The use of information and communication technologies by young people with intellectual disabilities in the context of digital inequalities and digital exclusion

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Abstract

Thesis. Although we have convincing data on the use of the Internet[1] by young people in the general population (also adults), our knowledge about its use by people with disabilities remains a lot more limited. The reasons for this include a shortage of research on access to ICT, the use of such technologies by users with varying disabilities, and the support they receive in this respect. This applies in particular to individuals with intellectual disabilities.

Aim. The aim of the paper is to introduce the state of knowledge and selected challenges for the research field and the practice addressing young people with intellectual disabilities. The article is also focused on the different dimensions of inequalities and proposes a model of the areas of implementation of media education practices.

Conclusions. The role of ICT in the life of people with intellectual disabilities (ID) should be analysed in the context both of benefits and barriers that may create the risk of exclusion. In terms of benefits, the analysis pertains to the Internet e.g. as a tool for new forms of interactions with the world, as a sphere of freedom and independent functioning, as well as a chance for their empowerment. When analysing the context of the risk related to the use of the Internet by young people with ID, one should not neglect e.g. various forms of abuse and other threats.

Key words: intellectual disability, media education, special education, Information and Communication Technology (ICT), the Internet, digital inequalities, digital exclusion

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[1] The use of the Internet is the most popular way of availing oneself of the ICT. The notion of information and communication technologies, however, is broader than the Internet and new media. As pointed out by Florian and Hegarty (2004), the Internet is the most advanced form of ICT, providing the prerequisite for the functioning of the new media. The world of the new media is a key tool for achieving various aims and at the same time it is also an environment in which human needs can be fulfilled and human interactions can take place. The media can be thus seen as a means for carrying out activities, whereas the Internet, as Szpunar (2012) observes, should be seen as a metamedium or a macromedium, i.e. the base medium affording a possibility of using other media skills and know-how in using the internet.

People with intellectual disability in digital world – different dimensions of inequalities

Information and communication technologies (ICT) are of major significance in the modern-day world, in part due to their extremely broad range of applications, including access to networked sources of knowledge and diversified resources, interactions with other users, and many others. Existing analyses (e.g. Alper, 2014) show that the situation of people with disabilities in the digital age is not particularly optimistic, and the vision of ICT as potentially providing significant support for the functioning of such individuals in various areas remains a vision of the future. The lack of deep insights into this area of activity of people with ID may be preventing the positive potential of ICT from being harnessed in this respect (in education, professional work, support, leisure activities, social contacts, and so on), thus leading to the limited and sometimes dysfunctional utilisation of such technologies. In a world where modern technologies are growing in importance, where groups that are especially vulnerable to exclusion, including people with ID, face a lack of access to such technologies, limited competencies, a low level of motivation to use them, and the absence of educational programs in the use of such technologies, this may further worsen what is already a difficult situation for these groups. Digital exclusion, just as the traditional, is a sign of discrimination against people with disabilities and their marginalisation in social life. It represents yet another manifestation of traditional oppression, which in the opinion of Barnes and Mercer (2003) is reflected in the social dominance of what is referred to as "disabling society."

One of the indications of the existence of digital inequalities[2] is the fact that households that include individuals with disabilities are significantly less likely to have a personal computer and Internet access (particularly broadband Internet access). This is further confirmed, for instance, by the share of Internet users among people with disabilities, which is less than half that of the population without disabilities (only one in three Polish[3] people with disabilities declared they used the Internet) (Masłyk, Migaczewska, 2014). It is worth noting that this field is changing rapidly, so the data may be already partially outdated. A survey of household budgets conducted in 2014 (GUS, 2015) found that 60% of households that included a person with disabilities had a computer with Internet access, compared with 74% in other households

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[2]   "Digital inequalities" mean inequalities in physical access to technologies (formerly termed the "digital divide" or "digital gap"). In the modern-day world, however, digital inequalities obviously pertain to a larger degree to competence in using ICT and the actual accessibility of such technologies for users, which manifests itself for example at the cognitive level.skills and know-how in using the internet.

