałaszewski, Interaktywność gier komputerowych, [in:] Nowe media w komunikacji społecznej w XX wieku, ed. Maryla Hopfinger, Oficyna Naukowa, Warszawa 2002, p. 404; interactivity is also understood more precisely as "the relation with the subject of attention, in which it is shaped as an object of perception of an extended meaning - together with the process of interaction" (G. Karwasz, J. Kruk, 2012, p. 17). In the context of communication - interaction is accepted as the negotiation of meanings (cf. S. Szykowna, 2008, p. 35).

of learners" (Pilch, 2003, p. 398). The *technological interaction* is also mentioned which is related to the impact of technical means and innovative communication methods (Wieczorkowski, as cited in: Pilch 2003, p. 400). In information technology interaction means "the mode of operation consisting in alternating exchange of information between the user and the computer - the user issues commands to the computer, whose effects can be monitored and used to make further decisions" (Ibid, p. 399). Human interaction with the computer becomes a key mechanism for acquiring knowledge, education, furthering education, developing interests and passions, and realizing the idea of lifelong education. The long-term empirical research on the use of media and digital technologies has confirmed the need to use activation methods with a high level of interaction (L. Leja, W. Strykowski, B. Siemieniecki, S. Juszczyk, M. Kozielska, K. Wenta, M. Furmanek, W Osmańska-Furmanek and others).

The impact of connectivism on the perspective of computer education is also worth noting. Connectivism draws its assumptions from social constructivism and cognitivism. One of the methods described in the literature is MIT (minimally invasive teaching). It was developed by Sugata Mitra on the basis of the famous "Hole in the Wall" experiment. The researcher believes that effective teaching requires social interaction and problem-based teaching. The stages of acquiring IT competencies are as follows: 1. one child tests the GUI (graphical user interface), then the other children watch his random discoveries; 2. the children repeat the discovered functions; 3. the other children show their own discoveries; 4. all children repeat their discoveries and describe them based on their own experience, 5. children will remember the discovered procedure, which increases the effectiveness of their learning (Mitra, 2000).

Mitra emphasizes that effective learning requires the proper selection of sources and minimal guidance given by the teacher only when the students stop and repeat the same activities without seeing a solution. But the teacher's hints open up only a certain possibility, and are not a final solution to the problem (Mitra, 2000).

This model has much to do with the theory of social learning by Albert Bandura. In the literature, the following experiment is known: the children were divided into experimental and control groups. In the experimental group, the children observed a model who used different objects to beat a doll. In the second group, the model showed no aggression towards the doll. As a result, the children in the control group did not pay attention to the sharp objects, they played with the doll, but in the experimental group children not only beat the doll in the manner of the model, but also themselves invented further aggressive behavior with the use of these objects (description of the experiment on page: Youtube). As a result of his research, the author emphasized that the process of acquiring knowledge requires activation of attention, which should be directed to the subject or activity. This interaction can be described as cognitive. It occurs between a human being and the surrounding environment. Thus, effective education requires a well-designed environment for relation, interaction and dialogue (Forster, 2007).

Interactivity should not be limited in an educational context to clicking a mouse button, reading a text, or viewing images. There are various variants of interaction, differing in the degree of user control over the outcome of the operation, as well as the degree of involvement, modality of the response, task type, software type and complexity of the project (cf. Szykowna, 2008, pp. 30-31). We can also talk about the complexity of interaction because of its duration: *current / synchronous - immediate interaction* - when a teacher and student perform a task together or use the same program, e.g. videoconferencing systems, multimedia

systems; *delayed / asynchronous interaction* - checking tasks, e-mails, etc. (Wieczorkowski, as cited in: Pilch, 2003, p. 400).

Let's use here the example of studies focused on the activity of learners who have the opportunity to participate in the project while exercising control over it and taking responsibility for the result. The teacher, in this case, is limited to the role of the initiator and moderator of the creation of the work, raises questions and signals possible problems, according to which learners are to set goals and stages, implement the plan through action and present the final result. Such a strategy can be used, for example, to create a hypertext photo essay, a thematic blog, a team project, co-creation of images and animations, interaction in wiki services or chat rooms, etc. The development of interactive media extends the possibilities of participation and interaction, leading to significant changes in the final shape of the work, as well as creating opportunities for new experiences and reflections.

The mentioned varieties of interactivity define the theoretical models of communication, where various carriers determine the message, giving it certain meanings, requiring the recipient to interpret them properly (cf. Siemieniecki, 1993; 2007, pp. 176-192). Due to the emancipation of the media and modern technologies, there has been the change in the scope and quality of interaction depending on many factors. Certainly we are dealing with a new quality of user relationships with the media, and thus a new perception of their educational potential.

The human being who uses the media not only actively searches for information, but creates and transforms them, giving them sense and meaning, and marks his presence in the virtual world. An increasingly common model of multimedia teaching is the structure of nodal points. Information in nodes differentiates its level (it may be more or less advanced). George Simens emphasizes the multimodal nature of such resources, which are co-created by network users. It often happens that these websites associate people with similar interests, passions, creating online communities.

At the same time, the people accept both the role of the receivers and the creators, leaving the passivity for active co-creation (cf. Szykowna, 2008, p. 29). They are agitated and psychologically and physically engaged (ibid, pp. 46-47). With the development of interactive media, we deal with the ever-improving storage and processing of patterns of interaction with the possibility of designing and embedding in the artificial body (robots), and going beyond the human body and its limitations expressed through ever-better interfaces and forms of avatars and agents (cf. Kerckhove, 2001, pp. 40-41). At present, we deal not only with human-computer communication, but also with communication between objects. In the future we will deal with programs that read non-verbal communication of man. According to Rosalinde Picard, emotionally intelligent devices will be able to read voice and facial expressions to see how a person feels at a given moment. Computers will then interact with each other based on emotions (Sollinger, 2015).

The constant change, the need to search for sense and meaning, forces society to continuously learn, including in the Internet.

Interactivity in social media: educational potential

The importance of interactivity in learning is emphasized in modern theories and concepts of education. Constructivism treats learning as a social process in which knowledge is actively constructed as a result of social interaction, while connectivism recognizes that the digital and network nature of everyday life requires learning that is realized by interacting with various sources of knowledge and participating in communities that share interests, as

well as social networks, and group tasks. The important role of technology in the learning process is also highlighted (Majewska, 2012, 2016).

The digital media, including the Internet and social media, in addition to information and communication functions, are becoming increasingly social, although they do so in a different way. Traditional societies were based on direct interactions of people living close to each other, and contemporary people more and more often build relationships by complementing direct communication with mediated communication. This allows them to establish contacts and create relationships, even within non-local groups (virtual communities). Jan van Dijk calls this type of relationship the *articulated relation*. It is built according to the concept of symbolic interactionism as a result of mutual communication, using symbols, whose meaning and sense are based on mutual agreement. With information and communication technologies, it is possible to cross the dimensions of time and space and to create virtual times and places, which allow people to act, receive information and think simultaneously at the global and local level (cf. van Dijk, 2010, pp. 56-61).

Manuel Castells, in his theory of network society, justifies this phenomenon by the appearance of the material basis of coincidence, the so-called *space of flows*, i.e. the material infrastructure that enables functional individuals to organize themselves into one whole operating in real time, regardless of their geographical location. The flows are understood as "purposeful, repetitive, programmable sequences of exchange and interaction between physically disjointed positions held by social actors" (Stalder, 2012, p. 170, p. 178). Residents of traditional places leave them to meet their traditional needs (i.e. information, communication, transaction, entertainment, educational, social and identity) in a modern and convenient way by acting individually or in a community. However, it is important to emphasize that in order for these new forms of personal fulfilment to be effective, one needs to master digital competences and skills

- of communication - to, using language signs, speech, and other means of expression, assimilate and creatively transform the new virtual reality and communicate effectively through the digital media, thanks to the ability to understand the intentions and meanings that underlie the actions and acts of speech of the participants of interaction (cf. Kron, Sofos, 2008, p. 55);
- of information - to learn effectively through digital media, thanks to having a personal ability to recognize when information is needed, as well as the ability to locate, evaluate and use the needed information effectively;
- of media - to consciously and effectively use digital tools for effective communication, learning and constructive entertainment through the ability to decode, analyze, evaluate and use media in various forms;
- of network - to work effectively on the Internet thanks to the ability to search for information, navigate through hypertext, evaluate web content, and collect information;
- visual skills - to understand and use images in different areas of human activity, thanks to the ability to think, to learn and express oneself through images (cf. Skibińska 2012, p.147).

Mastering the above mentioned skills is the basis and the requirement for effective action and interaction between people, as well as between people and the media in the space of flows, which in the context of educational activity of network users can be called the space of educational flows. Educational flows can be understood analogously to the Castells' definition of flows, as *purposeful, repetitive, programmable sequences of exchange and*

interaction between physically disjointed positions held by social actors for educational purposes.

The material infrastructure that would allow for implementation of educational flows on the Internet could be social media.

Numerous studies have shown the benefits of online social interaction in learning by:

- access to peer and expert knowledge,
- opportunity to receive feedback from teachers and peers,
- expressing own thoughts, discussing and questioning others' ideas,
- cooperation to find a group solution to a problem, so students develop critical thinking skills, as well as the ability to self-reflect and construct knowledge (Jovanovic, Chiong, Weise, 2012, pp. 39-40).

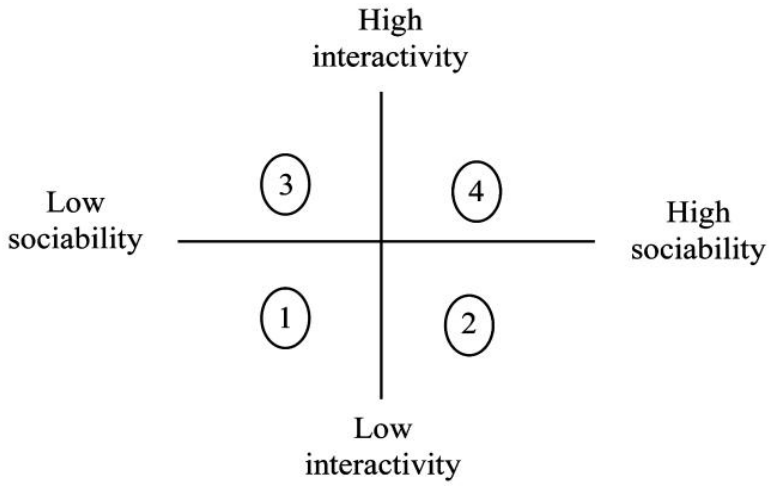
However, according to academics and practitioners of teaching it is difficult to interact in the educational environment. This is often due to improper course design and / or lack of student cooperation skills, i.e. decision making, consensus building, and conflict management. Therefore, careful planning of teaching and learning with teacher support is required to achieve the appropriate level of benefit from the use of social media in the learning process (ibidem).

Andreas Kaplan and Michael Haenlein define social media as a group of online applications based on the ideological and technological foundations of Web 2.0 that enable the creation and exchange of user generated content (Kaplan, Haenlein, 2010, p. 61). The main policy of 2.0 websites is to provide users with the greatest possible interaction, integration and personalization of web pages. Among the technical and social features of the mentioned websites are interactivity, user generated content, possibility of making contacts, sharing and co-creating, creativity, wiki mechanism, blogs, podcasting, folksonomics, screencasts, webcasts, and groupware and open-source software (Wadróbski, Wolanicka, 2010, p. 99). The main benefit of social media is the ability of author controlling of the generated message at the level of each form of content (text, image, sound) published in social media.

Kaplan and Haenlein included among the most important types of social media the following: collaborative projects (e.g. Wikipedia), blogs, content communities (e.g. YouTube, Flickr, Slideshare), social networking sites (e.g. Facebook), worlds of virtual games (MMORPGs - a type of role-playing game in which a large number of players can play online, e.g. World of Warcraft) and virtual social worlds (e.g. SecondLife) (cf. ibidem, pp. 61-64). It should be noted here that the technical characteristics of the social platforms are just the basic criteria for fulfilling the functions assumed by the designers, i.e. the production and exchange of content and the building of virtual communities. Their actual implementation depends mainly on the level and quality of activities and interaction of the users themselves.

Information exchange is the core of every interaction. Yaron Ariel and Ruth Avidar argue that the kind of information exchange (non-interactive, reactive or interactive) in social media determines the level of interactivity of the platform, and the number of users and types of activity on the platform determines its level of "sociability" hereinafter referred to as the level of community. The authors presented a model (Figure 1) illustrating the relationship between information, interactivity and social interaction in the context of social media. As it was previously suggested, social media platforms serve as technologies that promote different levels of social engagement and participation. The real engagement of users, their interactions and activities carried out on the platform determine the level of sociability (Ariel, Avidar, 2015, p. 26).

Figure 1. *Model of the relationship between information, interactivity and sociability of social platforms*



Source: Ariel, Avidar (2015) p. 27.

The analysis of each type of relationship indicates that the characteristics of social media, i.e. interactivity and sociability, are two different constructs defined by the number of users and the level of their interactions (as cited in: ibidem):

1. low level of sociability and low level of interactivity - the platform has a small user base and content exchange, the information is mostly non-interactive (not related to previous content) or reactive (refer to previous entries but do not encourage further interaction, limited only to tag or like),
2. high level of sociability and low level of interactivity - the platform has many users and a lot of content exchange, but the content is mostly non-interactive or reactive (e.g. lots of likes and shares, posts on the platform, but their content does not refer to previous entries, nor encourages further interaction),
3. low level of sociability and high level of interactivity - the platform brings together a small number of users and inconsiderable content exchange, mostly interactive (such as niche forums where several members discuss the issue, referencing their positions, commenting and asking questions, supporting others).
4. high level of sociability and high level of interactivity - "ideal" status of social media - many users are active and there are many interactive content exchanges (e.g. Facebook page of a well known person with many "friends" interacting with each other, exchange information concerning events, ask questions, and comment on their posts).

From the above it can be concluded that the potential of social media is conditioned by the level of engagement of participants in the interaction, reinforced by the right community building efforts, where users decide to engage and maintain interactivity in both the areas of content and relationship with other users of the virtual community.

Is it really possible to use the potential of social media in the field of education?

Chris Piotrowski (2015) from the University of WestFlorida has analyzed and summarized the main conclusions of the 29 research papers that focused on the use of social media in

education. Of these, only two research reports reported negative feedback on the implementation of social platforms to teaching-learning process, including the main problems: *lack of proper preparation of teachers in the use of Web 2.0 technologies*, *privacy issue* and *data overloading*. Among the benefits of integrating social media into the education process is the support of Web 2.0 technology to promote student learning, i.e. *involvement*, *promoting autonomy*, *intentionality*, *reflection* and social *relations*.

At the same time, aggregate findings indicate that Web 2.0 technologies can *increase engagement* of college students, improve their *results in science* and *interaction* between lecturers and students, as well as support communication between administrators and students (Kwiatkowska, 2016, pp. 151-175).

In turn, the analysis of critical attitudes towards the use of social media in education requires special attention *to be paid to the need to educate and promote critical thinking skills and literacy skills* in contemporary students.

In turn, the research involving Malaysian students and concerning their use of social media in the learning process has shown that the respondents' results were dependent on their interaction with other members of the group, their interactions with supervisors, their level of engagement and satisfaction, contributing to their shared learning. In general, social media is a platform for collaborative learning, enabling participants to perform tasks quickly and efficiently. They help to improve peer interactions, leading to greater diversity and improved communication between students and teachers. Social media also facilitates discussion and exchange of information, which contributes to a better understanding of content. In general, social media increases the productivity of all participants in the education process (Al-rahmi, Othman, Yusuf, 2015).

Nikola Draskovic, Ana Kustrak Korper and Katharina Kilian-Yasin (2017) have cited numerous studies that show that social media has the potential as an educational tool in the area of motivation and participation. However, the effective use of these media in the classroom depends on the level of interaction between both students and instructors. Unfortunately, instructors usually show lack of preparation and interest in using social media for educational purposes, thereby excluding the discussed medium from the selection of didactic tools.

Draskovic, Korper and Kilian-Yasin (2017) conducted a comparative study of Croatian and

German students on the use of social media for educational purposes. The result is the following:

- student often use social media and have a positive attitude and relatively low motivation to integrate social media into education;
- lecturers should therefore be the primary source of motivation for students to participate and communicate through social media for educational purposes,
- there are no significant differences in the use of social media among Croatian and German students.

Referring to the numerous reports from the literature on the subject and the studies presented in it, it can be stated that students and young people commonly use social media in everyday life. They mostly meet their own communication, entertainment and social needs with it. In spite of this, they are positively inclined to use these media also for educational purposes. However, due to the lack of experience in this area, they expect initiatives and support from teachers with whom they will be willing to engage in communication, and will take action and interact with other learners in the learning process. Teachers need to know

how to use interactivity in teaching. A good lesson is one that has been learned by the student, and the content carried by the media is the means to get answers to the questions asked.

Conclusion

Education with new technologies requires not only interactivity, but something more, namely, participation, cooperation with other people, and interaction with digital tools. All this, however, should not obscure the main purpose which is human education and the development of various spheres of human functioning.

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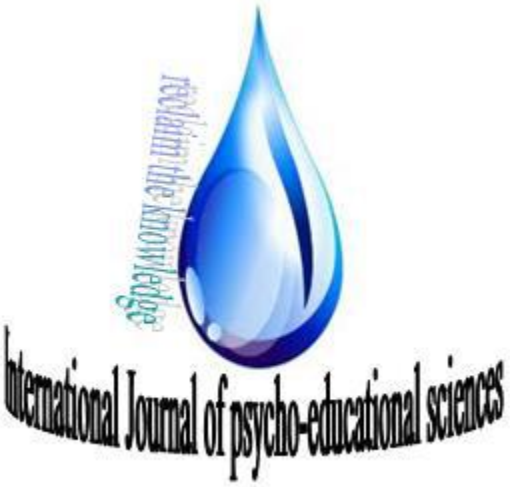

Are Phonological Awareness Intervention Programs Effective for Children with Disabilities? A Systematic Review

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Abstract

The purpose of this study was to find out the effectiveness of phonological awareness intervention programs. Computerized databases, including ERIC, PubMed, ProQuest Education Journals, and SCOPUS, were searched using the following search strategy: ("phonological awareness") AND (impairment OR intervention OR training programme). The search was limited to English journal articles. No limitations were set on date of publication. Studies selected for inclusion in this review were required to examine phonological awareness intervention programs for children with disabilities including those with Autism Spectrum Disorder, Visual Impairments, Down syndrome, Speech and/or Language Impairments, Intellectual Disabilities, Hearing Loss, and Learning/ Reading Disabilities. Overall, available research findings support the use of phonological awareness intervention programs designed for children with disabilities as an effective tool to improve phonological awareness skills. Implications and recommendations for future research are discussed.

Introduction

Phonological awareness can be defined as the ability to define and manipulate the sound structure of oral language (Layton& Deeny, 2002). Phonological awareness acquisition involves the learning of two things. First, it involves learning that words can be divided into segments of sound smaller than a syllable. Second, it involves learning about individual phonemes themselves (Torgesen, 2000). The awareness of phonological structure of a word helps children to draw connections between the spoken form of a word and its written representation (Gillon, 2004).

According to Oktay & Aktan (2002), phonological ability is not accompanied by an innate ability, which allows children to manipulate phonological elements intentionally. In addition, Cassady and Smith (2004) suggest that children should be trained to blend body-codas first, then to progress to more phonologically difficult blending tasks such as onset-rimes and phonemes. Study by Cheung et al. (2001) also suggests the important role of phonological training in reading acquisition. They point out that bilingual children develop phonological awareness earlier, but in the end, monolingual children reach the same level once they receive phonological skill training in reading development. However, Durgunoğlu (2002) argues that children can gain insight into phonological skills if they have had exposure in their L1. Given the ample amount of existing research indicating the l importance of phonological awareness training, the notion of beginning treatment for phonological awareness for children who lack these skills as soon as possible is consequently intuitive.

Objectives

The first objective of this paper was to review the existing literature regarding the effectiveness of phonological awareness intervention programs for children with disabilities. The second objective was to propose some implications and evidence-based recommendations for professional practice and to suggest areas for future research.

Methods

Search Strategy

Computerized databases, including ERIC, PubMed, ProQuest Education Journals, and SCOPUS, were searched using the following search strategy:

("phonological awareness") AND (impairment OR intervention OR training programme). The search was limited to English journal articles. No limitations were set on date of publication.

Selection Criteria

Studies selected for inclusion in this review were required to examine phonological awareness intervention programs for children with disabilities including those with Autism Spectrum Disorder, Visual Impairments, Down syndrome, Speech and/or Language Impairments, Intellectual Disabilities, Hearing Loss, and Learning/ Reading Disabilities.

Results

Phonological Awareness in children with Autism Spectrum Disorder

Children with Autism Spectrum Disorder show delays in Phonological awareness. Heimann et al.'s study (1995) has explored the effectiveness of Phonological Awareness intervention for children with Autism Spectrum Disorder. In Heimann et al.'s study(1995), 11 children with Autism Spectrum Disorder, 9 children with cognitive development, and 10 typically developing children showed an increase in vocabulary skills and word reading after participating in an interactive computer program aimed at teaching basic reading and writing vocabulary. Phonological awareness scores also improved, as measured by a Swedish standardized test that assesses phoneme segmentation, synthesis, and deletion.

In this study, the authors experienced considerable missing data on some measures (due to teachers not carrying out all the tests they had been asked to do). They also lost some subjects after the final selection process. Tjus et al. (1998) targeted only students with ASD. In this study, students received fewer sessions (15) conducted over a briefer time frame (1–2 months). Similar to the earlier study, students mastered the computer-assisted task and achieved generally positive gains with some demonstration of maintenance in phonological awareness. The findings from both of these studies (Heiman et al., 1995; Tjus et al., 1998) are encouraging, yet ambiguous. Because of the small sample size, age range of included participants, absence of information describing participant reading ability prior to the intervention, and the variable reading skills associated with ASD (Nation et al., 2006), mean scores can obscure findings (Kelly , Stephanie, and Monica, 2010).

Adel Abdulla Mohammed&Amaal Ahmed Mostafa (2012) described an action research project designed to improve word recognition ability of children with Autism Spectrum Disorder. A total of 47 children diagnosed as having Autism Spectrum Disorder using Autism Spectrum Disorder Evaluation Inventory (Mohammed, 2006), participated in this study. The sample was randomly divided into two groups; experimental (n= 24; 16 M ,8 F) and control (n= 23; 18 M, 5 F). ANCOVA and Repeated Measures Analyses were employed for data analysis. Findings from this study indicated the effectiveness of the program employed in word recognition ability in the target children. On the basis of the findings, the study supports the idea of PA as a powerful intervention for children Autism Spectrum Disorder.

The results of this study indicated that children with autism Spectrum Disorder and had not received any formal reading instruction are capable of improving their Word Recognition Ability in preparation for their future reading .This study

demonstrated that phonological awareness skills can be effectively instructed to children with autism Spectrum Disorder better positioning them for reading success. On the basis of the findings, the study supported the idea of PA as a powerful intervention for children Autism Spectrum Disorder.

Phonological Awareness of Young Children with Visual Impairments

Research on sighted children has suggested that "phonological awareness develops along a continuum from awareness of large and concrete sound units (i.e., words, syllables) to awareness of small and abstract sound units (i.e., phonemes)" (Lonigan et al., 2009, p. 347). Research has also indicated that the development of phonological awareness in children who are blind or have low vision is similar to that of children who are sighted (Barlow- Brown & Connelly, 2002; Gillon& Young, 2002). The findings from a sample of 22 young children with visual impairments and no additional disabilities suggest that potential readers of braille or dual media had better syllable-segmentation, sound-isolation, and sound segmentation skills than potential readers of print. Potential readers of print seemed to have slightly better letter-identification and letter-sound identification skills than potential readers of braille or dual media (Deborah, Karen, and Donna, 2010).

Many children who are visually impaired may not be exposed to print or braille until they reach preschool or kindergarten— a huge disadvantage. By the time that most sighted children begin school, they can recognize approximately 15 print letters, whereas most preschool children who are visually impaired know none (Deborah, Karen, and Donna, 2010).

Phonological Awareness of Young Children with Intellectual Disabilities /Down syndrome.

In children with Down syndrome, linguistic aspects, especially in the field of phonology and morphosyntax (Cinthia, Cacilda and Leonor, 2012), are more impaired than other aspects of their development. The literature is not extensive regarding the development of phonological awareness in children with Down syndrome, but it indicates that when it is worked out previously, it may benefit the literacy process. Few educators know the importance of phonological awareness as a prerequisite for literacy of children with typical development. Children with Down syndrome have measurable levels of phonological awareness, although they are lower when compared to those of individuals with typical development (Cinthia, Cacilda and Leonor, 2012).

Kennedy and Flynn's research study (2003) examined using a phonological awareness based intervention programme with three children with Down syndrome (aged 7;2, 8;4, and 8;10). A multiple baseline across behaviours design was selected. The intervention programme focused on the key skills of alliteration detection, phoneme isolation, spelling of orthographically regular words and rhyme detection. Two tasks (comprehension of passive structures and spatial structures) were selected as control behaviours. Phoneme segmentation and speech intelligibility were selected to investigate generalisation of intervention targets to other related skill areas. The results indicated that the participants improved the phonological awareness skills targeted in the intervention programme. the results indicate that children with Down syndrome can benefit from a phonological awareness based approach to literacy.

Children with intellectual disabilities typically manifest some degree of phonological deficit (Reed, 1994) that may interfere with their realization of the meaning of print (Swank & Catts, 1994). Notwithstanding, some authors recounted successful phonological awareness interventions for children with intellectual disabilities. For instance, Eissa (2013) explored the effectiveness of a phonological awareness training intervention on pre- reading skills of mentally retarded children. A total of 47 children intellectual disabilities participated in this study. The sample was randomly divided into two groups; experimental (n= 24, 19 boys, 5 girls) and control (n= 23 , 20 boys and 3 girls). ANCOVA and Repeated Measures Analyses were employed for data analysis. Findings from this study indicated the effectiveness of the program employed in improving pre- reading skills in the target children.

This study depended on the composite score of Pre-reading skills , and this was not as strong as it might have been if further sub skills were discussed in details statistically .Nevertheless, the findings of the study suggest that using phonological awareness intervention programs in classrooms for children with speech and/or language concerns can be effective for trained phonological awareness activities.

Phonological Awareness of Children with Hearing Loss

Werfel and Schuele (2014) investigated whether phonological awareness training would result in increased initial sound segmentation skills in two preschool children with severe to profound hearing loss. They used a single subject multiple baseline design across three behaviors (initial phoneme /m/, /d/, /b/ identification). The authors concluded that initial phoneme awareness training led to an increase in initial sound segmentation skill, though consistent performance was not observed during the maintenance period. This study examined only a small number of children (i.e., two children).

Sue, Brittany, and Sherry (2017) examined the feasibility of a telepractice intervention to improve phonological awareness skills in children with hearing loss as compared to a conventional in-person intervention. Twenty children with hearing loss participated in this study. Two groups of ten children each received a supplemental phonological awareness intervention either via telepractice or an in-person service delivery model. Within each of the two groups, five children were enrolled in preschool or kindergarten and five children were enrolled in first or second grade. The two groups of children demonstrated similar phonological awareness, non-verbal IQ, and vocabulary skills during pre-tests. After a 12-week intervention children with hearing loss showed improved phonological awareness skills as measured by a standardized post-test. No significant differences were found between the performance of the telepractice group and in-person group. Nor was a significant interaction found between the two age groups (PreK/K vs. 1st /2nd grade) and the two types of service delivery models (in-person vs. telepractice). The results suggest that a telepractice service delivery model is feasible for young children with hearing loss, and that telepractice may be as effective as in-person intervention in improving phonological awareness skills.

This study employed a small number of children in wide age ranges. It would be better if they could narrow age ranges to verify their findings. The intervention included many phonological awareness tasks. It would be better if they could examine one or two phonological awareness tasks. That study did not employ a control group that received no study-based intervention.

Phonological Awareness in children with Speech and/or Language Impairments

Sixteen preschool children with speech and/or language disorders in Kleeck, Gillam & McFadden's study (1998) received phonological awareness training for a period of 9 months. Eight children attended a preschool classroom, and 8 children attended a pre-kindergarten classroom. The classrooms were located in a private school for children with speech and language disorders. A group of older children with speech and/or language disorders served as a non-treatment comparison group. Children in the treatment groups received 15 minutes of small-group lessons twice each week for two semesters. Classroom-based treatment focused on rhyming the first semester and on phoneme awareness the second semester. Rhyming and phoneme awareness activities were adapted from the literature on the development of phonological awareness in typically-achieving children. Results revealed that preschool children with speech and/or language disorders made significant improvement in rhyming and phoneme awareness. Comparisons with the non-treatment group indicated that gains in phoneme awareness were likely a result of the treatment rather than maturation or other aspects of the curriculum.

Michaela et.al (2013)conducted utilizing a quasi-experimental pre- and post-group design to examine the effects of a phonologically based intervention aimed to improve phonological awareness (PA) and reading abilities in school-age children with language impairment (LI) in Grades 1 through 3. The intervention included instruction in PA and sound-symbol correspondence. Sixty-four school-age children with LI (Grades 1-3) were assigned to either an experimental (n = 34) or a control group (n = 30). Eleven kindergarten-age children with LI were then included as a comparison grade group to investigate whether the magnitude of treatment effect changed across grade level in the experimental group (K-3). Participants in the experimental group (Grades 1-3) made significantly greater gains in PA and reading (e.g., decoding and text comprehension) than the control group. Similar gains were observed across the varying grade levels (K-3). These results suggest that, despite being at risk of reading failure, school-age children with LI in Grades 1 through 3 have the potential to make accelerated gains in their reading development and in the PA skills that are essential to successful literacy acquisition. This study had small sample sizes for each grade level, which led to limited statistical powers. The results are also likely limited by the lack of follow-up of the participants' performances on PA and reading skills.

Phonological Awareness of Children with Learning/ Reading Disabilities

Rehab (2013) described an action research project designed to prevent early reading skills of children at- risk for future reading disabilities. A total of 47 children diagnosed as having poor pre-reading skills by teacher's nominations were invited to participate. The sample was randomly divided into two groups; experimental (n= 24, 16 boys, 8 girls) and control (n= 23, 18 boys and 5 girls). ANCOVA and Repeated Measures Analyses were employed for data analysis. Findings from this study indicated the effectiveness of the program employed in improving the pre -reading skills in the target children. On the basis of the findings, the study supports the idea of PA as a powerful predictor of early reading achievement. Though this study proved the effectiveness of the program employed in improving the pre -reading skills in the target children , but did not say much about children's characteristics , and 15 session lasted 20 minute each was not an adequate period. Additionally, though the authored

implemented her experiment using boys and girls, she did not compare between the two sexes nor she gave an explanation for why she chose both sexes.

Conclusion and Implications

Although children with Autism Spectrum Disorder show delays in Phonological awareness, studied aforementioned were suggestive of the positive effects of phonological awareness intervention in classrooms dedicated to children with autism and the results were promising. Research has also indicated that the development of phonological awareness in children who are blind or have low vision is similar to that of children who are sighted, nevertheless, much less is known about the effectiveness phonological awareness training for children with visual impairments.

Studies, although limited, on phonics based instruction for children with Intellectual Disabilities/ Down syndrome, have shown promising results. Research shows that children with Intellectual Disabilities can perform all of the same tasks related to phonics based instruction as their peers without disabilities (Al Otaiba & Hosp, 2004). when children with Down syndrome were instructed in an inclusive setting and presented with the same sequence of reading instruction as their peers without disabilities, children with Down syndrome showed similar progress to that of their peers in phonological awareness, phonics, vocabulary, comprehension, and fluency (e.g., Browder, Ahlgrim-Delzell, Courtade-Little, & Snell, 2006; Cupples & Iacono, 2002; Michael & Marie, 2016; Snowling, Hulme, & Mercer, 2002).

Webb and Lederberg (2015) suggest that phonological awareness training is necessary for children with hearing loss to help them develop their literacy skills. Even though research typically shows that they demonstrate delayed phonological awareness regardless of the degree of hearing loss (Kyle & Harris, 2011; Miller, 1997; Moeller et al., 2007; Most, Aram, & Andorn, 2006; Sterne & Goswami, 2000), a supplementary phonological awareness intervention should be beneficial to children with hearing loss. This might be delivered by a speech-language pathologist or another professional familiar with the development of these skills (Sue, Brittany, and Sherry ,2017; Werfel and Schuele, 2014).

Evidence indicated that children with speech and/or language disorders are significantly slower than their age matched peers in developing PA skills placing them at an additional disadvantage for developing successful reading skills, the results of the herein studies were suggestive of the positive effects of phonological awareness intervention in classrooms dedicated to children with speech and/or language disorders.

As for children with learning/ reading disabilities, a study (Rehab, 2013) supported the idea of PA as a powerful predictor of early reading achievement. These aforementioned studies may be foundational for further research.

Future Research Recommendations

Further research is still required to explore the potential benefits of phonological awareness intervention for children with disabilities. These studies ,ay include larger sample size, age range of included participants, much information describing participant reading ability prior to the intervention, and the variable reading skills associated with the disabilities.

