SKILL IT STUDY

Poland National Report on digital skills and youth work

SKILL IT
digital pathways for youth work

Erasmus+

léargas

This study was conducted within the framework of ***Skill IT for Youth - Integrating Digital and Future Skills into Youth Work*** **(Skill IT/Skill IT for Youth)** project.

Skill IT for Youth project (2018-2020) aims to increase the quality of youth work, combining higher levels of excellence and attractiveness in services, obtained through the digitalisation of youth work, with increased opportunities for young people. The main objective of the project is to equip youth workers with digital tools and skills to enhance young people's futures in the 21st Century.

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The project is outcome of a partnership between Youth Work Ireland (Ireland), Camara Education (Ireland), Norsensus Mediaforum (Norway), Fundacja Samodzielni Robinsonowie (Poland) and Fundatia Danis (Romania).

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The **Skill IT Poland National Report** was prepared by Fundacja Samodzielni Robinsonowie team: Paulina IWAŃSKA-CHEŁSTOWSKA, Anna Agnieszka GRZYMKOWSKA, Magdalena KĘPKA & Anna WALAS.

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partner organisations:

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camara education ireland

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EXECUTIVE SUMMARY

Context and research objectives

The report was compiled within the *Skill IT for Youth - Integrating Digital and Future Skills into Youth Work* project. The aim of the project is to increase the quality, attractiveness and effects of working with young people through digitalisation of tools and programmes. The objective is to equip youth workers with knowledge, skills and self-confidence in the field of digital competences so that they can share these with young people and strengthen them in order to meet the challenges of the 21st century. The research presented in the Report aims to serve as a knowledge base on the use of digital skills in youth work by both youth workers and youth support organisations and to identify the needs or shortages of young people in the field of ICT skills, digital and social media, also in the context of employers' expectations. The study provides an overview of existing digital education programmes in Poland and points to the role of non-governmental organisations in developing digital competences of young people.

Research methods

Fundacja Samodzielni Robinsowie (FSR) as a Polish partner in *Skill IT for Youth project,* has conducted a desk research with the purpose of finding and analyzing the available studies and reports that focus on the digital skills of young people, with an emphasis on what digital skills they need or lack for the 21st century labor market. The desk research covered the following aspects: (1) the employability skills of young people, (2) the existing types of formal and non-formal education programs for developing young people's digital skills, (3) the youth workers' digital skills and (4) youth organizations' capacity for developing digital skills of young people.

For the second part of the research, Fundacja Samodzielni Robinsonowie has developed and conducted four qualitative research studies (focus-groups and IDIs) with 4 types of groups:

1) Youth, aged 16-22 - 2 focus groups
2) Employers – 2 face-to face interviews
3) Youth workers – 2 focus groups
4) NGOs' Leaders and managers from youth sector – 9 face-to-face interviews and 1 online interview.

To facilitate the understanding of the concept "digital skills", all research tools included a common conceptual framework (Annex 1). The framework was carefully translated into Polish with the examples explaining the certain behavior for each skill described.

Main results

Young people indicate that specialised skills, knowledge of foreign languages and computer skills are most useful in entering the labour market. Young people are also aware of the need to show responsibility, commitment, creativity and openness to new experiences and new knowledge at work. As far as digital skills are concerned, despite the fact that some of the respondents are convinced that they move efficiently in the environment of the Internet and new technologies, at the same time they **have a sense of possessing superficial knowledge and would like to be trained**. Young people use the Internet as the main source of knowledge and communication. The respondents pointed out that they draw knowledge from tutorials and courses on YouTube. They believe that **school does not teach ICT well, they also point to deficiencies in equipment. The school staff is not qualified and has no authority among young people**. Young people feel that they have to learn digital competences on their own. The youth under research had no experience with NGOs and youth workers and their digital skills. It is worth noting that young people did not name websites or applications to search for a job or to support this process. There was also no mention of online dictionaries, encyclopedias (even Wikipedia). The websites and applications used in the school learning process mentioned by the surveyed group present rather ready-made, reproducible solutions and young people use them on a 'copy/paste' basis. Youth interviews showed that there is room for youth organisations and youth workers to work with; young people want to improve their digital competences, and school and formal education do not provide them with such opportunity in any way.

The expectations of **employers** look interesting when compared to the beliefs of young people. The surveyed employers listed universal competences that a young employee should possess; responsibility, attention to detail, communication, openness to people, an adequate assessment of their skills, as well as readiness to learn and use digital technology. The respondents pointed out that the most important thing is the ability **to use technology to develop one's own ideas and solve problems, as well as being able to find valuable sources**. The respondents agreed that the key, universal competence is **the ability to reach reliable information independently**. What is also important is a concise and attractive form of presenting one's arguments, for which digital tools are also very useful. According to the respondents, the basic tools that should be used by valuable job candidates are: Microsoft Office, presentation tools, Skype for business, instant messengers, Windows environment and the ability to find, analyze and manage information. The respondents assessed that young people are poorly prepared to act in these areas. They also pointed out that regardless of their position, it is increasingly important and cost-effective to **find ready-made solution**s that can be copied or processed. The skills of searching, filtering content, distinguishing information from entertainment are the common denominator for all workplaces.

The education system is not able to keep up with the rapidly changing trends in digital market. The school should therefore teach **the ability to search, verify, critically assess and rank the value of**

information. This general competence is the foundation of all digital skills. The role of educational institutions should be to instil that it is **better to use primary rather than secondary sources**, that it is better **to verify knowledge**, to force oneself to make a greater cognitive effort, because it brings results. Particularly as the Polish school **does not teach critical thinking** and there is no political will to change this. The curriculum focuses on history and mother tongue, marginalizing communication skills, building personal relations or mastering technology. The respondents observed that **NGOs** are the entities that can support the development of digital competences. Security and the fight against the phenomenon of hate on the web are examples of topics that NGOs are already dealing with successfully, albeit on a small scale.

People working with the young pointed to an even greater role of NGOs; NGOs could support a change of thinking and educate about the role of digital competences in today's world. In their opinion, school does not develop creativity, does not support analytical thinking and reflection in analysing problems. Digital competence is horizontal in nature and should constitute a part of all subjects. **The best form of teaching technology is its practical use**. In Polish school IT is more about technology than about its application and use in solving problems. In addition, there is a lack of understanding of the benefits of the use of the Internet and digital devices on the part of parents and teachers. The Internet is treated merely as entertainment, fun, and it is often forbidden for young people to use the Internet as a form of punishment. Education about the digital world is conducted mostly in the context of **threats** (cyber violence, data theft), and not benefits resulting from digitalisation and the use of technology.

The respondents pointed out that the development of digital competences can be **a field of mutual exchange** of experiences between young people and educators. They experience this in their work; for example, they help young people to secure their privacy, make them aware of the consequences of online behaviours, and show them the wider context. At the same time, they benefit from the knowledge of young people, learn from them new tools and then show how to use them more widely or to how to solve a problem. Youth workers assessed their digital skills rather highly (especially after reading the list of competences), while the use of devices and knowledge about novelties was given a lower rating. They were afraid that they had shortages or deficits, although during the discussion they realized that these fears were often exaggerated. They saw that they have a lot to pass on to young people, because they have a good understanding of the application of technology. It is also worth to consider **the aspect of encouraging educators to share their knowledge with young people**. Cooperation and integration with young people in **a model of mutual exchange and learning from one another** could bring great value, which would translate into young people's involvement. Classes should take the form of practical workshops and not theoretical training or presentations.

NGO leaders and managers who participated in the face-to face interviews emphasized that young people are generally well acquainted with programmes and applications for communication, creation of posts, memos, posting video materials, technical operation of technologies and visual effects. What is worse is understanding and selection of content, critical analysis, identification of sources, selection of

information, copyright protection or recognition of hate materials. Other deficiencies include ignorance of the functioning of search engines and positioning, selection of advertisements, password management. Educational program lacks teaching the logic of programming, creating algorithms, verifying the truthfulness of information, understanding the functioning of the media, coding. In addition, there are technical problems with outdated hardware, software, too slow Internet connection. NGO leaders postulate **a fundamental change in the way digital competences are taught**. The changes taking place globally in connection with the development of digital technology require a broader approach and are impossible to deal with in IT lessons alone. The public education system should take into account, among other things, issues related to democracy, social justice, critical media analysis, information management.

NGOs undertake many initiatives related to shaping digital competences, especially in areas related to Internet safety, counteracting digital exclusion, education from an early age (e.g. they teach coding to preschoolers) - however, finances and small scale of activities constitute a barrier. Although organizations do not have a special strategy for the development of digital competences, the surveyed persons **rated the level of digital competences among NGO employees highly**. Within their areas of interest, they constantly supplement their knowledge, get to know new tools, navigate social media efficiently, and use educational applications. Although NGOs cannot afford costly or revolutionary changes in the digital area, the sector is aware of modern technological possibilities, follows trends and is ready for new opportunities. The most important thing is to focus on the goal, which in the case of organizations dealing with education is 'a young adult who will find his or her place in the modern world'.

CHAPTER 1
LITERATURE REVIEW

A. Polish young people's present and future skills

A.1. General skills enhancing employability of young people

The skills of young people which improving their chances of employment and the expectations and needs of employers related to these skills are set out in the report '***Diagnoza poziomu kompetencji młodzieży i zapotrzebowania pracodawców'*** [Diagnosis of the level of competence of young people and employers' needs] developed as part of the *Młodzi na rynku pracy* [Young people on the labour market] project of the Erasmus+ Strategic Partnerships Programme (Lublin, 2015). It is the only Polish report covering both sides of the spectrum - youth and employers. 60 post-gymnasium school students, 60 university students and 15 employers from various sectors participated in the study, the aim of which was to measure the level of competence of young people and determine employers' expectations, with particular emphasis on social and interpersonal competencies (creativity, openness to change, coping with stress, negotiating skills, responsibility, team working).