[3]   According to the existing analysis such problem has rather universal (international) character.

(for broadband Internet access, the shares were 50% and 61%, respectively). In 2016, in turn, a computer with Internet access was found in 76% of households that included no disabled individuals and 66% in households that included disabled individuals, which points to a rise in ICT penetration rates and a reduction in the digital gap/digital divide (GUS, 2017a). In 2017, nearly 82% of households without individuals with disabilities had at least one computer, and 78% of households had broadband Internet access but the report (GUS, 2017b) includes no information about individuals with disabilities among people who have computers and Internet users. However, this reduced gap in access evidences an improvement in only one of the aspects of inequality. This is confirmed by the fact that the ICT penetration in households including individuals with disabilities is higher than its actual use. From the perspective of education, reducing inequalities in the sense of competencies poses a more serious challenge. One fundamental factor motivating further efforts to overcome the digital divide and inequalities is the lack of media literacy and digital literacy. Hence the need to identify and design preventive measures, for example media education addressed to users who require special support.

We know even less about the scope and methods of using ICT among individuals with disabilities, especially young people with ID. Access to ICT, in and of itself, is necessary yet by no means sufficient for the optimum use of digital-age tools. But even so, the support actually provided in this sense (assistance in purchasing computer hardware and funding Internet access) is limited. A report by the Polish State Fund for the Rehabilitation of Disabled Persons (PFRON) from 2017 indicates that only 10% of people with ID have ever utilised public funding of computer hardware and only 4% used funding of the costs of Internet access (but one in three respondents are of the opinion that such funding would be a very important or crucial help in their lives). Individuals with other disabilities are a lot more likely to make use of such public funding – a finding that at least partially corroborates the hypothesis that the situation of people with ID is more difficult compared not only with the situation of the non-disabled population but also with the situation of people with other disabilities (for example, there were nearly four times more people with visual impairments who had the opportunity to make use of such support). The particularly unfavourable situation of people with ID, their place in society, and their categorisation as less valuable members of society have been noted by such authors as e.g. Żółkowska (2013).

Population surveys among young Polish people without disabilities (PBI, 2015; TNS, 2016) reveal widespread access to the Internet and intensive yet diversified "immersion" in the world of new technologies. The question arises: to what extent, based on the findings of studies among adults and the analyses of ICT penetration rates in households, can we draw conclusions as to both

access to such technologies and the scope of their use among young people with ID? Although the former issue is more technical in its nature, I believe that the latter should constitute an important aspect of contemporary research in the field of education.

Young people with ID in a digital age – the state of knowledge and selected challenges for research fields and practice

Special pedagogy broadly studies the issue of the conditions in which people with different disabilities function, identifies the factors conducive to their fullest possible empowerment, their participation in the world, and the maximisation of their potential, and seeks the most effective methods of supporting them. More and more emphasis is being placed on the importance of social and environmental factors that influence the functioning of such people. In today's world, it is impossible to ignore the importance of the "arena" formed by new media (the Internet), understood both as an environment in which people with disabilities function on a daily basis and as a tool of targeted measures (in such areas as teaching, education, and support). The widespread presence of ICT, the ever-growing ease of access to such technologies, and the extremely wide scope of their use all prompt a closer look at the presence of people with disabilities in the digital world and the resultant opportunities (such as greater empowerment), as well as serious threats (for example, engagement in risk behaviour).

Education science, in particular special education, boasts an extremely wide range of accomplishments in the field of the traditional (i.e. offline) contexts in which people with different disabilities and other Special Educational Needs (SEN) function. However, how such people, especially those with ID, actually function in the digital environment has only been investigated to a limited degree.