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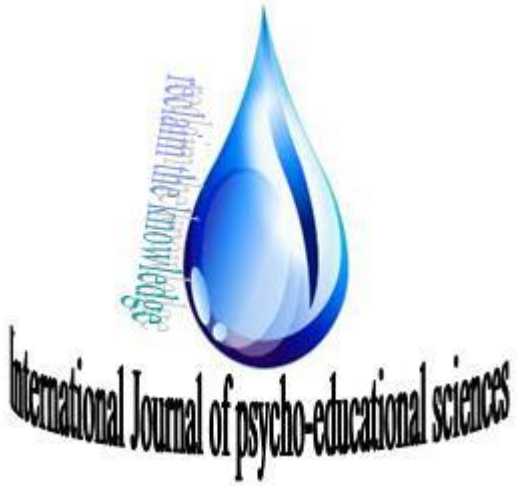

Metaphors in Adult Education: Cultural Inspirations for Advancement of Theory and Practice

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Abstract:

Metaphors are not only inherent element of culture, but also powerful tools of thinking. In the paper analysis of metaphors used in theoretical stances, research outcomes reports, depicting world of adult education practice in Poland are discussed. First, a short review of theories of metaphor is presented. Then, the role metaphors can play in educational research is discussed. Further, the author divides metaphors found in research and discussions about adult education into four categories: natural, astronomical, pictorial and geographical. The author not only reviews metaphors of adult education process, but she also points to their implications for further development of practice of adult education, advancement in theory and possibilities of opening new horizons of thinking about adult education as well. Searching for cultural sources and meaning of the metaphors in adult education research and theory aims at discovering values underlying the concepts and related contexts. Metaphors used in adult education are analysed in the perspective of lifelong learning. The most important issue however, is if those metaphors are useful and how they contribute to adult education's theory and practice advancement.

*Keywords***:** metaphor, adult education, lifelong learning, Polish adult education, culture

Introduction

Adult education and education as a whole, is strictly connected with and deeply grounded in cultural concepts of reality. Not every researcher pays attention to cultural issues, but culture broadens perspective of thinking, interpreting research outcomes and developing theory. Some researchers are interested only in cultural standpoint, using ethnography as leading method, focusing on Polish educational practice as cultural system in itself, e.g. school lessons as rituals (Dembiński 2005), intellectually disabled as group having own culture (Borowska-Beszta 2012, 2013; Smieszek & Borowska-Beszta 2017), myths in education (Kragul 2009) and many others, discovering new dimensions and deepening understanding of education. However this paper's aim is not to analyse ethnographic research, but concepts used in adult education by those researchers who use different methods, but find culture elements, like metaphor, helpful to interpret outcomes and advance adult education theory.

Education and culture are intertwined. Jaworska-Witkowska (2009, p. 103) enumerates three orientations: "orientation on **regaining** human development and culture for education, […] orientation on **gaining** new domains of communication in humanistic for education, […] orientation on communication inside culture, stressing not the search for new areas of research in education, but **exploiting** borders and cognitive passages […]." The second orientation became foundation for exploration in this paper with aim to address the following question: how inspiring for adult education theory and research can culture (especially metaphor) be?

Metaphors as tools of thinking – review of theories

The term "metaphor" belongs to linguistics, but its meaning is not so clear as it seems. Jäkel (2003) writes about few different ways of explaining what metaphor means. It can be displacement or shift of words. It can be, and commonly is, a picture, visualization, creation of links in imagination. It also can be a filter for our perception of reality, to focus on selected issues, to give a tint, to expose some colours, just like filter on camera in movie making. Last, it can be personification of things and phenomena.

Among theories of metaphor, the oldest is the classical one. "Rhetoric, philology and linguistics defined metaphor in traditional way (from greek *metaphorá,* 'displacement'; consist of meta 'to, behind' + *phérein* 'bring') as "metaphorical speech" affirming it as an artistic rhetoric figure and decorative artistic mean" (Jäkel 2003, p.20). Theories established by Aristotle and Quintilian are named classical ones, together with later theories, that of Cicero and Demetrius. In these theories metaphor is understood as one word replaced by another, resulting in different perspective (Jäkel 2003).

However, later research showed that metaphors cannot be treated only as means of style, only a decoration. Metaphor plays major role in the process of communication, and meaning of this term is much deeper. This is how cognitive theory of metaphor came to the front, that shed light on linkages between metaphor and our way of thinking and reasoning. The most known cognitive theory is the one presented by Lakoff and Johnson (1980, 2003). According to Jäkel, the main difference between classical and cognitive theory is about broadening metaphors' usage. Cognitivists not only point at single expressions, "but see language metaphors as systematic connotations between whole domains of ideas and as a sing of complex cognitive or culture models. In case of single language metaphor it is not about *displacement*, but a kind of *exploration*: they no longer demand displacement the "right" word by metaphoric one, but analyse epistemological discovery of destination domain, that needs explanation, by recalling source domains, closer to experience" (Jäkel 2003, p. 102).

Lakoff and Johnson, according to the book's title, analysed metaphors used in daily language, not those for special reasons, like art or politics. They pay attention not only to cultural foundations of the metaphors, that reflect how people think in a given society, but also to physical experience that underlies metaphors. For example, Lakoff and Johnson analyse orientational metaphors that place happiness up, and sadness down. "In some cases spatialization is so essential a part of a concept that it is difficult for us to imagine any alternative metaphor that might structure the concept. In our society "high status" is such a concept. Other cases, like happiness, are less clear. Is the concept of happiness independent of the HAPPY IS UP metaphor, or is the up-down spatialization of happiness a part of the concept? We believe that it is a part of the concept within a given conceptual system. The HAPPY IS UP metaphor places happiness within a coherent metaphorical system, and part of its meaning comes from its role in that system." (p. 18)

Thorough analyses of metaphors in daily life, led the authors of cognitive theory to conclusion, that terms people use are embedded in human experience with own body and space orientation. This relation is basis to successful metaphor. Hence using metaphors, even the simple ones, in daily communication becomes effect of sequence of associations connected with the way people experience the world.

Another concept of metaphor, interesting but at the same time controversial and criticized is interactional theory, especially presented by Black and Richards. In this concept, metaphor is understood as two-way, where both parts affect each other, and meaning is a result of cooperation of the parts. As an example the authors take metaphor "human is a wolf", where human gains negative features, like being evil, aggressive, predatory, while wolf gains some human features. (Black 1955, Jäkel 2003, p. 106; 111)

Interactivity in Black and Richards' theory concerns also metaphor's receiver, who is "[…] demanded to cooperate in understanding what has been hidden behind the words. Metaphor is supposed to evoke the sequence of implications, as a result of cooperation. Thus interpretation becomes a kind of research into metaphor, where diversity of metaphor's implications, reveals its quality" (Muszyńska 1999, p. 18). Two-way character of metaphor in

interactional theory shows up in operating terms and its mutual interactions, but also people who participate in communication process with metaphorical language.

Lastly, John Searle's pragmatic theory of reinterpretation, based on theory of speech acts, presents metaphor as a difference "[…] between *sentence's literal meaning* and intended *meaning of the speaker's statement* […] (Jäkel 2003, p. 114). Mácha (2012) gives further explanation of this assumption. "Since speakers mean and try to communicate something other than they say, metaphorical utterances are, thus, indirect speech acts. To be more formal, the speaker says that S is P and means metaphorically that S is R" (p. 187). Hence, metaphor appear in the area of meaning given to the statement. However the meaning itself is not clear for one at once, it could be even totally vague, if taken out of the context.

Metaphors as one of means of style, used mainly in poetry, understood as displacement of meaning, proved ability to operate the word by author and aesthetic function of language as well. Not till then cognitive theory showed another dimension of metaphor, broadening the scope of interpretation and usage. "Cognitivism changed the way of thinking about metaphor, gave it different status, linked to basic cognitive processes, underlined it as inevitable element of experiencing, understanding and expressing reality, and searching for new interpretations. Metaphor was no longer strange, outside, decorative, artificial. It became immanent, belonging to humankind in a complex world where human, indomitably curios and conscious of cognition's imperfection, tries to descript" (Wiśniewska-Kin 2009, p.38)

Metaphors in educational research

Metaphors are perceived as one of the most natural way to use language to describe the world. People use metaphors not only in art, but in daily life, in different domains of human activity. They become expression of meaning and broaden area of meaning. This is why it is not strange, that metaphors appear in education and academic papers and research reports. One needs creative thinking to use or pick a metaphor. Wiśniewska-Kin (2009) remarks that in traditional education, where knowledge is objective, cumulated and needs to be remembered, there is no place for metaphors.

This traditional concept of knowledge, the positive one, also present in quantitative research, rarely results in metaphors. Positivists or neo-positivists focus on unequivocal research outcomes and those could be disrupted by metaphor. Zeidler (2014) points to reason for this radical approach, where metaphor is rejected. "If neo-positivists see place for metaphor in science, then it would be only in the context of discovery, but this context in their opinion, does not belong to research into philosophy of science and methodological issues" (p. 3). Meanwhile it is a context that occurs to be the most fertile in creation of metaphors, the most valuable source of inspiration.

Repeatedly context is in the centre of qualitative researchers' analyses. Hence, reports from these research are plenty of metaphors, finding the best way to present and interpret the outcomes. Qualitative researchers also use *verbatim* data, citing passages of interviews, depicting the essence of research project. In these excerpts frequently metaphors appear, ready to use or being just inspiration for researcher to create their own metaphorical frame.

Shift in understanding what metaphor is enhanced the use of metaphor in research on broader scale. Especially Black's interactional theory changed negative attitude to metaphor and became incentive for researchers. Interactional approach opened new areas of exploration, new way of thinking about metaphors and gave opportunity to apply them in scientific knowledge. Metaphors turned out to be linguistic expressions operating on domains' borders, simultaneously linking distant domains, giving researchers possibility to interpret the explored world, give meaning to it and present more readable picture of theories and created concepts.

As Jäkel (2003, p. 4) observes, metaphor can produce new meaning and play crucial role in science – i.e. heuristic function.

Metaphorical interpretation of research outcomes or theory, not only facilitates perception, but also opens new horizons, sometimes in a revolutionary way changing picture of the world or its elements in society. However, metaphors are not only used in science but also by researchers in social science and humanists. What kind of metaphors are applied in educational research, especially in adult education area?

Metaphors in adult education research

Metaphors are useful in descripting practice and broadening theoretical area of adult education. The aim is to present adult education process more readable and to highlight some dimensions of it. Metaphorical approach to adult education appear in research reports, and in innovative or critical theoretical stances. Due to metaphors the researchers are more able to grasp the issues that needs to be exposed. But it is also an excellent way to report research result into new or niche problems. In the case of research into commonly addressed questions, metaphors are a way of finding fresh insight and setting new paths. Thus, metaphors are inspiring for in-depth exploration of adult education areas.

Review of qualitative research and literature in Polish adult education resulted in many examples of metaphors usage. Analysis of those metaphorical frames led to the following categories of metaphors: natural, geographical, astronomical and pictorial ones.

Natural metaphors

Moorland

In adult education area two metaphors taken from nature are discussed, that of moorland and tree. In geographical sense, 75% of the whole world's resources moorlands are in the Great Britain. (Internet 1) Those large terrains, covered with plants are also home to many species of animals. However, contemporary British moorlands, to some degree, are controlled by human.

It has been Shakespeare's "Macbeth" where the main character, commander of the royal army in war between Scotland and Norway, on his way home meets three witches at the moorland. In British literature moorland motif became popular in romantic novel, reflecting characters' emotions and creating mood, see Emily Dickens' *Wuthering Heights* for example (Internet 2). Moorland is a mysterious place, wrapped with fog, steeped with drizzle to create mood of eeriness and intimacy as well. In bestseller *Harry Potter* moorlands Ilkley are arena of quidditch.

In education, the most frequently used metaphor is that of moorland, introduced by Edwards (2006) to give the essence of contemporary dispersed educational activities and episodes, especially in lifelong learning concept. Edwards believes, that moorland metaphor depicts changes in adult education, particularly in adult learning's perception and research into its practice. As he observes, shifting from "field" where order reigns, signifying formal processes of adult learning, to "moorland" that is messy and may appear everywhere, signifies non-formal and informal adult learning process, getting more and more validity.

It is worth to considerate, why Edwards used moorland metaphor. On the one hand it is justified, as an opposition to "field". However, closer look leads to cultural background. Moorland is commonly perceived as something messy, savage, natural, uncontrolled. It has been strongly rooted in British culture, especially literature, for a long time. This metaphor depicts the very nature of contemporary lifelong learning as happening anytime, anywhere,

not necessarily in institution. Today's lifelong learning encompassing old and new areas of education really resembles moorland. But the question is – whose responsibility it is now?

Tree (redwood)

Metaphor of tree was used by Nizińska (2008) to depict one of two strategies taken by adult educators in different settings. In research report she took metaphor of redwood to describe some type of adult educator. Redwood is a long-lived, up to 2000 years, the highest tree in the world with height from 60 to 100 meters. It has extensive root system, shallowly located under the ground (Internet 3). Redwood – adult educator is faithful to values of educational institution he/she works in, organized and attached to institution's structure which he/she finds useful and legitimated. Redwood – adult educator follows patterns, and as emotions are not a part of his/her vocational identity, tends to keep distance and be rather reserved. It is a person who easily toes the line, precisely fulfilling educational tasks.

Nizińska (2008, p. 157-158) observes two variations of redwood – adult educator. The first one "aristocratic – intellectual", based on high reflexivity, results in domination over adult learners, who know less and should subordinate, to gain valuable knowledge, that only he/she is able to pass them along. The second variation is "satrap-technocrat", who also takes dominating position, but it is relation of power that is essential, not knowledge. This kind of adult education has low reflexivity and is interested only in strengthening the power he/she has. As a result, "satrap-technocrat" cannot create own teaching patterns, following methods used by others and is uncritical to content.

This metaphor of redwood, illustrates the key features of such adult educator who resembles a tree – dominating, haughty, hardly noticing adult learner, especially as an individual. Redwood as towering tree is a symbol of growth, development, self-improvement, knowledge (light) searching. Thus, adult educators, descripted as redwood, are highly qualified and represent top level of vocational competences. Simultaneously, this linear growth in one direction becomes a limit to lack of ability to create own patterns of educational behaviour, strong attitude to obey the rules, and move only inside well known borders (trunk of the tree). Extensive root system is in turn symbol of being ingrown into institution, its value system, giving backbone, a set of references for behaviour of adult educator. He/she is well "rooted", so is stable in position and teaching. Grandeur of redwood suggest authority, so this type of teacher may be admired by learners.

Astronomical metaphors

Pulsar

The universe is inspiring for metaphors in many domains, take the structure of atom for example. The cosmic space became also fruitful for social science. Skibińska (2006) used astronomical metaphor in her report from biographical research into elder women. She used the term "micro-worlds" and "pulsar". Micro-worlds were placed in opposition to the universe, as intimate spheres of women's life in particular aspects – education, leisure, work and family. The pulsar metaphor depicted specificity of women's life worlds, changes, behaviour in particular situations and results of decisions taken by them, revealed in narrations.

Skibińska (2006, p. 516-520) points to fierceness of situations experienced by women (pulsar as result of super-nova explosion), collapse of participants' micro-worlds, unexpected changes and loss (super-nova's annihilation), sacrifice to one domain at the expense of other with huge amounts of life energy (black whole), changes in women's activity and its duration (pulsar's radiation), position women take in different areas, their roles and usually subordination to others (pulsar in double system) or breaking schemes and women's roles

stereotypes (red giant), crisis or trauma incidents that change system of values, need additional effort, but also result in gaining strength (magnetars).

Participants of the research were also presented as stars, that adds them some value. Stars – heaven objects, observed as lighting spots, are useful as guides, also become key in romantic, intimate and spiritual mood. Together they establish constellations. Particular stars are admired, but as a group they become another, broader, but separate world. Finally, contemporary meaning of star can be mentioned – in show business known as celebrities. Woman in a micro-world or even few micro-worlds may become a star (idol).

Satellite

Turning back to Nizińska's research report (2008), astronomical metaphor is found in the second strategy taken by adult educators, namely "satellite". It is a way they work in educational institution and shape their vocational personality. They are more flexible, trace their own paths and interpret institutional rules as well as teacher's role. Adult educator – a "satellite" sticks to his/her values, balancing between own expectations, ambitions, and institution's goals. It is a person prone to changes, and able to initiate change in educational institution. He/she is also convinced that emotions play a major role in life and educational work.

Two strategies taken by adult educator – satellite were discovered by Nizińska (2008, p. 156; 159): "transformativist" and "neurotic showman". The first one is based on high reflexivity, teacher's role consciousness, changes in teaching methods, high criticism in knowledge and teaching process' assessment. The second one is based on low reflexivity, chaos in educational work, accidental changes in teaching-learning process. But "neurotic showman" needs public to play the role, so actions taken do not focus on the content and things essential for process of learning but on person's exposition and gaining admiration.

Using metaphor of satellite Nizińska depicted type of adult educator's behaviour, where one is settled down to educational institution (he/she orbits), but at the same time away because of (mental?) distance. Adult teacher as satellite is in better position to look at the institution, from different perspective – distance allows him/her see it as a whole. This is why these teachers are more reflexive.

Satellite is an object to communicate two-way, broadcasting and receiving signals, so this type of adult teacher should be communicative. This metaphor brings up the association with broadcasting world's picture or rather facilitating this broadcast. Nizińska does not pay attention to this issue. Perhaps it was not the direct result of data analyses. But this association points to the concept of teacher as translator, and co-interpreter of surrounding reality. Satellite may be broken, pause the signal and, in the extreme case, fall off the orbit, be out of the control. This is possible, as Nizińska underlines such features of the teachers as being prone to changes, beyond the role and exposing emotions.

Pictorial metaphors

Negative aspects of lifelong learning were identified in my project "Lifelong education's dark sides, shadows and hazes" (Frąckowiak 2008). Operating the light allows to expose some issues and hide others, making it more vague, unobvious. Dark sides of lifelong learning, i.e. totally negative, are as follows: promotion of learning throughout life by lofty slogan, with political populism standing behind, and lack of financial support from the state for many valuable educational projects. It is also growing commercialism of adult education and, in some cases, using methods inappropriate for teaching adults.

Shadows – understood as something wrong or done in an unaware manner, is illusion that adult education can fight social exclusion, for many educational offers do not meet real adults' needs. Education taken by adults often result in gaining new qualifications that allow to get low-paid job, that does not help overcome poverty. Also paying attention to needs of economy that to individual, forcing to learn – constant repeating that learning lasts throughout whole human's life, obligatory vocational advancement courses, may act as shadows, resulting in negative attitude to learning.

Finally, hazes – unobvious aspects of lifelong education, hard to assess as positive or negative. Good example is terminology used when talking about lifelong learning. In English literature, term "lifelong education" was abandoned and "lifelong learning" became officially accepted. Simultaneously, it brought shift from humanistic concept, promoted mainly by UNESCO, to neoliberal one, promoted mainly by the World Bank OECD, European Commission. Other terms may be found, such as "permanent education" (Suchodolski 1993), "learning throughout life", "lifewide learning" or even "in-depth learning" (Belanger 2016). On the one hand, many terms reflect variety of the concept and advancement in the field's exploration. On the other hand, it increases the risk of misunderstanding, and for people who are not professionally engaged in education – of misuse.

Shadows, dark sides and hazes as metaphor of some aspects of lifelong learning, are inspired by art but nature as well (the weather). A picture in blacks and greys is a sketch of some domain of reality. It sharpens particular elements, but at the same time, blurs the other ones, eager to hide something uncomfortable. This is why in discussions about lifelong learning, generally positive aspects prevail, while the negative, threats or potential situations of abuse, are not so common. Dark sides, shadows and hazes may also signify an attempt to draw attention away from what is behind the decisions taken, especially the political ones, concerning lifelong learning. It is an attempt to hide that many documents, between the lines, stress that learning is obligatory in contemporary world, while in the exact words like freedom, chose, commonness and sheer joy of learning are exposed.

Shadows, dark sides and hazes, especially the last ones, signify attempts to mislead or even manipulate by unfair adult education providers, promising adults the moon. Pictorial metaphor reflexes something mysterious, rarely or unwillingly spoken about. But the darkness itself is not tempting, rather discouraging, because it means lack of safety, uncertainty, so it is better to stay away from it. Thus, this metaphor points to issues absent or silenced in discussions about lifelong learning.

Geographical metaphors

Road

In Polish adult education biographical research conducted by Czerniawska and Dubas (2002) brought major contribution to the field's development. They used "educational road" as metaphor ranging not only for education, but cultural analyses in education as well. Road appears in philosophical and religious contexts, signifying choice, but also toil, an attempt to reach the goal. However, roads are different – straight and easy, wide as highways, main and side roads, but also winding, going down or up, branching off, so tempting but at the same time so dangerous, and finally there are roads that end suddenly. Multiplicity of roads and ways people can drive through, depends not only on human, but also on many circumstances, like other road users, who help or disturb driving. One may turn back or abandon a given road to change life.

As Czerniawska observes "educational roads teach humility, teach how to listen to others. Prevent from forgetting facts, people, things. Enhance for remembrance, rebuilding

one's life road, coming back to former friendship, to the past. Also posing a problem to researcher and participant, what to remember, what to skip, what to come back to, what to keep" (Dubas & Czerniawska 2002, p. 9).

To travel a given educational road one needs to accept the challenge, but also to set the goal. Travelling (learning) may be regular or irregular, interrupted by situations in family, work, health condition or social and political circumstances. Nevertheless, educational road always brings something new to human development. It is no matter if experience is bad or good – it always results in personal growth. Educational road means human must face subsequent levels, often hard to achieve, but the harder it is, the more satisfaction it brings when goal is achieved.

Educational road is strictly connected with metaphor of vocational career as ladder. Sometimes one needs to change a job and begin new educational road, or change the road itself, if ineffective, unsatisfactory or unsuccessful, especially when chosen not by individual, but others (e.g. family).

Meander

Close to metaphor of educational road is that one of "meander", usually associated with river, but also with roads. Czerniawska and Dubas observe that "researching educational roads, roads of learning is connected with research into life course, individual biographies, life histories; these categories are present in qualitative research" (2002, p. 13). Metaphor of meander depicts complexity of education, sometimes stagnation in curves. Meander resembles loop, that signifies the danger of looping, when one sees not chance to get out. But loop is not necessarily negative. Constantly coming back to one place (words, pictures e.c.t.) may be helpful for remembering ("repetition is the mother of all learning"), but it may also mean willingness to come back to pleasant educational situations. Sometimes meander, in effect of processes in river, becomes cut off, and the river changes its running, while the meander becomes oxbow lake (Internet 4). The last one may be treated as educational stock of particular value.

Implications of metaphors in adult education

On the basis of review of metaphors used in research reports and papers, a question arises – what is the influence of metaphors on adult education's theory development? Assessment of metaphors' implications may be different, having in mind functions to fulfil. Those are pointed by a given metaphor theory, discussed at the beginning of this paper. Boyd (1993, p. 485) distinguishes between two functions of metaphor: theory-constitutive, and exegetical (pedagogical). The first one are foundational of theory, that cannot be replaced, the second one are more explanatory. According to Boyd, the most implicative are theory-constitutive metaphors, because not only explain the essence of the theory, its elements and relations, but constitute creative expression of theoretical foundations. This is of crucial meaning in case of theories that change how people see the world around. (Boyd 1993; Zeidler 2014)

The exegetical (pedagogical) function in case of metaphors in adult education discussed above, has double sense. On one hand, it explains and depicts particular issues in thinking about adult education. This is what Lakoff and Johnson (2003) claim. "Because so many of the concepts that are important to us are either abstract or not clearly delineated in our experience (the emotions, ideas, time, etc.), we need to get a grasp on them by means of other concepts that we understand in clearer terms (spatial orientations, objects, etc.). […]We have tried with examples to give some indication of just how extensive a role metaphor plays in the way we function, the way we conceptualize our experience, and the way we speak" (p.

115) On the other hand educational function means teaching, instructing, interpreting, launching intellectual, cognitive processes. Boyd states that "[t]he fact that these metaphors, and other like them, do not convey theoretical insights not otherwise expressible does not indicate that they play no important role in theory change" (p. 486). Boys is absolutely right, especially when social science is taken into consideration. Every metaphor may be crucial for knowledge advancement, enriching the way problems are seen.

Lakoff and Johnson's (2003) cognitive theory interestingly explains metaphor's function. "Metaphor is principally a way of conceiving of one thing in terms of another, and its primary function is understanding" (p. 36). Metaphors, full of sense, built at the crossroads of meanings, are constructive for knowledge in the field of adult education. Inspiring for new research, new theoretical stances, innovations in adult education practice. This function of metaphor cannot be underestimated or unnoticed. "The primary function of metaphor is to provide a partial understanding of one kind of experience in terms of another kind of experience. This may involve preexisting isolated similarities, the creation of new similarities, and more" (Lakoff & Johnson 2003, p. 154)

Hence, metaphor ceased to be understood only as figure in poetry or rhetoric. It is obvious that metaphor reflect the way people think of the world. Metaphors depicting phenomena and concepts extract meaning and facilitate explanation and cognition. In the same manner, metaphors in adult education (natural, geographical, astronomical, pictorial), visualize phenomena in adult education and make them easier to understand. Metaphors move imagination and make adult education's theory more accessible.

Highlighting and hiding

Lakoff and Johnson (2003) make interesting remark on the nature of metaphors. "The very systematicity that allows us to comprehend one aspect of a concept in terms of another (e.g., comprehend-ing an aspect of arguing in terms of battle) will necessarily hide other aspects of the concept" (p. 10). What kind of aspects do metaphors in adult education highlight? What aspects they hide?

Moorland metaphor was criticized for being British-centred, and that moorlands are in fact not so opened as Edwards suggests in relation to lifelong learning. Whilst Edwards (2006) underlined that by using this metaphor he do not want to reject field of ordered adult education practice.

Metaphor of dark sides, shadows and hazes presents monochrome vision of reality, hence it reflexes extreme stance, where only the bad, adverse, unfavourable, perverted and manipulated aspects of adult education are seen. It represents only one-side picture, without positive features. Thus, it hides everything that functions good in adult education.

Terms, taken from astronomy, like pulsar and satellite, focus on distance and these metaphors show adult education from specific point of view. While moorlands, trees, light and darkness are closer to peoples' experience, phenomena and instruments in cosmic space interest only few. By watching television, exploring Internet resources or visiting science centres, one may for example hear how pulsar sounds. Hence astronomical metaphor moves imagination but is based on indirect experience. A question arises then – is adult education also based on indirect experience? If so, then it becomes less successful.

Last, but not least, metaphor of educational road and meander, is close to human's experience, not only is the sense of daily living as way home, to work or shop, but also more metaphysical – as way of life. The same road may be perceived differently, according to emotions and expectations. One's observations may differ and depend on mean of transport – if he/she walks, rides a bicycle or drives a car. There are milestones and points of choice – to

go left, right or ahead. Road changes one's perspective, when goes up or down. Educational road suggests not only the one on land, but also in the see, in the air or sometimes underground. This changes and broadens the manner of seeing adult education and its role in human's life, reveal new potential in theoretical views, research projects, especially biographical, and practice.

Conclusion

Metaphor changes the way people perceive the reality. Wiśniewska-Kin (2009), underlines this function according to cognitive theory of metaphor. She points to metaphor function as explanation and understanding of phenomena and expression of individual's attitude to reality. Authors of research and theoretical stances discussed above, also present their own way of perceiving educational reality, by metaphors. They enhance to follow their interpretation. But metaphor may act differently. It can provoke new associations, that allow for better understanding and reaching beyond author's interpretation, but are closer to reader's experience.

It is worth to cite Charteris-Black (2012), who proposes critical approach to metaphors' analyses. He claims, that Critical Metaphor Analysis (CMA) aims at pointing reason for metaphor's choice, together with ideology, and giving proof of metaphor's influence. Ideology as a basis for a given voice, are not always visible. But revealing ideology brings crucial data for framing the reality and setting borders of discussion. For theory advancement contestation is most fruitful.

Then what implications do metaphors bring to field of adult education? First, they develop interesting frames of adult education's practice. Enrich discussion about adult education, allow for other interpretations, inspire other researchers. But in fact, from all the metaphors discussed earlier, only that of educational road is used more frequently in different biographical research projects in Poland, by Czerniawska and co-operates. The remaining were used incidentally with no further research projects. Thus, in Polish adult education metaphors play role as in classical theory – that of ornament, interesting concept, but hardly ever deepen theory.

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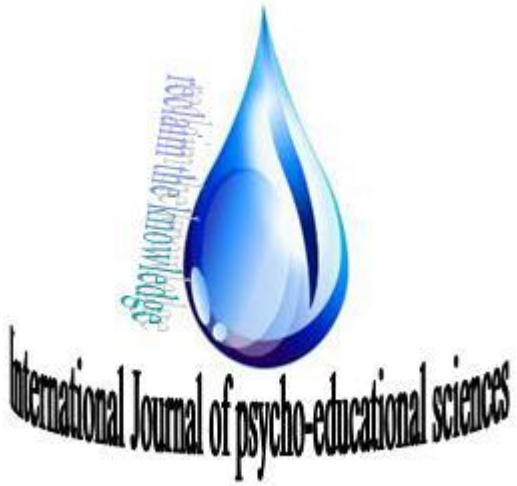

A Phenomenological Study on Teaching Practice In a Teacher Training Program

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Abstract

This study aims to research an in-depth study of how the teaching practice in a teacher training program is carried out. Phenomenology, one of the qualitative research designs was used in this research. The participants were composed of 12 teacher training students, three practice teachers and three mentors. The interview form and the observation form developed by the researchers were used as the data collection tool in the research. Descriptive content analysis technique was used to analyze the data. According to results, derived from the analysis, 8 themes and 21 categories under these themes were obtained. Teaching practice provides experience to teacher candidates and teachers and mentors are expected to guide teacher candidates in an effective way. The greatest problem faced by teacher candidates in the process is that they have to join classes except their bachelor degrees. In addition, the teacher candidates stated that they have so little time to practice in schools; thus the number of candidates per teacher should be decreased.

Keywords: Teacher training program, practice teaching, teacher candidate

Introduction

The training of the teachers has been one of the controversial issues in the history of our country, Turkey. It is thought that teacher training practices do not comply with facts and conditions of Turkey (Yüksel, 2011). A good teacher should be able to successfully carry out tasks such as guidance, leadership, management as well as teaching (Özkan and Arslantaş, 2013). In order to train qualified teachers many studies have been carried out for a long time in Turkey and also solutions having been produced of the problems that were found (Oğuz, 2004). Besides having many academic studies, several conferences and meetings were held to enhance the quality of teacher training in Turkey by Higher Education Council and World Bank in the scope of Increasing National Education Project. At the end of these meetings, it was clarified that it has been determined that prospective teachers in faculties of education were qualified in terms of field knowledge but lacking in pedagogical skills (Harmandar et al., 2000). In order to make up for this deficiency, Education Faculties have begun to give more weight to lessons such as school experience and teaching practice of prospective teachers and to school corporation (Seçer et al., 2010). Numerous research works have been done about teaching practice in Turkey for a few decades (Altıntaş and Görgen, 2014; Paker, 2008; Taşdere, 2014; Ünver, 2003).

Within the scope of the a set of principles taken by the Ministry of Education in Turkey, it is stated that students graduated from other faculties than the education faculty will be able to apply for teacher appointments if they successfully complete the teacher training program that is provided by the education faculties (Erarslan and Çakıcı, 2011). Although sometimes inconsistent decisions are taken in teacher training, it is also stated that prospective teachers can be supported both theoretical courses given by the faculty and the studies provided by the Ministry of National Education. It is expected that teachers should have certain qualifications in order to accomplish their duties and responsibilities such as managing and developing the educational setting. It is seen that in the training of prospective teachers expected to gain these qualifications, teaching practice in which they make observations and perform their teaching skills, has a great deal of importance (Gülşen and Gökyer, 2015; Özkan and Arslantaş, 2013). Teaching practice is a kind of course in which prospective teachers plan a lesson, apply their teaching skills, and after all they discuss and evaluate their performance in order to be more effective (Özenç, 2014). Teaching practice aims individual and professional development of prospective teachers by offering the opportunity to combine

and use their general culture, content knowledge and teacher training knowledge in effective, productive and safe way in school environment (Özay Köse, 2015).

Goodwin et al (2016) state that teachers, as mentors at teaching practice, are one of the important factors that improves the quality of practice, thus it must be taken into consideration while assigning mentors that they are to be volunteer, open to self-development, willing to work cooperatively. Higher Education Council in Turkey (1998) has set out the purpose, structure and the basis of faculty-school cooperation in order to catch the standard throughout the country. Moreover it has also clearly defined the duties, expectations, and responsibilities of all stakeholders involved in teaching practice. Gülşen and Gündüz (2016) indicate that teaching practice, which could be the first teaching experience of prospective teachers, has a high level of influence on teachers' views about teaching profession. A number of different studies have been conducted on teacher training program trainings, in which researchers try to investigate prospective teachers' attitudes towards the profession (Erarslan and Çakıcı, 2011; Özkan, 2012; Polat, 2013), motivation towards the profession (Altınkurt et al., 2014), and self-efficacy beliefs (Elkatmış and Demirbaş, 2013). However, it has been found that there is few studies about how teaching practice takes place in teacher training programs. Besides these studies are usually based on the quantitative screening pattern or only based on students' opinions. Taking into account of consideration of these facts, it is thought that that doing a study on how the teaching practice takes place in a teacher training program, by using method and data triangulation would increase the importance of such in depth studies. The main purpose of this research is to determine how the process of teaching practice takes place in the teacher training program. Hereby, the following questions are asked in our study;

1. What are the perceptions of prospective teachers, mentors at school, and instructors at faculty?

2. Does the teaching practice carried out appropriately with regard to its purposes?

3. How does faculty-student-school interaction take place in teaching practice?

Methods

Model

Phenomenology, one of the qualitative research designs was used in this research. In phenomenology, researchers aimed revealing and interpreting individual perceptions and perspectives for a phenomenon, focusing on phenomena that are generally known but have no detailed understanding (Creswell, 2013; Yıldırım and Şimşek, 2013). The aim of using phenomenology in this study was to reveal how teaching practice takes place in teacher training program in a detailed and comprehensive way. When it is viewed from the outside, teaching practice can be perceived such a process in which prospective teachers just shuttle to school, but we use phenomenology in order to reveal several different variables and aspects of teaching practice.

