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REMOTE EDUCATION FOR PEOPLE WITH INTELLECTUAL DISABILITIES: INCLUSION OR EXCLUSION? AN EMPIRICAL STUDY

INTRODUCTION

Digitalization of social life and consequently, also of education has been strongly affecting students with deeper intellectual disability (it is a broad term covering both people with moderate disabilities and those with severe intellectual disabilities), where practically the whole activity is based on a direct contact and cooperation of all subjects in the school environment.

This brings about the need to use, in the process of education and rehabilitation, digital solutions, which have so far been solely a possible option to choose in education. On the one hand, the remote formula of implementing these processes distorts the previous practice, implying an increased risk of excluding people with special educational needs, especially those with deeper intellectual disability. On the other hand, it may provide a platform enabling these people to get closer to the digitalized world. The situation which enforced the use of modern technologies in

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Dr JERZY WOLNY (1958–2021) was a researcher at the Silesian University of Technology, Institute of Education and Communication Research. He was Head of Laboratory of Neuroeducation; his research areas were: independent life of people with intellectual disabilities, inclusive education, counteracting digital exclusion of disabled people.

the education process, also in special education, was the COVID-19 pandemic. According to the NIK (Supreme Audit Office) report “Schools in times of pandemic” compiled between October 2020 and February 2021, 38% of students in mainstream schools were supported due to disabilities or other reasons preventing them from learning remotely from home, while 44% of students in inclusive schools and 77% of students in special schools had direct contact with a teacher (NIK, 2022).

The study presented here was an attempt to find answers to the questions concerning the possibility of using currently available communication technologies for educational needs, upbringing and education, and rehabilitation of people with deeper intellectual disability. For this purpose, common activities were planned, implemented by organizations from seven countries (Poland, Spain, Portugal, Bulgaria, Turkey, Romania, Belgium), as part of the Erasmus plus project (KA226-9A6B05FC-PL) entitled “With a little help...”, with the view to developing solutions enabling efficient work in such situations. These solutions are based on using, on the one hand, the ePortfolio method to plan and document students’ development together with students and parents; on the other hand, on applying virtual reality by means of 360 degrees cameras and googles, and consoles, e.g. Xbox to organize rehabilitation. Thus, the study results presented in the paper are based on activities undertaken in the discussed project and constitute a separate research process conducted in the formula of survey research and interdisciplinary research using the principles applied in comparative research.

1. LEGISLATIVE PREDICTORS OF ACTIVITIES AIMED AT DIGITAL INCLUSION OF PEOPLE WITH INTELLECTUAL DISABILITY

The last several dozen years have been the time of changes in social policies of numerous countries concerning development possibilities of people with intellectual disability in Europe and in the world. One should certainly mention here the acts which were of great significance for these changes, such as: *Standard Rules on the Equalization of Opportunities for Persons with Disabilities* from 1993 (United Nations, 1993, available on the Internet on 29.10.2021); the European Congress for Disabled People, 20-24 March 2002, called the Madrid Declaration (available on the Internet on 29.10.2021); or the United Nations’ (UN) Convention on the Rights of Disabled People from 2006 (available on the Internet on 29.10.2021).

In spite of the activities indicated there and other numerous positive solutions in Europe and in the world, still a lot remains to be done on this issue. There are also new risks posed by, for example, the phenomenon of Industrial Revolution 4.0, also known as the “digital revolution,” which has changed our reality by obliging people to

learn completely new things as well as use technology and linking educational goals to mental toughness and readiness for change (Adamczyk, Karpiuk & Soler, 2023). There emerge new study areas and new terms such as “the Internet of things”, “big data and augmented reality analytics”, “autonomous robots”, etc. (Tay et al., 2018). As a result of these phenomena, an increasing number of social groups are failing to keep up with both the dynamics of these changes and the demands they bring with them. People with intellectual disabilities are clearly such a group. It seems that using information and communication technology poses a challenge to these people and that gradually there arises a digital gap between them and the rest of the society, although these risks also concern other social groups. An interesting suggestion of evaluating the differences in the possibilities of access to digital solutions are the five criteria of digital inclusion or “access to digital devices, sensorimotor, cognitive and technical requirements [sic!] and comprehension of codes and conventions” correlated with the social support system (Lussier-Desrochers et al., 2017).