Many of the issues traditionally addressed in special education (including the leisure and socialization experiences of people with ID, peer relations, support, empowerment, autonomy, marginalisation, discrimination, social isolation and stigmatisation, inequality, exclusion, vulnerability to victimisation, and violence) should also be explored (in terms of both theory and research) in the context of the use of ICT. It is important to mention the field of the upbringing relations between parents and children as well as between educators and their students. Special emphasis should be placed on discussing and relativising these issues in the context of the specific characteristics of the digital environment. Maximising the opportunities and reducing the risks related to the presence of young people with ID in the new media environment will be achieved e.g. by helping practitioners design the appropriate education and support measures.

As I highlighted earlier, people with disabilities are at a greater risk of experiencing various forms of exclusion, including digital exclusion. The situation of people with ID is especially unfavourable due to the comprehensive nature of this form of disability, due to the related limitations, both individual limitations (for example, in cognitive functions and social skills) and societal factors (including the absence of support), and also due to the relatively low level of interest shown in such individuals as users of digital-age tools. They are in a less favourable situation than the non-disabled population and than people with other disabilities (because they are more reliant on others, have a limited ability to act independently, suffer from communication difficulties, and the stigma of intellectual disability is more powerful, etc.). The importance of this area also stems from the need to look for measures related to the practical implementation of the idea of inclusion as well as opportunities and barriers in this respect, and digital inclusion should constitute a major area of research into the presence of people with ID in the modern-day world. The need to search for "alternative zones of inclusion," where individuals with disabilities may explore their own definitions of ability and normality, have been pointed out by such authors as Adkins et al (2012).

The aforementioned topics are above all situated within special education, also in relation to other disciplines (e.g. media education, media sciences). In the research dimension, they result in knowledge about various aspects of the functioning of young people with ID in the digital world. Another important goal in broadening the scope of the knowledge is to identify and obtain deeper insight into the role of ICT, in particular the Internet, as tools of supporting the implementation of the traditional tasks of special education, the place and role of ICT in such important contexts as compensation, empowerment, inclusion, and the creation of the least restrictive environment. The latter issue is related to such questions as the accessibility of ICT, support, and efforts to maximise the potential of such technologies for people with ID and protecting them against the risk arising from their functioning in the modern-day world, in which modern technologies play an ever-growing role. The world of new media and the Internet should be perceived as important tools of helping people with ID achieve various goals (for example, to become more active, have a wider range of leisure activities, receive support) and as a legitimate environment of their activity. Therefore the Internet can be perceived as a tool of supporting the implementation of traditional tasks in special education.

The daily socialisation practices of young people with ID in the world of new media (which could affect the assertion of an identity based on other aspects than merely disability) is a point of departure for the work described in this paper. Nevertheless, such socialisation needs to be supported to a certain extent by purposeful action on the part of significant individuals, as people

with ID left on their own often receive no support in using modern tools and therefore not only fail to tap into their potential for pro-development activities but also become exposed to various threats e.g. cyberbullying (Plichta, 2015a; Pyżalski, 2012). If the perspective of "supported socialisation" is adopted too literally, however, this may create a certain risk of the failure to appreciate the importance of experiencing freedom on the Internet, the possibility of making choices, and the pursuit of social contacts. Consequently, this may lead to excessive interventions in this sphere of the activities of young people. Tools that support their functioning include media education, which is one of the requisites for utilising the potential of digital-age tools, managing in an increasingly technologised world, and reducing the risk of digital exclusion and the recreation of a more difficult situation of some groups in the digital context (for example, the risk of becoming a victim of online abuse or aggression). It is worth noting that effective education and support measures in this area may help overcome the stereotypes about people with ID as well as increase the range of educational measures (for example, vocational education with the use of modern technologies) and consequently ensure that such people are more comprehensively involved in social life.