Study Group

Participants of the study (See Table 1) were selected via convenience sampling, one of purposeful criterion sampling method. Researchers could reach to participants quickly by using convenience sampling method, which help to accelerate the research process (Ekiz, 2015). In the study, convenience sampling was chosen because the participants were studying in the same institution with the researchers. We chose eight female and four male prospective teachers, two female and one male teacher who were working at schools where prospective teachers attended classes, and one female and two male university lecturers who were responsible for the theoretical part of teaching practice as participants of the study. All of the

participants were volunteer for the study. The ages of the prospective teachers changed between 24 and 36 and also all of them had bachelor's degree. Two of them graduated from department of public finance, three from department of business and the rest seven from department of public administration.

Table 1. *Information about Prospective Teachers*

	Gender	Practice School	Department Of graduation	Working	Living place	Age
P1	F	O1	Pub.Administration	No	Other	25
P2	F	O1	Pub.Administration	No	Other	24
P3	M	O1	Pub.Administration	Yes	Aydın	30
P4	F	O1	Pub.Administration	No	Aydın	28
P5	F	O1	Pub.Administration	Yes	Other	29
P6	F	O2	Business	No	Aydın	36
P7	M	O3	Finance	Yes	Other	32
P8	M	O3	Finance	Yes	Other	29
P9	F	O2	Business	No	Other	28
P10	F	O2	Business	No	Other	25
P11	F	O3	Pub.Administration	No	Aydın	32
P12	F	O1	Pub.Administration	No	Other	24

Data Collection Tools

In the study, data were gathered with semi-structured different but parallel interview forms for prospective teachers, teachers, and lecturers. Interview forms were prepared by researchers by reviewing the relevant literature and after that the views of three domain experts of teaching and instruction were taken and the necessary changes were made. Then, pilot interviews were held with two prospective teachers and it was decided to combine questions that were so related to each other. Bailey (1982) stated that observation was a method used to obtain a detailed, comprehensive and time-spread image of a behavior or process. Before the observation form created, researchers had made free observations, and then the observation form related to the research questions were created. In this form researchers focused on such topics like situations that were encountered by prospective teachers, behaviors of teachers and students at school against prospective teachers, and classroom communications.

Data Collection Process

Interviews and observations were made towards the middle and last parts of the process of teaching practice so that stakeholders could have a bright idea about teaching practice. Interviews and observations were carried out simultaneously. The interviews conducted with teacher candidates and teachers had been lasted about between 10-15 minutes while the interviews with academic staff had been lasted about 20 minutes. Contact information of the participants was taken and interviews were held at the appropriate times of them. Researchers observed the prospective teachers while they were teaching totally seven hours at which two hours spent for the pilot study.

Features of the Teaching Practice School

Observations were made in an Anatolian Vocational High School in Aydın province. The school located in a neighborhood that was located in the older part of the city and had

two separate buildings. The physical structure and setting of the school is generally quite good and there are smart boards in every classroom. It could be said that students in that school did not care so much about academic achievement according to the information given by teachers and prospective teachers and also according to the observations of researchers. Although the class size is around 30 students, it was observed that between 20 and 25 students attend classes. Settings of the classroom are arranged traditionally and each student has a separate computer in PC laboratory.

Data Analysis

While analyzing the data, researchers used content analysis techniques. Initially researchers had created codes by viewing the data, then these codes were grouped under certain topics and these topics created categories that eventually created themes. These themes were analyzed and interpreted according to the research questions. And the names of the participants and schools were kept confidential and each was coded.

Validity and Reliability of the Study

In qualitative research, "validity" is related to the scientific findings and "reliability" is related to the reproducibility of these findings (Yıldırım and Şimşek, 2013). Thus these following measures were taken to ensure the validity and reliability of this study. While the forms of interview and observation were prepared, literature was examined and expert opinions were obtained in order to ensure the validity of the study. Moreover, in order to ensure data triangulation interviews and observations were made, also teachers, prospective teachers, and university lecturers were involved in the study. Also the data were analyzed and coded by two different domain experts for providing inter-coder validity and according to results themes were accepted when the agreement among coders were 70% Furthermore, the researchers re-coded the three interview data that were selected randomly two weeks after the initial coding and it was found out that there was an agreement over 90% between these two coding.

Findings

In this part of the study, findings that were obtained with observations made by the researchers during the lectures of prospective teachers and interviews with teachers, prospective teachers and lecturers are included. After analyzing the data, 8 themes and 21 categories under these themes were found out and presented in Table 2.

Table 2: *Themes and categories*

	Themes	Categories
Perceptions about Teaching Practice	Views of stakeholders	*Importance*
		Advantages
		Restrictions
	Expectations and responsibilities	*Prospective teachers*
		Teachers
		University lecturers
	Perspectives towards prospective teachers	*Views of prospective teachers*
		Perspectives of students towards prospective teachers
		Interaction with school staff
Practice of Teaching Practice	Process	*Process*
		Challenges
		Time allocation
	Planning	*Duration of practice*
		Duration of teaching
		Restriction of the number of prospective teachers
		Suggestions to planning
	Gains	
Interaction among Stakeholders	Communication	*With prospective teachers*
		With teachers
		With university lecturers
	Guidance	*Guidance of teachers*
		Guidance of university lecturers

Perceptions about Teaching Practice

Perceptions of teachers, prospective teachers and university lecturers about teaching practice are gathered under three themes; views of stakeholders, expectations and responsibilities, and perspectives towards prospective teachers.

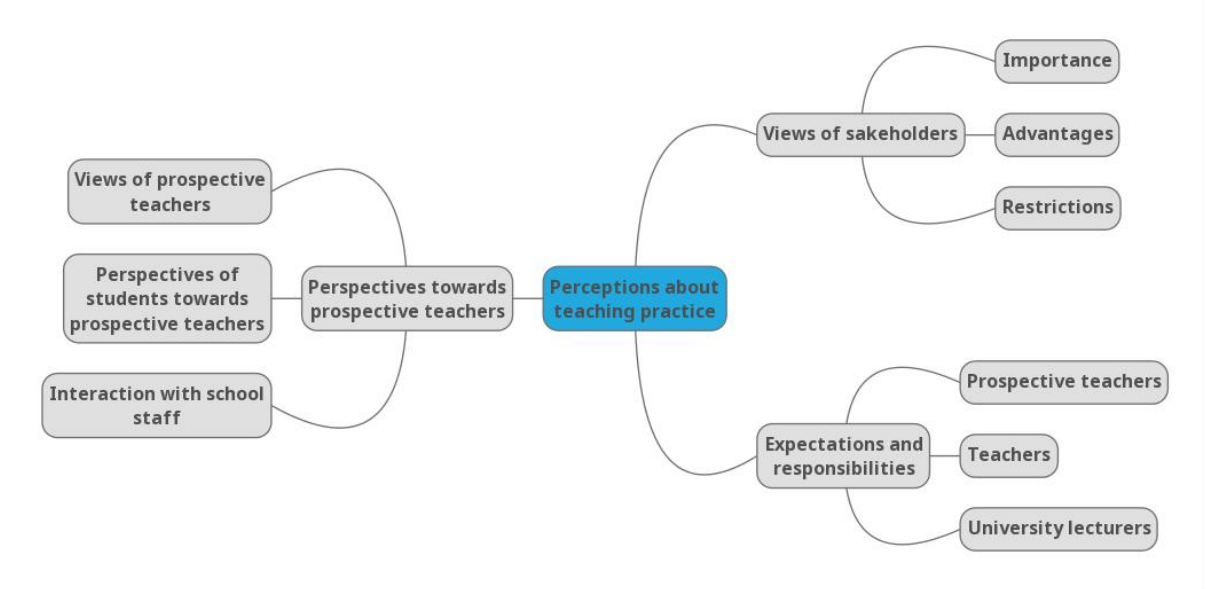

Figure 1. *Perceptions about teaching practice*

Views of Stakeholders About Teaching Practice

Under the theme of perceptions about teaching practice, we reached three categories namely importance, advantages, and restrictions of teaching practice. The data of these three categories were obtained from the interviews with all three stakeholders.

Importance of teaching practice

All of the interviewed prospective teachers stated that the teaching practice was very important in teacher training program, since they had the opportunity to practice the theoretical knowledge that they learned in lessons, also it gave them a great experience before starting their profession. One of the prospective teachers has expressed the following about this issue.

> *"…Teaching is not only a theoretical accumulation but also a profession that should be carried out with practical gains, thus teaching practice is very important. We are trying to gain this experience as much as possible by teaching during the process…" (P7)*

Teachers, who were interviewed, indicated that teaching practice was one of the most important courses for the prospective teachers, because theoretical knowledge could sometimes differ from its application, so it was an important process that prospective teachers must complete to be an effective teacher. Lastly, the university lecturers who form the other part of the teacher training also supported the opinions of both the teachers and prospective teachers.

Advantages of teaching practice

Prospective teachers stated that teaching practice provided some advantages for them before starting their career. They explained that teaching practice gave opportunity to see school climate, communication among students, teachers, and administrators in schools. They also realized the problems in the classroom and would take precautions for such situations when they became a teacher. One of the prospective teachers has expressed the following about this issue.

> *"…We gain some advantages by attending to classes like learning how to handle a lesson from teachers who have a great deal of experience in teaching, which helps us a lot…" (P8)*

Teachers working in the practice school also stated that teaching practice provided an advantage to prospective teachers before appearing in front of students on their own. They also pointed out that if the inexperience and mistakes of the candidates were determined at this stage and the necessary feedback and correlations were given, that would allow them to be a better teacher over time. And lecturers indicated that prospective teachers would be able to see the situations they could encounter in their future teaching life and would benefit from being familiar with these situations. One of the teachers has expressed the following about this issue.

> *"…I think one of the biggest advantages of teaching practice is that it helps students to blow off their stress and tension which is derived from their first time teaching. They become more relaxed towards the end of the practice and at the least they have little experience when they start their profession…" (T2)*

Restrictions of teaching practice

Prospective teachers stated that there was not too much restriction of teaching practice in interviews. However, some candidates (n:2) indicated that even though teaching practice

provided a school environment, it did not create a truly natural school or class environment. One of the prospective teachers has expressed the following about this issue.

> *"…it is not 100% natural environment although we are in the school because of the fact that it is a lesson…" (P1)*

Moreover, some of them (n:3) specified that they could not spend enough time for teaching practice because of the intensity of their private life. Regarding this issue, teachers also utter that some candidates did not want to attend to practice, even some of them offered to sign for lessons that they had not came. Teachers also expressed that performance of that kind of candidates were not promising. Similarly, a lecturer stated that some of the candidates did not care much about the teaching practice and they thought that they would pass it in any case.

University lecturers has stated that the aim of teaching practice is enhancing the teaching skills of the candidates but students in teacher training program do not take the course of school experience that allows students to gain some experience without teaching. Thus, they get candidates to observe the various factors so that they get used to the environment of classroom before starting to teach.

> *"…while teacher candidates in the education faculty is taking the school experience that helps them to learn school climate and so on, teacher candidates in teacher training program can't take such course, they just take teaching practice. Therefore, we ask them to make observations in the first weeks of teaching practice to compensate lac of school experience course…" (L2)*

Expectations and Responsibilities of Teaching Practice

Teachers, prospective teachers, and university lecturers have expectations and responsibilities towards each other through the process of teaching practice. It has been seen that there are three categories in this theme, namely prospective teachers, teachers and lecturers.

Expectations and responsibilities of prospective teachers

Some of the prospective teachers has expected to experience such situations that could be encountered in school environment (n:5), to find out the features that belong to good teachers (n:4), to develop communication skills with students (n:3), and to develop their teaching skills during the teaching practice. Furthermore, a great number of them has expected from teachers in practice school that they should maintain a useful guidance and give positive or negative feedback about themselves (n:7). However, four of the prospective teachers mentioned that their mentor teacher did not give enough feedback to them about at the end of their teaching performances. Besides, they also stated that teachers should be tactful, patient, and open-minded. Prospective teachers have expressed the following about this issue.

> *"… our teacher is interested in us and tries to help us from the beginning, indeed I don't have special expectations. We already begin to teach, but she does not make any comments after the lessons…" (P6)*

> *"… we have to grow up under the surveillance of a good in order to be a good teacher…in other words teachers who will be a guide to us should transfer his/her experience in a good way…" (P1)*

Finally, the vast majority of the prospective teachers mentioned that lecturers who carried out the theoretical part of teaching practice at university should be positive, patient,

and instructive towards them. They also expressed that lecturers tried to help them to solve problems encountered in practice as well as they informed prospective teachers in advance about the situations they may encounter in future. Moreover, candidates stated they gave useful examples of methods and techniques in those theoretical lessons. Although it has been seen that the teaching methods and techniques are included in a different course content, it is considered that the lecturers have implemented such an application in order to overcome the shortcomings of the candidates.

When the candidates were asked about their responsibilities, besides the expectations of prospective teachers, they pointed out that they were in charge of attending to teaching practice on a regular basis and teaching a good lesson. Because they regularly followed the lessons so that they could make up for their deficiencies and have better relationship with students in the process. They also stated that they were expected to be a good teacher in their profession, thus they tried to fulfill their charges by preparing well for the lessons. Some of prospective teachers has expressed the following about this issue.

"… our responsibility is to complete our deficiencies and I try to achieve that so much as possible by teaching in a well prepared way…" (P7)

"… our responsibility is to get students to comprehend the lesson better and help their learning by observing their inadequacies…" (P3).

Expectations and Responsibilities of Mentor Teachers

The interviewed mentor teachers indicated that they expected students to join classes regularly and in a well prepared way; furthermore, they expected prospective teachers to be a good observer and to carry out an effective lesson. However, mentors also stated that not all candidates meet these expectations; even some of them were unwilling and just came to pass the course. One of the teachers has expressed the following about this issue.

"…we do not expect prospective teachers to come blankly here as a guest but of course we expect them to be well prepared for lessons and to be beneficial both for students and themselves…" (T2)

Teachers also expressed that if university lecturers communicated with them more frequently, it would be more beneficial, since they did not seem pleased with the current situation. One of the teachers has expressed the following about this issue.

"…we see lecturers at university at the beginning and end of term, they just came here to watch or evaluate their students and do not have any interaction with us at that time…" (T2)

Mentor teachers, in conclusion, has stated that as their responsibilities they must be a good example and guide to prospective teachers, also they give feedback that reflects their experience to candidates. They have also indicated that they help prospective teachers when they need help. One of the teachers has expressed the following about this issue.

"…sometimes the students can be stuck in difficult situation while they are teaching, maybe because they are not master their subjects completely or they could hang up in the middle of the lesson, first I just wait a little bit and give some time to them then if they do not, I intervene to help…" (T3)

Expectations and responsibilities of university lecturers

University lecturers initially stated that they want prospective teachers to go to practice regularly because they would expose to school climate such as interaction between students, teachers, and other staff at school, which would be so beneficial for them. In

addition, lecturers have expected candidates to combine and apply their theoretical knowledge together with pedagogical skills that they gain in formation program. They have also expected candidates to prepare a well-organized lesson plan before teaching, since that is one of the vital requirements of a good lesson. And one of the lecturers has expressed the following about this issue.

> *"… we want students to prepare a lesson plan before teaching because they can be excited and can forget something that should be necessary for students due to their inexperience situations…" (L3)*

Lecturers has expected teachers in the practice school to provide guidance as mentors and to inform about the issues that are need to be done at school rather than teaching such as coterie meetings or software that are related to education system. They mentioned that as their responsibilities lecturers discussed the difficulties encountered by candidates in theoretical lessons and gave examples from their own experiences. Furthermore, they sometimes give lectures on teaching methods and techniques. A lecturer stated that she/he has two different groups, one of them was composed of candidates from her/his own field and the other was from different field, so she/he sometimes gave lectures on related to their field knowledge for the first group and on pedagogical knowledge for the other group. One of the lecturers has expressed the following about this issue.

> *"…I don't know something about their field so I just contribute to educational or pedagogical issues, however I help to other group in my own field mathematics as well…" (L1)*

Perspectives Towards Prospective Teachers

Under this theme, there are three categories, namely introduction of the prospective teachers to students, views of students and school staff towards prospective teachers.

Introduction of prospective teachers

Prospective teachers were asked how they were introduced to students when they first went to practice school, more than half of them mentioned that they were introduced as teachers or teacher candidates, which was frankly right way according to them. Two of these seven students reported that the mentor teacher warned the student to respect candidates because they would be teachers at the end of their trainings. One prospective teacher has expressed the following about this issue.

> *"… she introduced us as teacher candidates and said they came from university and would be teachers. I think that there is not any problem for being introduced like that, otherwise if she introduced as teachers, students could ask why there is a second teacher in class, so it was ok…" (P4)*

On the other hand, it was seen that one teacher mentioned about the candidates as trainee teachers in one of the observed lessons. The other four candidates expressed that they were introduced as teacher and they liked being introduced like that way. One of the interviewed teachers stated that she introduced candidates as "teachers" and other two teachers introduced them as "trainee teachers". Besides, it was seen during the observations that even some prospective teachers invited their friends, who would teach next, by calling trainee teacher.

Perspectives of students towards prospective teachers

Prospective teachers were asked how the students behave and see them. While five candidates indicated that students behaved and treated respectably like a teacher, three of

them stated that younger age groups, such as the ninth grade, were more respectful, but the older did not regard them as real teachers and did not control how to speak with them. One student expressed that students saw her as a elder sister and could not adjust their friendliness. In addition, a teacher candidate also pointed out that students did reflect the negative attitudes against their teacher to them. One prospective teacher has expressed the following about this issue.

> *"… 9th grade students behave in a respectful manner like we are their teachers, but in other senior students behave in an inappropriate way, since they knew that we were not their teachers…" (P10)*

Mentor teachers stated that students often behaved respectfully to prospective teachers and thought them as teachers over time. They also mentioned that the candidates who were well prepared for teaching, had good communication with students and had a better general knowledge were more embraced than the others. One teacher has expressed the following about this issue.

> *"… one of our candidates was so quiet, so I wondered how he would maintain a lesson. He would teach 20 minutes originally, but he wanted to continue to lesson and I let him to go on. He maintained the lesson really perfect, gave own examples related to topic and I appreciated him on my own; furthermore, students liked him more after that…" (T1)*

Lecturers pointed out that they were not so knowledgeable with this issue and could only explain the situation just when they went to observe the candidates. However, lecturers indicated mentor teachers warned their students and they behaved differently rather than normal while they were observing. During these observations it was seen that most of the students behaved respectfully apart from some. Moreover, one lecturer pointed out that teachers and students in a ranking school did not think candidates as real teachers because of their levels.

Perspectives of school staff towards prospective teachers

A large majority (n:9) of the prospective teachers indicated they did not communicate so much with other teachers and school staff except their own mentor teacher, since they hang out together outside of the classroom and did not use teachers' room so much. Some candidates also stated some teachers were warm and friendly towards them and sometimes they chatted together. One student indicated that some of the teachers in practice school criticized them for taking teacher training program because they thought that program provided an easy way to be a teacher.

Mentor teachers expressed their pleasure of spending time with prospective teachers and they sometimes talked all together with their colleagues and prospective teachers. It was understood from the speeches of teachers; school staff were in a positive manner towards prospective teachers. One teacher has expressed the following about this issue.

> *"… most of the time we are together, it is nice to spend time with young people, and sometimes our other colleagues joint to us…" (T2)*

On the other hand, it was seen that the university lecturers did not have enough knowledge about this issue, but two of them stated that there was no complaint related to this topic. However, L1 pointed out that the mentor teacher of science high school, which was ranking schools in Turkey, did not care the candidates so much and behaved them as students.

In addition, during the observations it was seen that two of mentor teachers warned and changed places of their students, who talked too much among themselves, while prospective

teachers were teaching. Besides, it was seen mentor teachers took attendance themselves at the beginning of lessons, and one of them wandered around the classroom and tried to silence the students while a candidate was teaching. A different teacher also intervened in teaching and gave additional information related to the lesson by cutting candidates' words.

Practice of Teaching Practice

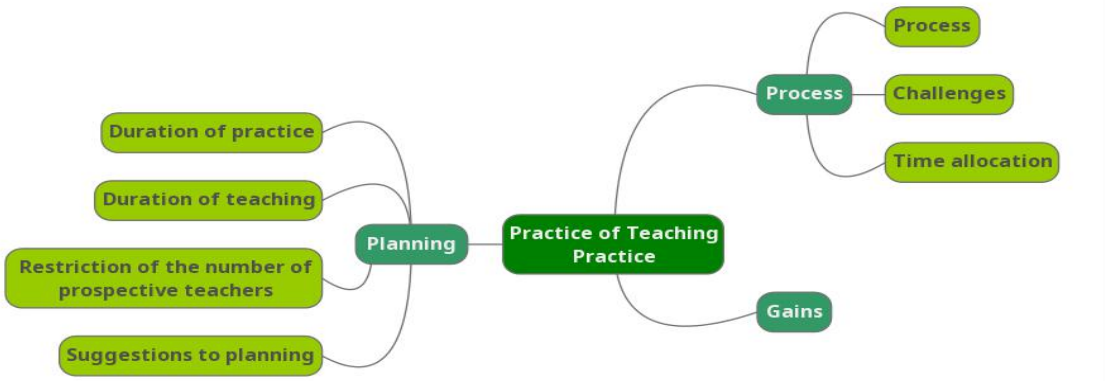

Figure 2. *Practice of teaching practice*

The findings of the research question "How does the teaching practice takes place?" were gathered under three themes; process, planning, and gains.

The process of Teaching Practice

Three different categories were reached under this theme from the obtained data; overall process, challenges of the process, and time allocation for the practice.

Overall process

According to the data obtained from teachers, prospective teachers, and university lecturers about the overall process of the teaching practice, the following information has been reached by the researchers.

- Teaching practice started at the beginning of spring semester.
- Prospective teachers must be registered into the MEBBİS system, that is a kinda software in which teachers can carry out their entities and evaluate the candidates.
- Prospective teachers take theoretical courses on weekends and go to teaching practice on weekdays.
- Prospective teachers go to practice for 4 hours a week for 14 weeks.
- Determination of the practice schools, mentor teachers and lecturers is carried out by the deanery of education faculty.
- Maximum six students can be assigned to mentor teaches in practice schools and 15 students to lecturers for theoretical lessons.
- Prospective teachers initially have observed the lessons then have begun to teach.
- University lecturers observe the lessons of the candidates at least once.

Challenges in the process

Prospective teachers pointed out that one of the biggest challenges they faced in the process was doing teaching practice in unfamiliar courses rather than their graduation field. Due to this challenge, they had some difficulties, for instance they try to carry out lessons that they had little knowledge. When they were asked how they did cope with this situation, they

said they studied earlier the topic. When the importance of the teaching practice is considered, it is unlikely to contribute to candidates. A teacher and lecturer has expressed the following about this issue.

> *"… the field of candidates are different from our lesson; as a result, they have difficulties while teaching. We don't want to get them to teach so much because we have to care our students as well…" (T1)*

> *"…some of the prospective teachers try to use this situation as an excuse and begin to complain when we ask something…" (L3)*

When it has been considered the views of teachers and lecturers, it seems this problem leads problems not only for candidates but also for teachers and lecturers. A lecturer stated that she came together with her students regularly but her students complained about that because other lecturers did not gather their students into classroom regularly.

Time allocation

In this category, findings about how much time the stakeholders allocate for teaching practice have been presented. Accordingly, prospective teachers have seemed to be separated into three in allocating time for teaching practice. Five candidates stated that they allow enough time for teaching practice, four hours a week as well as preparing for the lessons regularly, which took their time but enough. Four candidates said they participated regularly to the teaching practice but did not do anything else extra. However, two candidates admitted that they could not spend enough time for teaching practice due to their intensity. A candidate has expressed the following about this issue.

> *"… Obviously, I don't have too much free time more than going practice, I have a child, thus I must take care of him…" (P2)*

Teachers in the practice school pointed out that they were already at school with candidates and did not too much responsibility except for guidance at school. On the other hand, some of prospective teachers mentioned that the teachers did not give enough feedback while explaining the expectations from teachers. Lecturers reported that their schedule was dense enough, nevertheless they did theoretical lessons regularly and always had enough time to help them when they need help, also they allowed time for observing candidates while teaching at least once.

Planning of Teaching Practice

Three different categories were reached under this theme from the obtained data; duration of practice, duration of teaching of a candidate, restriction of the number of candidates, and suggestions for practice.

Duration of teaching practice

Five candidates indicated that duration allowed for practice was not enough to gain experience on teaching, school climate, and so on so forth. When the common characteristics of these candidates have been examined, it has been seen that they do not work in any job and it has been considered they have so much spare time. On the other hand, four candidates stated that the duration was sufficient and they could not allow more time because of their intensity. Two candidates said it would be beneficial to increase the time but they did not want it because that would bring extra burden to them. A candidate has expressed the following about this issue.

"...I think time is sufficient enough but that would be good to allow much time in order to gain experience, however me and some of my friends don't have so much time for that and we come from outside of Aydın..." (P8)

Mentor teachers said the period of practice was sufficient enough for the students who participated regularly to the classes. Likewise, two lecturers stated that the duration was enough and also thought students would not want spare more time. On the other hand, a lecturer said increasing the time would take much time of the students but it would be useful to raise them.

Duration of teaching

Majority of the prospective teachers (n:9) has thought that duration of teaching per candidate is not enough, although some of them have thought overall duration of teaching practice is enough. They stated for the reason of this situation that they joint the lessons in groups composed of at least three candidates, so they shared the topics and taught just one hour per week. The rest of candidates (n:3) said they taught just one hour as well, but they found this enough because of the preparation time for teaching. One of the prospective teachers has expressed the following about this issue.

"... I teach once a week and it takes time for me to make preparations for it, of course, I think it is enough and I will teach more if I assigned..." (P8)

Teachers indicated that it would be more useful for candidates to teach more, however they thought candidates had some other responsibilities against their families, employers, and themselves, so they thought current situation was sufficient. They also stated that after prospective teachers' lessons, they taught the missing parts of the topic. The lecturers pointed out that duration of teaching per each candidate was absolutely insufficient and must be increased. Furthermore, L1 said that the prospective teachers whose fields was mathematics are not allowed teaching, they are just allowed solving questions on board.

Claims of the L1 were supported by the observations made by the researchers, it was seen that candidates, who joint to mathematics class, solved questions they had prepared beforehand. In addition to this, it was seen that students just used the narration techniques while teaching rather than constructivist approach that was offered to use by their university lecturers. L1 has expressed the following opinion that supports these observations.

"...for example students just prepare a power point presentation and read it, but that was not what we taught to them..." (L1)

Restriction of the number of candidates

The number of prospective teachers given to mentors both at practice schools and universities is limited in accordance with the protocol between Ministry of National Education and Higher Education Council. According to this protocol, a teacher worked at the practice school could take six candidates at most, and a university lecturer could take fifteen candidates at most. Teachers found the current situation quite well and stated that sometimes two times more prospective teachers were assigned to them in previous years. Thus, they said it was too hard to control all of the candidates and the process. One of them said following about that issue.

"... in previous years I hardly learnt the name of my students because of their huge number, so I could not be so interested to them..." (T2)

The lecturers gave two opinions about this subject. First one they thought that it was good for prospective teachers because the amount of time they had was increased compared to

the previous years. However, they pointed out that this situation has also caused such a negativity especially candidates in the fields such as public administration, business, and finance, got used to enter courses belonging to their fields, but with the new system they were also entered courses in different fields. Thus, the efficiency of teaching practice has been affected negatively.

Suggestions for planning of teaching practice

Cases which teachers, prospective teachers, and university lecturers are not satisfied with or want to change in teaching practice have been presented. Initially, most of the prospective teachers stated that they did not join the classes in their own fields, therefore that must be turned over and improved immediately. After that four candidates mentioned that they did take the formation courses at the same time with the teaching practice, so it would be more beneficial to spread the process of teaching practice. Then three of them complained about the undesired behaviors of students in practice school like being uninterested in lessons or rude behaviors, hence they wanted to choose their teaching practice school on their own. At last two candidates stated that they should be assigned to mentors who were enthusiastic and willing to train prospective teachers. Candidates mentioned the following about that issue.

> *"… I just want to change the system of assigning mentor teachers, because it will be better assigning volunteer teachers who are eager to train teacher candidates…" (P12)*

> *"… I would like to change my practice school; it would be better if I were with more enthusiastic students, since sometimes I feel like I am teaching in vain…" (P4)*

Teachers wanted to change the co-operation with university lecturers and to increase the level because they pointed out that they just meet with lecturers at the beginning of term and nearly at the end when they came to observe candidates. But they found this inefficient and said there is a need to increasing the co-operation for better process. Also the lecturers stated that some steps need to be taken for the better implementation such as giving in-service training for teachers who take charge in teaching practice, assigning volunteer and useful mentors, and maintaining the theoretical lessons regularly all together with other lecturers. They also pointed out that too many candidates attend lessons except their fields, thus it would be appropriate to limit the number of students with respect to the number of teachers in the field.

Gains of Teaching Practice for Prospective Teachers

The majority of prospective teachers (n:8) indicated that practice get them to gain experience most as they just mentioned in their expectations. In addition, they stated that they began to teach more comfortably in time, since their self-esteem increased during the process. Moreover, they expressed they knew the importance of communication and interaction with students as much as having knowledge because they need these skills in order to transfer their knowledge.

> *"… teaching a lesson, guiding the conversations, managing the classroom and so on so forth gives you self-confidence in other words gives you the experience you need; furthermore, most importantly we see our potential and I need to come here to discover it…" (P7)*

It can be understood that teaching practice get students to know themselves and to recognize whether they are prone to teaching or not. Teachers mentioned that candidates gained experience in how to control classroom and communicate with students, also they

found prospective teachers nervous at the begging of process but then they did overcome it as they teach in time, consequently it was a vital gain before starting teaching professionally for them. University lecturers supported the opinions of teachers and candidates similarly and pointed out it was a great experience to apply the pedagogical and field knowledge all at once.

Interaction among Stakeholders of the Teaching Practice

The findings of the research question "How does faculty-student-school interaction take place in teaching practice?" were gathered under two themes; communication and guidance as seen in the Figure 3 below.

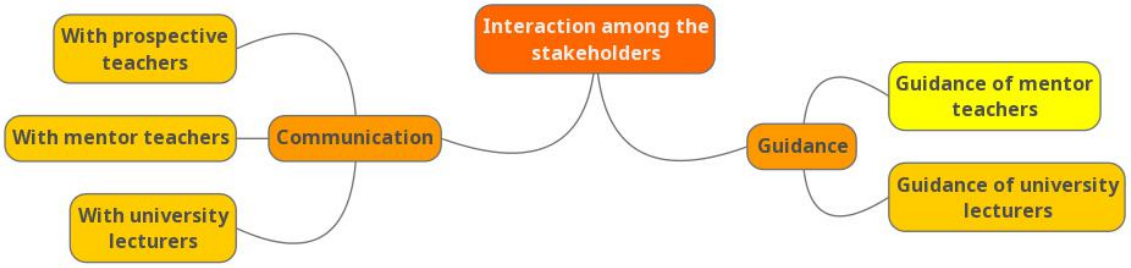

Figure 3. *Interaction among the stakeholders*

Communication

Under this them three categories were reached, namely communication with prospective teachers, mentor teachers, and university lecturers.

Communication with prospective teachers

Teachers stated that they took the contact information of the candidates and called them when it was necessary. Two lecturers mentioned that they use WhatsApp groups for communication while the other lecturer selected candidates from each of groups who would deliver the messages of her. On the other hand, it was understood that prospective teachers did not visit the lecturers except for theoretical lessons.

Communication with mentor teachers

Prospective teachers pointed out that they could communicate easily with their mentor teachers whenever they want by calling or texting messages. Lecturers indicated that they visited mentor teachers at the beginning of term and took contact information mutually but they did not contact so much during the process. They also added that teachers called them when they need help with the files or MEBBIS *[a system that allow mentor teachers to evaluate student teachers in digital platform]* system. A lecturer mentioned the following about that issue.

> *"… we don't communicate so much in the process, sometimes they have questions about MEBBIS so they call us…" (L3)*

Communication with university lecturers

Prospective teachers indicated they took the contact information of lecturers and were able to communicate easily just as with their mentor teachers. They preferred texting instead of calling lecturers because of not to disturb them, and also preferred using WhatsApp groups. One of the prospective teachers mentioned the following about that issue.

"… we don't have any communication problem, we have the phone numbers of both of our mentors, and mostly we use our WhatsApp group…" (P2)

Teacher at the practice schools stated that they often communicated with lecturers through the candidates. Nevertheless, they expressed if the communication increased, the efficiency of the practice would increase as well.

Guidance

According to the data obtained from the interviews, there have been two categories under this theme, namely guidance of the teacher and guidance of the lecturer.

Guidance of the mentor teacher

Some prospective teachers stated that they tried to benefit from the experiences of teachers in terms of classroom management and interaction, however they could not find any support about field knowledge due to their different fields. One of the prospective teachers mentioned the following about that issue.

"… I think the teacher is very talented and experienced in classroom management and has her own techniques, thus we try to take her as an example…" (P5)

Four of the candidates pointed out that their mentors did not give any feedback after they taught. However, three prospective teachers stressed that the guidance of the mentors was useful and she supported them, also used a positive language. Two candidates complained that their mentor intervened them so much. Although they knew that she tries to help them by warning students to become quiet, candidates did not like that type of behavior. One of the prospective teachers expressed the following about that issue.

"… she intervenes to us while we are teaching, I think that hinders our performance. Instead of intervening to us she should give feedback at the end, this would be better…" (P2)

Guidance of the University Lecturer

Prospective teachers pointed out that lecturers provided sufficient and useful guidance, also provided solutions to the problems they faced and behaved patiently towards them. Moreover, they gave constructive and positive feedback to candidates. Prospective teachers also indicated that lecturers showed useful teaching methods and techniques they could use while teaching.