The essential competences include, among other things, taking advantage of digital technologies for the purpose of studying, working, participating in society, conceived of as an ability to use information and data, to communicate and to cooperate (SWD (2018) 14 final, p. 4-5). They are defined as a process of extending participation in the society of disadvantaged people by increasing the chance of their access to possibly all resources, and thus to broadly conceived normalization processes (Perrin & Nirje, 1985). Similar assumptions are indicated by the UN’s Agenda 2030 principle, which promotes the rule of law and broad support for inclusive and participatory decision-making, according to which everyone should benefit from prosperity and enjoy minimum standards of well-being. However, this participation is often depleted when rights and dignity are not treated with equal respect and protection for and by all (United Nations Department of Economic and Social Affairs, 2016, p. 17-31, available online 29.10.2021). The limitations described can consequently lead to social exclusion, which is a complex phenomenon and should be considered in the context of, for example, specific costs for each society, both psycho-social and economic in nature (Genereaux, Bansback & Birch, 2016).

2. PROBLEMS OF REMOTE EDUCATION AND REHABILITATION OF PEOPLE WITH DEEPER INTELLECTUAL DISABILITY

During the pandemic, there arose a necessity of using remote education and rehabilitation also in working with people with deeper intellectual disability. It needs to be emphasized that these people are particularly vulnerable to physical, mental and social consequences of the pandemic. Cognitive impairment in people with this

dysfunction may limit understanding information, and the change, which is a remote form of classes, may increase the level of fear and generate difficulties of a behavioral and mental nature, which further hinders the smooth implementation of this form of education and rehabilitation. Of course, the use of digital technology is beneficial in maintaining contact with a teacher or therapist, but not every person with a learning disability has access to the aforementioned technology and carers, especially older people may not have sufficient digital competence in this area (Courtenay & Perera 2020, p. 232). This is also true about adults with disability – for example, in the UK in 2017, as many as 56% of people who do not use the Internet were people with a range of disabilities. In many cases, however, a remote form of contact allows one to avoid many of the barriers associated with access to buildings, transport, etc. Paradoxically, this has raised concerns about the use of technology to further exclude people with disabilities, as the intensification of digital technology use may exacerbate the state of isolation (Shakespeare et al., 2021, p. 9).

Online contact may be beneficial and facilitate performing many tasks, but it will not substitute human touch and creating a sense of community, for example, in the work of physiotherapists. The need for a direct contact is visible both in children, who want to be at school with their peers, as well as with adults, who want to go to work or to a day care center in order to meet with friends (de Zulueta, 2020).

Also professional assistants using various remote forms of contact with people with intellectual disability signal a clear deterioration of the quality of relationships (Scheffers, Moonen and van Vugt, 2021). The negative effects of lockdown and the consequent isolation are also marked in the sphere of emotions – as many as 60% of people with intellectual disability point to a negative effect in this area, and 48% of students are not satisfied with the remote form of education, emphasizing poorer access to information and to the support of their well-being (Amor et. al. 2021). Hence, among other things, the UN recommended some actions for remote education:

- “Provide Internet access for remote learning ...
 - Provide guidance, training and support to teachers on remote teaching
 - Establish close cooperation with parents and guardians ...
 - Provide guidance and support at a distance for parents and carers ...
 - Develop audiovisual materials for dissemination through various media”
- (United Nations, 2020, p. 6).

3. METHODOLOGY OF THE STUDIES CONDUCTED

The pilot study aimed to reach a preliminary diagnosis of the teaching environment in the countries under study in terms of a number of relevant issues, including,

among other things, the implementation of the process of diagnosing and educating intellectually disabled people, as well as the impact of the pandemic on the quality and dynamics of this process in the opinions of the respondents.

The study was designed as a quantitative study using original questionnaires and document analyses in the Erasmus plus project. The research assumptions adopted were situated in the positivist model referring to scientific knowledge and the possibility of expressing it “in terms relating directly to some reality, possibly to such aspects as are graspable through the senses” (Giddens, 1976, p. 103).

In order to identify areas of digitization of the educational process, 642 teachers from the seven participating countries were surveyed. The research was carried out in 2021 and consisted in comparing two temporal perspectives – the first past, referring to the forms of education undertaken during the pandemic and the second one, post-pandemic.

The respondents were asked: What educational and rehabilitation activities were organized in the special school for students with deeper intellectual disabilities? How will education be organized after the end of the pandemic? How should students with deeper intellectual disabilities be supported in the development of their digital skills and how to counteract their digital exclusion?

4. SAMPLE

A total of 642 0 teachers from seven countries took part in the survey, with the number of completed questionnaires varying from country to country.

The sample selection was purposeful, with the surveyed teachers working in special education, falling into a narrow range of professionals, representing a small percentage of all teachers.