Both technological "overoptimism" and attitudes dominated by fear and anxiety result to a considerable degree from an excessive focus on the tool (ICT) and the omission of individual factors (such as disability) as well as social factors (support or its absence), which leads to the adoption of a perspective involving a particular kind of technological determinism. For that reason, the use of technologies, including ICT, should be considered in broad contexts, including non-technological domain (for example social, communication-related, and support-related aspects) that take account of disability-related factors (such as learning difficulties, poor reading and comprehension skills), individual traits (the level of trust in others), the characteristics of equipment and services (the level of difficulty in use) as well as the attitudes and competencies of those who decide on the possibility of using such technologies and the scope of such use.

For people with disabilities, ICT may become a source of many positive changes, but they can also recreate the problems experienced in other spheres of life. Such technologies have a very wide range of applications, starting from facilitation, through assistance, an improved ease of day-to-day activities, all the way to the possibility of broader participation in social life. Specialists can use them as tools of working with people with disabilities, but people with ID can also use such technologies "of their own accord" in their leisure time as a space for independence and as a socialisation environment. The latter question, as I stressed earlier, is an area that is particularly poorly studied, because relatively little attention is devoted to the leisure-time use of the Internet by people with disabilities and the resultant positive and negative

socialisation experiences (Plichta, 2010). Such aspects of using new media as inclusion and anti-stigmatisation (Neely et al., 2013) should also be explored.

Despite general growth in the number of publications devoted to the use of ICT by people with disabilities, we can see clear disproportions in this area that depend on the type of disability – there is particularly little data on the use of the Internet by people with ID. The other neglected areas, aside from the leisure-time use of the Internet by people with ID, are the use of ICT for playing (Brodin, Lindstrand, 2004) and a low level of participation in the design of services dedicated to such users (participatory design) (Alper, Hourcade, Gilutz, 2012).

The issue of barriers and the risk of digital exclusion against the backdrop of the evolution of concepts that determine the digital divide and digital inequality as well as the influence of factors other than disability on the use of the Internet (for example socio-demographic factors), among other things.

The Internet may be an excluding environment - adaptation and universal design (Kent, Ellis, 2015) are two of the requisites for participation in the digital era. Although the digital divide is narrowing, analyses show that access to new media is a key aspect of the possibility of utilising its potential, and such accessibility, coupled with support, should be one of the fundamental rights of people with disabilities (Jaeger, 2015). This also applies to the subjective participation in studies and the process of adjusting ICT to their needs.

Selected traits associated with intellectual disability (for example gullibility, susceptibility to harm) should be perceived in the context of individual, technical, and environmental factors, the specific characteristics of the online environment and mediated communication, leisure-time patterns in this group, and the risk of social isolation and stigmatisation.

The context of the risk related to the use of the Internet by young people with ID (including various forms of abuse) is another important area which should be analysed. For young people with ID, the best identified risk was engagement in cyberbullying, often occurring simultaneously with traditional peer violence. Data shows that such individuals are at an increased risk in this respect (e.g. Simpson, Rose, Ellis, 2016; Buijs et al., 2016). The role of the protective factors (e.g. positive risk-taking, resilience) should not be neglected (Seale, 2014).

Exploring the aspect of victimisation is particularly important, because people with ID experience the accumulation of unfavourable factors: they are easily hurt and socially isolated and therefore receive no support; have difficulties coping with dangerous situations and communicating; and finally their accounts of the harm they have suffered are treated as unreliable by the people around them. Intellectual disability is a factor of risk in the use of the Internet in terms of both risk behaviour (for example, contacts with strangers) and increased vulnerability to harm (abuse, victimisation).