Discussion and Conclusion

In this research, it was aimed to investigate in a detailed way ow the teaching practice takes places in teacher training program. Thus, the views of the prospective teachers, mentor teachers, and university lecturers were consulted; furthermore, it was also supported by observations made by researchers. When it was viewed from the outside, teaching practice could be perceived such a process in which prospective teachers just shuttle to school, but phenomenological design was used in order to reveal several different variables and aspects of it. After analyzing and coding of the data, 8 themes and 21 categories under these themes were found out. It was seen that providing an experience to the candidates was the most emphasized issue about teaching practice. When the literature has been surveyed it was seen there are studies that support our findings about teaching practice, being one of the first and vital steps in teaching profession (Baran et al., 2015; Çepni et al., 2015; Kana, 2014; Özay Köse, 2014; Ramazan and Yılmaz, 2017).

Considering the expectations and responsibilities of the stakeholders, the most important expectation of prospective teachers was a useful guidance from mentor teachers and university lecturers. Moreover, these expectations and responsibilities have been stated in the Faculty-School Cooperation guide published by Higher Education Council (1998) as the qualities that the teachers should have. There are lots of research that point out teachers should be an example to prospective teachers (Erarslan, 2008; Karasu Avcı and İbret, 2016; Paker, 2008). In addition, candidates indicated they were informed about the situations they could encounter and how to act to these situations by lecturers. Sılay and Gök (2004) similarly expressed that lecturers should explain the roles and behaviors demanding in teaching at the beginning of practice.

On the other hand, prospective teachers pointed out that the mentors should give them feedback in order to be aware of their mistakes and to be able to get rid of them however they also added that their mentors did not do it effectively. It has been emphasized in many studies that feedbacks and corrections have an important effect at every stage of learning (Boud and Molloy, 2013; Soden, 2017; Van den Bergh et al., 2014). Gündoğdu et al. (2010) stated that mentor teachers could not help prospective teachers to apply the methods and techniques they learnt theoretically, and also they had difficulties in getting candidates to adapt school and classroom environment. Therefore, it is necessary to remind teachers on their duties and responsibilities that should be monitored in the process regularly. Teachers and lecturers expect from candidates to participate in practice on a regular basis, but it is not so for all. Paker (2008) has indicated that it can't be said teachers and candidates have enough knowledge about mutual responsibilities to each other; furthermore, he has pointed out that despite of the high and positive initial expectations, some problems could occur in the process due to the different charges of the parties.

Not being seen as the legally appointed teacher by students was one of the important complaints of prospective teachers, which has been similarly seen in the literature (Baştürk, 2009; Karaca and Aral, 2011; Oğuz and Avcı, 2014). Therefore, teachers and administrators of the practice school must take the necessary precautions to prevent the candidates suffering from emotional and psychological problems. The other problem that candidates encounter is that they attend classes rather than their own fields. It has been presented in the guide prepared by Higher Education Council (1994) that one of the most important aims of teaching practice is combining the field and pedagogical knowledge.

One of the other problems of prospective teachers is that they found the duration of teaching per them inadequate, even the candidates who said the overall duration of it was enough thought that they could not teach enough because they attend to the same classes together with their friends. There are many studies that show the negative effects of attending classes in crowded groups (Baran et al., 2015; Baştürk, 2009; Karaca and Aral, 2011; Seçer et al., 2010). This situation could hinder the development of prospective teachers, since they could not find enough time to practice. Improvement of this situation, which is frequently expressed in the studies about teaching practice, has contributed to improve the quality of teaching practice, however, it has been stated that the ideal number should be determined as two or three at most per teacher (Baştürk, 2009; Çelikkaya, 2011; Özay Köse, 2015; Sılay and Gök, 2004).

It was seen that the communication of prospective teachers between teachers or university lecturers was good and could be sustained easily vice versa. However, it was understood that the communication between teachers and lecturers was not very satisfied and need to be improved, and there are other studies that supports this result (Baştürk, 2009; Karasu Avcı and İbret, 2016; Oğuz and Avcı, 2014; Sılay and Gök, 2004).

Suggestions

The following suggestions have been presented in the light of this study:

- It has been suggested that all stakeholders should come together at the beginning of term and define their expectations and responsibilities to each other, which seems to end many problems that were mentioned. Especially it was advised that communication between teachers and lecturers should be improved.
- It has been suggested to take the number of candidates and teachers in the same field into consideration so that every candidate can practice in their own fields.
- It has been understood that prospective teachers can't teach enough due to their crowded numbers; therefore, it has been suggested to decrease the number of them per teacher.
- It has been suggested that teachers who are enthusiastic, responsible, and open to self-development should be assigned in teaching practice.
- It has been suggested to give in-service training for teachers who take charge in teaching practice to improve the quality.

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Decoding of Bias in Qualitative Research in Disability Cultures: A Review and Methodological Analysis

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Abstract

Prejudice and bias are described as an embarrassing phenomenon of research work in social sciences. They concern both quantitative and qualitative research. Authors working in both antagonistic paradigms such as positivist, post-positivist and constructivism, interpretivism generally point to the main patterns showing the aspects of bias. They usually indicate the bias in the process of the research design, among the subjects involved in the study or including the reliability and quality issues of the study. Gender is also mentioned as not neutral and as factor raising bias. In this review and methodological article the concept of bias is narrowed down to discussing these that concern chosen elements of research design process and the three actors involved as researcher, gate-keeper and censor. The gender issue bias, detailed analysis of design process bias, as well as quality of research bias and informant bias are briefly mentioned in the article but are extensive enough to be discussed in a separate paper.

Key words: bias, qualitative methodology, field research, disability cultures.

Introduction

Many social science authors, methodologists write about biases in the research process. The issues of biases are analyzed by Spradley (1979, 2016), Peshkin (1988), Norris (1997), Hammersley (1997), Onwuegbizie & Leech (2007), Pannuci & Wilkins (2010), Flick (2010, 2011), Jemielniak (2012a,b), Glinka & Hensel (2012), Sarniak (2015), Roulston & Shelton (2015) et al. The authors agree that the bias in social research work are an unfortunate phenomena, because they cause consequences throughout the entire research process that is deformed. This article is a review of bias in social research, with a special emphasis on bias in the planning of qualitative research and ethnographic field practice in vulnerable groups, including disability. Particular attention is devoted to bias and prejudices developed in qualitative research conducted in disability cultures. The paper contains analysis of bias in 3 essential contexts: 1. design-related bias, 2. Actors involved in generating bias, in which I will discuss biases on 3 sides: (a) researcher, (b) gate-keeper and (c) censor.

Defining Research Bias

According to Pannuci & Wilkins (2010) prejudice are a systematic errors in social research. They are not a one-time errors in qualitative research. When, in the opinion of the authors may exhibit bias in the research? The authors agree that prejudice may occur at every stage of research, including research design, data collection, literature analysis or review.

In addition, Hammersley & Gomm (1997) point to the prejudices generated during the reporting of research results by the media that act in a biased way. Sarniak (2015) confirms that prejudices can appear in all components of qualitative research, and additionally indicates that they may be derived from improperly constructed tools such as interview matrices, questions alone. They will be the brainchild of the researcher, but also what Sarniak (2015) points out may be from the participants of research - informants.

The next definition of research bias is constructed by Roulston & Shelton (2015), while analyzing the teaching methodology of qualitative research. The authors indicate that while learning about qualitative research methods, students routinely ask questions about research biases, expressing concerns about manipulation or distortion of data. Authors continue that in the basic course of the qualitative methods, the questions and comments of students usually reflect a number of views on "prejudice", including mainly indicated bias as lack of objectivity.

The authors argue that by analogy, the idea that bias is an aspect of subjectivity as feature of naturally subjectivist qualitative research nature and that it is in fact perceived is a universally accepted issue (Roulston & Shelton, 2015). Roulston & Shelton (2015) after Peshkin (1988) try to explain the idea of subjectivity linked with the qualitative research bias. They write: " Peshkin (1988) argued that problems with subjectivity arise not so much because of the ways in which one's "*class statuses, and values [interact] with the particulars of one's object of investigation*"(p. 17) but with failures to recognize and account for these, and thoughtfully shape a project in ways that manage subjectivity"(p. 333). The other conclusion of both authors reading Peshkin (1988) is that subjectivity is related to personality of the qualitative researcher and are therefore individual in qualitative research.

Dimension of Bias in Qualitative Research

The authors of Roulston & Shelton (2015) indicate the following credibility-related bias:

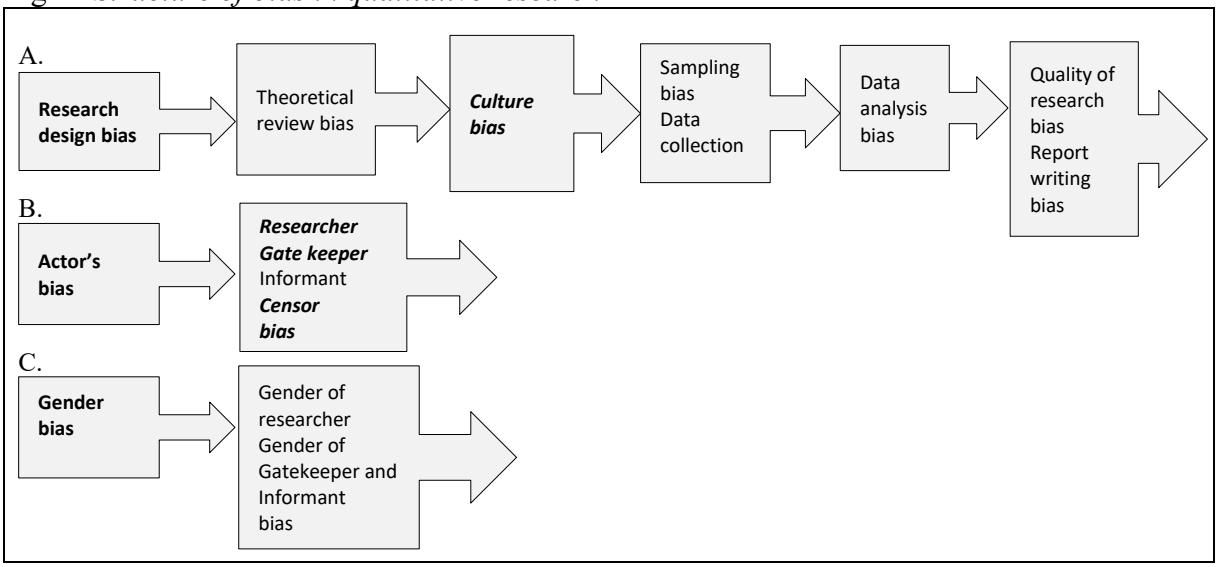
- use of terminology,
- issues of credibility and its' procedures,
- errors,
- prejudices related to confirmation of the assumptions made by the researcher,
- researcher bias (p. 241).

The authors after Onwuegbuzie and Leech (2007) indicate a different set of prejudices in qualitative research:

- bias in observation,
- bias in the choice of purposive sample,
- researcher bias,
- bias related to confirmation of a priori assumptions (p. 241)

In reviewing the typology and characteristics, I constructed a diagram in which concluded the key areas of the manifestation of bias. In the below parts of the article I analyze the key themes of prejudice indicated in Fig. 1. and related to (A) research design bias and (B) actors' bias. Highlighted are issues discussed in this article. It is easy to notice how extensive problems bias may concern.

Fig. 1. *Structure of bias in qualitative research*



Source: own concept Beata Borowska-Beszta

Not all the elements of the diagram are discussed in this article, giving the framework of the text. Continuing the initial typology of possible bias in qualitative research, I would like to point out three main elements: (A) prejudice about the design of a research project from which I will discuss only culture bias and (B) biases on the actors' side on which I focus more and discuss bias on 3 subjects: (1) resarcher, (2) gate keeper, (3) censor. Informant bias will be analyzed in another paper.

While the role of researcher and informant is often pointed out by researchers and qualitative methodologists, among others. Sarniak (2015), Jemielniak (2012 a, b) have not mentioned however that also third actor as (3) the gate keeper, that determines the conditions of access to the site, can also be a source of prejudice in researching disability cultures. A censor has a similar role related to power, however with more hidden influences.

In addition, complex situations during field work and the possibility of prejudice appear when gate keeper is also a member of a research team that collects data and / or in the field acts as an authority, the role of an important leader in the studied culture of disability. These problems will also be clarified.

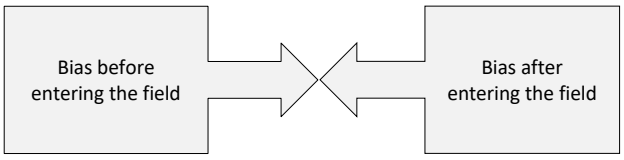
A. Research Design Bias

What do bias mean in the design phase of qualitative research? In the case of research design, prejudices will be present at each phase, including (1) preliminary literature reviews, (2) selection of purposive sample and data gathering with prejudices, (3) negotiations and rapport building in the research area, as well as (4) data analysis and report writing or essay after research, in the case of ethnographic studies. Of course, qualitative research is based on a circle model, or a funnel so prejudices will be typed into a specific circular model for collecting and analyzing qualitative data and recurrence in the field.

Time as Source of Bias

Glinka & Hensel (2012) have pointed to a slightly differentiated (than aforementioned) set of dilemmas and errors in qualitative research, that in my view may simultaneously imply partiality of the whole research process in relation to bias. The authors divided prejudices on the possible time of occurrence (1) before entering the field and on the phases of preparation of the research assumptions of the project and (2) after entering the research area.

Fig. 2. *Bias before and after entering the field*



Source: Beata Borowska-Beszta

The authors point to the following two moments of possible dilemmas before entering the field and concerning the negotiation and construction of rapport that I perceive as sources of bias:

- Formulation of negotiations in the research field in a way that changes the behavior of informants (p. 46)
- Acquiring entry into a given cultural scene at all costs when the participants of the place expressly reluctant to refer to the researcher and research proposal (p.47)

Glinka & Hensel (2012) point to the following sources of problems and dilemmas after entering field research that I also perceive as possible sources of research bias:

- *Shortcuts.* Walking by the members of the research team for short cuts and "extrapolation of observed trends" (p. 47). My former fieldwork suggests also that this bias source can be especially active when the researcher has little time to collect data or that there is poor co-operation in the research team, between data collectors.
- *Prematurely formulating conclusions* (p. 48), that is a mistake earlier pointed out by Spradley cultural anthropologists (1979, 2016).
- *Excessive concentration on the so-called "tastes"* and trivial and secondary (or random) things for a given area. Furthermore, extracting the content observed or discussed from the context (p. 48). Analogously in my opinion to the "chilly topic" of e.g. local, sensational newspapers.
- *Time and description of research field* (page 48). The authors of Glinka and Hensel (2012) do not, however, specify the sources of bias more broadly. I will add that, in my opinion, this topic should be understood as e.g. selective descriptions of time and place, research realities in teams. By skipping what actually happened in e.g. research teams that is related to the course of cooperation in the field, turbulence in cooperation, e.g. related to the gender and power. In addition, conflicts arise and their sources and/ or of what happened at the interface between the cultures of the research team and the cultural scene that is the subject of research.
- *Culture shock*, as a source of bias pointed out by Glinka & Hensel (2012) as dilemma, related to the sudden need to associate with different communities and communities (p. 49). The phenomenon of cultural shock in the study of disability I described in the article Borowska-Beszta (2008) as *Anathema of Culture Shock in Special Adult Education*.

  In my opinion, bias while researching disability cultures will occur in situations of too early attempts to conclude and write the conclusions of field researchers while they are in the real phase of shock and not adapt to the new cultural scenes of disabilities. At the time of the shock, writing field notes is essential, but making key conclusions can act as a precautionary factor of bias.
- *Strong entry into the role*. In addition, Glinka & Hensel (20120 also point to the sources of dilemmas as a strong entry into the role of an attempt to modify the research field (p. 49), that in turn I perceive as a source of bias in disability cultures research (Borowska-Beszta 2013a,b). The phenomenon is especially related to researchers who are activists of disabled people and want to modify the area, i.e. of apriori, before gathering data in the form of transcripts of interviews, field notes, photographs etc.
- *Empathy.* An additional problem of bias in my opinion, identified as a dilemma in research by Glinka & Hensel (2012), may be the overwhelming empathy of the researcher. Phenomenon I identify as a metaphorical *drowning* in the studied culture. The authors Glinka & Hensel (2012) write, that while overwhelming empathy and its effects, as a problem is located on the part of the researcher, who begins to live the life of the group, losing sight of his own goal of the project (p. 49). I add that this source of prejudice is often observed among younger seminar students performing qualitative projects. Sometimes, from beginner researchers, at any stage of the research, they become rather the activists and advocates of cultural scenes, that results in the process

of data collection as losing sight of their own research objectives.

Culture Bias

Sarniak (2015) distinguishes interesting cultural prejudices, grounded on the one hand in limiting the understanding of cultural diversity and at the same time ethnocentrism and the lack of sensitivity to cultural relativism and limits of knowledge, and I will add - about the culture of disability. When thinking about the environment of people with disabilities as a culture (Brown, 2002, Barnes & Mercer, 2001, Borowska-Beszta, 2012, 2013a), as pointed out by Sarniak (2015), a qualitative researcher may in my opinion make many mistakes assuming that disability cultures, people with needs related to dysfunctions in sensory-neurological, physical, emotional-behavioral or intellectual areas are identical because the researcher knows one culture already, e.g. from past own research or other kind of professional participation.

It would be a mistake for the researcher to assume that the different cultures of disability are in fact subject to the same processes, changes or identical goals. It is important to note cultural relativism in disability cultures as well that other disability-related processes and concepts are shared by adults with physical disabilities having regular intellectual potential and other by adults intellectual disability (Borowska-Beszta 2014) in different levels according to DSM-5 from mild (I.Q 70-55), moderate (I.Q 55-40) severe (I.Q 40-25), profound (I.Q 25<).

That is why I also distinguish the unique category of bias in the social qualitative research of vulnerable groups, including the cultures of disability, observed by me on the sides of almost all actors of the research processes. It concerns the investigator, gate keeper, censor, sponsor, research participants. The category is called the *clinical label bias*. This type of prejudice concerns the strong and priority action of the diagnostic label, that at specific stages of development and life were given to individual research participants in psychological-pedagogical clinics or by doctors' offices. In field research practice since 1999 I met openly with such suggestions of gate keepers and key informants: *he/she has a serious level of intellectual disability, what will he/she tell you?* - When I collected data and conducted interviews in a day care center for adults with intellectual disabilities.

I would like to add that conducting simple interviews with people with severe (I.Q 40-25) intellectual disabilities is possible, but in these cases, the gate keepers' prejudice were related to the assumptions of extensive knowledge, that he believed I should have to gather from my informants with disabilities.

In this context, the category of cultural bias, where the source is culture, as indicated by Sarniak (2015) and in addition to cultural bias - the *clinical label bias* I point to, has a broader meaning. It appears in full dimension in the disability area when researchers *will prefer of apriori the 'categorical' or group identity of the participants, having as nucleus an analysis of medically and psychologically diagnosed disability*. In my opinion, a clinical label (although essential in any supportive activities offered by specialists or educators) poses a risk of prejudice to (1) a qualitative researcher, (2) gate-keeper, (3) censor and (4) informants from the cultural scene themselves.

In addition, it must be born in mind that the cultures of disability vary in the kind and quality of experiences and external control, as discussed by Douglas (2007) and social oppression, illustrated by Shakespeare (1994), Barnes & Mercer (2001) et al. Other barriers and oppression experiences and openly describe the cultures of people with physical disabilities, other cultures with intellectual disabilities. In addition, disability cultures differ in values, norms, language and code, and taboos. Members of the terminally ill, or cancer and

members of cultures with intellectual or mental illnesses, require multidisciplinary researchers prepared for research.

I go with analysis to the thread of bias generated by the actors of entire qualitative research. I want to point out that Sarniak (2015) identified a total number of 9 types of prejudices in qualitative research and divided them into 2 general types. These are the types of bias associated with the phases of the research process and the bias of the researcher. The author points out 5 types of prejudice on the part of the researcher as (1) confirmation of assumptions, (2) prejudice on culture, (3) prejudice on the order of questions, (4) prejudice on key questions and vocabulary used by the researcher. Sarniak (2015) distinguished also 4 types of bias on the informant's side as (1) prejudice related to acquiescence, (2) prejudice related to social acceptance, (3) bias associated with habituation, (4) prejudice generated by the sponsor. In addition, I distinguish the other optional sources on the continuum of subjects that make prejudice as mentioned before researcher and informant - the (3) gate keeper and the (4) censor.

B. Actors' Bias

In terms of biases on the actors of the research process, I indicate three important actors in the process of bias development: (1) researcher, (2) gate keeper and (3) censor.

Researcher's Bias

According to Roulston & Shelton (2015), the researcher's bias may be individual. The authors write that prejudice developed in qualitative research can be understood as result of a unique and characteristic trait for a particular researcher (p.6). The authors continue that analysis of the bias generated by researcher researching disability cultures on a certain general plan, indicate the issues, especially related to the personal qualification of the researcher to carry out the research and his/her research experience in the field. This was confirmed earlier anthropologist Spradley (1979, 2016) thesis that qualitative research is learned during the field research practice. It turns out that different results can be achieved by researchers who know, for example, the ways of communicating with people with severe or even profound intellectual disabilities or multiple sensory dysfunctions than those without specific skills. Not difficult to notice, that lack of certain skills of performing data collection in vulnerable disability cultures can be a source of bias in perceiving the communication potential of participants of the cultural scene - persons with disabilities.

While researching various disability cultures some solution would be it would likely to focus on individual verbal and nonverbal signals and to decode individual messages that are sometimes rarely unique. Such attitude can prevent bias developed by researcher related to lack of communication competences (Borowska-Beszta 2005). In addition, what omitted by Norris (2007), writing about the field of research among people with various psychiatric disorders, I also generally would narrow down to the lack of researcher's special preparation and response during and to the psychiatric patients being interviewed. Data collection may be subject to prejudice developed due to lack of skills, strength of the researcher for particular informant's expression or behavior as sudden changes, directives, also change of emotions and moods of informant with psychiatric disorders (Borowska-Beszta 2013b, 2014b).

As I recall, Sarniak (2015) distinguished 5 types of prejudice on the part of the researcher: (1) prejudice regarding the willingness to confirm a prior hypothesis; (2) prejudice concerning cultures; (3) prejudice on the order of questions and vocabulary used by the researcher, (5) prejudice as a halo effect. From this hierarchy I find it noteworthy that some of the prejudices have their origins in errors at the level of the epistemological program and the paradigm of transferring habits and procedures from positivist research to constructivism,

what I call *paradigm chaos* on the part of the researcher (Borowska-Beszta, 2016).

Confirmation Bias

In the cultural scene and field research Sarniak (2015) defined this prejudice as follows. “One of the longest known and widespread forms of bias and prejudice is when a researcher formulates a hypothesis or conviction on a topic and then uses informants to confirm that belief, opinion, or hypothesis”(Sarniak, 2015). It cannot be nor noticed that such bias often involve poor knowledge of the ethos and theoretical assumption of qualitative research or the strong quantitative background of the researcher as well as the ethics of research in general.

From the perspective of ontology research, the researcher will make this mistake as a preconception about confirming initial hypothesis when, for example, has grounded, incomplete or no knowledge of one culture of disability, he will hypothesize about another. For example, a researcher who is familiar with the realities of linguistic environments and cultures of intellectual disability, functioning below 70 pts. of IQ will assume and attempt to confirm own bias as the same level of intellectual functioning in the cultures of people with physical dysfunction. This in practice of the research translate into simplicity of tools such as interviews, simple, uncomplicated or even avoidance of narrative techniques in groups of people without intellectual disabilities but with visible serious physical dysfunction. Researchers can also construct bias as exert pressure in the field for confirmation of the hypothesis of identical intellectual functioning (such as intellectually disabled), groups of people with visible disabilities in the physical sphere.

In my view, from a research epistemology perspective, a researcher of disability and vulnerable groups can commit bias in the following three cases: first when he/she was previously firmly established in quantitative methodology and research (Borowska-Beszta, 2016). Second, when he/she experiences *research paradigm chaos* and is unaware of it. This means that researcher moves the quantitative research model without deep reflection into qualitative research model and practice. Third, when researcher conducts the mixed methods research without their proper methodological requirements of correctness. This particular research situation as a study linking two separate epistemologies needs much attention and clarity according to Creswell (2009).

Research Tools Bias

The other possible sources of bias, as pointed out by Sarniak (2015), concern data collection and tools such as interview forms. The author calls them directly the *question - order bias* and *vocabulary bias*. The author believes that the phenomenon of errors and prejudices in the construction of questions consists in the fact that the erroneous order of questions causes that "one question may affect the answers to the next questions, creating prejudices in the order of the same queries. The facilitators will be prepared for the words and ideas presented in the questions, which in turn will affect their thoughts, feelings and attitude towards further questions "(Sarniak, 2015). In addition, the author points out the prejudices generated by leading questions and the use of a given vocabulary by the researcher. Sarniak (2015) deals with the type of verbal manipulation used by the investigator to confirm a prior hypothesis. Here in my opinion one can notice a double error:

- on the level of paradigmatic chaos and
- error in the construction of the tool in the qualitative research, i.e., the interview forms.

The prejudices that arise at the level of the vocabulary used, according to Sarniak

(2015) are associated with "inserting own words and sometimes ready ideas, concepts in the mouth of informants." The author continues that even when the researcher's key question and vocabulary are not saturated with prejudices in themselves, they may lead to bias and bias as results.

Sarniak (2015) believes that researchers make these mistakes because "they want to confirm their previous hypotheses, build relationships in the field, or overestimate their own understanding of informants" (Sarniak, 2015).

In the case of data collection in socially vulnerable groups, disability cultures, this kind of prejudice may in my opinion have at least three reasons. First, when the researcher is in a hurry to collecting the data and their own concepts and linguistic concepts will put in the mouth of the interlocutors. Secondly, when the researcher does not know the specific and individual language codes of the studied culture of disability, individual persons with intellectual dysfunction and thus may deform future research results. Thirdly, deformations due to poorly prepared research tool will be stronger when the researcher does not respond to the specificity of verbal concepts and expressions used in disability cultures during data collection in the field, but he/she rigidly follows the pattern of the previously prepared tool of the data collection.

Preferences Bias

In addition, Sarniak (2015) has distinguished an interesting source of bias, which is also of particular importance in the study of disability cultures. The author called it the halo-effect bias, which is referred to the selection process of the purposive sample. Sarniak (2015) writes that "moderators and respondents have a tendency to see something or someone in a certain light because of a single, positive attribute. There are several cognitive reasons for halo effect, so researchers must work to address it on many fronts. For example, and the moderator can make assumptions about a respondent because of one positive answer they've provided. Moderators should reflect on their assumptions about each respondent "(Sarniak, 2015).

Automatic Translation Bias

Except to the above mentioned by Sarniak (2015), in 2005 I indicated a kind of bias during field research in disability cultures while the data collection phase, that may be generated by the researcher (Borowska-Beszta, 2005). Bias occur when the researcher unreflectively and almost automatically translates the linguistic codes of the informer, e.g. with a moderate or severe intellectual disability into the researcher's own code and terms, deforming the essence of the transmitted content (Borowska-Beszta, 2005).

Ontology of Disability Bias

The following prejudices have been decoded successively in own publications and research reports (Borowska-Beszta, 2001, 2005, 2013a, b, 2016). They concern problems of ontology of disability issue as prior theoretical knowledge of the researcher on disability concepts and theories. It includes theoretical models of disability itself, perception of themselves by people with disabilities, prejudices related to social roles such as fathers, mothers with disabilities in the mainstream or with the sexuality of people with intellectual disabilities in Poland. I would indicate as follow:

- *Medical or social model of disability bias*. This means that the researcher entering the field has a ready hypothesis about the medical concept of disability and a priori expresses the belief that a disabled person is a sick person who can never accept a disability. There may be situations when the researcher enters the field with the

hypothesis that the disabled person is merely a subject of cultural and social oppression, from which he will never be freed, because historical data point to the oppression that has been taking place for centuries.

- *Self-perception of persons with disabilities bias.* This type of research bias is directly proportional to the lack of knowledge of disability backgrounds and cultures. A qualitative researcher enters the field with the hypothesis that a person with a disability sees himself as a sick, lifelong suffering, with a wheelchair, unable to live independently a happy.
- *Sexuality of adults with intellectual disabilities bias*. Publications in Poland on the sexuality of adults with intellectual disabilities have been taking place for years from Nowak-Lipińska (2003), Kijak (2013, 2014, and 2017). I also confirm that also qualitative research works, conducted under my supervision in years 2003-2017 with generative families members of adults with intellectual disabilities will admit parental (in fact *gate-keeper's*) bias that their son, daughter with intellectual disability (mild or moderate) is asexual, and there is no need for him/her to establish intimate ties.

Gate-keeper's Bias

Power Bias

Gate-keeper is a participant in the cultural scene and also key informant. The prejudices that may be addressed by him in disability culture research may relate to researcher personally and to field bias. Both types of bias can appear separately and are associated with power. I believe that the gate-keeper has the power he/she can sometimes unknowingly abuse, while recruiting purposive sample and regulating researcher's access in the field. Power and use as regulation of access to certain data is darkening and damaging the image of the studied culture can also lead to bias.

In addition, I observed such sources of bias related to power after my own 3 field projects in foreign countries (2 individual and 1 team research): in France 2012 (shadowing and micro-ethnographic research in French inclusive schools in Lyon), Japan 2016 (visual ethnographic studies in special education schools and support facilities in Fukuoka), team research in Scotland 2017 (ethnographic studies of disability and care in opinions of Polish migrants, caretakers of disabled people in their homes in Edinburgh & Livingston).

Some of the initial conclusion are that gate – keepers can be aware and may consciously reinforce own power over a single researcher in the field or over the team. May cut off access as I observed in research in Japan, or consciously or less consciously manipulate the research team members through sharing contradictory information according to upcoming phases or parts of further research or retreat from different situations, causing additional voltages in the research team. I noticed such phenomena in team research in Scotland as well as in individual project in France.

The other issue I only briefly mention is the role of gate-keeper's gender. What I noticed after recent fieldwork in Scotland 2017 that gender of gate-keeper combined especially with his power (understood as various accesses in studied culture he could offer) are also factors of subtle tensions or even deeper conflicts among the field research team of opposite gender. Sometimes the team undergo turbulences according to changes of roles in the team while data collection what influences the data collection either. The gate-keeper can be informally appointed as a new leader of the research team, according to his power in the field, perceived goals or other form of attractiveness. It happens that the research team is totally deconstructed after leaving the field and having poor or lost abilities to work again on former

basis. On the other hand such changes, experiences and learned facts are not bad for better understanding of the real roles of power and gender of potential gate-keepers.

The other problems as the ethical side of gate-keeper's work are discussed by Duncombe & Jessop (2002). The authors write that the main task of the gate keeper is establishing relations in the human plane that will then give the data for analysis in the scientific perspective.

The gate-keeper in disability cultures may also exhibit prejudice regarding the *clinical disability label.* This kind of bias is related to the erroneous regulation of access and gate keeper's conviction that a given participant is not necessarily capable of "telling something" valuable to a researcher (Borowska-Beszta, 2013a, b). In the first place, therefore, he/she wrongly specifies that the researcher expects an eloquent informant with higher level of verbal expression assuming that one does not meet expectations. In addition, gate-keeper will assume with bias that the researcher is a total outsider in the field of disability studies and cannot communicate with people with intellectual disabilities or mental illnesses, especially those who make it difficult for regular participants in cultural scene being studies. Above depicted a few examples of biased attitudes of gate-keepers lead to prejudices related to the underestimation of communication competences of informants with disabilities and the researchers as well.

Censor Bias

Shadow Figure Bias

Sarniak (2015) writes also about the role of bias in collecting data by calling them biased by the sponsor. Sarniak (2015) pointed out that: "when informants know - or suspect who is the sponsors of research, their feelings and opinions about the sponsor may discourage their responses. The views of the sponsoring organization's mission or its core beliefs may also affect the answer to all questions related to the source of funding, as he writes" (Sarniak, 2015). However, I do not always think that the researchers or cultural scenes are always controlled or have direct contact with the sponsors of the cultural scenes. In my opinion the research findings and reports are read by the head of institutions and cultural leaders, such as the director of the care centers for persons with disabilities of those who are dependent. Therefore the foundation manager who allowed them to enter the area and who are not sponsors of the research will rather serve as censors of the research and cultural scene being studied. That's why, I think that researchers may come across in the cultures of disability facing the phenomena of real or symbolic actors of creating additional bias from behind the scenes called censors.

Minimizing Bias

Roulston & Shelton (2015) have identified 3 strategies to minimize bias that can be used in the teaching of qualitative methodologies to help reconcile prejudices:

- analyze the relationship between philosophical assumptions and method,
- exploring research roles and
- analysis of the researcher's work

The authors continue after Onwuegbuzie & Leech (2007) that the search for representativeness will of course (p. 241) protect against prejudices in the selection of purposive sample of objective and observational biases.