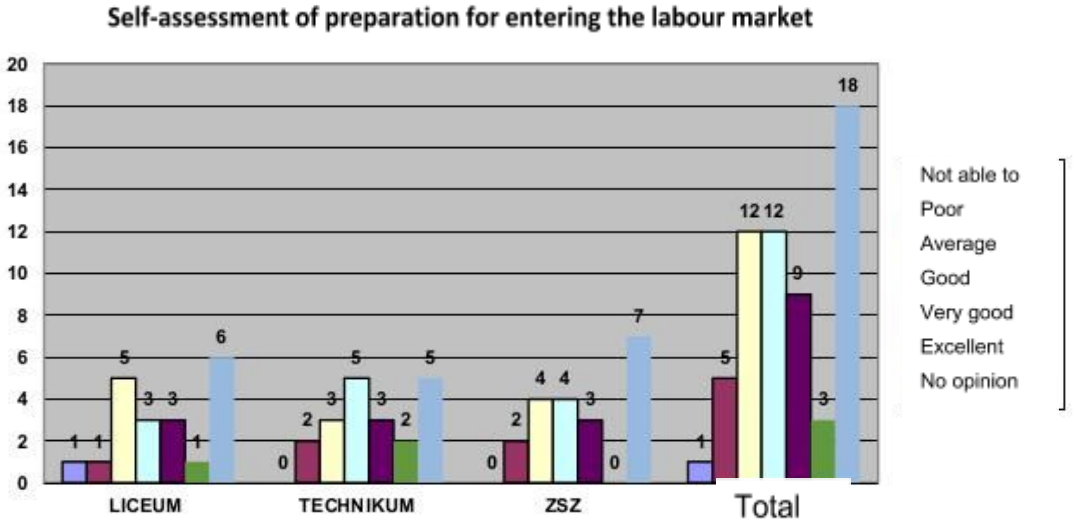
The research questions used the concept of the so-called key competences, which appeared together with the Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning (2006/962/EC). The European Union identified eight key competences, which combine knowledge, skills and attitudes necessary for personal fulfilment and development, active citizenship, social inclusion and employment. Therefore, they play a particularly important role in the life of every person, both in the process of learning, social activity and professional activity.

Key competences as specified by the EU:

- communication in the mother tongue,
- communication in foreign languages,
- mathematical competence and basic competences in science and technology,
- digital competence,
- learning to learn,
- social and civic competences,
- sense of initiative and entrepreneurship,
- cultural awareness and expression.

The analysis of competence tests of school and academic youth and detailed interviews conducted among employers allowed the following conclusions to be drawn:

- Secondary school students show mainly average and low level of social competences.
- A large group of the surveyed students (30%) are not able to assess the level of their competences, while the others, in most cases, assess this level as average. Self-assessment of students of technical and vocational schools is higher than that of general secondary school students (Tab. 1).
- Students have low awareness of employers' expectations concerning social competences.
- The vast majority of school and university students express readiness to improve their skills useful on the labour market.
- Employers stress the significance of such competences as logical and independent thinking, commitment, responsibility, openness to new knowledge, effective communication, team-working, creativity, team cooperation, formulating and solving problems, ethical behaviour, IT skills, management, negotiating, time management, work planning (Tab. 2).
- Employers assess the theoretical knowledge of young people as good, but its practical application is at a much worse level.
- The professional experience of young people is very diverse; very low in those who did not have any contact with practical activities in the real working environment and sufficient, and even very high in those who worked on a casual basis, worked in various institutions, volunteering, etc.



Tab 1. Self assessment of preparation for entering the labour market of post-gymnasium school students

Source: Diagnosis of the level of competence of Young people and employers' needs (2015), p. 25.

Competences	Expected level (1 – least important; 5 – most important)				
	1	2	3	4	5
Ethical conduct	-	1	3	1	10
Responsibility	-	-	1	2	12
Commitment	-	-	-	2	13
Loyalty and willingness to be a part of the company	-	2	3	3	7
Willingness to learn	-	1	-	4	10
Ability to communicate effectively	-	-	2	2	11
Ability to work in a team	-	-	2	2	11
Ability to cooperate with people from different backgrounds	-	2	1	4	8
Ability to cooperate with people on high positions	a -	2	3	3	7
Negotiating skills	-	3	3	3	6
Logical thinking	-	-	-	7	8
Creativity	1	-	1	6	7
Independent thinking	-	-	-	8	7
Ability to formulate and solve problems	-	-	3	2	10
Ability to prioritise and justify priorities	1	-	5	3	6
Numerical ability	-	1	5	4	5
Knowledge of foreign languages	1	1	6	4	3
Work organisation skills	-	2	5	4	4
Effective time management	1	1	4	5	4
Ability to manage projects	3	1	5	5	1
Ability to use digital tools	-	4	1	7	3
General and professional knowledge	1	4	6	2	2
Industry and business-specific knowledge	2	2	3	2	6
Level of expertise sufficient to meet current expectations of enterprises	1	4	1	5	4
Analytical skills	3	2	1	5	4
Work experience	4	1	6	4	-
Entrepreneurial skills	2	1	6	5	-
TOTAL	**20**	**37**	**79**	**108**	**169**

Tab. 2 Competences employers expect from job applicants

Source: Diagnosis of the level of competence of Young people and employers' needs (2015), pp. 31-32.

A.2. Digital skills of young people in Poland

The basic research on digital competences of young people in Poland was conducted by TNS Polska on commission of the Orange Foundation in 2013. **'The Digital Competences of Young People in Poland'** survey (2013) consisted of a qualitative component (12 interviews) and a quantitative component (600 interviews) on a representative sample of young people aged 14-18. The interviews were conducted in households with Internet access. The results of the survey show that young people use new media very widely, but their activity is rather connected with receiving content and does not involve the use of advanced tools. Several criteria were considered in the study - the ability to use digital tools and Internet applications, the easiness of searching for information and verifying its reliability. Young people rated their competences as high when it comes to using the Internet and searching for information (as the authors of the report highlight, it does not mean that these competences are really high), whereas creating e.g. internet presentations or assessing the reliability of information were ranked lower.

The ability to find information on the Internet - seemingly efficient and routine due to the widespread use of the Internet when doing homework - proved to be on a surprisingly low level in the research. It turned out that only 2% of young Internet users spontaneously use logical operators, enabling them to find precise information efficiently. The authors of the study assume that finding answers to more complicated questions could cause young people a problem.

Verification of the searched data is another difficulty; young people often do not recognise such a need at all. The respondents showed different levels of trust in the reliability of the information found on the web. 65% consider it safe and reliable, but 79% confirm it in other sources (24% in other places on the web, only 15% in books and encyclopedias). 21% of the respondents do not check or confirm information found on the web anywhere.

The survey showed that only 25% of teenage respondents used photo editing software, 10% used music editing software, and 9% used video editing software. 66% of Internet users aged 14-18 not only do not use such tools, but even do not know them.

Young people aged 14-18 really consider the Internet to be their natural environment. The web serves many purposes: to acquire knowledge, develop interests, establish and maintain social contacts, entertainment. The social networking portal Facebook leads the way - 88% of surveyed teenagers have a Facebook profile and 62% declare that they enter it every day. Facebook is a digital playground - this is where you can meet friends, share sorrows and joys, do your homework. The Internet also helps to shape the personality of teenagers. It is a space where young people, on the one hand, satisfy the need for affiliation, belonging to a peer group (confirmed by 62% of respondents, and 75% declare that they find people with similar beliefs on the Internet), on the other hand they assert their individuality and uniqueness (65% of teenagers declare that using the Internet 'gives them personal space', 44% of the respondents see the Internet as a place where they 'can stand out and be different than all others').

Young people rate their digital competences as very high (80% rated them as excellent), but the report shows that this high self-assessment often does not go hand in hand with actual skills.

The Orange study also highlighted an interesting difference between young people's and adults' perception of their digital skills. Adults - although they use modern technologies - rate their digital competences much worse than young people. A good or very good assessment of their computer skills is declared by 41% of the surveyed adults, in terms of searching for information on the Internet - 38%, in creating and editing texts - 31%, avoiding online threats - 28%, assessing the reliability of information - 35%, creating presentations - 21%, searching for information - 44%. Parents do not feel confident about their own skills in using the Internet and modern technologies. They believe that they are unable to act as guides for their children in this respect. Three quarters of parents (76%) rate their digital competence lower than that of their children. **Only 3% of the adult respondents confirmed that they advise teenagers on how to use a computer and the Internet.**

The authors of the report **Skills of the Polish people - findings of the International Assessment of Adult Competencies** (PIAAC), published in 2013 by the Educational Research Institute (IBE) come to similar conclusions regarding the overvaluation of their digital skills by young people, disproving the myth of cyber-generation. They show that also among young people there is a group of people without basic computer skills. It can be estimated at least 7.6% (most probably it is larger - only 80% of people under 24 years of age solved the computer version of the PIAAC test in Poland).