The largest percentage of surveyed teachers came respectively from: Bulgaria – 31.2% (200) of all respondents, Portugal – 20.6% (132), Turkey – 15.3% (98), Poland – 13.2% (85), Romania – 8.1% (52), Belgium – 7.9% (51), and Spain – 3.7% (24). The gender distribution of the study population was as follows: 80.1% (514) of all respondents were women and 19.9% (128) were men. More than half of the respondents, 55.5% (356), held a master’s degree and 44.2% (284) – a bachelor’s degree, with two respondents indicating that they had a doctorate (0,3%). In terms of the length of service, the largest group, 37.7% (242) of the respondents, were teachers with seniority of 0-10 years, followed by those with seniority of 10 to 20 years – 27.7% (178) and finally teachers who had been in the profession for more than 20 years – 34.6% (222) of the sample.

5. STUDY RESULTS

According to the survey, the vast majority of schools in which the surveyed teachers work did not temporarily suspend educational and therapeutic activities due to the pandemic (78% of all indications). This was: Belgium: 17.6%; Bulgaria: 26%; Poland: 12.9%; Portugal: 18.9%; Romania: 21.2%; Spain: 4.2%; Turkey: 32.7%

All countries took action to support students and their parents/guardians in learning and rehabilitation. The most frequently mentioned form of action was contacting pupils via the available instant messaging services for learning activities, indicated by a total of 43% of the surveyed teachers, of which the most frequently in Poland (as many as 80% of the surveyed teachers from Polish schools), but also in Bulgaria (53%), Portugal (43.2% of all indications), and Turkey (21.4%); this type of action to support students was undertaken on a regular basis. According to the respondents, therapy with the use of modern technologies, i.e. instant messaging services available in the institutions concerned, was also carried out, although to a lesser extent than education; 38.2% of all indications referred to such an activity. Of course, one may wonder why the remaining more than 60% of the teachers did not make use of such opportunities.

Teachers indicated the use of various types of instant messaging services to communicate with parents in order to give them tips for working with their children at home, which also means that the pandemic has shifted some of the tasks previously carried out at school to the parents. This way of communication and support for people with intellectual disabilities was particularly frequently used in Spain (91.7%) and Poland (78.8% of all indications). For the next four countries, teachers' indications were at similar levels: Romania – 38.5%, Turkey – 37.8%, Belgium – 37.3%, and Bulgaria – 34%. Respondents in Portugal (19.7%) were least likely to indicate this way of supporting students and their carers.

Although all countries used technology to a greater or lesser extent to implement education and rehabilitation activities for their pupils, the majority of respondents declare a return to traditional ways of working after the pandemic. Almost $\frac{3}{4}$ of the respondents surveyed, i.e. 74.5% (478 people), believe so. Interestingly, as many as 92.2% of all surveyed teachers in Belgium share this opinion. Despite being the richest of the countries surveyed and being at the forefront of European countries leading the way in digitalization (European Commission, 2019), it is Belgian teachers who are very critical of the possibility of using digital solutions that have worked in the pandemic. As many as 84.5% of teachers from Bulgaria, 78.6% from Turkey and 76.5% from Poland think the same. Only one in four respondents, 25.5% (164 people), believes that they will use some of the solutions that were proven in the pandemic. However, when already asked about the forms

of supporting students with profound intellectual disabilities in the development of their digital skills, 47.8% represent the opinion that it is worthwhile to use the solutions developed during the pandemic for this purpose, and 43.9% point to the ways developed as part of EU projects.

A statistically significant relationship was found when analyzing the variable of length of service of the teachers surveyed. The majority of teachers who declared that they would use digital elements in their work with students in the post-pandemic period were those with more than 20 years of seniority. In contrast, the opinion that they will return to pre-pandemic solutions in their work with students after the pandemic is over was most often expressed by teachers with the shortest length of service (0-10 years). This difference is statistically significant, as confirmed by Pearson's Chi2 independence test ($N = 642$) = 12.662; ($p < 0.05$). However, the correlation between these variables should be assessed as weak (Cramer's $V = 0.140$; $p < 0.05$). The occurrence of such a correlation is interesting insofar as it somehow contradicts the common stereotype about the reluctance of older generational groups to use modern means of communication. In the case of the study described, it is older people, not only by seniority, but also by age, who perceive the validity of using modern technologies in the field of education.

CONCLUSIONS

The analysis of the collected results, despite the social and cultural diversity of the countries surveyed, allowed the following conclusions to be drawn:

1. The majority of the surveyed special schools (approximately 80%) implemented stationary educational activities during the pandemic period. Across countries, the percentage of suspended classes had a relatively large amplitude, ranging from 32.7% of non-implemented educational activities in Turkey to 4.2% in Spain.