Another important aspect is the identification of other factors (aside from disability), both risk and protective factors.. The latter include positive relations with people, support, and the development of "digital" competence (this also applies to professionals), which are a requisite for the mitigation of the risk of digital exclusion and enable more effective support for both children with ID and their parents. A spontaneous socialisation of young people with ID in the world of new media should therefore be considered also in the context of media socialisation practices on the part of family members (teachers) and peer socialisation, also at school. However, such people often need broadly-understood support, which may also be provided via the Internet. Existing data (e.g. Plichta, 2015b; Walter 2016) confirm the significant potential of such social support, including all of its types (informational, instrumental, emotional, and material support). The Internet's potential for supporting parents may be twofold: it offers possibilities of searching for sources of support and it is a source of targeted interventions addressed to parents. Unfortunately, parents, who have a considerable impact on the use of the Internet by their children, sometimes withdraw from participating in this sphere, opting not to exercise elementary control, provide support or even use digital-age tools together with their children. Regardless of their choice, they affect the processes of socialisation and upbringing in the digital era (Plichta, 2013).

Towards media education addressed to young people with intellectual disabilities

Analysis shows that the successful upbringing of young people with ID and more effective methods of supporting them in the digital era (in light of their significantly greater dependence on others) will be determined by such factors as the presence of professionally prepared specialists who understand the importance of new media, the opportunities it offers, and its limitations in the context of people who are in a more difficult situation (Plichta, 2017).

I propose a model of the areas (Plichta, 2017) of the implementation of media education addressed to young people with ID that includes such tasks as:

- Identifying demand for the use of ict and the measures taken in this field so far
- Securing or improving access to ict
- Addressing measures not only to people with id but also to their parents and teachers
- Combining the measures that employ ict with traditional "non-technological" measures and making sure the former are anchored in day-to-day activities

The key areas of activities should be implemented with respect to adults as "gatekeepers" (Seale, 2007) who decide on access to the world of new technologies for young people with ID. Hopefully, formulated areas of educational measures will favour the use of the Internet in ways that better support development and reduce risk behaviour on the part of young people with ID. It may prove useful both to those who study the issue of disability, in particular ID, for example through the identification of issues that have not been explored or have been underexplored, and to practitioners (for example, teachers), parents, and decision-makers who seek inspiration for measures that utilise new media to support the development of people with ID.

Implementing activities related to the aforementioned areas may help maximize the positive potential of ICT and build awareness of actual threats among those who influence the development of measures addressed to young people with ID. People with ID form a highly diversified group in terms of their level of development, and we can expect the Internet to be most widely used by those with mild disability. Simultaneously, young people with mild ID are more likely than those with more severe ID to participate in integrated or inclusive forms of education (with non-disabled peers). In addition to opportunities, broader presence in the world always brings threats. This provides an additional context and poses a challenge in terms of education and upbringing (such as the risk of victimisation).

Conclusions

Links between intellectual disability and ICT are a relatively neglected area of research. This applies to both media studies, technical sciences, and pedagogy. There is a need to broaden scientific knowledge and to use such knowledge as a basis for the organisation of measures that reduce the risk of recreation of the problem of traditionally understood social disparities and digital exclusion in the new media environment (*Digital inclusion*, 2007).

It is worth mentioning the importance of efforts to identify and further explore the phenomenon of reverse socialisation and the so-called socialisation shift in the "digital" or media-related context of the functioning of people with ID. Special importance should be attributed to the need to observe and draw conclusions from the use of new media by people with ID in the context of both opportunities (for example, for the development of creativity) and threats (such as peer victimisation and engagement in risk behaviours). Access to modern technologies and the scope of their use, just like functioning in other spheres, especially for people with ID, depends on other people (chiefly parents, teachers, and specialists). Consequently, the attitudes of the latter and the activities taken with respect to children (students) regarding media activity and their "digital literacy" (Seok, Da Costa, 2016). Access to the new media and

education in this field may put into effect the concept of equal opportunities (normalise the situation) for people with disabilities and their families, and measures that favour digital inclusion may create broader opportunities to make choices and lead to empowerment (Amichai-Hamburger, McKenna, Tal, 2008). Implementation of introduced guidelines for media education (especially in the context of new media), addressed to young people with ID as well as teachers, parents, and professionals, should increase the potential of the use of ICT by individuals with ID and mitigate the related threats.

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