Similar conclusions emerge from the report ***Cybernauci – diagnoza wiedzy, umiejętności i kompetencji dzieci i młodzieży, rodziców i opiekunów oraz nauczycieli w zakresie bezpiecznego korzystania z internetu*** **[Cybernauts - a diagnosis of knowledge, skills and competences of children and youth, parents, guardians and teachers in relation to safe Internet use],** carried out within the project *Cybernauci – kompleksowy projekt kształtowania bezpiecznych zachowań w sieci* [Cybernauts - a comprehensive project for shaping safe online behaviour] financed by the Minister of National Education (Warsaw 2016, Nowoczesna Polska Foundation and Collegium Civitas). It examined 75 junior high school students, 128 post-junior high school students, 82 primary school students, 289 parents and 284 teachers. The aim of the report was to identify the initial level of knowledge, skills and attitudes (competences) in terms of safe use of the Internet among students of primary, lower secondary and upper secondary schools, as well as among teachers and parents of students of the indicated schools. The report shows that **students' knowledge about using the Internet is superficial and intuitive**. While as far as technical knowledge is concerned, young people are aware that they still have a lot to learn, they have a very high opinion of their knowledge concerning Internet safety. In fact, however, young people are often unable to identify the basic tools for increasing Internet safety. The authors of the report concluded that the difference between the declared knowledge and the actual state of affairs proves that many of the respondents are unaware of their ignorance. Many of the respondents do not see a real threat while using the Internet. For them this is an abstract danger associated mainly with extreme situations. Questions about safe Internet, threats and dangers on the web evoke common associations and unconsidered

answers. Students remember random information they have heard from friends, teachers or the media about dangerous situations or activities related to the use of the Internet.

The report also shows that in all age groups the Internet is used by students mainly for communication and entertainment purposes, and less frequently for educational purposes. They do not know how to increase their knowledge and how to use the Internet for purposes other than entertainment. The only area where students gave low scores to their competences is their knowledge of tools that allow to ensure anonymity on the web.

B. Formal and non-formal education for developing young people's digital skills in Poland

B.1 Formal education

Formal digital education in Poland is still in the process of development - the core curriculum of teaching IT and other subjects, as well as the education system itself are constantly undergoing changes. In 1999 a reform of the educational system was carried out, changing two-stage education into a three-stage structure. In 2017, the Ministry of Education decided to restore the two-stage structure and is currently in the process of liquidation of junior high schools, causing another chaos in the core curricula.

In accordance with the guidelines of the Ministry of Digitalization (IT core curriculum - primary school - 2016; IT core curriculum. Proposed changes in the current core curriculum - 2015) from 1 September 2017, the primary school curriculum includes programming. Before that time, IT core curriculum provided only for activities aimed at developing students' skills in efficient use of information and communication technologies. Currently, in the first three years of primary school, programming should be used as one of the tools in the curriculum and for the remaining five years it should be a subject. This is important in the context of data from 2015 provided in the **Edu-Tech 2016 Report. New technologies in the world of education** (published in Business in brief and Mediarun partnership by edutorial.pl), according to which only 14% of young people wrote in their lives a program using a specialized language.

***The Digital Economy and Society Index (DESI)* 2018**, pointing to changes in the core curriculum, highlights that Poland has developed a comprehensive approach to teaching digital skills. The All-Poland Educational Network project, co-funded under the POPC, will allow all schools to have access to fast Internet by 2020. However, for the time being, they are plans and it is difficult to say whether they will be implemented or not. Previous core curricula reduced IT lessons to information and communication technology, primarily focusing on the use of devices and programmes. The experience of formal education in Poland so far shows that the way IT is taught at school is quite archaic and ineffective, and the subject itself is often treated as a secondary subject. The International Computer and Information Literacy Study ICILS report 2013 **Computer and Information Literacy of young people in Poland**

(research carried out in Poland by the Educational Research Institute) shows the relationship between digital competences of students and school education. The ICILS study enables us to assess how students from different countries develop their knowledge, understanding, attitudes, approaches and skills that are related to computer and information competences in order to be active in times of digitization. The research involved school students in their eighth year of education, i.e. the second grade of junior high school in Poland. In Poland, 2870 students from 157 randomly selected junior high schools were surveyed in the school year 2012/2013.

The report defines digital competence as an individual's ability to use a computer to explore, create and communicate information in order to participate effectively in the context of the family, school, workplace and society in general. The ICILS research measures students' readiness to live in digital reality, focusing on the extent to which they are able to search, evaluate, transform and share information using a computer - for example, to collect materials and prepare a presentation on a given topic. According to the core curriculum, such competences should be acquired in Polish schools - relevant provisions and content can be found primarily in requirements relating to IT and computer classes, but also in lessons of Polish language, history, nature, mathematics, foreign language, and even visual arts and music.

The results achieved in the study by Polish teenagers are similar to those of teenagers from other developed European countries. In Poland they correspond closely to school marks in Polish, mathematics and IT as well as results from junior high school exams. Therefore, the authors of the report conclude that **young people's skills are more strongly connected with individual characteristics than with the school curriculum**. First of all, the student's computer experience, social and economic status of his/her family and educational aspirations are important here.

The aforementioned **Digital competences of young people in Poland** survey, commissioned by the ORANGE Foundation, shows that opinions among students as to whether schools teach useful computer and information competences are divided. Although the majority of students believe that information provided in IT lessons is useful (57%) and uses it in life (52%), in the qualitative study the young respondents listed a number of proposals for changes in the IT syllabus which could make this subject more useful and more attractive for students. The results of the qualitative study also showed that one of the three important drivers for the acquisition of high and very high digital competences was school requirements or motivation/inspiration from this direction.

According to the teachers' declarations, they treat safety on the Internet as an important issue in IT education, although education in this field does not necessarily take place during IT lessons, but e.g. during general educational classes. The '**Cybernauts - a diagnosis of knowledge, skills and competences of children and youth, parents, guardians and teachers in relation to safe Internet use'** report shows that the problem of Internet safety is addressed during lessons. Almost all teachers answered affirmatively (98.9%) to the question about whether they communicate knowledge about the dangers related to the use of the Internet in their lessons. However, the situations related to cyber-bullying mentioned by the students show that there is not enough discussion about how to deal

with such problems at school. As a source of knowledge about safety on the Internet, young people mentioned: everyday use of the Internet, information they heard, trial and error methods and, in the last place, the school. Pupils admitted that this topic was raised during an IT or a general educational lesson. However, they were not able to quote the exact topics discussed during such meetings. They also admitted themselves that they do not remember much from these meetings, the topic itself was of little interest to them, and the way knowledge was communicated was incomprehensible to them.

The most common topics of IT lessons in the field of Internet safety are cyber-bullying, dangerous contacts, using false identity. There are also other topics, such as dissemination of illegal content, but in such cases schools often invite police officers or other specialists, who, according to the teachers surveyed, can give the problem a slightly more serious dimension and have a more effective impact on young people's awareness. The topic of anonymity on the Internet and communication via the Internet does not often feature in lessons. Students are made aware that one is never anonymous on the Internet, but issues related to connection encryption tools are rather ignored and tools to ensure secure communication are not presented.

B.2. Non formal education

The **Cybernauts - a diagnosis of knowledge, skills and competences of children and youth, parents, guardians and teachers in relation to safe Internet use** report highlights that students, when asked about where they find information about how to use the Internet, most often point to self-education. They mostly learn about the Internet from the Internet itself. They explain that it is simple for them and they cannot pinpoint any problems in working on the computer. As regards the source of knowledge on safe use of the Internet (the main topic analysed in the report, but also one of the main topics addressed in school education), the majority of students state that they obtain such knowledge independently (56% of upper secondary school students), 36% indicated that they draw this knowledge from school, 27% from parents, 7% from the Internet and 6% from their colleagues.

The **Edu-Tech 2016 report** points to educational start-ups, e-tutoring platforms, applications for learning foreign languages and increasingly popular e-books as the basic forms of digital informal education in Poland. It is also worth mentioning the e-learning systems usually used by academic institutions and additional educational projects initiated by non-governmental organizations, e.g. by the Centre for Citizenship Education or the Panoptykon Foundation for schools, which use the Internet and new technologies in various ways.

Many educational start-ups are established in Poland. However, most of them disappear very quickly. Remaining in business and reaching people interested in the offer, who want to use it and pay for it, poses a huge challenge. Following the example of Edu-Tech report, which lists most interesting Polish educational start-ups, we present three of them:

- **Brainly** is a social networking portal based on the exchange of knowledge between users. A person who needs an answer in physics, for example, must first help another user from

another subject. Brainly, first as Zadane.pl, was launched in Poland in 2009. 5 years later it entered the American market. It is used by over 20 million users worldwide.

https://brainly.co/

http://zadane.pl/

- **Coders Lab** is a Warsaw-based start-up offering training in various programming languages. In a short time, through a condensed learning system, Coders Lab prepares for professional work and allows people to acquire specialist skills, which are difficult and expensive to obtain in Poland, at the same time allowing them to join the group of elite and most sought-after IT specialists in the country. The start-up was established in 2013.

  http://coderslab.pl/

- **Explain Everything** – a start-up that has achieved great success in countries such as the USA or Denmark, which is hardly used by anyone in Poland. Poles created an application for tablets, which can be described as an interactive virtual blackboard for creating animations. The program allows you to create your own educational materials, using images, sounds, graphics and many other tools, which is of great help to teachers in the educational process. The application is very popular in the developed western countries, where tablets at schools are commonplace. In fact, Apple sends iPads to schools with the Explain Everything app already pre-installed.

  http://www.explaineverything.com

The issue of Internet safety is being dealt with in Poland by various non-governmental organisations. The report 'Panoptykon. Digital school starter-kit' from 2018, prepared by students of the first year of Management and Leadership at the Warsaw School of Social Sciences and Humanities, presents the following initiatives:

- **Cyfrowa wyprawka [Digital school starter-kit]** – an educational Project of the Panoptykon Foundation (http://cyfrowa-wyprawka.org), that aims to provide knowledge about how to safely use a computer, telephone, the Internet, how new technologies work, what consequences everyday online activities have for users and their closest family and friends, and how to protect oneself and the closest people from the dangers associated with the use of these technologies. Educational materials concerning these issues are available free of charge on the Panoptykon Foundation website. They comprise lesson plans, check-up exercises, a glossary of new terms, a reading room (recommended materials). Lesson plans were prepared for students of grades 4-6 of primary school, junior high schools and post-junior high schools.
- **Cybernauts** is a comprehensive project of shaping safe online behaviours, implemented by the Nowoczesna Polska Foundation in partnership with Collegium Civitas. The main objective of the project is to increase the level of safety of children and youth, as well as their parents, guardians and teachers while using the Internet.