In my opinion, useful in the field of research on disability cultures would be:

- transparency and reflection throughout the research process from design phases to field data collection, analysis and report writing
- openness to specific and non-standard ways of communicating on the ground and knowledge of the specific mental and physical performance of the participants
- triangulation of researchers and data sources
- vigilance on manifestations of *paradigm chaos* of the members of the research team (Borowska-Beszta, 2016)
- use of bracketing techniques and phenomenological approach during field work
- acceptance of *emic perspective* in the field of research
- frequent and as needed recurrences in the field after the data collection

Other interesting ways of minimizing bias and prejudice indicates Norris (1997). The author writes that "while there may not be a paradigmatic solution to error and bias, there are certainly things that can be done. It is not difficult to label a whole range of potential sources of bias in research. For example:

- *the reactivity of researchers with the providers and consumers of information;*
- *selection biases including the sampling of times, places, events, people, issues, questions and the balance between the dramatic and the mundane;*
- *the availability and reliability of various sources or kinds of data, either in general or their availability to different researchers;*
- *the affinity of researchers with certain kinds of people, designs, data, theories, concepts, explanations; the ability of researchers, including their knowledge, skills, methodological strengths, capacity for imagination;*
- *the value preferences and commitments of researchers and their knowledge or otherwise of these;*
- *the personal qualities of researchers, including, for example, their capacity for concentration and patience; tolerance of boredom and ambiguity; their need for resolution, conclusion and certainty (p. 174)*

Conclusion

These factors are part of the possible sources of prejudices that I have examined in the article. Attention may also be paid to the problem of bias in contexts of improving quality of the field research in the context of researching vulnerable groups and disability cultures. There is some final reflection that bias in field research in disability cultures are neither avoidable nor completely eliminated. They are a complex of factors involved in the research process and involve both the design of the research, the personality and the actions of the actors in the research process and consequently the quality of the research. There are individual configurations of problems related to bias that the researcher or research team has to solve in the field or, unfortunately, what they consciously or unconsciously construct in the field.

However, efforts can be made to devise a research process to minimize the deforming effects of various bias, as long as the researcher or team of researchers will reflect reflexively on their own in the field and the actors involved in field research (gate-keepers, sponsors, informants) and openly cooperate for purposes of bias minimization.

In addition, the minimizing bias is more successful when researchers are particularly sensitive to being alert to all the factors that deform the results of the inquiry and to the

sometimes subtle manifestations of actions initiated by censors and sponsors. That requires however further, broader scientific research and methodological analysis.

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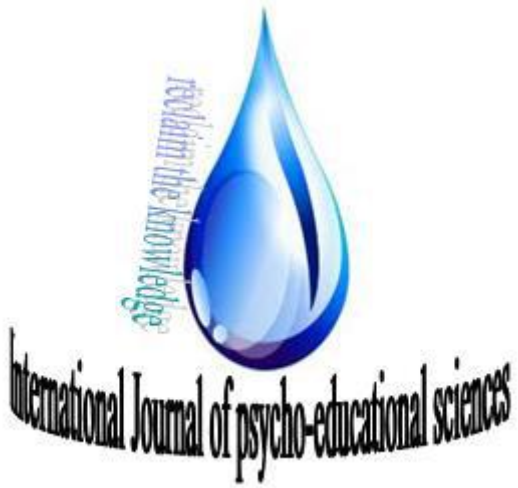

The Mediator Effect of Mindfulness Awareness on The Relationship Between Nomophobia and Academic University Adjustment Levels in College Students

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Abstract

This study explores the mediator effect of mindfulness awareness levels on the relationship between not being able to access information with mobile phone (nomophobia) and academic university adjustment rates in college students. 286 university students from Aydın Adnan Menderes University were recruited into the research and Mindful Attention Awareness Scale, University Life Scale and Not Being Able to Access Information Factor of Nomophobia Scale were given to participants to obtain the data. The consequences of this research showed up that there is a crucial negative correlation between nomophobia and academic university adjustment levels in college students and more vitally, nomophobia significantly predicts the academic adjustment level of college students. Also, it is found out that there is a significant mediator effect of mindfulness awareness levels of college students on the relationship between nomophobia and academic university adjustment rates.

***Keywords*:** Mindfulness, nomophobia, academic university adjustment.

Introduction

In recent years, psychological and mental problems that are experienced and emerged during the transition from adolescence to young adulthood in human beings have been perceived and investigated in the fields of both clinical, social and developmental psychology (Ceyhan, 2006). The logic behind the occurrence of this case could be stated that the shaping and formation of personality, character, life dynamics and decisions that are crucial to life have the potential to deeply influence the life cycle of the individuals who have this mentioned transition process, with psychological disturbances or troubles that may arise during this period (Pancer, Hunsberger, Pratt and Alisat, 2000). Hence, researchers who are active in social, developmental and clinical psychology fields gravitated their interest into this life process of human beings in order to provide deeper and detailed comprehension for the psychological cases of individuals (Pancer, Hunsberger, Pratt and Alisat, 2000).

The psychology science indicates that it turns out that individuals are mostly examined and investigated during adolescence to young adulthood transition process through adjustment and adaptation abilities due to the importance of these features for the entire life process and progression (Chemers, Hu and Garcia, 2001). In this context, adjustment ability involves the terms of harmony, completion, fulfillment of adaptation according to the literature (Chemers, Hu and Garcia, 2001). Following to this case that, harmony could be displayed as a person's ability to adapt psychologically, physically, and individually to certain environmental and living conditions and also, another vital point could be explained that completion is a subject to a certain period, where it is seen that the individuals define and accept new conditions and conditions and shape themselves within new conditions (Chemers, Hu and Garcia, 2001). As a result of the full fulfillment of the adaptation, the individual adapts to the social environment and becomes able to use and manipulate its vital functions fully through having high level of harmony and completion abilities (Beyers and Goossens, 2003). When the life processes of individuals are taken as basis, it could be observed that adaptation skills and its progression rates are very important for resuscitating life conditions and regularities (Beyers and Goossens, 2003). According to evolutionary psychology perspective, adaptation could be mentioned as one of the most important element for survival process for human beings, and also, Sigmund Freud indicated that adaptation ability of individuals as a representative of existence, conditions of social adjustment. For this reason, it is seen as a very important process for the development and progress of psychological and mental development of a person in his / her life, experience or new experience (Beyers and Goossens, 2003).

In the university process, individuals are admitted with new knowledge in professional and social terms and experience a kind of oriental form of their life in university education process. For this reason, in the university process, the decisions made by the individuals and the dynamics of their lives, they are confronted as factors that shape their attitudes towards life events while they are in the adult life and their surroundings (Beyers and Goossens, 2003). Literature indicates that it is necessary to avoid the problem of the adaptation of the individuals in the university process in order for these dynamics to be fully realized. However, in today's world, many individuals in university life are experiencing certain psychological problems in terms of adapting and conforming to the new social and professional norms, values and principles (Beyers and Goossens, 2003).

Attending to the university for the first time can be a very challenging task for the young adults. A growing body of evidence shows that this transition places a great deal of stress on students' lives (Wintre and Yaffe, 2000). Hamilton and Hamilton (as cited in Buote et al. 2007) reported that 20% to 25% of 1st-year students do not complete the second year in university. A study found out that %40 of students face serious difficulties to the extent that they cannot complete their degrees (Pantages and Creedon, 2016). Furthermore, students successfully completing their degrees still may struggle with significant levels of stress during their university years (Zitzow, 1984).

First-year students generally experience a wide range of adjustment problems. Homesickness, friend sickness, depression and other psychological disturbances are among these could be demonstrated as the most observed psychological problems that first-year students suffer (Buote et al. 2007). Problems can also affect academic performance (Buote et al. 2007) within turn may lead to other problems.

Adjustment is a complex process where the individuals try to better fit to the environment (Ramsey et al. 1999). So, arguably there can be many reasons and predictors to the success of this "fitting process". The current research aimed to concentrate on three of these: mindfulness awareness, nomophobia and academic university adjustment process in order observe to what extent mindfulness awareness levels of college students has a mediation effect on the relationship between nomophobia and academic university adjustment rates of university students.

Nomophobia

While the technology is evolving every day, the fears surrounding human beings are also changed during the time. According to a research conducted in England, today's new phobia is "Nomophobia" (King, Valença, Silva, Baczynski, Carvalho and Nardi, 2013). This new psychological problem might be demonstrated as covering the rest without mobile phones. It has been stated that the reason why the mobile phone is so addictive for individuals is the desire of people to keep in constant contact with their family and friends (King, Valença and Nardi, 2010). These people who are actually having nomophobia are so addicted to their mobile phones that the stress of not being able to find where the phone ends charging or where the phone is putting up a lot (King, Valença and Nardi, 2010).

Following that, nomophobia is a fear of extreme fear of being disconnected from communication via mobile phones. This causes physical side effects such as panic attacks, shortness of breath, dizziness, tremors, sweating, increased heart rate, chest pain and nausea. Staying indoors, standing in the open, not afraid of the heavens, a new phobia of modern times appeared as nomophobia (Yildirim and Correia, 2015). Since this psychological problem is observed as a new phenomenon, extensive research has not been conducted on the subject. In a study through 2100 cell phone users, one of the two people who attended said

that they never turned off their phones (Yildirim and Correia, 2015). One in ten people said that they wanted to be always accessible because of their work (Yildirim and Correia, 2015). Researchers displayed that "nomophobia" can affect 53 percent of mobile phone users, 58 percent of men, 48 percent of women who are worried that they have lost their phones, lost their phones or dropped out of their coverage when their charges run out in negative way for the psychological well-being.

Additionally, nomophobia symptoms could be ordered as;

- If losing a mobile phone or signal is causing a negative physical indication, or if the person never turns off the phone,
- If the person is aware of a panic attack or an excessive reaction to the end of the charge,
- Obsessively checking to see if it's next to your mobile phone or mobile device,
- Even if the mobile phone is in a safe place, the concern of losing it is observed in constant way,
- If the phobia goes on for a very long time and affects the health or daily life of the person.

It can be said that the fear of losing the mobile phone connection is a dependency. Mobile phone and social media addiction is working with the same mechanism as other addictions (Yildirim and Correia,2015). If a person is deprived of what he / she is addicted to, and if he / she needs more and more, the same effect is seen in the nomophobia. In fact, again, as with addiction, many people are less likely to use the phone (Yildirim and Correia,2015). It is observed that the nomophobia is very common among college students, especially those who have given themselves a certain personal freedom (Yildirim, Sumuer, Adnan and Yildirim, 2016). Especially when the university campuses are observed with deeper attention and interest, it might be very regular to be able to observe young people who are walking down the building with their heads on their smartphone and who are not even aware of what is happening around them. It seems that the lives of these young people, who are constantly or intermittently busy on the floor, in the garden, in the cafeteria, on the bed, at home, on the bus, on the metro, in the minibus, or even with the smartphones, seem to be under the influence of these smart and attractive devices. It is reported that traffic lights are placed on the sidewalks in Germany in order to prevent possible accidents by attracting the attention of the individuals who do not pay attention to the traffic lights, especially because they look at the smart phones of their permanent owners (Yildirim, Sumuer, Adnan and Yildirim, 2016).

The conflict-like psychological conditions that are concerned with smartphones in classes and lectures, such as the conflicts they experience when they are taken away from mobile phones or when they are forced to close the for a moment, are also striking, as these young friends, who have their own attention and adversely affect their classmates'. The issue of how to deal with students who use smartphones in high school is discussed in the internet based academic sharing environments as teaching staff. The vast majority of teaching staff from various countries and cultures in the world who comment on the online academic sharing environment report that they see this as a serious problem that prevents learning in class (Yildirim, Sumuer, Adnan and Yildirim, 2016). Students who do not leave the smartphone even when they are asleep can end up having to spend less time on their lessons as a result of their lessons in learning the lesson, reinforcement and reinforcement, and the limited time spent in the preparation of the exams are affected by the time they spend with the smartphone. It is also reported that the use of smartphones has also increased the stress levels of individuals (Yildirim, Sumuer, Adnan and Yildirim, 2016).

Mindfulness

The term mindfulness can, in fact, have different meanings (Chase, 2009). Mindfulness (1) is a philosophical or religious practice originated from eastern religions, (2) is a set of skills and abilities that can be learned, (3) is a set of beliefs about the world, (4) is a cognitive style and (5) mindfulness is a personality like, trait. It could be argued that the common part to all definitions is that mindfulness requires to be fully present in the moment and to be aware of internal and external stimuli. The teachable skills definition may be the most used and most referred among mental health professionals. Many studies have been made regarding specific mindfulness-based intervention programs (Bishop et al. 2004). One of these intervention programs, Mindfulness-based stress reduction (MBSR), was developed by Kabat-Zinn (Chang et al. 2004). MBSR, designed as a group intervention is widely used in clinical practice. MBSR has shown to be effective in reducing stress. Chase (2009) indicated that in a sample of cancer outpatients concluded that those who had an MBSR training showed fewer stress symptoms than the control group.

Brown and Ryan (2003) studied on the effects of dispositional and state mindfulness with well-being. Dispositional mindfulness, measured by the Mindful Attention Scale, "is focused on the presence or absence of attention to and awareness of what is occurring in the present rather than on attributes such as acceptance, trust, empathy, gratitude, or the various others that have been associated with mindfulness "(Brown and Ryan, 2003) which can be seen as components of the more inclusive state mindfulness term. Brown and Ryan (2003) displayed that both dispositional and state mindfulness predicts self-regulation behavior and positive emotional states.

In addition to this circumstance that, Fravell (1979) displayed that, mindfulness awareness levels of college students were found as playing significant role in social cognition, problem solving, memory, attention, language acquisition, writing, reading comprehension, verbal persuasion. It was indicated that awareness could improve motivation and academic learning for college students. Mindfulness awareness provides an individual assessment of the learners' beliefs and supports independent learning. In this respect, mindfulness awareness is seen as an important variable in the course work, which in turn leads to an increase in the academic achievement of learners or college students (Fravell, 1979). Therefore, the individual cognitive processes are based their mindfulness awareness level play an important role in self-regulation and academic performance for university students (Zimmerman, 2000). Hence, it was inferred that students who think they are aware of their own learning process in such a process will catch a higher academic success by themselves. If a learner is aware of the preliminary information they possess before learning a subject, how much it will affect the new subject, and if you ask yourself what you know and complete the deficiencies (Zimmerman, 2000).

In short, mindfulness awareness could be defined as the conscious and periodic control of whether the individual can achieve his or her goal and, if necessary, the freedom to choose and implement different strategies. When we look at all these definitions, mindfulness awareness is interwoven with all dimensions of thinking dimensions, more importantly, mindfulness awareness levels of university students were observed as playing a vital role in academic achievements and performances (Zimmerman, 2000).

The Present Research

University adjustment is an important issue which can positively or negatively affect students' life. Mindfulness has been shown to be effective in relieving stress and attention is considered by many as one of the prerequisites to start a self-regulation process and, nomophobia at its part is known to facilitate self-regulation and management regarding the

cases on academic adaptation abilities in college students. In this study Not Being Able to Access Information Factor of Nomophobia Scale was used.

This study aims to investigate the mediator effect of mindfulness awareness levels on the relationship between nomophobia and academic university adjustment rates in college students. The hypotheses of this research are formed as;

1. Is there a significant inter-correlation between nomophobia, mindfulness awareness and academic university adjustment levels in college students?
2. Do mindfulness awareness levels of college students show mediator effect on the relationship between nomophobia and academic university adjustment rates?

Method

Participants

Participants in this study were 196 women and 90 men (N = 286) who were students at Adnan Menderes University in Aydın. Participants' ages change between 17 and 29. Also, a total of 199 students (68.9%) are living in student dormitory, 15.6 %with flat mate and6.2 % with their family. Also, 187 participants (64.7%) are not using cigarette and 165 participants (57.1%) alcohol; 98 participants (33.9%) are using cigarette and 117 (40.5%) alcohol. For 159 of participants didn't any chance about using cigarette and for 174 of participants about using alcohol after they begin to university. In addition, 109 participants in the metropolitan city, 75 participants in the city, 63 participants in the district, 35 participants in the village said that they spent a large part of their lives. More than half of the participants (67.5%) said that were at normal levels of income.

Instrumentations

Socio Demographic Information: Form was prepared to learn the socio-demographic characteristics of the participants by researchers. The form included information about age, gender, marital status, alcohol and cigarette use, the place they live (home, dormitory etc.), the place they spent their lives for a long time (big city, district etc.), income situation.

University Life Scale: The scale used to measure the level of adjustment of the university life of the university students is developed by Aladağ et al. (2003). The internal consistency coefficient is .90. The Cronbach's alpha fort this scale was found .91 in this study. It has 48 items and 6 subs-scales; Adaptation to university environment (12 items). Emotional adjustment (9 items), Personal compliance (7 items), Counter-Sex relations (7 items), Academic compliance (7 items), Social cohesion (6 items). This scale is a Likert type scale of 7.

Mindful Attention Awareness Scale: This scale was developed by Brown and Rayn (2003) measures the frequency of open and receptive attention to and awareness of ongoing events and experience. The scale was adapted to Turkish by Özyeşil et al. (2011). The Cronbach's Alpha internal consistency of the scale was .80 and test-retest correlation was .86. In additional to in this study, Cronbach's Alpha was found .89. The high scores on the scale indicate that conscious awareness is high.

Not Being Able to Access Information Factor of Nomophobia Scale: This scale was generated by Yıldırım and Correia (2015) in order to observe the level of phobia for individuals in terms of spending time without smart phones. Not Being Able to Access Information Factor of Nomophobia Scale has 4 items that are measured through answering 1-Nothing to 4 – Very. Also, the Cronbach's Alpha was found out as 0.95 and higher scores that

are obtained from the scale indicate high level of nomophobia that the participants have according to the norms of this scale.

Procedure

After the approval of the ethics committee, the study was conducted with 286 voluntary students of Adnan Menderes University. First of all, students were informed about the purpose of studying by entering the classes. After that informed consent forms, socio-demographic forms and scales were given who wanted to participate in the study. This study is designed as a descriptive survey model. The data was analyzed with a computer program which is SPSS (Statistical Package for Social Sciences) for Windows 18.0. During the assessment of data, descriptive statistics methods were used which are numbers, percentages, means and standard deviations. The difference between two groups are analyzed with t- test, One Way ANOVA was used for analysis of more than two groups difference. Additionally, Pearson correlation test was used for analysis of relationship between predictor and predicted variables; and predictability of variables were tested with regression analysis. Hierarchical regression was performed with variables resulting in statistically**.** To test the significance of mediation effect sobel test was used.

Results

To test the mediation effect of mindfulness awareness on the relationship between nomophobia and academic university adjustment levels of participants, Pearson Correlation analysis was primarily used in order to observe inter-correlation between these displayed variables. According to the outcomes, there was a significant positive relationship between academic university adjustment and mindfulness awareness scale rates of participants, r=.412**, n= 240, p=.000. This consequence showed up that while mindfulness awareness levels of individuals are increasing, academic university adjustment rates of them are also augmenting simultaneously. Furthermore, there was a negative significant association between mindfulness awareness and nomophobia levels of university students, r=-.246**, n= 242, p=.000. This evidence would be determined that while mindfulness awareness levels of individuals were increasing, nomophobia rates of college students were also seen as reduced in simultaneous way. Another found out outcome might be indicated that participants' academic university adjustment rates and nomophobia levels were found as significantly correlated in negative way, r=-.151**, n= 238, p=.000. This described that while academic university adjustment levels of students were augmenting, their nomophobia levels were also decresing at the same time and path.

Additionally, Table 1 displays the inter-correlation between nomophobia, academic university adjustment and mindfulness awareness levels of participants below.

Table 1 The Relationship Between Nomophobia, Academic University Adjustment and Mindfulness Awareness Levels Of Participants According to Pearson Correlation

	Mindfulness Awareness	Academic University Adjustment	Nomophobia
Mindfulness Awareness	1		
Academic Uni. Adj	.412**	1	
Nomophobia	-.246 **	-.151 **	1

Note: ***p*<.01. N=221.

After conduction of correlational analyses, regression method was used in order to observe the future based relationships between the nomophobia and academic university adjustment abilities in college students. The regression revealed that, mindfulness awareness levels of university students contributed significantly to the regression in terms of nomophobia F(1, 240) = 15.459, p< .01. Additionally, it is found out that nomophobia levels of university students contributed significantly to the regression, F (1, 236) = 5.510, p< .01 and accounted for 0.2 % of the variation in academic university adjustment ability. Also, mindfulness awareness levels of university students contributed significantly to the regression in terms of university adjustment F(1, 238) = 48.696, p< .01. Table 2 shows the regression relationship between nomophobia and academic university adjustment levels and mindfulness awareness levels and university adjustment levels in university students below.

Table 2. *Regression Analysis for the Relationship between Nomophobia, Mindfulness Awareness and Academic University Adjustment*

Variable	β	t	sr^2	*R*	R^2	ΔR^2
Nomophobia and Mind.	-.079	-3.932*	.020	.246	.061	.057
Nomophobia / Uni Adj.	-.365	20.971*	.156	.151	.023	.019
Mindfulness / Uni Adj.	.308	6.978*	.044	.412	.170	.166

Note: ***p*<.01. N=237.

Also, mediation analysis indicated that mindfulness awareness levels of participants has a significant mediator effect on the relationship between nomophobia and academic university adjustment levels in college students. All of the relationships between mindfulness and nomophobia (β= -.079, p< 0,01); nomophobia with academic university adaptation (β= -.365, p< 0,01); and mindfullness with academic university adaptation (β=.308, p< 0,01) were significant. In the last step both mindfullness and nomophobia added to regression together, the effect of nomophobia on academic university adjustment was weaker. Furthermore, results of the Sobel test indicated that the association between nomophobia and academic university adjustment is significantly mediated by mindfulness awareness levels of college students (z' = -2.22, p<0.01).

Together, these results suggested that nomophobia predicts academic university adjustment levels of college students by strengthening academic university adjustment abilities through application of higher levels of mindfulness awareness levels. Table 3 and Figure 1 will present the mediator effect of mindfulness awareness levels of college students on the relationship between nomophobia and academic university adjustment levels in university students below;

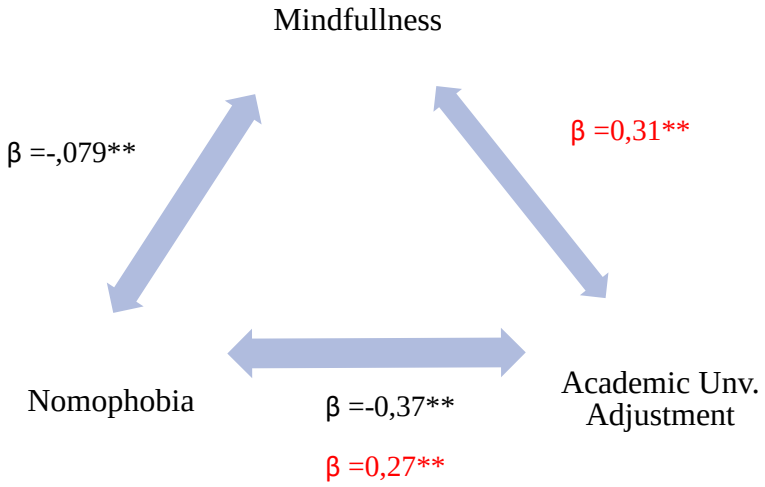

Figure 1
*Mediator Effect of Mindfulness Awareness on the Relationship between Nomophobia and Academic University Adjustment (*p= *0,05, **0,01)

Discussion

In this research, it was purposed to analyze the mediator effect of mindfulness awareness on the relationship between nomophobia and academic university adjustment abilities in college students. According to the findings of this study, nomophobia is significantly predicting the academic university adjustment rates of college students. It means that if the nomophobia levels of university students are observed in high rates, their academic university adjustment levels would be displayed in lowered rates due to fear of being without smart phone, internet connection and social media applications. Therefore, students might have difficulty in concentrating on their academic achievement, performances and academic university adaptation processes. More importantly, nomophobia is seen playing a crucial role in determining the academic university adjustment levels in college students.

On the other hand, previous investigations that were conducted in this field indicated that nomophobia might not be taken as one single factor that could be able to determine the level of academic university adjustment ability rates in college students (Gezgin, Sumuer, Arslan and Yildirim, 2017). Because, an adjustment process contains more than one variable and their influences within its contexts, and in university students, mindfulness awareness levels could be taken as an important factor that affects the adjustment and adaptation process in university (Gezgin, Sumuer, Arslan and Yildirim, 2017). Therefore, this study taken mindfulness awareness variable as a mediator one in order to observe its effects on the predictive relationship between nomophobia and academic university adjustment abilities in college students. According to the findings of this research in terms of measuring the mediator effect of mindfulness awareness on the relationship between nomophobia and academic university adjustment levels in college students, there was a significant mediator effect of mindfulness awareness levels in university students on the relationship nomophobia and academic university adjustment rates. This information could be evaluated that although nomophobia level of a student is seen in augmented levels, if his/her mindfulness awareness rate is observed as increased, his/her academic university adjustment ability could be monitored in raised rates. Because, he/she would aware of the negative influences of nomophobia on his/her academic university adjustment process and then, he/she would

prepare his/herself for the possible obstacles that could be emerged due to his/her nomophobia. Therefore, he/she might create his/her own coping mechanism toward nomophobia in order to provide better level of academic university adjustment abilities in his/her university education process.

Additionally, Mittal, Rajasekar and Krishnagopal (2015) indicated although university students have cell phone dependence or addiction, their awareness level toward the infleunces of excessive usage of cell phone might play an important role in regulating their academic performance and adaptation process in university. Therefore, awareness could be seen as a mediator variable within the context of mentioned study, which is observed as valid with our study's results. Also, another study displayed that personal awareness and mindfulness levels might be taken as crucial factors in determining the academic adjustment processes while there are external variables within the context (Ehrenberg, Juckes, White and Walsh, 2008). To explain this case that, researchers indicated that although there is severe effect of intensive cell phone usage on academic performances and adjustment process in college students, self-awareness and mindfulness levels could be taken as intervening factor that might interfere the negative influences of excessive cell phone usage and nomophobia for academic adjustment and performances in college students. Hence, mindfulness and awareness rates of individuals has to be taken as crucial components while determining the academic performance and university adjustment processes of them.

In summary, this research purposed to measure the mediator effect of mindfulness awareness on the relationship between nomophobia and academic university adjustment levels. This study found out that mindfulness awareness levels of college students were found as an mediator variable on the relationship between nomophobia and academic university adjustment abilities in college students through recruited 286 participants from Aydın Adnan Menderes University.

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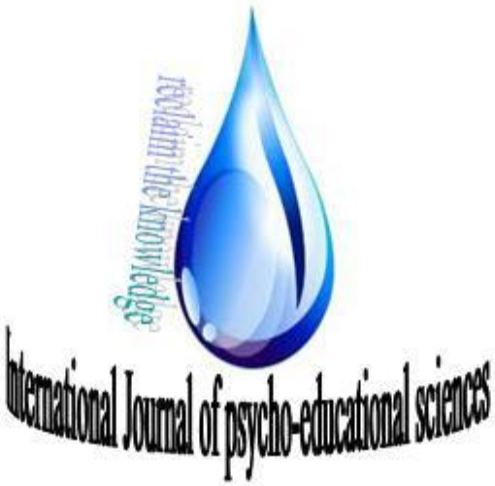

A Review of Education Technology in Digital Age: Classroom Learning for Future and Beyond

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Abstract

The focus of all of this intense interchange was the shape and future of learning institutions. Our charge was to accept the challenge of an Information Age and acknowledge, at the conceptual as well as at the methodological level, the responsibilities of learning at an epistemic moment when learning itself is the most dramatic medium of that change. This is an idealistic claim about the primacy of learning that the single most important characteristic of the Future of classroom learning in a Digital Age is its capacity to allow for a worldwide community and its endlessly myriad subsets to exchange ideas, to learn from one another in a way not previously available. We contend that the future of learning institutions demands a deep, epistemological appreciation of the profundity of what the Internet offers humanity as a model of a learning institution.

Keywords: Internet, digital world, classroom, technology

"I am often told that I rush ahead to promote things that will only be possible 30 or 40 years from now. But that is not the case, because I commend that which is current and urgent, which already exists in more advanced countries, while my detractors are unaware of such things because unknowingly they are 30 or 50 years behind the times". Bernardo A. Houssay (Nobel Prize for Medicine, 1947)

Introduction

Current Scenario of Our Education System

During the last decade, as the Internet and multimedia technology became widespread, enthusiasm for the use of computers in schools also became more evident across the United States. Attendance at educational technology conferences rose sharply; hundreds of businesses started up to offer hardware, software and related services to education; and thousands of teachers took courses to help them utilize newer technology in their classrooms. Outside the school system enthusiasm grew as well despite the publication in newspapers and magazines of several articles critical of the growing reliance on computers in schools **(**Ronald, Anderson and Ronnkvist, 1998).

Will classrooms still exist in 20 years from now? Do we have traditional classrooms in a physical sense anymore? What is the classroom anyway? For most of us, a classroom consists of four walls, 'closed' doors, chairs, tables, perhaps a blackboard, and sometimes a desk - simple but efficient pieces of furniture. A quick glance at the history of pedagogical practices reveals that the classroom has scarcely evolved over a period of many years. Is the traditional classroom intrinsically outdated or has it rather survived the test of time because it is already self-reconfigurable and has been adapted in many different contexts of use? Do we even need a classroom anymore? Do we need a teacher in the classroom? What do we teach and what do we want pupils to learn? What kinds of knowledge and skills will be required in the future? These are some of the questions that we should bear in mind when thinking about the classroom of the future (Siegl, Zottmann, Kaplan and Fischer 2010).

Each solution is stated in such a way that it gives the essential field of relationships needed to solve the problem but in general and abstract way, so that you can solve the problem for yourself, in your own way(Alexander, Ishikawa and Silverstein 1977). Nowadays, it is a global trend that young brains are being attracted more towards technological education. There is no doubt that science and technology are complementary in nature and have to grow hand in

hand. Besides, the growth of knowledge, research in fundamental science always adds an inevitable input to the advancement of technology.

We find that having a home computer is associated with higher test scores in mathematics and reading, even after controlling for family income and for cultural and social capital. However, children from high socioeconomic status (SES) homes achieve larger educational gains from home computers than do lower SES children. Boys' performance advantage is larger than girls' (Attewell and Battle (1999). Quick and highly paid job opportunities have always been an added advantage for the technology graduates. Further, they are not encouraged to have crazy ideas. The current system of teaching and evaluation does not provide any opportunity for this purpose. Starting from the primary to the higher education, the present emphasis is on maximization of the quantity of information instead of leaving room for imagination or recreation of minds. We forget that the creative mind always has no problem in acquiring information on its own.

New Type of Teacher and Student

Teachers taking part in remote education must fulfill various essential pre-requisites. They will have to be fully familiar with all distance education technology. Teachers should be trained in the use of new technologies. This training will be continuous given the constantly changing demands of distance education and the new opportunities offered by the rapid renewal of technologies. Their homes and workplaces should be well equipped. Quality education requires teachers' homes to be supplied with standard computer and communications equipment. This equipment must be updated periodically. New digital habits must be acquired. The process of transition from a predominantly analog classroom academic world to a digital and virtual world is slow. Teachers should eliminate printed information wherever possible, replacing paper by bits.

Digital Presence and Digital Futures

Digital technologies increasingly enable and encourage social networking and interactive, collaborative engagements, including those implicating and impacting learning. And yet traditional learning institutions, whether K–12 or institutions of higher learning, continue to privilege individualized performance in assessments and reward structures. Born and matured out of a century and a half of institutional shaping, maturing, and hardening, these assessment and reward structures have become fixed in place. But they now serve also to weigh down and impede new learning possibilities. Digital technologies have dramatically encouraged self-learning. Web interfaces have made for less hierarchical and more horizontal modes of access. The Web has also facilitated the proliferation of information, from the inane and banal to the esoteric and profound, from the patently false, misleading.

New Digital Culture

In practice this road towards greater unity in human society requires a change in culture, beginning with a profound change in daily working habits. This is turn supposes special training which is not easy but is worth the effort as the advantages are obvious. In the first place there is a leveling of leisure and study time. The stress of change will be reduced. Initially, hybrid situations will exist, such as the coexistence of printed and digital texts, as when an architect displays a design on paper that has been generated by computer, and which could be consulted directly on the screen. With time it is possible to acquire the habit of communicating without paper. Even fax paper turns out to be obsolete in the face of the modem/fax that enables

messages to be sent and received directly from computers. Once the network between students and professors has been established, progress is made at a different pace.

Technology in Today's Classrooms

Do you remember lugging your books to and from school every day? How about stuffing them in your locker while trying to keep track of your calculator, pens, and pencils? For future students and even some current ones, these common school quandaries may never be a problem again. Computers and advancing technology are changing the way classrooms work and providing students new ways to learn.

The formidable expansion of the digital environment in our planet is one of the most urgent challenges of this century. This new environment supports most human activities around the world today. Among the multiple social changes empowered by the digital environment we must emphasize the transformation of the education of the new generations, the so-called "digital natives." The access to this digital environment is now becoming a hope for millions of students and teachers, a way to overcome ignorance and poverty. It is a human right, and a value in itself. At the same time the digital environment is becoming the common ground for the mind, brain and education sciences. We think that the future of education will depend on the increasing integration of these sciences. And education is the hope of humanity. The teacher is facing new pedagogical challenges in a globalized world. We should however acknowledge the fact that while we have significant information about the learning brain we lack a similar knowledge of the teaching brain. Our expectation is to bridge this neuro-cognitive gap in the next years (Battro 1997).

Today, the blackboard has become a whiteboard; chalk has become a magic marker; the slates that students used have been replaced by notebooks; and classes have sometimes gotten smaller. Little else has changed. True, some schools are providing their students with laptops, and teachers are increasingly using technology and encouraging collaboration. But the methods are essentially the same—with the teacher dictating learning (Wadhwa, 2015).

Technologies that has Changed the Digital Classroom

In the past, the suggestion of getting a college degree without ever cracking a book meant paying a degree mill. It meant the degree was in name only, reflecting neither learning nor effort. Then distance learning meant correspondence courses, perhaps combined with some coordinated telecasts. Technology has already changed all that, and the future will change it even further and they are-

eTexts

Now, online college students can obtain legitimate college degrees without cracking a book– but that doesn't mean they don't have to read. Even with hard copy texts available, most students download their textbooks in password protected Portable Document Format (PDF). Not only is this a "green" alternative, but you avoid the weight of having to carry around textbooks. Students can copy the PDF to mobile devices, and carry all of their texts on one iPad or Galaxy Tab. They choose to print whole books, only parts, or just use the digital document. A drawback to depending on protected PDFs is that they only open with active internet connections — but once opened students can use them until closed.