2. Various types of instant messaging services were frequently used in schools, affecting a total of 43% of all teachers surveyed, with the most frequent use of this form of communication in Poland (80%) and Bulgaria (over 50%), slightly less frequent in Portugal (43%) and least frequent, at 21.4%, in Turkey.

3. Therapeutic and rehabilitation classes were conducted remotely less frequently than classes of an educational nature. The lower percentage of rehabilitation classes is justified by the limited possibilities of conducting them without direct contact, e.g. physiotherapy. Therefore, only 38.2% of all therapeutic interventions were based on contact using modern technology.

4. In most of the countries surveyed, modern technology was used to communicate with parents and carers of students. The dominant country in this respect was

Spain, where 91.7% of teachers declared this form of support for pupils' education and rehabilitation; the number of indications of this form in Poland was also relatively high (78.8%). In the case of the other four countries (Turkey, Belgium, Romania and Bulgaria), the rate for the above-mentioned form of support reached more than 30%, while the lowest percentage was recorded in Portugal (19.7%).

5. After the end of the pandemic, almost 75% of the teachers surveyed intend to return to their previous forms of work, with only 25% declaring that they will use some of the digital solutions from this period in the future. The exception is the use of solutions developed within the framework of the EU projects supporting the development of digital competences of students and teachers, indicated by more than 40% of teachers.

The use of digital technologies by individuals with intellectual disabilities is relevant to numerous areas of their lives, including their consumer potential and social engagement. Tackling the digital exclusion facing individuals with disabilities is one of the factors contributing to the normalization of their lives and promoting sustainable development in Poland (Adamczyk, 2021). The period of pandemic has necessitated that individuals with disabilities, as well as their caregivers, develop a range of skills for remote interaction (Adamczyk, Majewicz & Wolny, 2023). Nonetheless, it is critical to acknowledge that without adequate preparation of the digital services market for this group of users, they may face numerous challenges (Adamczyk, Karpiuk & Soler, 2023).

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ZDALNA EDUKACJA OSÓB Z NIEPEŁNOSPRAWNOŚCIĄ INTELEKTUALNĄ:

WŁĄCZENIE CZY WYKLUCZENIE? BADANIE EMPIRYCZNE

STRESZCZENIE

Celem artykułu jest porównanie rodzajów wsparcia edukacyjnego i rehabilitacyjnego w sytuacji konieczności organizacji tych procesów wyłącznie zdalnie, za pomocą sieci Internet, oferowanego osobom z głębszą niepełnosprawnością intelektualną przez systemy szkolne siedmiu państw: Polski, Hiszpanii, Portugalii, Bułgarii, Turcji, Rumuni, Belgii. Współczesne czasy, określane jako „post-

digital”, skłaniają do postawienia pytania o poziom i rodzaje wsparcia edukacyjnego oferowanego przez systemy szkolne w różnych krajach Europy w szkołach specjalnych, gdy organizacja procesów edukacyjno-rehabilitacyjnych, dobór treści nauczania i wreszcie stosowane metody i środki w czasie pandemii COVID-19 uległy szybkiej zmianie. Badanie przeprowadzono metodą sondażu diagnostycznego (kwestionariusze ankiety) oraz z wykorzystaniem niektórych zasad postępowania w badaniach komparatystycznych. Badania zostały zrealizowane na próbie 642 nauczycieli pracujących w szkołach specjalnych z siedmiu różnych krajów.

Słowa kluczowe: wykluczenie; inkluzja; wykluczenie cyfrowe; niepełnosprawność intelektualna

REMOTE EDUCATION FOR PEOPLE WITH INTELLECTUAL DISABILITIES: INCLUSION OR EXCLUSION? AN EMPIRICAL STUDY

SUMMARY

The purpose of this article is to compare the types of educational and rehabilitative support provided online to individuals with severe intellectual disabilities by the school systems of seven countries: Poland, Spain, Portugal, Bulgaria, Turkey, Romania, and Belgium. As we are living in the so-called postdigital era, it is imperative to explore its implications both generally and specifically for marginalised social groups, notably those with severe intellectual disabilities. In this context, questions arise regarding the extent and types of educational support offered by school systems in various European countries within special education settings. This is particularly relevant when considering how the organisation of educational and rehabilitation processes, the selection of teaching content, and finally, the methodologies and tools employed had to be swiftly and substantially adapted due to the COVID-19 pandemic. The study was conducted using a diagnostic survey method (survey questionnaires) and certain comparative research methodologies. It involved a sample of 642 teachers working in special education schools from seven countries ($N=642$).

Keywords: exclusion; inclusion; digital exclusion; intellectual disability