- **Dyżurnet.pl** is a team of experts from the Research and Academic Computer Network (NASK), acting as a contact point for reporting illegal content on the Internet. The project helps combat infringements on the Internet and conducts information and educational activities aimed at various user groups. The primary focus is on combating infringements on the Internet, education is a secondary topic.
- **The European NGO Alliance for Child Safety Online** is a network of 23 NGOs working for children's rights across the EU, working for a safer online environment for children. Their mission is to promote and support activities at national, European and international level to protect children and promote their rights in relation to the Internet and new technologies. One of the members of this organisation is the Polish foundation **Dajemy dzieciom siłę** [We give children strength], which has been protecting children from abuse and helping those who have experienced violence since 1991. The Foundation is also active in the area of threats to children's safety on the Internet.
- **Włącz się. Młodzi i media [Switch on. Young people and the media]** is a programme implemented jointly by the Centre for Citizenship Education and the Evens Foundation. It has been operating since 2012. Goals of the programme are to raise awareness of the threats posed by the media, to develop the ability to search and check information, to encourage students to create their own works with the use of media, to turn media into a tool for gaining knowledge.
- **5medium Foundation** deals with education focused on promoting the so-called new media in the educational process. Projects implemented by the Foundation put emphasis on the development of appropriate competences, including the ability to use modern technologies and the ability to search for and select information necessary for proper functioning in the information society.
- **Feminoteka. Bądź bezpieczna w sieci [Be safe online]** – the project focuses on showing girls how to use new media safely. The guidebook issued by the organization focuses on cyber-bullying against girls.

C. Polish youth workers' digital skills

The following material regarding Polish youth workers' digital skills, was prepared by Mateusz Wit Jeżowski, Chief research Officer from Foundation for the Development of the Education System (FRSE – Fundacja Rozwoju Systemu Edukacji) from National Agency of Erasmus+ Programme.

Polish youth workers are one of the most active in the European Union when it comes to participating in Erasmus+ Youth Programme. Erasmus+ Youth and its predecessor – the Youth in Action Programme are European Union key initiatives to support education, training, youth and sport in Europe.

They are addressed to young people aged 15-30 and to youth workers. Their effects are studied on a yearly basis within the RAY research network[1]. Its main objectives are:

- to contribute to quality assurance and quality development in the implementation of the Erasmus+: Youth in Action Programme;
- to contribute to evidence-based and research-informed youth policy development;
- to contribute to the recognition of non-formal education and learning in the youth field, in particular in the context of international youth work and learning mobility;
- to promote dialogue between research, policy and practice in the youth field.

According to the 2017 RAY study[2] the Erasmus+ Youth Programme contributed to the development of several skills and competences of youth workers, such as communication in foreign languages (in 98% of cases), intercultural awareness (92%) or digital skills (76%)[3]. As far as digital skills of Polish youth workers were concerned, they claim to have learned for example to produce media content (printed, visual or electronic) on their own. Moreover, the majority of surveyed leaders claimed to have created and uploaded content on the websites and to have used social media (Facebook, Twitter, Instagram, LinkedIn) for professional and project purposes on a daily basis. Finally, some 65% of the surveyed project leaders and youth workers claimed to have developed mathematical skills, mainly related to financial settlement of the project they carried out. However only 7% of project leaders/youth workers declared they learned or developed skills related to coding or programming thanks to implementing an Erasmus+: Youth project.

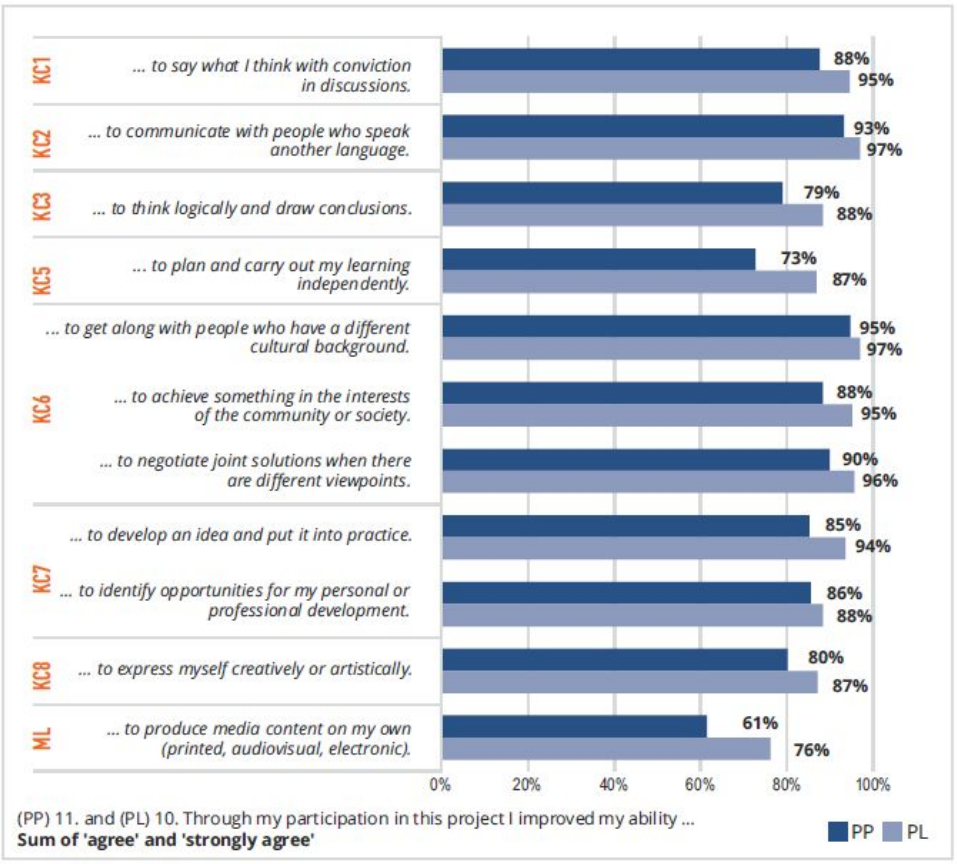
It is therefore justified to state that the Erasmus+ Programme contributes to some extent to the development of digital skills among youth workers in Poland. Still, it cannot be treated as a mechanism specifically designed to do so, since digital skills are rather a tool used in youth work than the main purpose of the project.

[1] 31 National Agencies of Erasmus+: Youth in Action Programme and their research partners represent the self-governed European research network "Research-based Analysis and Monitoring of Erasmus+: Youth in Action" (RAY Network).
It was founded on the initiative of the Austrian National Agency of the Erasmus+: Youth in Action, in particular by its consortium partners Interkulturelles Zentrum and the Institute of Educational Science of the University of Innsbruck, in order to develop joint transnational research activities related to the Youth in Action Programme.

[2] Bammer, D., Fennes, H., Karsten, A. Exploring Erasmus+: Youth in Action. Effects and outcomes of the Erasmus+: Youth in Action Programme from the perspective of project participants and project leaders. Institute of Educational Science, University of Innsbruck. Innsbruck 2017.

[3] In total a number of 2 939 project leaders and youth workers took part in the study, out of which 220 were from Poland.

FIGURE 1: COMPETENCE DEVELOPMENT OF PROJECT PARTICIPANTS (PP) AND PROJECT LEADERS (PL)



Source: Youth in Action. Effects and outcomes of the Erasmus+: Youth in Action Programme from the perspective of project participants and project leaders. Institute of Educational Science, University of Innsbruck. Innsbruck 2017.

The issue of digital competences of school teachers in the area of safe use of the Internet is addressed in the report '**Cybernauts - a diagnosis of knowledge, skills and competences of children and youth, parents, guardians and teachers in relation to safe Internet use'**. The research findings show that teachers are a group that very often uses the Internet for professional and personal purposes, and less frequently for entertainment. At home, they also use the Internet for professional purposes, e.g. to communicate with students, check their work or enter marks into the virtual journal. Teachers most often communicate via three tools: e-mail, less frequently via Facebook and least frequently via Skype.

The main issue examined in this report, i.e. knowledge about safe use of the Internet, is rated quite high in the self-assessment of teachers. Teachers give themselves the highest marks for their own knowledge in the aspect of cyber-bullying, and emphasize that this is the topic most frequently discussed in classes with students. They also rate highly their knowledge of phishing, dissemination of illegal/harmful/unlawful content and illegal data acquisition - in this case, however, one can get an impression by listening to the respondents that these issues are the seen by them as the same (especially illegal data acquisition and phishing). Teachers are also quite familiar with malware, which is related to

unpleasant experiences where the installed software led to the blocking of the computer or other unpleasant situations. However, this knowledge is of a practical rather than technical nature - i.e. teachers' knowledge is based on the awareness that not everything should be installed and the sources from which the software is downloaded should be taken into account. Teachers also have a great deal of knowledge - at least this is how they judge themselves - in terms of contacts with strangers who may pose a threat, as well as of extortion and fraud in online commerce. Teachers, on the other hand, assess their knowledge in the field of network intrusions at the lowest level, pointing out that this is a technical issue which, first of all, they were unlikely to be able to detect and, secondly, they would not be able to counteract it on their own. There is also a lack of knowledge among teachers about tools increasing anonymity on the Internet and privacy in communication via the Internet. There are teachers who are not familiar with issues such as data encryption.

Teachers declare that they are frequent participants in various projects related to Internet safety. Nearly ¾ of the respondents say that they participate in them. They most often mention trainings, workshops and seminars organized by external companies and organizations, as well as educational campaigns organized in schools. They also refer to the Internet as a source of knowledge in this area - here they most often refer to the Dzieci Niczyje [Nobody's Children] Foundation's website. At the same time, they claim that they need additional safety training.