Virtual Libraries

Most online school programs — even those which still use correspondence course designs have robust virtual libraries – something that never existed 15 years ago. Many colleges and universities contract with EBSCO Publishing to maximize available peer reviewed journals. Even traditional students use in college libraries. Distance learners access the same journals as campus students — from anywhere in the world. Students quickly build up their own virtual libraries of thousands of journal articles, just as mobile as any e-text. Renaming these files as closely as possible to the required bibliographic format, and cataloguing them, keeps them organized, accessible, and easy to cite in papers.

Online School Portals

Until here resources for modern distance learning seem only different in form from correspondence courses. That changes with portals. These virtual campuses come complete with individual rooms for each class. They are so significant an innovation that they could change the future of on campus studies. Anticipating how ubiquitous technology should become, some schools already require even on campus students to take at least one class online. This innovation means students need not all be present at once. More, many schools are now integrating social media into their portals – so students can correspond about classes and socially connect for pleasure.

Webcams & Teleconferencing

With the advance of higher bandwidth, real time webcasts have become a reality for online courses. Some schools still set most of their distance learning around attending formal classes, and allow this method as a supplement. Other colleges choose to use up such heavy bandwidth only for specific lessons, allowing students and teachers to get to know each other better. Lectures that do not change need not have all the students watch at once, so schools now make them available to download as needed. Downloading is quickly replacing mailed audio and video recordings as a preferred media delivery method. Webcams and teleconferencing have added a new element of interactivity to the virtual classroom that cannot be matched.

Mobile Apps & Augmented Reality

Mobile apps may present the biggest challenges for colleges with growing online programs. Augmented Reality (AR) apps interest schools. This cutting-edge technology is so young that its full potential still requires exploration. AR allows students to point mobile device cams at objects around them. The screen image offers information about what they see. Schools might use them for mobile testing, for example asking questions about objects on museum visits or historic tours. They could allow astronomy students to point a device at the night sky for the screen to identify stars, or outline constellations. Common availability of such apps may still be out of reach (Pricenetwork, 2012).

Effects of Technology on Classrooms and Students

Dunwill (2016) states technology is becoming a bigger and bigger part of the world today. Technology has evolved and become more central to teaching and learning. Integrating technology into the curriculum is a priority in schools. When teachers first began to use computers in a classroom setting, schools evaluate whether the use of educational technology had a significant and consistent impact on student achievement. When people hear the word

"technology", computers are the first thing people think. However, there are many different types of technology other than computers that can be used to improve student learning.

Change in Student and Teacher Roles

When students are using technology as a tool or a support for communicating with others, they are in an active role rather than the passive role of recipient of information transmitted by a teacher, textbook, or broadcast. The student is actively making choices about how to generate, obtain, manipulate, or display information. Technology use allows many more students to be actively thinking about information, making choices, and executing skills than is typical in teacher-led lessons. Moreover, when technology is used as a tool to support students in performing authentic tasks, the students are in the position of defining their goals, making design decisions, and evaluating their progress. The teacher's role changes as well. The teacher is no longer the center of attention as the dispenser of information, but rather plays the role of facilitator, setting project goals and providing guidelines and resources, moving from student to student or group to group, providing suggestions and support for student activity.

Increased Motivation and Self Esteem

The most common – and in fact, nearly universal – teacher-reported effect on students was an increase in motivation. Teachers and students are sometimes surprised at the level of technology-based accomplishment displayed by students who have shown much less initiative or facility with more conventional academic tasks. Teachers talked about motivation from a number of different perspectives. Some mentioned motivation with respect to working in a specific subject area, for example, a greater willingness to write or to work on computational skills. Others spoke in terms of more general motivational effects--student satisfaction with the immediate feedback provided by the computer and the sense of accomplishment and power gained in working with technology.

Technical Skills

Students, even at the elementary school level, are able to acquire an impressive level of skill with a broad range of computer software. Although the specific software tools in use will likely change before these students enter the world of work, the students acquire a basic understanding of how various classes of computer tools behave and a confidence about being able to learn to use new tools that will support their learning of new software applications.

Accomplishment of More Complex Tasks

Teachers for the observed classes and activities at the case study sites were nearly unanimous also in reporting that students were able to handle more complex assignments and do more with higher-order skills because of the supports and capabilities provided by technology.

More Collaboration with Peers

Another effect of technology cited by a great majority of teachers is an increased inclination on the part of students to work cooperatively and to provide peer tutoring. While many of the classrooms we observed assigned technology-based projects to small groups of students, as discussed above, there was also considerable tutoring going on around the use of technology itself. Collaboration is fostered for obvious reasons when students are assigned to work in pairs or small groups for work at a limited number of computers. But even when each student has a computer, teachers note an increased frequency of students helping each other.

Increased Use of Outside Resources

Teachers from 10 out of 17 classrooms observed at length cited increased use of outside resources as a benefit of using technology. This effect was most obvious in classrooms that had incorporated telecommunications activities but other classes used technologies such as satellite broadcasts, telefacsimiles, and the telephone to help bring in outside resources.

Improved Design Skills/Attention to Audience

Experiences in developing the kinds of rich, multimedia products that can be produced with technology, particularly when the design is done collaboratively so that students experience their peers' reactions to their presentations, appear to support a greater awareness of audience needs and perspectives. Multiple media give students choices about how best to convey a given idea.

Changes That Will Shape The Classroom of The Future: Making Education Fully Technological

It's hard to read the tea leaves of education technology. You never really know what the classroom of the upcoming year will look like in terms of technology. Will iPads be all the rage? Will videoconferencing replace face-to-face office hours? Would a Smartphone app be the new way to turn in homework? Who knows?. It's difficult to discuss the classroom of the future, as if it is something that it exists in some faraway time. The truth is, education is changing right now. Technology and expanded knowledge of the learning process have already resulted in a metamorphosis of the classroom and of teaching methods. There will be even more changes in the future

The layout of the classroom will change immensely.

Forget about neat rows of chairs and desks from which students focus intently on the teacher delivering a lecture and demonstrating concepts on the whiteboard. That's already falling out of favor today. Seating arrangements in the future will be flexible so that they are appropriate for the task that students are working on, and there will also be more focus on the comfort of the students. Here are just a few things that will become more commonplace in the classroom of the future:

- Standing desks for students who have difficulty maintaining focus while sitting.
- Accommodation for students who need more movement.
- Private workstations will be available for individual tasks while collaborative workspaces will be available for group projects.
- Interactive projectors and other technology will replace interactive whiteboards.
- Students will be given more autonomy on how and where to sit.
- Moving walls will make spaces more adaptable.

Virtual and augmented reality will change the educational landscape.

Imagine this: A student opens a book to what appears to be a page with a picture of the earth on it. Then, the student puts on a pair of special glasses and a three dimensional images pops out at them. Now, instead of seeing a simple, flat image, they can see various landforms; look at a cross section of the planet to see all of the various layers going down to the earth's core. Picture a student walking through an art gallery and scanning a code next to a picture using a special app on their cell phone and then being able to watch a video of the artist speaking about

their own work. This is all possible today because of a technology known as augmented reality. Apps and other educational devices act upon trigger images to create an augmented learning experience.

Flexible assignments will accommodate multiple learning styles.

Today, in the majority of classrooms, students all complete the same assignments. For example, if the assignment is to use MS word to write a research paper on tools developed during the Bronze Age, which is the assignment each student must complete. The only time when exceptions are made is usually when the student has special needs and accommodations are required. Unfortunately, these one size fits all assignments don't take into consideration learning styles. With flexible assignments, the teacher will be more interested in proof of competency than in receiving 25 assignments all completed using the same methods

MOOCs and other online learning options will impact secondary education.

You have to stay in school. You have to get good grades. You have get your diploma. If you don't do these things, you cannot get into college. If you don't get into college, you won't be able to get the degree that leads you to the career that you love. All of these seem like very logical statement, and chances are most people reading this were raised being told these very things by their parents and their teachers. There's just one problem. The diploma simply isn't as necessary or as valuable as it used to be, and neither is the college degree. In the future, students will feel less inclined to spend 4 years in high school learning the basics, plus another 4 years in college, especially when the first two years is simply covering the basics yet again. Today, a thirteen year old with an email address and access to the internet can sign up at Khan Academy and complete courses of study in a variety of academic disciplines, all for free. They can sign up for free classes designed and taught by professors at prestigious universities that are created and distributed using MOOC. In the time that it takes to finish high school, a student who is particularly motivated could have mastered multiple technologies; learned as much about history, business, mathematics, science, economy, etc. as a college graduate, and earned industry recognized certifications.

Ten Global Trends in ICT and Education

Hawkins (2010) says with a discussion of 10 Global Trends in ICT and Education for 2010 and beyond (joining the crowded space of lists in this New Year). The list is an aggregation of projections from leading forecasters such as the Horizon Report, personal observations and a good dose of guesswork

The Top 10 Global Trends in ICT and Education are:

Mobile Learning. New advances in hardware and software are making mobile "smart phones" indispensable tools. Just as cell phones have leapfrogged fixed line technology in the telecommunications industry, it is likely that mobile devices with internet access and computing capabilities will soon overtake personal computers as the information appliance of choice in the classroom.

Cloud computing. Applications are increasingly moving off of the standalone desk top computer and increasingly onto server farms accessible through the Internet. The implications of this trend for education systems are huge; they will make cheaper information appliances available which do not require the processing power or size of the

PC. The challenge will be providing the ubiquitous connectivity to access information sitting in the "cloud".

One-to-One computing. The trend in classrooms around the world is to provide an information appliance to every learner and create learning environments that assume universal access to the technology. Whether the hardware involved is one laptop per child (OLPC), or – increasingly -- a net computer, smart phone, or the re-emergence of the tablet, classrooms should prepare for the universal availability of personal learning devices.

Ubiquitous learning. With the emergence of increasingly robust connectivity infrastructure and cheaper computers, school systems around the world are developing the ability to provide learning opportunities to students "anytime, anywhere". This trend requires a rethinking of the traditional 40 minute lesson. In addition to hardware and Internet access, it requires the availability of virtual mentors or teachers, and/or opportunities for peer to peer and self-paced, deeper learning.

Gaming. A recent survey by the Pew Internet and American Life Project per the Horizon Report found that massively multiplayer and other online game experience is extremely common among young people and that games offer an opportunity for increased social interaction and civic engagement among youth. The phenomenal success of games with a focus on active participation, built in incentives and interaction suggests that current educational methods are not falling short and that educational games could more effectively attract the interest and attention of learners.

Personalized learning. Education systems are increasingly investigating the use of technology to better understand a student's knowledge base from prior learning and to tailor teaching to both address learning gaps as well as learning styles. This focus transforms a classroom from one that teaches to the middle to one that adjusts content and pedagogy based on individual student needs – both strong and weak.

Redefinition of learning spaces. The ordered classroom of 30 desks in rows of 5 may quickly become a relic of the industrial age as schools around the world are re-thinking the most appropriate learning environments to foster collaborative, cross-disciplinary, students centered learning. Concepts such as greater use of light, colors, circular tables, individual spaces for students and teachers, and smaller open learning spaces for project-based learning are increasingly emphasized.

Teacher-generated open content. OECD school systems are increasingly empowering teachers and networks of teachers to both identify and create the learning resources that they find most effective in the classroom. Many online texts allow teachers to edit, add to, or otherwise customize material for their own purposes, so that their students receive a tailored copy that exactly suits the style and pace of the course. These resources in many cases complement the official textbook and may, in the years to come, supplant the textbook as the primary learning source for students. Such activities often challenge traditional notions of intellectual property and copyright.

Smart portfolio assessment. The collection, management, sorting, and retrieving of data related to learning will help teachers to better understand learning gaps and customize content and pedagogical approaches. Also, assessment is increasingly moving toward frequent formative assessments which lend itself to real-time data and less on high-

pressure exams as the mark of excellence. Tools are increasingly available to students to gather their work together in a kind of online portfolio; whenever they add a tweet, blog post, or photo to any online service, it will appear in their personal portfolio which can be both peer and teacher assessed.

Teacher managers/mentors. The role of the teacher in the classroom is being transformed from that of the font of knowledge to an instructional manager helping to guide students through individualized learning pathways, identifying relevant learning resources, creating collaborative learning opportunities, and providing insight and support both during formal class time and outside of the designated 40 minute instruction period. This shift is easier said than done and ultimately the success or failure of technology projects in the classroom hinge on the human factor and the willingness of a teacher to step into unchartered territory.

These trends are expected to continue and to challenge many of the delivery models fundamental to formal education as it is practiced in most countries.

Exploring Benefits

Dede (2000) quotes rapid changes in technology over the last 75 years have created enormous opportunities for education. While some technologies such as the computer were adopted early on, a reluctance to embrace change coupled with a lack of funding has resulted in a continuing dependence on chalkboards and other anachronistic technologies. The extent to which schools adopt new technologies, not surprisingly, often depends on how well they're funded. Technology-based innovations offer special challenges and opportunities in this scaling up process. I believe that systemic reform is not possible without utilizing the full power of high performance computing and communications to enhance the reshaping of schools. Yet the cost of technology, its rapid evolution, and the special knowledge and skills required of its users pose substantial barriers to effective utilization. One way to frame these issues is to pose six questions those school boards, taxpayers, educators, business groups, politicians, and parents are asking about implementing large-scale, technology-based educational innovations. After each question, I'll respond to the issues it raises. Collectively, these answers outline a strategy for scaling-up, leveraging the power of technology while minimizing its intrinsic challenges

Preparing For the Workforce

One of the most positive results of schools embracing new technologies is found when low-income students gain skills they otherwise wouldn't. The ability to type, use email and execute basic computer functions like Word and Excel are imperative in today's workforce. When students who have no access to computers at home learn these skills specifically because of technology in the classroom, they have a far greater chance of moving from have-nots to haves in the future. Having technological competence gives them a better chance of success in the workforce and gives them a greater ability and confidence to pursue online education university options.

No Student Left Behind

When classrooms adopt iPads or other tablets in lower grades amongst younger students, the possibility that those students will be left behind in terms of the greater society decreases dramatically. Studies have consistently shown that new technology introduction to younger children provides better results than when introduced at a later age. Even if low-income students

have no access to computers at home, the integration of new technology into all aspects of school life ensures that they have greater opportunities going forward.

Quality of Writing

There is another, lesser known, but reasonable argument against adopting computers across all academic disciplines. Pen and paper often tend to be more conducive to good writing than computer keyboarding. Longhand writing is more likely to result in well-reasoned, nuanced and intricate prose. This may arise from the fact that typing lends itself more easily to abrupt and punchy prose. The staccato quality of typing can work its way into writing. Stylistic arguments aside; a potentially far more worrisome implication for the long term is the increasing technology gap among schools.

Social Class

When the only technology requirements for completing a primary education involved paper, pencils, a slide rule and eventually calculators, the impact technology had in widening the divide between haves and have-nots was minimal. But the technology gap which exists in schools today also functions as a solidifier of social class. If low-income students are unlucky enough to attend schools which can't fund technology purchases, the chance that they'll find a way out of a low income life becomes less likely.

The Danger of Making Technology So Critical

The ability to use technologies such as laptops and tablet computers allows students to acquire the same sets of core competencies they'll need in the workforce. Not acquiring these skill sets is more than an inconvenience. The ability to access information and basic computer literacy can function as a potential stepping-stone out of poverty for many students. If a student graduates high school without at least a rudimentary and working knowledge of new technologies, their future starts looking a lot less bright. Since many school/colleges which can't afford to incorporate technology into the classroom are largely found in less affluent areas, the likelihood of upward social mobility decreases significantly and social classes begin to look a lot more like social castes. The technology gap runs the risk of further cementing social class.

Technology's Impact on the Future

Twenty years ago, someone without computer skills could still expect to find a decent job which, though not providing a huge income, could still support a family. But now, jobs that used to be considered basic blue collar jobs require technological know-how. A car mechanic used to need mechanical aptitude and a good set of wrenches and they were in business. Working in customer service used to require basic telephone skills. But increasingly, even menial entry level jobs require much more computer literacy than what some disadvantaged students are getting in schools.

Technology as a replacement for pen and paper is neutral

It has some minor advantages and disadvantages but is essentially just replacing one tool with another. By this I mean using an office suite to do work instead of an exercise book. It is becoming increasingly popular as computer equipment is becoming more and more accessible (especially with the net book phenomenon, for example in NSW in Australia public schools have embraced net books to great effect). Two disadvantages are the increased possibility for distractions and also the increased possibility for copying others work. Both of these can be overcome with correct management of students and design of class workflow however.

Advantages are that it is easier to make changes to work and so exploring different ideas and experimenting becomes easier.

Conclusion

Chalk, blackboards and textbooks are still essential components for educating students today, but there is no question that in order to engage young people who are growing up with technology in a cyber-world, we must incorporate a greater level of technology into our schools. By introducing students to these resources and teaching them effective and appropriate use as digital education does not discriminate, but schools cannot create a digital habit if teachers do not manage to incorporate information technology and communications into their daily lives. As the world grows "smaller" through connectivity, some local cultures are struggling for momentum to remain vital. Through the media and growing international trade, a strong global corporate culture is overlaying its symbols and values on top of local cultures, creating a dissonance. At the same time, there is an incipient "intercultural" that is emerging – via global nomads, multilingual and polycultural scholars, and people engaged in international virtual communities of practice. Interactions among diverse cultures are creating a new mix of ideas, symbols, and values that are blending organically toward the emerging intercultural (Clegg, 2001).

Having arrived at this point we will attempt to summarize the central concepts of digital education and reach a few conclusions. However, many people are unaware of this elementary fact and persist in their old habits. To make these changes, teachers and school leaders should participate in extensive professional development on how to best harness the power of technology to increase student achievement and ensure students are ready for college and the high-tech global job market.

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The Effects of Advance Graphic Organizers Strategy Intervention on Motivation to Learn Science in Primary Six Students with Learning Disabilities

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Abstract

The objective of this study was to investigate the effects of Advance Graphic Organizers Strategy Intervention on motivation to learn Science in primary six students with learning disabilities . 60 students participated in the present study. Each student participant met the following established criteria to be included in the study: (a) a diagnosis of LD by teacher's references, and learning disabilities screening test (Kamel,1990) (b) an IQ score on the Mental Abilities Test (Mosa, 1989) between 90 and 118 ,(c) Neurological scanning results indicated that they were neurologically deficient (d) absence of any other disabling condition. The sample was randomly divided into two groups; experimental (n= 30 boys) and control (n= 30 boys).The effects of implementing the advance graphic organizers strategy on students' academic motivation were assessed using a repeated-measures design, pre- post- and follow-up testing. ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in academic motivation showed that the (F) value was (521.447) and it was significant value at the level (0.01). Scheffe test for multi-comparisons in academic motivation scale showed that there were statistical differences between pre and post measures in favor of post test, and between pre and follow up measures in favor of follow up testing , but no statistical differences between post and follow up testing.

Keywords: Advance Graphic Organizers, Motivation to Learn Science, Primary Six Students with Learning Disabilities

Introduction

An advance organizer is a kind of cognitive bridge, which teachers use to help learners make a link between what they know and what is to be learnt . A graphic organizer can be defined as a visual and graphic display that depicts the relationships between facts, terms, and ideas within a learning task. Graphic organizers are also referred to as knowledge maps, concept maps, story maps, cognitive organizers, advance organizers, or concept diagrams (Adel Abdulla , 2010). Graphic organizers have multiple benefits. These benefits include helping learners grasp the material by assisting in seeing the relationships between ideas, concepts, or authors. Graphic organizers also assist in memory recall. Finally, graphic organizers encourage the use of developing higher-level thinking skills by assisting students to synthesize and integrate information, ideas, and concepts. Ellis and Howard (2007) stated that graphic organizers are effective across subject areas because they provide visual cues designed to assist students in their understanding of information by organizing information. According to Yin, Vanides, Ruiz-Primo Ayala, and Shavelson (2005), graphic organizers allow students a means of creating connections by visually showing relationships among concepts.

Science and Graphic Organizers

FN Keraro(2005) investigated the effects of using advance organizers on students\' achievement in biology. The sample comprised of 166 form three students in Bureti District, Kenya. Data was collected by use of a Biology Achievement Test (BAT). A t-test and One-Way ANOVA statistical techniques were used to analyse the data. Results were accepted at an alpha level of 0.05. The findings indicate that students taught using advance organizers achieved significantly higher than those taught using conventional teaching methods.

Hudson & Fred(2009) investigated the effect of using advance organizers on students' motivation to learn biology. The research design used was quasi-experimental design where the non-randomized Solomon Four group was adopted. The focus was on the topic pollution.

The sample comprised of 166 form three (third grade in the secondary school cycle) students in Bureti District, Kenya. Data was collected by using Students' Motivation Questionnaire (SMQ). A t-test, one-way ANOVA and ANCOVA statistical techniques were used to analyze the data. The findings indicate that students taught using advance organizers had a higher level of motivation than those taught using conventional teaching methods. The findings further indicate that following the intervention, male students had a significantly higher level of motivation than their female counterparts.

Hendron (2014) reported that students who use graphic presentations perform better in tests that require higher cognitive skills, due to the way the organizers provide scaffolding of new ideas with pre-existing schema. Onwioduokit and Akinbobola (2005), and Oloyede (2011) also demonstrated that pictorial organizer was most facilitating, followed by written organizer and non-organizer was least in enhancing student's achievements.

Theodore Njeribe Ekenobi1 and A.A.O Mumuni (2015) adopted a re-test, pre-test control group, quasi-experimental design in a 3x2 factorial matrix to investigate the efficacy of advance organizers strategies on chemistry students' cognitive achievements in redox reaction concept. A total of two hundred and twenty (220) senior secondary two (SS2) chemistry students (118 males and 102 females) purposively selected from three out of six public co-educational senior secondary schools that met sampling criteria in Obio/Akpor education zone, Rivers State, Nigeria constituted three non-equivalent intact classes that participate in the study. A Redox Reaction Concept Achievement Test (RRCAT) instrument with Kuder-Richardson's reliability co-efficient of 0.90 was used to obtain data. Descriptive statistics (mean, standard deviation and percentages) and inferential statistics (ANCOVA and Scheffe's post hoc analysis) were used for data analysis at 0.05 alpha level. The findings established that graphics advance organizers strategy consistently produced the highest levels of achievement gain and was therefore found to be most efficacious in promoting meaningful understanding and enhancing higher cognitive achievements in redox reaction concept at all levels of the cognitive domain among the three strategies compared. Gender did not significantly influence the achievement of students in redox reaction concept.

Objective

The objective of this study was to investigate the effects of Advance Graphic Organizers Strategy Intervention on motivation to learn Science in primary six students with learning disabilities .

To achieve the stated objective, the following research questions were raised:

1-Are there differences in post-test scores mean between control and experimental groups on Academic Motivation test?

2- If the program is effective in academic motivation of experimental group, is this effect still evident a month later?

Methods

Participants

60 students participated in the present study. Each student participant met the following established criteria to be included in the study: (a) a diagnosis of LD by teacher's references, and learning disabilities screening test (Kamel,1990) (b) an IQ score on the Mental Abilities Test (Mosa, 1989) between 90 and 118 ,(c) Neurological scanning results indicated that they were neurologically deficient (d) absence of any other disabling condition. The

sample was randomly divided into two groups; experimental (n= 30 boys) and control (n= 30 boys)

The two groups were matched on age, IQ, academic achievement in social studies, self efficacy, and academic motivation. Table 1.shows means, standard deviations, t- value, and significance level for experimental and control groups on age (by month), IQ , and academic motivation (pre-test).

Table 1. *means, standard deviations, t- value , and significance level for experimental and control groups on age (by month),IQ and academic motivation (pre-test).*

Variable	Group	N	M	SD	T	Sig.
Age	Experimental	30	143.24	1.98	-.121	Not Sig.
	Control	30	143.41	2.01		
IQ	Experimental	30	112.34	3.45	-.221	Not Sig.
	Control	30	112.89	3.24		
Academic	Experimental	30	35.27	2.00	-.442	Not Sig.
Motivation	Control	30	35.85	2.52		

Table 1. shows that al t- values did not reach significance level . This indicated that the two groups did not differ in age (by month),IQ and academic motivation (pre-test).

Instrument

Intrinsic and Extrinsic Motivational Orientations Scale(Mourad Ali Eissa ,2012) : The Intrinsic and Extrinsic Motivational Orientations Scale consists of six subscales; three for Intrinsic Motivation (Challenge , Curiosity, Independent Mastery) , and three for Extrinsic Motivation (Easy Work, Pleasing Teacher , and Dependence on Teacher). a three point Likert scale (agree=3, Uncertain= 2 , and Disagree=1) was used . Reliability coefficients were computed for the full scale (Intrinsic and Extrinsic Motivational Orientations Scale) and subscales. These results were -91 for Intrinsic and Extrinsic Motivational Orientations Scale, .91 for challenge , -73 for curiosity , and -80 For Independent Mastery, 0.82 for easy work , 0.76 for pleasing teacher, and 0.86 for dependence on teacher .

Procedures

Screening : Six year primary students who participated met the following established criteria to be included in the study: (a) a diagnosis of LD by teacher's references, and learning disabilities screening test (Kamel,1990) (b) an IQ score on the Mental Abilities Test (Mosa, 1989) between 90 and 118 ,(c) Neurological scanning results indicated that they were neurologically deficient (d) absence of any other disabling condition.

Pre-intervention testing : All the sixty students in grade six completed Intrinsic and Extrinsic Motivational Orientations Scale, which assesses students' intrinsic and extrinsic motivational orientations. Thus data was reported for the students who completed the study.

General Instructional Procedures: Instruction was delivered to the six year Science teacher. Before the study started, instructors participated in 10 hours of training to learn how to implement the advance graphic organizers strategy. The teacher was provided with a notebook that contained detailed directions for implementing all activities and lessons. The teacher received training and role-played implementing the strategy until she was able to do so to criterion. To help ensure complete implementation, she was provided with a checklist for each lesson. As she taught a lesson, each step was checked as it was completed.

The teacher, however, had the flexibility to respond to individual student needs, backing up and repeating a step, if necessary, or reordering steps. Students received 3 training

sessions a week, lasting between 40 and 45 min. Instruction took place in the regular classroom in order to naturalize the situation.

Design and Analysis

The effects of implementing the advance graphic organizers strategy on students' academic motivation were assessed using a repeated-measures design, pre- post- and follow-up testing.

Results

Table 2. shows data on ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in academic motivation . The table shows that the (F) value was (521.447) and it was significant value at the level (0.01).

Table 2. *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in academic motivation*

Source	**Type 111 Sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Pre	229.992	1	229.992		
Group	24640.438	1	24640.438	521.447	0.01
Error	2693. 474	57	47.254		
Total	29974.733	59			

Table 3. shows T. test results for the differences in post- test mean scores between experimental and control groups in academic motivation. The table shows that (t) vale was (23.166). This value is significant at the level (0.01) in the favor of experimental group. The table also shows that there are differences in post- test mean scores between experimental and control groups in academic motivation in the favor of experimental group.

Table 3. *T. test results for the differences in post- test mean scores between experimental and control groups in academic motivation*

Group	**N**	**Mean**	**Std. deviation**	**T**	**Sig.**
Experimental	30	83.000	2.04	24.161	0.01
Control	30	38.533	4.22		

Table 4. shows data on repeated measures analysis for academic motivation. The table shows that there are statistical differences between measures (pre- post- follow up) at the level (0.01).

Table 4. *Repeated measures analysis for academic motivation*

Source	**Type 111 sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Between groups	35224.022	1	5224.022	590.551	0.01
Error 1	2984.556	58	51.458		
Between Measures	23157.378	2	11578.689	497.742	0.01
MeasuresxGroups	19331.511	2	9665.756	415.509	0.01
Error 2	2698.444	116	23.262		

Table 5. shows data on Scheffe test for multi-comparisons in academic motivation scale. The table shows that there are statistical differences between pre and post measures in

favor of post test, and between pre and follow up measures in favor of follow up testing , but no statistical differences between post and follow up testing.

Table 5. *Scheffe test for multi-comparisons in academic motivation*

Measure	**Pre** **M= 35.27**	**Post** **M= 83.00**	**Follow up** **M= 82.50**
Pre	--	--	--
Post	48.26*	--	--
Follow up	46.76*	1. 500	--

Discussion

The objective of this study was to investigate the effects of Advance Graphic Organizers Strategy Intervention on motivation to learn Science in primary six students with learning disabilities . The findings of this study have shown that advance organizers enhance learners' motivation to learn. The use of advance organizers in this study, therefore, enabled learners to be active cognitively and hence was motivated to learn.

Experimental group gained better scores in academic motivation tests than did control groups in post-tests though there were no statistical differences between the two groups in pre- test. This is due to the program which met the experimental group's needs and interests. On the contrary, the control group was left to be taught in a traditional way. This goes in line with Mourad Ali's(2012) adopted perspective which indicates that traditional methods used in our schools do not direct students as individual toward tasks and materials, and do not challenge their abilities. This may lead students to hate all subjects and the school in general. On the contrary, when teachers adopt a technique that suits students interests and challenges their abilities with its various modalities, those students had a lot of gains. The results also go in the same line as Bouyaoude and Attieh's (2008) who showed that students who used advance organizers performed better than those that did not use advance organizers at knowledge, comprehension and application levels respectively. Onwioduokit and Akinbobola (2005) and Oloyede (2011) demonstrated that pictorial organizer was most facilitating, followed by written organizer and non- organizer was least in facilitating student's achievements. Based on the findings of this study, it was concluded that graphics advance organizers strategy was most efficacious in enhancing students' Science.

Limitations and future research

Although the results of this study showed the effectiveness of the adopted strategy , it had some limitations. The study was implemented to boys only . Gender difference in motivation to learn Science is important. So, future research should study gender difference in motivation to learn Science. Another limitation was that this study did not investigate teacher characteristics as Proko, Tuncer & Chuda (2007) also posit that teacher characteristics have a significant role on students' attitude towards Science.

Implication

The findings of this study have indicated that the use of advance organizer teaching strategy results in higher students' motivation in Science. Thus the strategy should be incorporated into the teaching of Science at primary school level. This in turn would improve students' motivation to learn Science. Curriculum developers in their efforts to improve the effectiveness of Science teachers should encourage the use of advance organizers.

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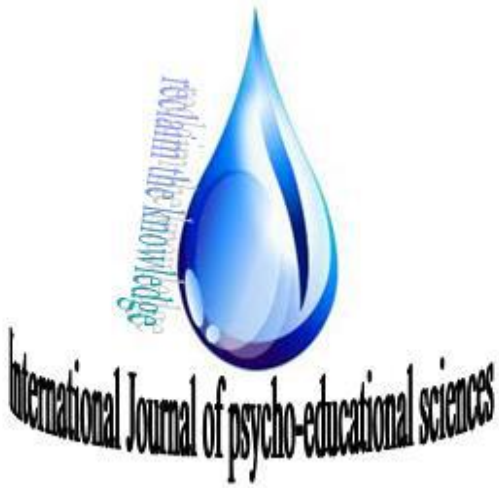

Children with Special Educational Needs (SEN) in the Polish Education System

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Abstract

The law currently binding in Poland favors students with disabilities and SEN. The parents have a right to choose between many forms of education and facilities which, in their opinion and according to the suggestions of a psychological and educational support centre, will give their child the best opportunities of development. The Ministry of National Education Regulation of 10 June 2015 on grading, classifying and promoting students demands adjustment of educational requirements to the needs of the student with a certificate confirming his/her special education needs (&3 clause 1) in each education establishment. Theoretically, the situation is extremely favorable. However, for now, the research studies have shown that the readiness of teaching staff, children, and parents for these different possibilities are insufficient; therefore, the legal regulations do not make the conditions of educating students with disabilities or SEN perfect. What is more, the perception of e.g. integrated education as a "cheaper" solution causes that not all legally provided possibilities of supporting a student are applied.

*Keywords***:** Special Educational Needs (SEN), support of children, educational system

Introduction

Rights to Education in Poland

In Poland, the right to education was already provided by the Constitution of 3 May 1791 and it can be traced back to the tradition originating from the period of the operation of the Commission of National Education (1773-1794). Currently, it is guaranteed by the Constitution of the Republic of Poland (Article 70), which, on the other hand, considers Poland's obligations within the scope of human rights resulting from the UN documents. What is more, the right to education is recognized in the Act on Education System of 7 September 1991 (Dz. U. of 1996 No. 67 item 329 and No. 106 item 496; of 1997 No. 28 item 153 and No. 141 item 943 as well as of 1998 No. 117 item 759). The preamble of this Act goes as follows: "Education in the Republic of Poland constitutes the common good of society as a whole; it is guided by the principles embodied in the Constitution of the Republic of Poland, as well as the indication contained in the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights and the Convention on the Rights of the Child". Among the provisions of Article 1 of the Act, one can find the one providing the possibility of learning in all types of schools for disabled children and young people in accordance with their individual developmental and educational needs as well as predispositions.

Disability and Special Educational Needs

Terms as "disability" and "special educational needs" are not synonymous and cannot be used interchangeably. The Polish education system recognizes the fact that students' needs may differ and in some cases, they may require special approach of teachers, both when it results from certain disabilities and when they are not found in a student.