D. Polish youth organizations' capacity for developing digital skills of young people

In Poland, there has been no publication that would give an overview of NGOs supporting young people, especially in developing digital competences. There is no document that would summarize organizations' programmes aimed at increasing digital skills of young people, provide data on the resources (infrastructure and human resources) of these organizations or on the level of their digitisation.

Following the *CoOp Poland National Report on SMEs and Youth Organizations Cooperation* (2018) we provide general data on non-governmental organizations in Poland, including youth supporting organizations, and their areas of activity:

There were **around 20 thousand foundations and 106 thousand associations registered** in Poland in December 2015. That means there are five times more associations than foundations. Proportions have, however been changing, with more and more foundations being established, for a year before the number of foundations was six times lower than the number of associations.

However, the fact of there being 126 thousand organizations registered in Poland does not mean that all of them are operating actively. It is estimated that approximately 70% of registered organizations carry on their activity. The rest have either suspended their activity or ceased to operate altogether. This means that **the number of associations and foundations actively operating in Poland is around 100 thousand**.

The scale of operations of Polish NGOs:

- local community (5%)
- gmina or poviat (32%)
- voivodeship (25%)
- country (28%)
- international (10%)

Many associations and foundations conduct parallel operations: while operating locally they take on activity on a regional scale, organise gmina or poviat-wide actions or, while operating internationally, their first and foremost focus is on domestic activity – either nationwide or regional or even concentrating on local community work.

Polish NGOs are primarily involved in:

- **sport, tourism, recreational activities and hobbies** (34%): e.g. conducting sports classes, organising recreational events, taking care of sports facilities
- **education and training** (15%): e.g. activity clubs for children and youths, organising courses and trainings for adults, running of schools
- **culture and arts** (13%): e.g. organising fetes, festivals, cultural education, activities advocating regional traditions
- **social and social welfare services** (8%): providing help and support to the disabled, the poor, large families, people with addictions
- **health protection** (7%): e.g. health promotion, education, running of rehabilitation centres
- **local development** (6%): e.g. encouraging local community activities, neighbourhood activities, development in rural areas

In regard to youth organizations specifically, developed projects are realized in the following areas:

- Arranging leisure activities as a method for non-specific preventive treatment of social exclusion.
- Sports and sport education.
- Ecological education.
- Digital education.
- Teaching and talent development.

F. Conclusions / highlights of the desk research and gaps identified in literature on the aforementioned topics

The main conclusion that emerges from the reports concerns the questionable effectiveness of digital education among young people in Poland. Polish youth is convinced of their rather high digital competences, which, as it turns out in practice, are not as high, and are often limited to the efficient use of

several selected applications. It seems that young people's ignorance stems from the fact that they even lack awareness of what they might know (e.g. enhanced search algorithms, security on the Internet, anonymity on the Internet). Polish schools are trying to meet this challenge by introducing a new core curriculum in IT, which includes teaching programming already on primary school level. However, it is too early to talk about any effects here. On the other hand, it can be seen that so far the school, although teachers themselves rate their digital competences quite highly and declare the use of technology not only in IT lessons, has not been able to provide students with sufficient knowledge and skills, and students are mostly convinced that almost all of their digital competences are the result of their own efforts.

Not all the topics indicated for elaboration in this part of the report have been taken up. It results from the fact that Polish literature lacks adequate research and statistics. Only to a small extent it was possible to determine the current digital skills of youth workers and to identify the skills they need. There is a lack of literature summarising existing educational programmes developing digital skills of youth workers, and literature indicating the needs and expectations of youth support organisations in the field of digital competences of youth workers (point C). In Poland there is also no publication giving an overview of non-governmental organisations supporting young people in developing digital competences, nor is there a document which would list the programmes of organisations aimed at increasing digital skills of young people, provide data on the resources (both in terms of infrastructure and human resources) of these organisations or on the level of their digitisation (point D).

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CHAPTER 2

REPORT ON FOCUS GROUPS WITH YOUNG PEOPLE

Introduction

The main purpose of the focus-groups was to collect information about the young people's perspective on the digital skills they need to enhance their employability. Following this purpose, SKILL IT Romanian partner organized two focus-groups with 20 young people. The bellow report presents the results obtained through this research effort.

1. Profile of the focus-group participants

A total of 22 participants aged 16-22 (8 girls and 14 boys), all charges of the Robinson Crusoe Foundation (Fundacja Samodzielni Robinsonowie), took part in two interviews. Young people come from foster care (orphanages, foster families, family-type orphanages) and are in the process of becoming independent. They come from Gdańsk, Szczecin, Kraków, Wrocław, Warszawa, Sieradz, Zawiercie and Żory. Most of them attend vocational or technical schools.

2. Perspectives on young people's present and future skills

Both groups indicated that it is important to complete **vocational courses** and to have appropriate **qualifications** required for performing specific professions. They also identified the Matura exam and the results of vocational examinations as important elements for entering the labour market. **Driving licence** and knowledge of **foreign languages** were mentioned as valuable skills when looking for a job. Young people also believe that **basic computer skills** are essential, they stressed that depending on the profession they want to work in, they should be familiar with computer programmes used in given positions, e.g. for designing websites or accounting. Some of the respondents indicated that previous experience plays an important role when looking for a job. During the interview, employers will require them to be able to demonstrate their strengths and not to get nervous. When they start working, they should be able to talk, including with clients, learn quickly, be open to training and be oriented towards further education (e.g. specialist courses). Young people are aware of the need to possess qualities such as responsibility, commitment, creativity, punctuality and openness at work. They pointed out that future employers will require them to have impeccable manners and knowledge of how to behave in specific

situations, they will have to be able to talk to the client and represent the company externally. Those working in an international environment in the future should be able to switch quickly from one language to another, and office staff should be able to operate a printer, a photocopier, a shredder and download software necessary to use them.

3. Assessment of young people's digital skills and young people's digital skills needs

Both groups of respondents were very diverse, some of the young people indicated that they had very highly developed skills and that they could do everything, others were more sceptical about their knowledge. Some young people feel that they can handle the phone and programmes from the Office package, they have no problems with finding information on the Internet and in distinguishing real information from 'fake news'. It is not a problem for them to create a photo-report and make videos using their mobile phones, they are administrators in different groups on the Internet and they run vlogs on Snapchat. Getting a new job, they would like to receive training on specialist programmes/applications related to their profession, such as operation of supermarket equipment - cash registers, barcode scanners, or software used by architects or hairdressers, programmes for editing photos. Respondents are usually able to identify such programmes, they know which ones they can obtain free of charge and which ones are paid.

Young people attending IT schools, on the one hand, think they have a lot of knowledge and, on the other hand, they still need in-depth information on advanced computer skills, programming, coding and working with databases. Evaluating their own competencies, young people indicate that they do not have the ability to write formal e-mails or to create formulas in Excel. The need to increase knowledge related to programming, creating websites, learning computer graphics used to create animations, professional film editing and creating security systems was repeated many times in the interviews.

Several of the respondents were unable to indicate which programs they could use in their work, arguing that they were at the beginning of their education. These people hope that they will be introduced to such software at school.

Most of the respondents feel their knowledge is superficial and would like to attend trainings. As an obstacle they mention not having access to, or lack of funds for the purchase of, specialist programmes and professional equipment. Seven of the respondents report being able to touch-type.

4. Digital skills development and ICT use among youth

Focus group participants use the Internet as main source of knowledge and communication. Everyone confirms that they learn from tutorials and courses on YouTube. The most important

applications are Facebook, Instagram, Messenger, YouTube and Snapchat. When asked which applications they use, young people very quickly mention more than 70 names. Focus groups participants had a vast knowledge of software and applications available on the market, from those supporting their learning process, through financial needs to dating portals. However, this does not mean that they use all of them.

Young people indicate that thanks to Internet access they can save time (they do not need to go to the library) and learn from others' mistakes (they find errors in instructional videos). However, some of them appreciate and even prefer traditional, i.e. paper, books/textbooks.

The group believes that **school does not teach IT well**, although much depends on the specific school, the teacher and the equipment. Those who previously had their own computer at home will not learn anything new in such lessons. Young people believe that there are not enough IT lessons and point to negative selection among teachers - people who are familiar with IT issues go to work in corporations, where they can count on higher salaries. **Teaching staff at schools are not qualified and have no authority among young people.** When asked about the sources from which they obtain knowledge, young people indicate that they learn on their own, from peers or from family members with IT education, individual people, mostly from schools with IT profiles, say that they can count on their teacher.

The main benefits of digital literacy for young people is that it **makes it easier for them to find a job and receive higher salaries**. Thanks to Internet access, you can save time, quickly get messages and establish contact with people all over the world (conferences and on-line meetings). Young people see great facilitations in banking - financial operations and, above all, fast transfers. They also point to the benefits of having access to printers and photocopiers where they can quickly duplicate materials.

At the same time, the group can see the disadvantages and problems associated with digitalisation. They feel they are bombarded with information and advertising, they notice a lot of misrepresentation in the messages that reach them. On the one hand, when looking at applications on the phone, they feel that everything has already been invented, on the other hand, they see that new things are constantly appearing, e.g. 3D printers. Getting to know new tools is time-consuming and difficult to reconcile with everyday life. Reported problems include finding understandable instruction manuals for programmes and breaking through the maze of information. Another problem for the group is the incompatibility of Windows/Android operating systems with Apple. They also note that access to modern technologies, software (e.g. antivirus) and courses is expensive and that they do not have the means to afford them. They appreciate discounts on products that are already becoming ‘old’ and therefore cheaper or even free.

When asked what does not constitute a challenge for them in the digital world, the respondents answered: **answering e-mails, being present on social networking portals (Facebook, Instagram), giving 'likes', commenting and clicking.**

5. Young people’s previous experience with the NGO sector in regards to youth workers’ digital skills

Young people **do not seem to have any experience with NGOs and youth workers** and their digital skills. Both groups focus on schools and teachers, pointing out equipment and competence gaps. The examples given show that contacts with adults trying to operate equipment, use new technologies or teach them something are a joke and resemble anecdotes about adults' lack of skills rather than an educational opportunity.

In the eyes of the examined group adults 'do not grasp it', are not able to connect simple devices, they are not able to write on the keyboard. One of the teachers was using a floppy disk. Occasionally, adults can find photos and information on the web and use them for their lessons. Adults do not understand that young people know that something is 'fake news'; for young people it is a joke, and adults take it seriously. At the same time, they perceive the employers' group as capable of using new technologies and programmes.

6. Conclusions and other relevant insights

It was **difficult for the group to think of what they could learn from adults**. After a lengthy discussion, young people saw an opportunity to learn something in areas such as doing administrative duties online, operating databases, websites or learning and improving their professional qualifications. When they think about acquiring digital competence, **they feel they have to do it by themselves**. They would like to have more classes in which they could use computers and tablets with competent people, who do not need to be assisted in conducting the classes. They indicate that they could learn by making memes. They would like to have more access to office equipment at school to print or scan something.

Identifying instructional videos as the primary source of knowledge and information is a sign that young people today learn by watching rather than reading.

None of the groups listed any websites or applications for job searching and supporting that process during the research. Names of dictionaries, encyclopedias (even Wikipedia) available on the web were not mentioned either. The websites and applications used in the learning process at school listed by the group present rather ready-made, reproducible solutions that can be used by young people on a 'copy' and 'paste' basis.

CHAPTER 3

REPORT ON INTERVIEWS WITH EMPLOYERS

Introduction

The main purpose of the interviews was to collect information about the employers' needs and expectations with regard to young people's digital skills. The interview also focused on the expectations of the employers towards youth organizations and youth workers' contribution in the area of digital skills, in the process of preparing young people for future jobs. Following this purpose, SKILL IT Polish partner interviewed 2 employers from Warsaw. The report presents the findings obtained through this research effort.

1. Profile of the interviewees

- VML Poland – Communication and Technology sector - Michał Wolniak – President
- Dentons Business Services EMEA – Wojciech Łapacz - Service Desk Team Leader

2. Perspectives on young people's present and future skills

Both respondents listed a number of universal competencies that employers look for in young employees. These are: **attention to detail**, **the ethic of work** taken from home: not throwing work at others, fulfilling one's duties, assertive and honest declaration on whether I can do something or not, or, alternatively, whether I am unable to do something. Besides, **openness to people** and **empathy**. One of the respondents pointed out that it is difficult to determine the main success factor when it comes to starting a new job, but that it is very important to fit in with the entire team, and it is the job of recruiters and superiors to see to that. In turn, a factor that is influenced by the candidate is the development of the ability to "listen wisely". What this means is that in the first few years of work it is essential **to be oriented towards learning** from people experienced in the given specialty. At the same time, it is important **to have an opinion** and to express it. A mind that listens, but has an opinion and is ready to defend it is a valuable asset to the company. A young worker should do this openly, bravely, actively, not orthodoxically, and be ready to change. For a manager, a discussion with such a person is likely to be enriching and valuable. Both sides will benefit, so a good manager will find time for it. The competence that will help in such a meeting is **the use of technology**. Preparing to justify one's views requires doing some research,

finding examples, **reaching valuable sources**, checking them, and finally, presenting arguments in a concise, attractive way. You need to have an idea and then use technology wisely to develop and communicate your work. Of course, technologies will change and be improved over the years, but the basics of the workshop and habits related to the development and justification of one's own arguments will not change. More sophisticated technical and IT tools can only help and speed up the search for necessary information. In this sense, **mastery of new technologies will be essential**. We must also consider the trend, which is already visible on the market, that **valuable sources of information will become paid**. From the quality of data point of view, this is a promising development. On the other hand, it will have an exclusionary effect on young people who cannot afford access. This may contribute to the habit of obtaining information from poor or even false sources. In addition, **communication** will play an increasingly important role at work. There will be some automation of processes or behaviours, and then the so-called soft skills such as finding, analyzing, interpreting data, and not possessing it will play an increasingly important role. The respondents agreed that the key, universal competence sought by employers is the **ability to reach reliable information sources independently**.

3. Perspective on young people's digital skills: expectations and required competencies

According to the respondents, the basic tools that valuable candidates should use are: **Microsoft Office, presentation tools, Skype for business, instant messaging, Windows environment** as such, and the already mentioned **ability to search, analyse and manage information**. Depending on the area of specialization, management tools such as Asana, Trello, Slack, Teams and their derivatives, or industry-specific programs such as image processing may also be required. However, regardless of your position, it is increasingly important to be able **to find ready-made solutions** that can be copied or processed. In order to achieve this, it is necessary to be able to precisely identify the needs and requirements and to search the available databases. This is more cost-effective than creating new solutions from scratch. The **ability to search and filter content** is a common denominator of all jobs. The respondents observe that this is a completely neglected area in terms of education. The same is true for a modern approach to what the IT department in a company is. Even among young graduates of profiled secondary schools there is a flattened, generalised image of IT as something related to coding or hardware infrastructure, with little knowledge of how it functions in large organizations. Schools do not prepare anyone for such specialisations as data centres, networking, messaging, deployment or security. The respondents have no illusions that the education system is able to keep up with the rapidly changing trends on the programme market. Who heard of Slack a few years ago? What should be taught at school in a separate course and then expected from young people is **the ability to search, verify, critically evaluate and rank information**. This general competence, which has already been mentioned, is also the basis for all digital skills.

4. Digital skills gaps among young employees and companies' ways of addressing them

The respondents noticed that young employees usually do not cope with the basics, such as Word, Excel, Outlook, less frequently PowerPoint. When something crashes, users are often unable to restore the functionality of the programme. They also find it difficult to establish a remote connection with a computer, the role of which has changed from that of a file repository to that of a process management centre. It is clearly visible that university graduates show greater resourcefulness. This may be the result of experience gained during the writing of a thesis. One of the respondents noted that on internal groups for communication and problem solving even talented employees have deficiencies in identifying the source or use very poor, reproductive processes. This is a nationwide problem. As a relatively small country, we have too few specialists, so the texts translated from other languages are rarely part of the discourse. We are doomed to poor qualities summaries. This can be altered by the habit of referring to the original source. However, the Polish school does not teach such a habit. This is despite the fact that more and more technologically advanced translators or programmes which translate, for example, only more difficult words (Word wise for Kindle) are available. A relatively high level of English proficiency among young people could also provide a good background. The respondent states that adequate resources are available (language skills, technologies), but that there is a lack of appropriate attitude and promotion of reaching for primary sources. The role of educational institutions should be to make people understand that **it is better to use primary, rather than secondary, sources**, and that it is better to **verify knowledge** and force oneself to make a greater cognitive effort, because this brings excellent results. In the context of a low level of education, respondents observe that deficiencies need to be remedied by retraining employees, as well as by means of so-called on the job training. The company of one of the respondents organizes hour-long Excel workshops twice a week for those interested. The plan provides for 72 meetings. The second of the respondents notes the need to develop the skill of accessing primary sources. There are also gaps in the ability **to present and promote one's point of view transparently, to debate, to create a clear, coherent argumentation.**

5. Obstacles impeding digital skills development and limits to using ICTs by young people

Respondents identified a number of obstacles to the development of digital competence. From a lack of equipment resulting from **low budget to an incomplete teaching program**. It is likely that a computer connected to the network is not always the standard. The lack of understanding of the

contemporary world by digitally excluded people results in a worse start for their children. When young people enter the age at which they would like to participate in the e-world, they **do not receive adequate support from their parents**. The school, on the other hand, **does not teach critical thinking** and there is no political will to change this. The curriculum focuses on history and the mother tongue, marginalising **communication skills, building personal relations and mastering technology**. This is not in line with the needs of a market where mastering digital competencies is as important as knowing English. Already at the beginning of the education process, along with the development of the child's communication skills, the learning of basic digital competencies should start. Without it, children browsing the Internet will encounter mainly harmful content and will acquire inappropriate habits, e.g. the use of substantively weak, often vulgar materials on YouTube. It is important to learn how to distinguish between **information and entertainment**. This cannot be taught only in IT lessons, as it is a more general school task. It is not about banning, but about showing the value of smarter behaviour.

6. Standpoints on stakeholders involved in developing digital skills in youth

The survey participants claim that upbringing and education on digital skills are primarily the responsibility of parents and schools. In the ideal world, it would be mainly home, but parents are not always up to date and aware of trends, so school is particularly important. It sounds utopian, because it is an institution that often lags with its curriculum and is 10-20 years behind what is happening in the real world. In the ideal model, however, one can imagine training workshops for the staff of these educational institutions. Every year there could be a visit of specialists who would make the staff aware of current trends. It would probably be enough for external experts to devote around 10 hours a year to training in data security, law, legality, and the quality of teaching would improve dramatically. In the opinion of the respondents, people who work in companies consciously taking care of online security are in a privileged position with regard to the development of digital competencies. They have good working habits, are sensitive to certain standards and think about their data. Such people are the few ones who have the competence to safely introduce their children to the virtual world. Therefore, it is the school and the work of parents that provide an opportunity for the development of competencies, with the former always lagging behind when it comes to available programmes. Sometimes a young employee can count on the company to train them in this area, but this will only happen if there are no people on the market with the desired skills. Respondents noted that **NGOs** are another entities that can support the development of digital competencies. They usually appear in places where the basic institutions fail the most. **Security or the fight against phenomena such as hate** on the Internet are examples of topics that NGOs have successfully addressed, **although on a small scale**.