For several decades, the Polish special education has been distinguishing the main types of disabilities, namely: hearing and sight impairment, chronic condition, physical and intellectual disability, social maladjustment (cf. Chrzanowska 2015, Doroszewska 1989, Sękowska 1998). However, the educational situation of these people is ambiguous. Certain disabilities do not necessarily have to involve knowledge acquisition problems (e.g. physical disability, chronic condition). On the other hand, some dissimilarities which are not included

in the group of disabilities (e.g. autism spectrum disorders, partial deficits, e.g. dyslexia, spelling difficulties, students showing above-average abilities) hinder knowledge acquisition in the traditional educational conditions and require the creation of a favorable environment. There are also those which are not considered disabilities in the education system (e.g. social maladjustment), but a student may obtain certificate showing his/her need of special education.

In Poland, separate authorities deal with issuing certificates confirming disability and special educational needs. Disability is confirmed by District/Municipality Disability Assessment Boards (children and youth up to 16 years of age) and Level of Disability Assessment Boards (children and youth over the age of 16); SEN is decided upon by the assessment boards operating in public psychological and educational support centers. The documents obtained from the former authority enable one to use different kinds of allowances and authorizations facilitating everyday functioning (for more information, see: Self-governments and Government Administration Working to the Benefit of the Disabled: a Guide for Parents of Children with Disabilities). The document issued by the second authority, "evaluation for special education", constitutes the basis for organizing special education in preschools, schools and other education system facilities. This certificate may be obtained by a child with a disability or "specific learning difficulties", that is, a student with normal intellectual capacity who has difficulties with acquiring learning contents resulting from the specific character of his/her perceptive and motor as well as cognitive functioning, undetermined by any neurological condition (Dz. U. 2015 item 357). This certificate should guarantee "provision of conditions enabling the use of special organization of learning and learning methods for children and youth protected within special education system" (Dz. U. 2015 item 357, section 7 clause 1a). Special education is an organized process adjusted to the needs of a pupil and disabled student who, with regard to significant disorders and dysfunctions in different realms of development (motor skills, senses, intellect, psyche) needs specialist educational and revalidation impact directed towards his/her comprehensive development (Serafin 2016).

The implementation of the recommendations included in the certificates is supported by the Department for Special Educational Needs organized within the Centre for Education Development. Among others, the Centre supports the research on and dissemination of the information on issues connected with SEN students, while the department supports teachers and the following facilities: schools, teacher training centre, psychological and educational support centers, etc. (https://www.ore.edu.pl/specjalne-potrzeby-edukacyjne-99676).

Via the website, the editors convey current legal information, inform about implemented projects supporting the particular groups of SEN students (e.g. talented students, the ones with dyslexia, depressive disorders). The Centre also publishes books (in paper and electronic formats).

Forms of Fulfilling Schooling Obligation

Students diagnosed with developmental disorders may have their schooling obligation deferred if they are considered to be unprepared for entering school. Before starting school, each student is obliged to receive a year preschool preparation. A disabled student may receive it at the age of 6,7 or 8 (she/he has a right to use the possibility of deferring schooling obligation twice). Therefore, a child with a disability may start school in a school year when he/she turns 7 or later: in a school year when he/she turns 8 or 9 years old (Dz. U. 2016, no. O, item 35).

What is more, students with different types of disabilities may have their schooling obligation prolonged (successively, in primary school, junior high school, and upper secondary school). At the primary school level, this obligation may be fulfilled till 16 years of age. The junior high school level may be finished at 21 years of age (this type of school will be liquidated in 2019), and at the upper secondary school level it is 24 years of age (Article 15 of the regulation of the Minister of National Education of 4 October 1993, Dz. U. MEN No. 9 item 36 on organization of care-taking over disabled students, teaching these students in public schools and schools and facilities of integrated education, rules of organization of special and integrated education). Disabled children and youth have a possibility of learning in general and integrated schools and special classes (Article 22 section 2 clause 9 of Act on Education System of 1991).

Schools Available to General Public

In 1991, there was the Act on Education System adopted in Poland which provides "the possibility of learning in all types of schools by disabled children and youth according to their individual developmental and educational needs and predispositions" ((Dz. U. 1991 No. 95 item 425 Article 1, clause 5). However, children and youth with profound mental disability faced compulsory school education only in 1997 (The Regulation of the Minister of Education of 30 January 1997 on organization of revalidation and educational activities for children and youth with a profound mental disability, Dz. U. No. 14, item 76). Since 1 January 2016, each school attended by a student with autism, Asperger syndrome or multiple disabilities has an obligation to employ additional teachers with qualifications in special education in order to contribute to organization of teaching these students, and in the case of first to third grade of primary school, these are teaching assistants. This is to provide the implementation of recommendations included in the evaluation for special education. Each student has an individual educational and therapeutic program developed by a specialist team (teachers, tutors and other specialists) (Dz. U. 2015 item 1113).

Integrated Schools

Classes in integrated schools may number 15-20 students including 3-5 students with a disability (this can be different types and levels of disability). Students are admitted to the school upon the request of a parent/legal guardian. Integrated schools and classes may be organized at every education level (preschool, primary school, junior high school, upper secondary school). It is a school's task to provide specialists who will co-organize teaching in this type of school/class.

Special Classes

Schools, according to the Ministry of National Education Regulation on rules of providing and organizing psychological and educational assistance (Dz. U. of 7 May 2013) organize assistance provided to students in forms of, among others, therapeutic activities, teaching-compensatory classes, specialist corrective and compensatory, speech therapy and social therapy classes as well as therapeutic classes.

Therapeutic classes – it is a form designed for students with homogeneous and multiple disorders requiring long-lasting assistance for whom the environment appropriate for their educational needs is organized. The class may number 15 students. The aim of creating such classes is eliminating or alleviating disorders which are the reasons for a certain child's presence in the class (Dz. U. of 7 May 2013 &8 clause 1).

Revalidation and educational activities for children with profound mental disability

Children with profound intellectual disability of 3 to 25 years of age also have to fulfill schooling obligation. This can be done by participating in revalidation and educational activities (Article 16 section 7 of Education System Act and Dz. U. of 1997 No. 14 item 76) individually or in a group. The document which forms the basis for granting and organizing the revalidation and educational activities is a certificate of the need for revalidation and educational activities issued by an evaluation board of public psychological and educational support centers, including a public specialty care clinic.

The aim of these activities is supporting the development of children and youth with a profound intellectual disability, promoting their interest in the surroundings and supporting their independence in everyday activities according to their psychophysical abilities and individual developmental needs.

The revalidation and educational activities may be organized in a preschool or school (including special preschool and school) but it has to be the one closest to a student's place of residence. These classes are given by teachers with proper qualifications. During group activities, a teaching assistant provides care and during individual classes this is provided by parents or legal guardians. This is parents' or legal guardians' task to arrange proper conditions for the revalidation and educational activities. Group activities are organized for groups of 2 to 4 participants and their duration (as well as individual activities' duration) is specifically defined by the mentioned Regulation. Each participant has got a detailed schedule of activities developed in cooperation with teachers and a psychologist as well as (when needed) other specialists. The basis for the schedule is a diagnosis and recommendations included in the certificate of the need for revalidation and educational activities. The schedule is subject to inspection and possible modification, depending on the level of participant's functioning, at least twice a year.

Individual Year Preschool Preparation and One on One Teaching

When organizing compulsory education in these forms, the basic principle is a child's health condition which temporarily or permanently hinders attending preschool of school classes. The document indispensable for organizing this form is a certificate of the need for individual year preschool preparation or one on one teaching issued by a public psychological and educational centre upon the request of parents (legal guardians). Individual year preschool preparation or one on one teaching is organized in the special situations, in the place of child's residence: family home, foster family home, children's care home, residential home (The Ministry of National Education Regulation of 28 August 2014 on individual compulsory year preschool preparation of children and one on one learning of children and youth). Teaching in a form of individual year preschool preparation or one on one teaching should take place in a direct contact with a student. Number of hours and methods of implementation is provided by The Ministry of National Education Regulation of 28 August 2014. A child who has to receive preschool preparation gets 4-6 learning hours with a preschool teacher. A 1 to 3-grade students of primary school gets 6-8 learning hours (with one or two teachers). In higher grades, one on one teaching may be organized by several teachers and a number of hours is as follows: 4 to 6 grade it is 8-10 hours, in junior high school it is 10-12 hours, in upper secondary school it is 12-16 hours.

Hospital preschools and schools functioning within health care institutions and community care units

Education in hospital preschools and schools is organized under the Ministry of National Education Regulation of 8 March 2013 on organization of education as well as

conditions and forms of implementing special care and educational activities in special preschools and schools organized in health care facilities and community care units. Learning is organized for a student who stays in a health care facility for more than 9 days or who requires frequent hospitalization. A principal of preschool or school organized within the facility, upon the request of a teacher, the facility's manager or authorized physician, considering a student's health condition, may authorize: 1) withdrawal from teaching of some contents of compulsory educational classes; 2) reducing the number of educational classes' hours; 3) withdrawal from student's participation in educational classes for the period indicated by a physician (section 2. 1. clause 3 of the Regulation). In proper circumstances (a small number of students or specific conditions of their treatment and therapy), teaching and learning in the above-mentioned school may take place in combined grade classrooms. The preschools and preschool departments in primary schools organized in the facilities implement preschool education programs taking the core curriculum of preschool education into consideration (section 4. 1). The schools organized within the facilities implement education programs which include the core curriculum for general education determined for a certain educational stage as well as curriculum frameworks of schools which students had attended before being admitted to the facilities (section 4. 1. clause 2). The mentioned facilities also organize special care and educational activities in order to satisfy students' educational and developmental needs, support their therapeutic process and manage their free time.

The above-mentioned Regulation governs the organization of education in community care units (section 9. 1.). Here, one may organize: 1) special preschools; 2) special primary schools; 3) special junior high schools; 4) special upper secondary schools.

These provide students with education and special care and educational activities which, in the case of preschools and schools organized in residential homes, take the recommendations of therapeutic and care teams into consideration (Article 57 section 8 of the Act of 12 March 2004 on social care services (Dz. U. of 2013 item 182). Preschools and preschool departments in primary schools implement preschool education programs considering the core curriculum of preschool education. On the other hand, schools take curriculums including the core curriculum of general education determined for a certain educational stage as well as curriculum frameworks of schools which students had attended before being admitted to the facility into account.

Fulfilling Schooling Obligation/Learning Outside of School

The Education System Act of 19 March 2009, Article 16, Section 8 has introduced guidelines concerning a possibility of organizing child's education outside of school/preschool. Generally, the compulsory schooling obligation is in force from a school year in which a child turns 7 to a junior high school graduation; however, at any time during the school year, parents may file an application in a selected school for getting permission for out-of-school education, the so-called "homeschooling". The application should include: 1) opinion from a psychological and educational support centre (this cannot be identified with a referral or certificate concerning the need for homeschooling), 2) parents' statement about providing the child with conditions enabling the completion of core curriculum obligatory for specific level of education and 3) parents' commitment that their child would take an annual qualifying examination during each school year. At the end of a school year, a child receives a school certificate listing the results of his/her examinations. This certificate does not include a conduct grade. In the case of students with moderate or profound intellectual disability, the qualifying examinations do not apply.

Homeschooling is also available to students with disabilities or special educational needs. Parents/guardians of a child with a moderate or profound intellectual disability do not have to include the opinion from a psychological and educational support centre, neither the obligation that their child would take annual qualifying examinations in the application (these do not concern students with disabilities of this type).

This form of fulfilling compulsory schooling obligation may be especially willingly chosen by conscious parents of talented children (with general or specific abilities) or students with less potential, specific school problems or disabilities whose parents have a possibility and essential skills within the scope of education (rehabilitation) of their child.

However, the organization of homeschooling for a child is related to a great effort made by parents since they are the ones burdened with the constant care of a child and responsibility for his/her performance. Still, the parents do not have to teach their child personally – this could be done by a hired tutor and, in the case of children with disabilities, a proper specialist (special education teacher, physical therapist). The costs are borne by a family. If parents do not use a specialist support, providing them with proper assistance by a school, specialists or a psychological and educational support centre is challenging.

Alternative Schools

Taking advantage of freedom given by homeschooling, there have been different types of alternative schools established in Poland (democratic schools, free schools, Montessori schools, educational groups). Parents who have filed a formal application for permission for teaching a child outside of school may (usually for a payment) use services of this kind of alternative school. An example here are the Good Education Academies where a quite large group of students with different disabilities or problems with adaptation to the traditional school system are taught (Bartnikowska 2015, Kichler 2015).

Individualized Program of Study

Another possibility found within the functioning of each type of school is the individualized program of study. It is the form designed for students showing general or specific abilities. The act and provisions of the regulation of 19 December 2001 on the conditions and procedure of granting permission for the individualized program of study and organization of the individualized program of study Dz. U. of 2002 No. 3, item 28, Article 66 regulate formalities. The application may be filed by parents/guardians or a student himself/herself (if of age). Then the principal – after eliciting the opinion of the teaching staff and a public psychological and educational support centre (also specialist one) - gives (or does not give) permission for this learning mode. This student has a teacher-guardian assigned. This student is graded on the basis of end-of-term examinations. Thanks to the individualized program of study, a student may use the individualized program of study concerning one or more subjects or the one developed outside of school. The Minister of National Education Regulation of 10 June 2015 on detailed conditions and methods of grading, classifying and promoting students and course participants in public schools (Dz. U. item 843), as well as the in-school grading system, determine the method of classifying these students. The student following the individualized program of study may be given end-of-term grades during a school year or take examinations of more than one school year.

Considering the fact that disability or specific learning difficulties may not concern the whole body system of a student, this form of study may also be implemented in these cases. One should consider the students with a savant syndrome demonstrating special abilities, often in a quite narrow range.

Apart from the above-mentioned forms of educating children with SEN, the Polish law allows the possibility of proposing educational innovations and experiments (Dz. U. 2002, no. 56, item 506). These regulations enable one to use other solutions after obtaining the permission of a school's principal, teaching staff and chief education office (government administration representative who performs and supervises educational tasks in a particular province); in the case of educational experiment, one should get a permission of the Ministry of National Education.

Conclusion

The law in Poland currently favors students with disabilities and SEN. The parents have a right to choose between many forms of education and facilities which, in their opinion and according to the suggestions of a psychological and educational support centre, will give their child the best opportunities of development. Theoretically, the situation is extremely favorable. However, the research studies have shown that the readiness of teaching staff, children and parents for these different possibilities is insufficient; therefore, the legal regulations do not make the conditions of educating students with disabilities or SEN perfect. What is more, the perception of e.g. integrated education as a "cheaper" solution causes that not all legally provided possibilities of supporting a student are applied (cf. M. Gołubiew-Konieczna, 2015).

According to Sue Gerhardt (2010, p. 150) "The X factor, the mystery tonic that enables babies to flourish as soon as they get it is responsiveness". The currently binding legal regulations give one the foundations for this to be happening. However, it is important to keep in mind that teaching and learning conditions should be adjusted to a child and his/her needs and not the other way around: a child adjusted to the current conditions of a particular school.

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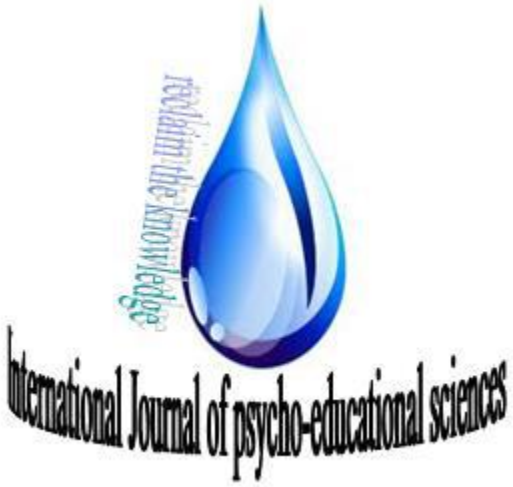
The Ministry of National Education Regulation of 8 March 2013 on organisation of education as well as conditions and forms of implementing special care and educational activities in special preschools and schools organised in health care facilities and community care units

The Ministry of National education Regulation of 23 April 2013 on the on conditions and organisation of revalidation and educational activities for children and youth with profound mental disability

The Ministry of National Education Regulation of 10 June 2015 on detailed conditions and methods of grading, classifying and promoting students and course participants in public schools

The Ministry of National Education Regulation of 24 July 2015 on the conditions of organising education and care for disabled, socially maladjusted or at risk of social maladjustment children and youth (Dz.U. 2015 item 1113)



The Effect of Using Multiple Intelligences on Some Basic Reading Skills of First Graders At-Risk for Reading Disabilities

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Abstract

The objective of this study was to investigate the effect of using multiple intelligences on some basic Reading skills of first graders At-Risk for reading disabilities. 40 first grade children selected from two schools located within two elementary schools in Sharkyia Educational Edara participated in this study . The participants were selected based on the results of Arabic teacher nominations, screening for reading achievement, school attendance, and parental consent. Neurological scanning results indicated that they were neurologically deficient . Children were randomly classified into two groups: experimental(n= 20 boys) and control (n= 20 boys). The two groups were matched by age, IQ, word recognition and reading comprehension skills. the effect of using multiple intelligences on some basic Reading skills of first graders At-Risk for reading disabilities was assessed using pre- post testing . Findings from this study indicated the effectiveness of the program employed in improving word recognition and reading comprehension skills in the target children.

*Keywords***:** Multiple Intelligences, Basic Reading Skills, first graders At-Risk for Reading Disabilities

Introduction

Reading is a cornerstone for a child's success in school and, indeed, throughout life. Without the ability to read well, opportunities for personal fulfilment and job success inevitably will be lost (1985). A student's ability to master such a concept in primary grades establishes the groundwork needed for student achievement in reading and thereby in other subjects as well. If the ability to learn to read takes a prolonged time to develop, students may struggle to read in later grades (Nielsen, Winter ,Keetle& , Jackson, 2007)**.**

The concept of intelligence has been the core of interest for scholars, scientists, through scientific research area as in a way that aims to understand the reality of human intelligence and its development (Legg and Hutter, 2007, p.2). MI theory can be a new and effective method for presenting different strategies of teaching and can help students achievements ameliorated(Habib Soleimani, Ahmad Moinnzadeh, Zohreh Kassaian & Saeed Ketabi, 2012).

Pamela (2003) describes an action research project improving student academic reading achievement.The targeted population consisted of fifth grade students in a growing suburb of a major midwestern metropolitan area.The evidence for existence of the problem included student surveys,assessments,teacher observations and checklists.Analysis of probable cause data revealed some students were not motivated to meet or exceed expectations in reading comprehension on classroom assessments, district tests, and state evaluations.The lack of students' skills to read strategically and for better comprehension was observed by the teacher.A review of solution strategies suggested by knowledgeable others,combined with an analysis of the problem setting,resulted in the selection of two major categories of intervention: multiple intelligences strategies,and guided practice of reading skills.Post-intervention data indicated an increase on reading skill tests, improved motivation to read, increased on-task behavior,and improved cooperative learning skills used with multiple intelligences strategies.

Habib et al.(2012)investigated the effect of instruction based on Multiple intelligence (MI) theory on attitude and learning of General English course among students of Islamic Azad University, Kermanshah Branch in the second semester of educational year of 2010-2011. 61 male and female students in two different classes participated in the present study that were assigned to experimental (32 students) and control (29students) groups based on random cluster sampling. A quasi experimental method of research with a pre- and post test was used. The experimental group was taught according to the theory of MI and the control group was instructed based on the traditional method of teaching General English in eight weeks time. In order to determine the effect of MI-based instruction compared with traditional method, a researcher constructed test including 30 items were utilized. In order to assess the attitude of the learners toward English, a 15 items scale of attitude toward English Language was also employed. For analyzing data we used ANCOVA and independent sample t-test. The results of the study indicated that there was a significant difference between improving in General English course between experimental and control groups. In other words, students taught based on MI theory exceeded the traditionally instructed students both in general and in each sub-skill of learning English (vocabulary, reading comprehension, and structure). The results also indicated that attitude of students towards learning English in experimental group improved significantly.

Hasanah, Nur. (2013)discussed about improving students' motivation on reading comprehension by using Multiple Intelligences strategies. The objectives of the study are explaining 1) the problems faced by the eight graders of SMP N 1 Alian, Kebumen in reading comprehension, 2) the implementation of Multiple Intelligences strategies in motivating reading comprehension for the eight graders of SMP N 1 Alian, Kebumen, 3) how Multiple Intelligences strategies improve the motivation of the eight graders of SMP N 1 Alian, Kebumen in reading comprehension.

In order to achieve the objectives, the researcher held an action research at SMP N 1 Alian, Kebumen on 16th of March- 9th April 2013. There were 2 cycles in which 2 meetings held for each cycle. The subject of the study is the second graders of SMP N 1 Alian, Kebumen. The numbers of population are 32 students. The instruments used were observation sheet, questionnaire, and CARI. The result of the study is the problem in motivating students to read. This can be solved by using Multiple Intelligences strategies which combine students' intelligences with fun learning activities by Multiple Intelligence instruction. Based on the questionnaire, all of the students said that the strategies used were interesting. In line with the questionnaire result, the observation sheet also showed excellent result on students' study habits. There was improvement on students' comprehension, it can be seen from the mean of CARI I which was 89.06 point and CARI II which was 95.6 point.

Reem(2014)aimed at investigating the effect of using multiple intelligences (MI) on developing fifth graders' achievement in English vocabulary in the Gaza Strip. To achieve this aim, the researcher improperly used sample of (121) female and male students studying at Abdullah Ben Rawah School in the Gaza Strip. The researcher used a quasi-experimental which fitted the nature of the present study. The participants were divided into two groups. Each group was divided into control and experimental. Regarding the instruments of the study, the researcher used an achievement test and a teacher guide. The researcher used the achievement test as a pre-test to prove equivalence. It was also used as a post test to measure any possible differences between the target group due to implementation of MI. The collected data

were analyzed and treated statistically through the use of SPSS. The following statistical methods were used: T- test and Eta square. The findings indicated that there were statistically significant differences between the two groups, in favor of the experimental one due to MI implementation and there were statistically significant differences between the male of experimental group and control group in favor of the experimental one. Additionally, there were statistically significant differences between the female of experimental group and control in favor of experimental one. Moreover, by implementing the effect size equation, the researcher discovered that MI had a large effect size in favor of the experimental group.

Amir Reza(2016) investigated the relationship between Multiple Intelligence and Reading Comprehension Abilities of Iranian EFL learners. For the purpose of study, 117 senior English students were randomly selected. After administering two types of instruments including MIDAS Adults (Shearer, 1996) and Reading Comprehension Section of TOEFL (2005, Longman), the data were collected and analyzed. The results indicated that all types of the learners' MI profile have significant relationship with the reading comprehension scores and the Verbal-Linguistic Intelligence is the most significant predictor of the learners' reading comprehension abilities, while Visual-Spatial and Interpersonal Intelligences are the second and third predictors of the learners' reading comprehension respectively. Furthermore, Intrapersonal and Kinesthetic Intelligences could not predict the reading comprehension of the learners.

Alaeddin (2017) examined the potential effect of a program based on multiple intelligences on improving the Jordanian tenth grade English as a Foreign Language (EFL) students' critical reading skills in English. The researcher claims that multiple intelligences strategies have the potential to provide a suitable resource to empower the quality of TEFL in Jordan. The study follows a quasi- experimental design in which an experimental group and a control group were purposefully chosen from AzZarqa First Directorate of Education (Jordan). In the experimental group, 30 students were taught by multiple intelligences strategies and 29 students of control group were taught by the conventional teaching method as outlined in the teacher's book. A pre-post achievement test was utilized. The findings reveal statistically significant differences at ($\alpha \leq 0.05$) between the two mean scores of experimental and control groups in the post- test in favor of experimental group.

Purpose

The purpose of this study was to investigate the effect of using multiple intelligences on some basic Reading skills of first graders At-Risk for reading disabilities

To achieve the stated objective, the following research questions were raised:

1- Are there differences in post–test scores mean between control and experimental groups on word recognition test?
2- Are there differences in post–test scores mean between control and experimental groups on reading comprehension test ?

Method

Participants

40 first grade children selected from two schools located within two elementary schools in Sharkyia Educational Edara participated in this study . The

participants were selected based on the results of Arabic teacher nominations, screening for reading achievement, school attendance, and parental consent. Neurological scanning results indicated that they were neurologically deficient . Screening procedures of the participants included these steps:

Teacher nominations. The Arabic teachers was asked to nominate students who exhibited poor reading skills and might benefit from additional instruction.

Screening for reading achievement. All children were assessed using The Dynamic Indicators of Basic Early Literacy Skills. Based on the results of these assessments, children exhibiting poor reading skills were identified as at-risk for reading disabilities and possible participants for this study.

School attendance. Regular attendance was one of the eligibility requirements to participate in this study. Previous school attendance records were reviewed, and children with potentially poor attendance were excluded from the study.

Parent consent. A letter introducing the purpose of the study and a consent form were sent to parents of the potential participants. Written consent was obtained before beginning of the study. In addition, an oral solicitation using understandable sentences was read to the children by the researcher. Children without written consent were also excluded from the study. Children were randomly classified into two groups: experimental (n= 20 boys) and control (n= 20 boys). The two groups were matched by age, IQ, word recognition and reading comprehension skills . Table 1. shows means, standard deviations, t- value, and significance level for experimental and control groups on age (by month) ,IQ, word recognition and reading comprehension.

Table 1. *Pre-test Means, standard deviations, t- value, and significance level for experimental and control groups on age (by month), IQ, word recognition and reading comprehension*

Variable	Group	N	M	SD	T	Sig.
Age	Experimental	20	61.35	2.25	-.735	-
	Control	20	61.95	2.76		
IQ	Experimental	20	108.15	4.68	-.816	-
	Control	20	108.25	3.79		
Word recognition	Experimental	20	6.21	3.00	-.547	Not sig.
	Control	20	6.67	3.52		
Reading comprehension	Experimental	20	6.82	2.65	-.539	Not sig.
	Control	20	6.54	2.32		

Table 1. shows that al t- values did not reach significance level .This indicated that the two groups did not differ in age, IQ , word recognition and reading comprehension (pre-test) .

Instrument

a. Mourad Ali's Basic Reading Skills Test (word recognition, and Reading Comprehension, 2007). The test consists of (44) items assessing word recognition and Reading Comprehension, 22 items each , with score ranging from 0-1 on each item and a total score of 44. The test has demonstrated high internal consistency with Cronbach's α ranging from 0.83 to 0.87.

Procedures

Participants were selected, then pretest data were collected using d recognition and reading comprehension (pre-test). The classroom MI training program was conducted by the author with the experimental class in one large group for 10 weeks with 45 minute sessions conducted three times a week. The seven intelligences were employed in all sessions. Employing verbal / linguistic intelligence requires students to brainstorm , use new vocabulary, and tell the story in their own words. While using logical / mathematical intelligence requires that students asking and answering questions about the text, and explain their answers. Students employed visual / spatial intelligence through illustrations, and using pictures of the new vocabulary. They also used role play, body movements, and concrete materials while learning the new word as part of bodily / kinesthetic intelligence. Musical / Rhythmic intelligence was employed by students. They created rhythmic patterns, and sang songs. Students shared work with one another, assessed peer's work, and worked collaboratively as part of their interpersonal intelligence. Additionally, each student had a space to work individually and reflect on his/her progress and achievement as part of his/her intrapersonal intelligence.

Design and Analysis

The effects of implementing MI on word recognition and reading comprehension of first graders At-Risk for reading disabilities were assessed using pre- post testing.

Results

Table 2 shows T. test results for the differences in post- test mean scores between experimental and control groups in word recognition test. The table shows that (t) vale was (10.112). This value is significant at the level (0.01) in the favor of experimental group . The table also shows that there are differences in post- test mean scores between experimental and control groups in word recognition test in the favor of experimental group .

Table 2. *T- test results for the differences in post- test mean scores between experimental and control groups in word recognition test*

Group	N	Mean	Std. deviation	t	Sig.
Experimental	20	15.95	1.79	10.112	0.01
Control	20	8.65	2.13		

Table 3 shows T. test results for the differences in post- test mean scores between experimental and control groups in reading comprehension test. The table shows that (t) vale was (12.004). This value is significant at the level (0.01) in the favor of experimental group . The table also shows that there are differences in post- test mean scores between experimental and control groups in reading comprehension test in the favor of experimental group .

Table 3. *T- test results for the differences in post- test mean scores between experimental and control groups in* reading comprehension *test*

Group	N	Mean	Std. deviation	t	Sig.
Experimental	20	16.05	3.23	12.004	0.01
Control	20	7.22	5.11		

Discussion

The objective of this study was to investigate the effect of using multiple intelligences on some basic Reading skills of first graders At-Risk for reading disabilities. The findings of this study have shown that . Findings from this study indicated the effectiveness of the program employed in improving word recognition and reading comprehension skills in the target children . This goes in the same line with Hall's research (2004) which shows that teachers who have utilized multiple intelligence-based instruction in second or foreign language classrooms have observed students been more satisfied and had more positive attitudes towards learning English in experimental than the control group. Goodnoughin a case study (2001) reports that 85% of students have declared that multiple intelligence-based teaching help them enjoy the lesson and learning. Experimental group gained better scores in word recognition and comprehension tests than did control groups in post-tests though there were no statistical differences between the two groups in pre- test. This is due to the program which met the experimental group's needs and interests. On the contrary, the control group was left to be taught in a traditional way.

Limitations and future research

Although the results of this study showed the effectiveness of the adopted strategy , it had some limitations. The first limitation was the small sample size in order to arrive at more accurate and generalizable results, similar studies can be conducted with a larger number of participants. Another limitation of this study was that lessons were not from students curriculum, so some students were not taking the sessions seriously. Future research needs to take this into consideration; that is lessons should be from students books. Despite its limitations, this study can be considered one of the many steps that need to be taken in order to plan curricula taking the different intelligence profiles of the students into consideration and embrace all the students no matter how different they are from each other.

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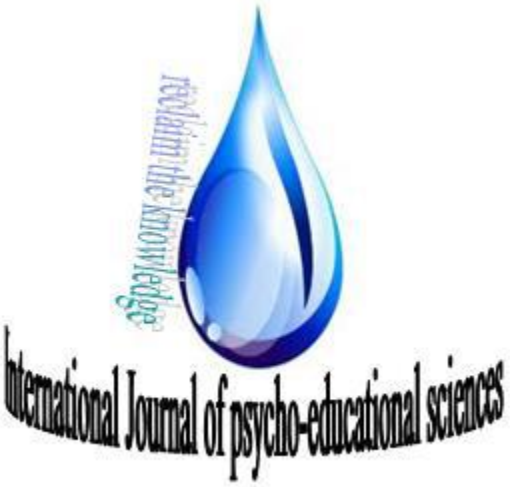

Democratic Education in Kindergartens as Perceived by Teachers in Public and Private Schools

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Abstract
The purpose of this study was to find out the differences in preschool teachers' views regarding democratic education in public and private kindergartens. The population of this study consists of kindergarten's teachers in public and private preschools in Menofya Governorate , Egypt. In the selection of sampling, the numbers of public and private preschools, and preschool teachers(all were females) .200 preschool teachers (100 teachers from public schools and 100 from private schools)were surveyed. All the teachers hold state teaching certificates; that is they were specialized in preschool education. Scale for Democratic Behaviour in kindergarten's Classroom developed in particular for this study. showed that there were no differences in preschool teachers' views regarding democratic education in public and private kindergartens.

*Keywords***:** Democratic education, kindergartens, teachers in public and private schools

Introduction

Democracy is regarded as a 'way of life' interrelated with the perceptions and assumptions, common experiences of individuals and it is about living together. It is a form of life and government based on human rights and freedoms where the majority has the right to make policies and the minority has the right to participate and criticize (Gömleksiz, 1988). According to Tortop (1992), the basic principle of democracy is to be respectful and tolerant of different opinions. Democracy is based on faith in the dignity and worth of every single individual as a human being. The object of a democratic education is, therefore, the full, all-round development of every individual's personality. i.e. an education to initiate the students into the many-sided art of living in a community. It is obvious, however, that an individual cannot live and develop alone. … No education is worth the name which does not inculcate the qualities necessary for living graciously, harmoniously and efficiently with one's fellow men (Dipty Subba, 2014).

According to Dewey (1916; cited in Kiroglu, 2013), "a democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experiences". In other words, unlike certain perceptions, democracy is not just about going to the ballots. It is about the internalization of such concepts as tolerance, rights, justice, fairness, respect of differences, participation, honesty, cooperation, freedom, responsibility, collaboration, and peace by the individual as an active member of society.

Democratic classrooms are the optimal environment where students can best learn and live these values. Students learn how to make decisions autonomously, how to lead, how to tolerate different opinions, and how to collaborate with and respect the rights of others in the classroom (Kiroglu,, 2013).

Osler and Starkey (2006) and Print, Ornstrom, and Nielsen (2002) hold that the teaching-learning setting in a democratic classroom requires the teacher to open subjects for debate and let the students freely express their views. Kiroglu, (2013) demonstrated that democratic classroom is one where values like equality, freedom, justice, and participation prevail. Another characteristic of democratic teachers, as claimed by Kiroglu, (2013) is that they treat all their students fairly and equally. If a teacher discriminates against their students on the basis of language, religion, creed,

gender, socio-economic status, attire, and other points; is partial in giving out rewards and punishments; does not let everyone have an equal say; and is knowingly unfriendly towards certain students, then that teacher cannot be said to be fair or equalitarian – or, consequently, democratic. Another significant token of a democratic classroom is that all students feel free. This is not a feeling that the students can experience by themselves; the person who is to help them experience it is the teacher who has internalized democracy.

The more a teacher understands democracy and incorporates it in the classroom the more it will be understood by students. Kesici states, "The teacher is the key factor in the process of building a democratic classroom". (Dipty Subba, 2014, P.38). Dipty Subba(2014)states that teachers should use appropriate teaching methods so that students can easily express themselves and their thoughts and ideas. A democratic teacher also needs to be fair, applying rules uniformly and listening to student explanations for misbehavior before making decisions.