7. Conclusions and other relevant insights

When asked about the depth of knowledge of the digital world by the young generation, the respondents noticed that people from the so-called e-native group treat the Internet in a rather functional way. Knowledge about how programmes or even popular search engines work is definitely niche even among the so-called IT professionals. This reveals a great need to explain the mechanisms, to launch critical thinking, to raise awareness of cause-and-effect chains. The stake is data security, protection against flooding by contextual and behavioural advertising, protection against manipulation. An example of a method of learning indicated by one of the respondents is the use of an application developed by scientists from the University of Cambridge. The script created by them collects, among others, information from the user's Fb profile, analyzes habits on the Internet, and then estimating the probability of several dozen variables it generates very precise information about who we are. This tool discloses how, contrary to appearances, little anonymity we have, how much applications know about us.

CHAPTER 4
REPORT ON FOCUS-GROUPS WITH YOUTH WORKERS

Introduction

The main purpose of the focus-groups was to collect information about the needs of youth workers in terms of the knowledge, competencies and skills required to provide meaningful and sustainable programmes and services that develop young people's digital skills. We also aimed to collect information about the needs of youth workers to grow their own digital skills and through that, the capacity to offer high quality and innovative youth services. Following this purpose, SKILL IT with a Polish partner organized 2 focus groups with 20 youth workers (each group comprising 10 people). The report presents the results obtained through this research effort.

1. Profile of the focus-group participants

All participants of focus groups were Youth Workers, who cooperate with Robinson Crusoe Foundation. They are pedagogists or psychologists, working with young people professionally for various institutions and organizations. Participants live and work in 10 cities all over Poland: Warsaw, Szczecin, Łodź, Gdansk, Lębork, Sieradz, Zawiercie, Żory, Wrocław, Krąków.

2. Perspectives on young people's present and future skills (Q1)

Both groups listed similar skills that can be useful to young people in their future lives and jobs in today's world. Digital skills did not come first in any of the groups. Respondents indicated specialist and professional knowledge, language skills, orientation in the job market, creativity, as well as physical fitness. Most attention was paid to social competence and self-assessment, learning skills and internal predispositions, which determine motivation and attitude to tasks. The following skills were identified in these areas:

Social competence: teamwork, self-presentation, communication.

Self-assessment: self-confidence, self-esteem, inner conviction that I will succeed. Adequate image of one's own skills.

Internal predispositions related to mental resilience: openness to new experiences and changes, assertiveness, sense of agency, self-discipline, flexibility, courage and motivation, resistance to stress, frustration and failures, ability to accept criticism and learn from mistakes.

In both groups, respondents spontaneously indicated knowledge of new technologies, especially in the context of computer literacy and searching for information on the Internet. They also paid attention to the fact that young people - although they use devices such as smartphones or computers efficiently and do not know the world without the Internet - often cannot perform some specific tasks, e.g. make a presentation in PPT, calculate something using Excel spreadsheet or search for information effectively. They can operate tools, but they do not always know how to solve problems using these tools.

3. Assessment of young people's digital skills

According to the respondents, young people are able to use their smartphones and computers relatively efficiently, they are present and active on Facebook and use FB for communication. They also have a basic knowledge of MS Office software gained from school. However, they are often unable to perform more complicated operations, e.g. text editing or handling e-mail, they do not have e-mail addresses. They are up to date with many new developments and quickly learn new functions. When faced with difficulties, they are able to cope, they know how to gain access to Wi-Fi, or which network is best. They use tutorials to learn different things, they can quickly search for information, although they are not always able to analyse it critically.

They move freely in the world of social media, are able to enter into online relations, know how to find support and help, to whom and how to speak over the web. They establish such contacts with ease. However, they are often not aware of the consequences of their online behaviour. They do not realize that their games, statements and other activities convey information about them, they do not adjust the privacy settings of their FB profiles. They do not seem to understand which materials, e.g. pictures, are 'ok' and which violate privacy. At the same time, among young charges there are people who consciously build their image online and create themselves. They show their interests, e.g. one Robinson studies fashion and publishes his projects on the web.

There are a number of factors which, according to the respondents, make digital skills of young Poles weak, and often superficial, in comparison with other EU countries. Young people usually treat digital tools as entertainment, and not as a way to efficiently perform tasks, solve problems or achieve benefits. Such reproductive approach is the result of poor school education, including outdated teaching methods, lack of competent teachers, excessive theory and a general civilizational lag. Polish schools do not provide a platform to ask the student about their thoughts or feelings. Task-based approach and the focus on the effect i.e. obtaining a positive mark dominate. The school does not develop creativity, does not support analytical thinking, does not support reflection in analysing problems, or even reading with understanding. Computer science at a Polish school is more about learning about technology than about

its application and use in solving problems. In addition, there is a more general lack of understanding of the benefits of using the Internet and digital devices on the side of parents or carers. The Internet is treated as entertainment, fun, it is often forbidden to use the Internet as a form of punishment. Education concerning the digital world is conducted in the context of **threats** (cyber violence, data theft) and not in the context of benefits resulting from digital competence and using technology. The older generations did not know the Internet during their education, they do not know it, they do not understand it, they perceive it as a threat to interpersonal relations. They evaluate and depreciate the digital world instead of trying to understand it.

4. NGOs' and youth workers' role in developing digital skills in young people

According to the respondents, there is a need for educational campaigns showing positive examples of using digital skills. First of all, parents and carers should be educated in order to change their negative, undermining beliefs and stereotypes. There is a lack of knowledge about how to educate and develop a child in the digital world. Parents are often unaware of the conditions and benefits of the digital world. At the moment, the number of IT lessons at school has decreased - at Polish school there are more history lessons than IT.

The role of NGOs is to educate educators, aimed at changing their way of thinking about the role of digital competence in today's world. It is necessary to educate youth workers about the benefits and conditions, and to provide them with practical knowledge about the functioning of blogs, influencers, social networking portals, online popularity building and online earnings. Especially that the knowledge of social media among young people is mainly tool-based and superficial, e.g. they can write a post, but they do not care about privacy settings. And as far as the teachers are concerned - they are totally behind the times.

As far as IT lessons are concerned, Polish school is **technology - not ICT - oriented**. Developing digital competence should not be a separate lesson, but a part of all subjects! Digital competence is a horizontal competence! For example, online quizzes and games can be used to learn different subjects. The best form of learning is practical use. As a positive and, at the same time, the only example of using digital tools at school, the respondents indicated the E-journal, observing, however, that parents are often unable to use it. None of the respondents had a chance to come across a conscious programme aimed at the development of digital competence. There have also been opinions that it is not worth educating parents because they are digitally illiterate and it will be difficult to change this, especially as it is accompanied by a bad attitude, negative beliefs about, and evaluation of, the phenomenon of the digital revolution.

The respondents pointed out that the development of digital competence can be a field of mutual exchange of experiences between young people and educators. They often experience this in their youth

work. For their part, they help young people to secure their privacy, make them aware of the consequences of their behaviour on the Internet and show them the wider context. At the same time, they benefit from the knowledge of young people, learn from them about new tools and then show them how to use those tools more extensively or how to solve a problem. For example, they encourage them to open a group to carry out a common task, then verify how these tools are used and identify good and bad practices. They also work with carers and foster parents, teaching them how to use digital devices. They try not to value the world in which young people move about, but to be present in this world with them. As a result, they contact young people through groups on FB or Messenger. They consider telephoning to be less effective. Such exchanges develop and motivate young people very much. They also help in communication and understanding with young people.

In both groups, the Youth Workers rated their digital skills as rather high (especially after reading the competence description), whereas the use of devices and knowledge about novelties was lower. They fear that they have deficits, deficits, even though they have realised in the course of the discussion that these fears are often exaggerated. They saw that they had a lot to communicate to and share with young people. They thought that they were technologically backward in comparison to young people but, at the same time, they saw that they were doing better than young people when it was necessary to perform a task, and that they understood the application of technology well (the technological aspect - for improvement, but the understanding of the application/use of technology - very high). Younger educators are fully digital native. They do not know any other world. And so there is hope.

5. Standpoints on programs and services aiming to develop young people's digital skills

When considering what programs and tools could strengthen educators in the development of digital competence of young people, it is worth thinking about the aspect of encouraging educators to share their current knowledge with young people. Cooperation and integration with young people in a model of mutual exchange and learning could be of great value for the involvement of young people. Classes should take the form of practical workshops and not theoretical trainings or presentations.

6. Conclusions and other relevant insights

The aspect of mutual exchange and cooperation appeared as a final reflection in both groups. During the discussion, the respondents realized that they pay too little attention to the development of digital competence of young people, in the context of such an important and key role of these competences in the contemporary world.

CHAPTER 5
REPORT ON INTERVIEWS WITH SENIOR MANAGERS

Introduction

The main purpose of the IDI interviews was to collect information about the senior managers' perspective about the digital skills needs of the youth workers and the readiness degree to use certain ICTs in their organization/ develop certain digital competencies in youth workers. Besides that, the focus-groups/ interviews collected information about the types of programs and services that are currently developed or could be developed by NGOs to increase young people's digital skills.

Following this purpose, Polish partner interviewed 10 senior managers from youth organizations. The report presents the findings of this research effort.

1. Profile of the interview participants (type of organization, position in the organization)

The survey involved 10 people who, on a daily basis, are managers at NGOs and run projects in the field of youth work and digital skills. They were:

1. President of an association, an independent activist - an artist and theatre director, cooperating with various organizations for the benefit of neighborhood activation through joint participation in culture.
2. President of an organization supporting the development of civic attitude among young people, in particular those leaving foster care.
3. Operational Director in an Association focused on helping young people and families at risk of exclusion, mainly through day-care facilities and streetworking.
4. President of a foundation supporting the achievement of independence of foster youth through individual work based on the diagnosis of their potential and the creation of individual career paths.
5. Coordinator of a programme promoting safe online behaviour in a foundation supporting children and young people.