He (2014)also ascertains that the teacher's role should be transformed from a traditional didactic, authoritarian one to a facilitating, personal role. Schools can and should play a major role in preparing citizens to play their democratic roles in adult life. For democratic teaching to succeed in schools it must be conceptualized and practiced as a dialogue between students and the teacher.

Early childhood is the most important stage in man's life. It is the stage of developing abilities, talents and future tendencies. It is the stage of determining the main dimensions of personality development, morals and human relations traits. Consequently this stage is the main base for child education and preparation for life in the future. At the age of between 4-6 is of utmost importance in personality, health, education and abilities formation. Enrolment in the kindergarten is a strong indicator for success in the following education stages. The optimal investment in Egypt is investment in children. The extent of investment in children in a country is an indicator of its priority. Children in Egypt represent the major population category. Consequently their welfare reflects the country's welfare in the future. Children shape the future of Egypt and its way to progress and development. No investment in education is a big loss. Today's poor children are tomorrow's poor parents, which leads to continuous poor generations. This results in decrease in development rates in the country (UNESCO, 2015).

To achieve comprehensive care for the Egyptian child law number 12/1996 concerning child protection was issued. Its executive regulations were issued by a decree of the prime minister to extinguish between the role of the nursery school and that of the kindergarten. The law included the nursery school under the child social care, supervised by the ministry of social affairs, and the kindergarten under the child education as it is considered an effective educational system that achieves comprehensive child development in the pre-school stage. At the beginning of the year 2000 the second document for the Egyptian child care and protection was issued. It stated that the second document should be well used for the good of our children as part of our national developmental plans in education, health, cultural and social development. Preparation for a third document started in January 2011, but the revolution at that time hindered it (UNESCO, 2015).

The purpose of this study was to find out the differences in kindergartens teachers' views regarding democratic education in public and private kindergartens. The following questions can be considered.

1- Are there differences between public and private kindergarten's teachers in Freedom factor?
2- Are there differences between public and private kindergarten's teachers in Equality factor?
3- Are there differences between public and private kindergarten's teachers in Justice factor?
4- Are there differences between public and private kindergarten's teachers in Participation factor?

Method

Population and Sample

The population of this study consists of kindergarten's teachers in public and private kindergartens in Menofya Governorate, Egypt. In the selection of sampling, the numbers of public and private kindergartens, and kindergarten teachers (all were females). 200 kindergarten teachers (100 teachers from public schools and 100 from private schools) were surveyed. All the teachers hold state teaching certificates; that is they were specialized in preschool education .

Instrument

Scale for Democratic Behavior in kindergarten's Classroom(developed in particular for this study) . Following review of the literature on democratic behaviors in the classroom, a 20- item scale was developed for teachers. A three-step Likert scale was used to reveal the extent to which preschool teachers' behaviors were democratic in the kindergarten's classroom. The Cronbach α internal consistency factor of the scale was found to be 0.91. The sub-scales of the research scale are described below.

Freedom. This subscale had the following items:" I friendly listen to what the child say in the classroom" , " I give the child the freedom to choose his toys", " I avoid annoying the children" , " I approach the children with love", and " I respect the freedom of the children" .

Equality. This subscale had the following items:" I trait my children fairly", " I share work with my children", " I tolerate differences in the classroom" , " I am not annoyed with sex differences ", and " I am not annoyed with individual differences between and among children" .

Justice. This subscale had the following items:" I am a model for democracy" , " I treat all alike" , " I discuss things with my children that concern them" , " I am fair in giving rewards ", and " I don't differentiate between children on any basis ".

Participation. This subscale had the following items: 'I encourage children to participate", " I ask children to be active ", " I use different interesting methods to help children to be active " , " I facilitate the transfer of democratic values to real life" , and " I always talk about and tell children about democracy ".

Data Analysis

T- test was employed to estimate the differences between teachers from public and private preschools. The SPSS 16.0 statistical package program was used in the analysis of the research data.

Results

The t-test results for preschool teachers' views on the freedom factor of the scale are given in Table 1. Table 1 shows T. test results for the differences in preschool teachers' views on the Freedom Factor. The table shows that (t) vale was (.565). This value is not significant.

Table 1. The t-Test Results for preschool teachers' views on the Freedom Factor

Group	N	Mean	Std. deviation	T	Sig.
Private	100	13.83	1.25	.565	Not
Public	100	13.73	1.24		Significant

* private refers to private school teachers - public refers to public school teachers

The t-test results for preschool teachers' views on the Equality factor of the scale are given in Table 2. Table 2 shows T. test results for the differences in preschool teachers' views on the Equality Factor. The table shows that (t) vale was (.829). This value is not significant.

Table 2. The t-Test Results for preschool teachers' views on the Equality Factor

Group	N	Mean	Std. deviation	T	Sig.
Private	100	14.01	1.20	. 829	Not
Public	100	13.87	1.18		Significant

The t-test results for preschool teachers' views on the Justice factor of the scale are given in Table 3. Table 3 shows T. test results for the differences in preschool teachers' views on the Justice Factor. The table shows that (t) vale was (.310). This value is not significant.

Table 3. The t-Test Results for preschool teachers' views on the Justice Factor

Group	N	Mean	Std. deviation	T	Sig.
Private	100	14.11	1.17	. 310	Not
Public	100	14.06	1.06		Significant

The t-test results for preschool teachers' views on the Participation factor of the scale are given in Table 4. Table 4 shows T. test results for the differences in preschool teachers' views on the Participation Factor. The table shows that (t) vale was (.319). This value is not significant.

Table 4. The t-Test Results for preschool teachers' views on the Participation Factor

Group	N	Mean	Std. deviation	T	Sig.
Private	100	14.17	1.13	. 319	Not
Public	100	14.12	1.07		Significant

Discussion and Conclusion

The purpose of this study to find out the differences in preschool teachers' views regarding democratic education in public and private kindergartens. As indicated, Tables 1, 2, 3, 4 showed that there were no differences in preschool

teachers' views regarding democratic education in public and private kindergartens. This highlighted the important roles played by Kindergarten Colleges in Egypt. From my own experience, teachers in kindergartens spare no effort to promote the spirit of democracy among children in the classroom, where they give all children an equal opportunity to express and participate in activities in the classroom. They already discuss things with their children that concern them. As indicated by psychological and educational theories, the first six years of a child's life has great impact on the development of the individual's personality and his entire. Hence teachers should be well- prepared for the democratic life, and this is transformed by dependency to their children. As indicated by Kiroglu (2013), the significance of the role of the teacher is undeniable, especially in learning democracy, which is the acquisition of attitudes and behaviors that require practice and a role model. As indicated by Matusova, (1997),democratic classrooms are the optimal environment where students can best learn and live these values. Students learn how to make decisions autonomously, how to lead, how to tolerate different opinions, and how to collaborate with and respect the rights of others in the classroom .The results of this study confirmed, as indicated by other researchers (e.g. Kesici, 2008; Shechtman, 2002; Knight, 2001) that democratic classroom is one where values like equality, freedom, justice, and participation prevail.

Limitations and Future Research

One limitation of this study is that it did not take into consideration children's views of teacher's democratic behaviour; that is: Is My Teacher Democratic? Küçükahmet (1989) found a positive correlation between teachers being democratic and students turning out democratic. So, future research should take into consideration teachers' democratic behaviour from their children's views.

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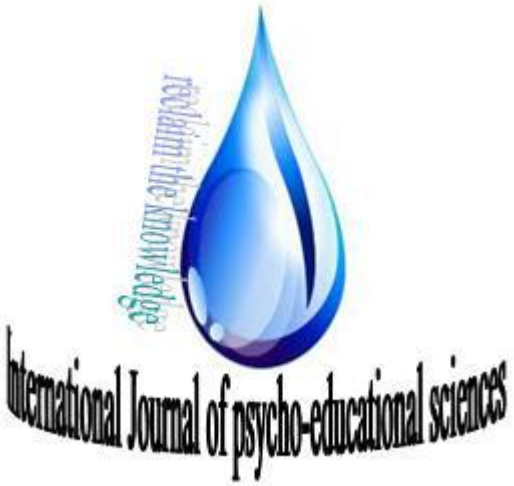

Service Learning: Citizenship Education through Social Engagement and Cognitive Experience

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Abstract

The article presents a part of an action research project undertaken by students and a small village's inhabitants, within a service learning approach. The project lasted for three academic years (from 2014/2015till 2016/2017). Its idea was education students' (members of Scientific Circle of Educational Media at Faculty of Social Sciences, University of Warmia and Mazury in Olsztyn) engagement into voluntary activity in favour of a small local community (of village near Olsztyn in Poland). During the project students not only carried out the work for and with the members of local society but also they made a research with them (participative observation, surveys). To fulfil the agenda of action research students were also investigated (interviewed) by the protector of the Circle (author of the article), in aim to explore the meanings they gave to their activity, learning and research process and the way they perceived and experienced the changes which were the results of the project.

Key words: service learning, practice, action research, higher education

Introduction

The action turn (Reason, Torbet, 2010) announced in social sciences directs our attention to practice and its role in professional learning, knowledge and research. An idea that "mind, rationality and knowledge are constituted through action and interaction within practices" and through them social life is organized reproduced and transformed Schatzki (2001, p.2) found its rationality in social research and education. Practice was discovered as an essential category "that produce learning and learners, practices that involve agencies of an ontologically diverse kind" (Mulcahy, 2014, p.53). Such an idea is represented mostly by the advocates of action research and other active strategies in education (e.g. action learning, service learning) who postulate including subjective/civic engagement in resolving social problems into a research and educational processes.

Service learning becomes "a linkage of classroom with communities, theory with practice", activity with reflection in order to "improve students' academic achievements, enhance their cultural competence and foster a more inclusive and just world" (Butin, 2015, p. xiv). Service learning is "a pedagogy that links community service and academic study so that each strengthens and transform the others (Eyler & Giles, see: Simonet, 2008, p.2). Being engaged in service learning students have many opportunities for various forms of engagement: cognitive, social, behavioral, emotional (Simonet, 2008, p.3), so the link among "students' personal and social development with academic and cognitive development experience enhances understanding; understanding leads to more effective action" (Eyler, Dwight E. Giles, 2003). Such an education then has a holistic dimension, supports students' efforts to manage their own personal and professional development and raises the graduates' awareness of their role in the society.

Theoretical Background

Practice as a Central Category of Education and Research

During a few last decades there is a significant shift in educational practice and research concerning understanding professional learning and knowledge. Accepted before acquisition of knowledge, treated as "static" element of cognitive processes (Mode 1.) was, in

many investigations, analysis and educational practices, removed by dynamic understanding of knowledge (Guerriero, 2017; Bratianu, 2015; Tunison, 2016), "continuously emerging in experimental participation in practice itself" (Mode 2) (Fenwick, Nerland, Jensen, 2012, p. 5). "Practice, both as an enactment of and a medium for learning, has been argued to weave knowing together with action, conversation and affect in purposeful and regularized orderings of human activity (Fenwick, Nerland, Jensen, 2014 p.3). Practice has its dynamics, it is constituted as "complex relations and movements across multiple sites" (Ibidem, p.5). Learning then is perceived as an activity based on many actions and interactions characterizing people's presence in a world rich of meetings, ideas, things, processes. "It is practices that produce learning and learners, practices that involve agencies of an ontologically diverse kind" (Mulcahy, 2014, p.53). To be engaged in practice means to construct reality and a world around and to be (re)constructed through activity which – very often – demands taking an effort to overcome our intellectual, social, emotional borders.

Practice-based learning considers students experiences of participation in real conditions, in solving real problems, which belong to people living outside the university, in local surroundings. Process of knowledge constitution (knowing-in-practice) (Gherrardi, 2006) allows the participants to undertake their professional learning within real social context, in relation to real people's needs and students' efforts to fulfill them. The added value of such an education has a moral character – students can develop their engagement carried out for social purposes, through the experiences they rise their responsibility and sensitivity, in an activity for common good. Such understood learning „involves integrating aspects of knowing, acting and being within a broad range of practices" (Dall' Alba, Barnacle, 2007,

In relations to this „pragmatic" approach to education and learning some transformations in the theory and practice of social research were observed. At first it was "a linguistic turn" which was a result of "a tension" between empirical positivist view and a counter movement called postmodern interpretivism. This way a thesis that "all ways of framing and interpreting the world are human constructions framed by language in social interactions" (Reason, Torbet, 2001, p. 5) was underlined. Going further - because human being started to be perceived as an active and critical subject, social actor creating the world around - the "practice turn" was announced. Schatzki (2001, p.2) stated that "mind, rationality and knowledge are constituted through action and interaction within practices" and through them social life is organized reproduced and transformed. This approach has had some consequences for social sciences' research. According to Reason & Bradbury (2001, p.7) "the primary purpose of research/practice after action turn is practical knowing embodied in the moment to moment action of each research/practitioner in the service of human flourishing" (Reason, Torbet, 2001, p.7).

The purpose of inquiry then is to treat knowledge dynamically, as 'a doer" (Jensen, Lahn, Nerland, 2012, p. 14) as „situated, negotiated, emergent and embedded activity" (Gherardi, 2009, p.1), as a tool for improvement the reality investigated and transformed. Such a thinking is represented mostly by the advocates of action research and other active strategies in education (e.g. action learning) who postulate including subjective/civic engagement in resolving social problems into a research and educational processes. This way they have opened a broad space for explorations new areas of knowledge (practical, reflective, experiential) which is strongly connected with practice embedded in multi-contextual learning environment.

Service Learning and Its Role in Professional Education

The idea of practice as a "tool" which can transform our understanding and acting in education and social research was approved by many humanists. Some of them who are looking for a good solution to combine practice to educational processes (Butin, 2015; Kerins, 2016) pay attention to a "larger community movement in higher education" (Butin, 2015, p. xiv) They represent an active pedagogy and civic education in higher education. This movement is an exemplification of a search for "a new generation of scholarship that carefully and critically examines the gaps, limits and problematics of an incredibly complex practice (Butin, 2015, p. xiv). The movement embraced "a set of loosely interrelated practices and philosophies such as civic engagement, community-based research, public scholarship and participatory action research" (Butin, 2015, p. xiv). It also embraced service learning which "enhances students outcomes (cognitive, affective, ethical), fosters a more active citizenry, promotes a scholarship of engagement among teachers and institutions, supports a more equitable society and reconnects colleges and universities with their local and regional communities (Butin, 2015, p.3). Service activities are used as a 'text' that is interpreted, analyzed and related to the content of a course in ways that permit a formal evaluation of the academic learning outcomes" (Bringle & Hatcher, 2009, p. 38).

Students participating in service learning are not only "serving to learn" but also "learning to serve", and this last aim is not represented in any academic curricula, so is treated as the "unique civic dimension of the pedagogy" (Bringle & Hatcher, 2009, p. 38). What needs to be strongly underlined service learning is defined as "social -movement-phenomenon" (Butin, 2010, p.xiii) because of its implicit potential in activating and integrating social communities which take – together with students – the tasks for the good of community. For students it is an opportunity to develop their civic competences, not only they learn how to analyze and solve social problems but also they learn how to animate local groups of interests, how to encourage them to common cultural and social activity, how to strengthen the leaders in more responsible and autonomous engagement.

According to (Butin, 2015, p.xiii) there is no one thing called "service learning". Instead there are multiple, divergent and often contradictory modes of service learning by which this learning is accomplished in higher education. Theory of service learning is actually " a set of theories contingent on the embodied and experiential character of the service learning experience" (Butin, 2010, p.iiix)

The constitutive feature of service learning is students' engagement in the activity carried out in purpose to benefit others (Kerins, 2016, p.2). So, students leave classrooms and use their knowledge and skills taking tasks, projects, events, trying to answer the needs, expectations, problems of people (street children, older people, excluded persons, little village people) in their surroundings. Such an education can combine many educational aims. Students serve to the people who need help and becoming members of their community they can acquire many (social, communicative, professional) competences necessary for their future professions. They also have an opportunity to build their moral competences – values that arise from the service activity: responsibility, charity, respect for people in bad life situation (Kerins, 2016, p.2).

An integration of knowledge and experience gives students opportunity to develop better understanding of themselves being encouraged to reflection concerning their self-

development, participation in social change and their role "within a greater context of democracy" (Simonet, 2008, p.2).This, much bigger than traditional set of educational aims allows to perceive service learning as "a process that creates greater student engagement" (Simonet, 2008, p.1) which supports their successes and counteracts educational failures. Students "develop a sense of competence in using knowledge and are able to broaden, build and connect their understanding through application, dialog and reflection" (Simonet, 2008, p.1). They "become more confident, socially adept and versatile in applying creative solutions to complex problems" (Simonet, 2008, p.1). Their understanding of learning overcomes the borders of university, through the involvement in activity in favor of local communities they can also recognize a sense of learning lasting the entire life – lifelong learning.

Being engaged in service learning students have many opportunities for various forms of engagement: cognitive, social, behavioral, emotional (Simonet, 2008, p.3), so the link among "students' personal and social development with academic and cognitive development experience enhances understanding; understanding leads to more effective action" (Eyler, Giles, 2003). Such an education then has a holistic dimension, supports students' efforts to manage their own personal and professional development and raises the graduates' awareness of their role in the society.

Method

The research was focused on an educational project which lasted for three academic years (from 2014/2015till 2016/2017). The project engaged students into voluntary activity in favour of small local society (of village near Olsztyn in Poland). They were 8 students of education, the members of Scientific Circle of Educational Media at Faculty of Social Sciences, University of Warmia and Mazury in Olsztyn. It was an action research project with some elements of service learning so during the project students not only carry out the work for and with the members of local society but also they made a research with them (participative observation, surveys). To fulfil the agenda of action research students were also investigated (interviewed) with a semi-structured written interviews which were conducted with three, the most involved members of Students' Scientific Circle.

These 8 students were chosen intentionally to explore what meanings they gave to deep and personal engagement in service learning and in wider sense, in an activity of scientific circle (which is taken by rather small number of students) and how they perceived their participation in the project in their preparation to future pedagogical work. We wanted to identify how students perceived a role of such an intensive engagement in an activity of service (as a form of pedagogical activity) in the process of building their pedagogical knowledge and competences. Our aim was also to recognize the possibilities of including such "scholarship of engagement" (Butin, 2015, p.xv) in local society's renewal to educational practices of university. The article presents data gathered with a triple team of students in three-year project's duration (from 2014/2015till 2016/2017). From this (2017/2018) academic year we have started a new one, in two neighbouring villages.

During the project students were engaged in intergenerational meetings for celebrating events like: St. Adrew's Day, The Grandparents' Day, carnival balls, Easter workshops, Family festivals. For each meeting they prepared scenarios which contained many plays, competitions, games, quizzes, workshops trying to attract the inhabitants by various proposals of being, playing and working together. Throuh this way, students wanted to enhance them to

be engaged, to build their integration and readiness for the involvement in the activities taken for common good.

The service learning's incorporation in the framework of action research strategy was related to the aims of Students Scientific Circle, which were twofold: pedagogical and investigative. First one concerned developing students' social, civic and cultural competences through community engagement. Second - was connected to their role as researchers and reflective practitioners who investigated their own activity and the results achieved (or not achieved) in the project. They could thus build their personal knowledge based on personal and team research experience analysed critically and reflectively. The data of the research presented in the article exemplifies a meta-reflection students took up after the realisation of the project.

Choosing action research as a base for the project undertaken with students – members of scientific academic circle was related to special characteristic of this strategy of inquiry. Reason and Bradbury (2008, p. 3) stated that action research is "a set of practices that responds to people desire to act creatively in the face of practical and often pressing issues in their lives in organizations and communities". It is defined as „a democratic and participative orientation to knowledge creation. It brings together action and reflection, theory and practice, in the pursuit of practical solutions to issues of pressing concern. Action research is a pragmatic co-creation of knowing with, not on, people" (Bradbury, 2001, p. 1) It is a space for „working with and towards knowledge in action" (Bradbury, 2001, p. 1), what means operationalization of knowledge as a dynamic phenomenon, mediated by widely contextual environment.

Action research is a kind of „co-operative inquiry", „grounded in an extended epistemology for researching human experience through participatory human inquiry" (Yorks, 2015, p. 256). This epistemology concerns many interconnected ways of knowing which encompass various ways of producing, expressing, using and sharing knowledge and holistic understanding the way human beings create their worlds. The extended epistemology concerns integration of four ways of knowing (practical, experimental, presentational, propositional ones), (Heron, Reason, 2008) based on evidence generation and expression of different forms of presentation.

Going through repeated cycles of action and reflection action research participants cooperate as co-researchers and co-subjects (Yorks, 2015, p. 256). Action research has a processual, multistage character. It is emergent and developmental (Bradbury, 2001, p. 6), the participants' involvement is motivated by the „questions that are professionally or personally developmental, socially controversial or require social healing on the part of the co-inquires" (Yorks, 2015, p. 256), it demands being personally „inside the experience" (Yorks, 2015, p. 256).

According to Peter Reason (2001) action research strategy has double objective, but except from the ones indicated above (leading to gather practical and research experience and knowledge) he underlined empowering the participants not only to produce "their own knowledge" but also to use it in a "process of self-awareness through collective self-inquiry and reflection" (Fals-Borda & Rahman, see: Reason, 2001). It means „consciousness raising or conscientization" of the „underprivileged members of our world" (Chambers, 1997, see:

Reason, 2001). Such an understanding of our activity was of a big importance for the students working with people in a small village.

Data Reconstruction and Discussion

The article presents a part of a service learning project undertaken with students and a small village's inhabitants, within an action research approach. The data received from students had a narrative and reflective character, they were reconstructed by codifying and categorizing (Saldana, 2016, p.31), in a search for students meanings, interpretation, transformations. Some questions, like: What are they doing? What are they trying to accomplish? How, exactly, do they do this? What specific means and/or strategies do they use? How do they talk about, characterize and understand what is going on? What do I see going on here? What did I learn from these notes? Why did I include them? (Saldana, 2016, p.15) were very helpful during these analyses. Gathering data we also included our "own reflective data" (Saldana, 2016, p.15). They were a source of our constant reflection on the research and educational processes. In effect of the indicated analytic processes four categories of reconstructed data were distinguished. They concerned the way students perceived personal and professional aspects of service learning, the results/changes emergent in the research fieldwork and the meanings given to service learning as an "education in action".

Personal Aspects of Participation in the Service Learning

Our first observation concerning the answers students gave during the interviews was their concentration and an effort to make a deep reflective analysis about their participation in the project. They uncovered many personal aspects of their activity. One of the woman (K) told us about their biographical motives of taking part in the project.

K: *I was raised in the village therefore I am aware that few activities are organised for local communities. (...) This knowledge and experiences of living in the village were crucial to make a decision to take part in the project".*

Other personal motives have developmental character.

A: *"It is an internal need to realise my own ideas, relating to local society's animation. So it was self-actualisation but not only. It also was an improvement of my abilities to pedagogical work (...), an opportunity of my personality development".*

K: *"I am glad I can develop my passions, work in favour of these inhabitants, help the local society and thereby derive many inspirations and learn from more experienced persons".*

A: *"I stimulate my imagination and creativity".*

Participation in the project was also perceived as a developmental task having very significant, even disruptive impact. One of the woman said:

M: *"Activation of the inhabitants was a precious experience which shaped a character and enriched internally. Therefore making a decision to undertake the activities has changed, to some extent, my past life, through the experiences of new things, exchanges of them. It was an occasion to share my time, knowledge with other persons, but it also was a way of gaining new, practical skills".*

She continued expressing her sensitivity and a determination to pursue voluntary working for helping people.

M:"*I think it is a kind of addiction, obviously in a positive sense. Who tries it once, he never gives up, and who does, he will come back after some time being stronger and having new ideas. For me it is a very important and incredible experience in my life.*

The strong motive of students' engagement was a satisfaction they experienced through the participation in service learning. But feeling this satisfaction was connected with a reflection („in-action", „on -action"), concerning the effects which were achieved. Students also expressed a pedagogical awareness of young pedagogues understanding the value of their work for themselves and for the people they worked with.

K: „*If the task which I planned give the intentional effects and the participants are glad I feel satisfaction. But I always analyze the events which took place and look for the situations I should improve next time".*

M:"The awareness of time and efforts I sacrifice for helping others causes a satisfaction of my activities and I gain a self-confidence. I feel like I don't waste my time".

A:"I feel satisfaction looking at smile at children's faces, when parents take part in our meetings together with children, cooperating together, talking, rooting for each other".

Telling their stories students indicated also social motives of their participation. They presented a strong will to help the inhabitants to overcome the problems of lack of engagement and passivity.

A: „*I would like to encourage both children, youngsters and adult inhabitants of the village to common activity, to teach them about the organization of spare time and alternative possibilities of spending it, to encourage intergenerational integration".*

M: *My guiding motive was a consolidation of an attractiveness and the improvement the quality of integrative meetings to cause the village to pulsate with life – integrating with each other".*

These narrations presented students' pedagogical responsibility and awareness, ability to diagnose the detected problems and readiness for taking even bigger engagement to help the village society to solve them. The source of this readiness was really extraordinary sensitivity.

M: *„Regardless of who they are we should selflessly help as much as we can, not necessarily financially, but supporting or taking care of others, motivating them to activity, presenting an idea that „together we can do a lot" and „nobody is alone".*

These data indicated students' strong motivational and emotional engagement. We think the way they connected their passions and interests leading to their self-actualisation with community service proclaimed a wide range of their personal educational outcomes.

Service Learning as an Opportunity for Professional Learning

Students – members of scientific circle strongly underlined the possibility of professional learning, of gathering experiences which would give them better preparation to a future pedagogical work. They also appreciated the recognition of their strong and weak sides

and thanks to such experiences to meet some inspirations for personal and professional development.

K: *"Thanks to a possibility to cooperate with wonderful people, I can learn a lot, observe social phenomena and regularities.*

A: *"Taking active part in these activities I have an opportunity to learn new things. Then I can recognize my possibilities and limitations during organizing the meetings, managing games and plays. I can develop myself".*

They also – more specifically – defined what they have learnt thanks to their engagement in service learning experiences. A process of personal knowledge constitution was underlined.

K: *First of all I have an opportunity to applicate theoretical knowledge gained during studies into practical activities and this way I can verify the knowledge.*

Some other aspects of professional experiential knowledge were presented, especially the ones considering developing social and interpersonal competences. A strong emphasis on social learning seems to be connected with the character of the tasks taken during the project which were focused on learning the group management, cooperation, skills of good communication and supportive leadership.

K: *"I learn working with a big group of children, youngsters and adults. I have to plan my things in the way attractive for four age groups".*

A: *"I learn a cooperation in the group through talking the activities over and preparing them".*

K: *"I learn empathy, try to develop my interpersonal skills, to win the group's trust and sympathy, to cooperate effectively"..*

Learning a pedagogical profession was also presented as a challenge which students want to take up. Reading the sentences it is easy to discover students' strong positive attitude to their future profession.

A*: "It is an event which allows me to test myself in pedagogue's role, animator's role. It is a significant meaning, even invaluable, it is difficult to describe it in a few words".*

K: *"The work that allows us for a self-actualisation and brings some effects gives us a self-confidence that we chose the most appropriate way of real-life development".*

M: "It is a source of a lot of new experiences, which can be useful in our life. It gives me a strength, courage, strengthen my character. I don't say it is easy but we can manage with all the things if we have ideas and desires to act."

These narrations presented students as brave and ready for various efforts "fighters". Then they were asked about the difficulties they met taking the tasks. It occurred they have met some emotional barriers to overcome, especially in the beginning of their activity.

A: *"I was afraid and felt stress thinking I would not be accepted by the members of the village. I had a fear nobody would participate in the meetings. But it occurred the inhabitants were very open for our initiatives".*

K: "*It was difficult to win the inhabitants trust and to start a cooperation with totally unknown group of people".*

Another kind of difficulties were tied with the specificity of pedagogical profession: unpredictable and dynamic. Students had to learn how to be a reflective practitioner being able to applicate a reflection-in-action which is a very useful tool in pedagogical work.

K: *." It was a necessity to change something in the program, spontaneously. We sometimes had to change our roles, enter new tasks, plays, help a colleague who was not able to manage. We needed fluency, the work with a group learns fast reactions for emerging situations".*

Participation in the experiences of service learning was treated by students as an advantage for professional learning taken through practical experiences of pedagogical work. It concerned mostly the improvement of social and interpersonal competences and the recognition of the specificity and barriers met by students in pedagogical work. Practice was treated as a tool to overcome them.

The Meanings Given to the Results of Service Learning

A big part of data gained during interviews concerned students narrations about the results. They indicated benefits both for the inhabitants and for themselves. First of all they noticed a processual character of people's involvement in the activities.

K: "*In the beginning the inhabitants and children felt difficulties to join our activities, but they gradually started to engage. Their participation in ordinary plays allowed them to meet, to talk together".*

M: "*They step by step started to cooperate with us and with themselves".*

A: "*Something started to happen in the village".*

Students also perceived some changes in the way of inhabitants' engagement.

K: *Each person engaged according to his/her potential, using their manual abilities, talents, creativity, joy.*

M: "*Until recently they sat at home …But they started to become convinced of the activities (…) They understood that acting jointly they could accomplish a lot. They started to organize evenings, meetings on their own, going together for walks. They organized a common trip.*

K: *The participation in common tasks convinced them that as a rural society they could take independent actions.*

A: "*I noticed changes concerning the persons who took part in a few events. In the beginning some persons came just because of curiosity, to look, they were sceptic, standing aloof. During the following meetings they not only look but also took part in the tasks, educational games. And they were glad because of the common fun".*

The perceived changes have had – according to one of the students – also much deep personal character. He told how he perceived such transformation of some "inhabitants.

A: *"First of all they had a feeling of appropriability and a belief that without them nothing can be successful. These feelings supports positive self-estimation, it is the beginning for the following activities taken for the society's good. It implicates a reinforcement of interpersonal bounds and gives a mobilisation for a more frequent meetings".*

Some results presented by the students concerned their mutual cooperation with the inhabitants. They underlined a process of community' constitution, based on responsibility and civic competences. These narrations presented also presented some moral aspects of service learning.

K: "*I think that during the tasks which were realised in the village we both develop, the inhabitants and we, students. We felt responsible for each member of this community"*

A: "*Both students and inhabitants have the possibility to gain and improve the civic competences, like a feeling of solidarity and local bounds"*

For us as researchers and academic teachers students' voices about their personal experiences gained through taking part in the project were very important. Telling their stories they said it was „education in action"- appreciated because of the possibility of working and learning in real conditions and mutual exchange of experiences. Knowledge constructed through these activities had for them dynamic and "hot" meaning.

A: "*For me it is an alternative for the education taken by the participation in lectures at the university where we work through simulation of real events. But education in action is a reality, it takes place here and now, you can immediately draw conclusions what can be improved, what was successful, what was popular among the participants, what mistakes you made. Here we have a feedback form the receivers at once".*

The fast and immediate process of estimating value of knowledge underlined a strong connection between theory and practice, which was another important aspect of „education in action".

A: *"And all the more I practice what I have learnt and immediately I have verified my knowledge".*

Additionally students noticed a interdependence between their free and creative participation leading to competence development and their service for local community's evolution.

K: "*This kind of education gives the educator a lot of possibilities of the aims realization. Being oriented on the development of local society he/she is allowed to constitute his own professional competences"*

K: "Through the education in action we can strive for positive social changes"

M: I am able to have an impact on people's life, give them support and motivation to further devoirs".

Some "egocentric" benefits were also uncovered.

A: "*Participating in education in action I am not only a giver but also a receiver and it is the best for me. I gain more than I give.*

Education in action seemed to have differentiated results, students could recognize

on one side a big number of them (personal, social, developmental, educational), on the other – the way these results were interrelated with each other. The research data indicated that students engagement in the service learning fostered their many-sided preparation to a pedagogical profession and civic activities.

Conclusion

Service learning is a "type of engaged learning that embraces the possibility of conjoint civic renewal and academic betterment" (Butin, 2010, p.xv). In our research this engagement was increased by students' participation in action research process. These complex experiences created additional opportunity for a combination of educational, social and exploratory activities, important in students' professional education. They constituted personal knowledge, going through multiple ways of knowing – mostly practical one – „know how" to prepare and organize meeting, manage the group, achieve the planned aims, communicate and cooperate with inhabitants, encourage them to common activity, conduct a research. It was knowing experienced through „education in action", sometimes through trial and error method, through the attempts of undertaking pedagogical practice. This way of knowing was enhanced by a mutual learning of students and the inhabitants. It was a multidirectional co-construction of knowledge resulted in a process of building a community of practice, of people learning with and from each other through the involvement in practice. These common activities were motivated by personal (biographical and developmental) and social motives of young people looking for their own ways of self-actualization and for possibilities of a „making the world better", of being the actors of social positive changes.

The practical knowledge was „hot", created „here and now" but it was reconstituted by reflection (in-action, on-action - Schön, 1988) and meta-reflection and through students' narrations. These reflections and creative narratives helped them to build a connection between the experiences and „a world of theory in their own worlds and stories" (Long, 2008). This way practical knowing was integrated with propositional one – theoretical, conceptual, representing knowledge brought from the University. During project realization students also experienced representational and experiential ways of knowing, they took advantage of their sensory abilities and artistic capacities but these opportunities for knowledge constitution were less recognized by them.

Education „in action" gave students many opportunities of personal and professional learning. Its main „tool" was practice as a space of learning, experience and service. Such an education creates possibilities for many competences' development: cognitive, communicative, interpersonal, social ones. But what was especially valuable – according to students narratives – was connected with civic competences understood as learning to recognize a local reality of small village and a service for the animation and integration of this society. Students expressed their solidarity and took responsibility for the increasing well-being of the village community. They made an effort to activate the inhabitants to overcome the barriers hindering their independent engagement in solving their local problems. Service learning had then also strong moral aspects - very significant in pedagogical profession.

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