6. Member of the council of a foundation that raises funds for the activity of a public benefit organizations.
7. President of an association organizing social and artistic projects (including multimedia projects) with the participation of young people.
8. President of a foundation for anti-discrimination and equality education.
9. Coordinator of activities in a foundation supporting young people from foster family care.
10. Coordinator of a project for the acquisition of basic life skills by young people in that organization.

2. Perspectives on young people's present and future skills

Due to their functions and rich experience, the surveyed experts have a broad knowledge of young people's competencies, their way of thinking and functioning. Considering the size of the collected material, the issues raised in the interviews are presented in points accompanied by explanations and examples.

2.1 General competencies necessary for young people entering the job market

- ABILITY TO USE PROGRAMMES: MS Office, Google, spreadsheet (basic formulas), text sheet, graphics programs
- ABILITY TO OPERATE DEVICES: computer, phone, scanner, printer
- KNOWLEDGE OF REGULATIONS RELATED TO ONLINE SECURITY: protecting sensitive data, recognizing which websites extort data.
- CARE AND DILIGENCE IN TERMS OF PRIVACY: distinguishing between content that is worth sharing with close friends only and content that is generally available.
- ABILITY TO HANDLE CORRESPONDENCE AND KNOWLEDGE OF NETIQUETTE: formulating a message, writing an e-mail, using proper form and register, showing respect.
- TELEPHONE SKILLS: contacting unknown persons, talking to employees of public offices, conducting conversations.
- JOB SEARCHING SKILLS: knowledge where to look for information.
- WORKSPACE MASTERY: regularity, perseverance, self-initiative.
- CAUSE AND EFFECT THINKING: realistic planning and making arrangements, as well as predicting consequences.
- IMAGE CREATION: awareness that employers use social networking sites to learn more about candidates.
- ABILITY TO USE SOCIAL MEDIA: fluency in the use of social media and communication with customers are the assets of a young employee.

- CRITICAL ANALYSIS OF THE MEDIA AND VERIFICATION OF INFORMATION SOURCES.
- AWARENESS OF BEING RESPONSIBLE FOR ONE'S ACTIONS: e.g. for posting hate material.
- COMMUNICATION AND ASSERTIVENESS: asking questions, sharing ideas, reporting needs, ability to refuse, making realistic appointments/arrangements.
- MATHEMATICAL SKILLS IN PRACTICE and in problem solving.

2.2 Main competency deficits of young people entering the job market

- FOCUS ON ENTERTAINMENT: the use of programs is often just for fun.
- FORWARD THINKING: young people often live in the present moment, calculate how much they will earn or gain today, what they will write in their CVs. They often give up their jobs after just a week because they are offered better conditions elsewhere. Young people do not want to become involved with any employer for a long time. They are looking for work among friends, not on thematic portals.
- CRITICAL THINKING: a peculiar return to the pre-technological era as a result of blind faith in false messages of virtual gurus.
- FORMS OF CONTACT: having a mistaken belief that correspondence is direct communication - this leads to misunderstandings and understatements.
- ABILITY TO USE E-MAIL.
- OPEN COMMUNICATION: avoiding questions, active listening, paraphrasing, closing oneself in one's own little world.
- SELF-AWARENESS OF STRENGTHS AND COMPETENCIES ALREADY ACQUIRED

3. Assessment of young people's digital

3.1 Digital competencies of young people entering the job market

The respondents opposed the common belief of the division into digital natives and digital emigrants. Although the view that young people are more computer literate than older people can be heard even at conferences, the respondents claim that it is not true. Generally, it is natural for young people to use different digital tools, but it should be remembered that this statement does not apply to everyone. There are also those who are digitally excluded. In addition, young people are familiar with technology to varying degrees. Some of them obtain their knowledge only from their intermediate-level colleagues. Finally, there are some programmes, e.g. Excel, that almost everyone has had contact with, but does not use. The respondents agreed that young people are generally well acquainted with programmes and applications for communication, posting, creating memes, posting videos - generally speaking, with the technical aspects of technology and visual effects. Problems appear, however, when it comes to understanding and selection of content, critical analysis, identification of sources, selection of information,

protection of copyright or recognition of a hate material. Examples of digital competencies and shortcomings mentioned by the respondents are presented in the table below.

Digital competencies of young people according to NGO experts:

Competencies	Competency deficits
• use of social media • efficient use of smartphone • use of instant messengers • familiarity with the basics of MS Office, especially among technical or general secondary school graduates • openness to new tools • ability to quickly find simple content • promotion of one's image • exploring areas connected with interests	• a general lack of trust even in relation to reliable sources • stopping at first search results • difficulty in carrying out complex tasks • password and access management, security • analysis of the media, e.g. in terms of the social and political situation • planning and task management • understanding what positioning in Google is all about

3.2 Reasons for poor digital competencies, findings in Poland

The respondents provided many explanations as to why Polish youth did not perform well in the field of digital competence. Vast majority of those were related to **the role of school, and in particular to improper selection of teaching staff and incorrect methodology of teaching**. The accusations concerned, among others, lack of teaching the logic of programming, creating algorithms, verification of the truthfulness of information, understanding the functioning of media - skills desired by employers. According to the respondents, **IT is often taught by random people rather than by professionals**. Other factors mentioned by the respondents included technical problems with obsolete hardware, software and too slow Internet connection.

4. NGOs' role in developing youth's digital skills and standpoints on programs and services aiming to develop young people's digital skills

According to the respondents, NGOs take many initiatives aimed at developing digital competencies. The main areas of activity are:

- **Online violence and security** - raising awareness that online violence is also violence, how to safeguard against it, how to behave.

- **Working with socially excluded people** - bringing them back to society by developing digital competence.
- **Media monitoring** - identifying violations of ethical standards in media broadcasts.
- **Modelling right behaviours** - by working together on projects.
- **Fighting digital exclusion** - through education (trainings).
- **Teaching coding** - the NGO sector is open to innovation, coding is already taught at pre-school level.
- **Equipping charges with IT equipment** - laptops, tablets, smartphones.

The role of the NGO sector is significant. Organizations have expert knowledge, are familiar with the needs, benefit from innovation to the greatest extent possible financially and are driven by passion. They operate by organizing workshops, trainings, conferences, media monitoring, publications, information and social campaigns. Their activities are limited by financial resources, time and scale. To sum up this chapter, let us present two statements that rightly identify the opportunities, but also the limitations, of NGOs' activities:

- 'The role of NGOs may be great, depending on their characteristics and statutory objectives. Even organizations focusing on other aspects can incorporate digital themes 'sideways', e.g. in the implementation of a photographic project, in the promotion of a children's show, etc. It is important to do this in cooperation with schools, as there are many teachers who are ready for change and can create space for it by working from the bottom up.' (interview 2)
- 'NGOs can complement and point out trends, but they will not replace the education system. We will identify gaps and show solutions, we can be spokespersons, but **solutions should be systemic**. NGOs cannot train everyone.' (interview 10)

5. Assessment of youth workers' digital skills and NGOs' digital competencies needs

The respondents gave **high marks to the level of digital competence among NGO employees**. The following competencies were mentioned:

- well-mastered basics, such as Office, tools for group work and data sharing in the cloud,
- needs awareness,
- ability to ask for help,
- speed of action and flexibility,
- high specialization and expertise in selected digital issues,
- ease in sharing knowledge,
- creating partnerships between many organizations and companies,
- holding talks and building cooperation with the world of business, which is more difficult for the public sector to communicate with,

- good knowledge of social media,
- benefiting from innovations,
- creating new solutions to fill the gaps in the system,
- critical analysis of media discourse,
- handling official matters,
- familiarity with legal aspects,
- adherence to ethical standards,
- ability to search valuable content.

6. NGOs' digital readiness

Most of the respondents stated that they do not have any special strategy for the development of digital competencies. Within their areas of interest, they constantly supplement their knowledge, learn new tools, observe trends and remain ready for new challenges. The respondents listed a number of tools used by their organizations: MS Office, Google Drive, Mail, YouTube, Fb, WhatsApp, Skype for Business, Emplo, Kahoot, Mentimeter, Tableizer, Trello, graphics programmes, CMS for website management, CRM for contact management, own websites, portal - a platform for collecting materials, with e-learning functionality, project monitoring database. The respondents did not make any far-reaching plans. In general, they were interested in continuing the current policy of managing the organization with the use of the latest technologies available to them, based on cloud solutions. A survey participant noted that 'it may soon be useful to have another Teamwork or Slack programme, the important thing is to know not only of its existence, but also of its limitations and the fact that is not indispensable (interview 1). Organizations try to follow trends wherever possible, e.g. by increasing their Fb exposure at the expense of shrinking websites. However, small organizations have no chance in the race for the latest technologies. Their response time is too long in relation to the dynamic changes. Some organizations are considering introducing smaller or greater improvements, such as adding a billing software to CRM, establishing CRM. Every such decision is preceded by a long consideration of profits and losses. Generally speaking, NGOs cannot afford expensive or revolutionary changes in the digital area. Still, the sector remains aware of modern technological possibilities. The most important thing, however, is to focus on the goal which, in the case of organizations dealing with upbringing, is 'a young adult who will find their way in today's world'. (interview 9). Digital skills are therefore important in the process of achieving this goal. Incidentally, young people often lack a number of important, non-technological competencies and technology can easily be used to 'hide behind' it (interview 10).

7. Conclusions and other relevant insights

The respondents pointed out the paradox that 'young people, on the one hand, are incapable of doing many things and activate the attitude of helplessness in situations such as searching for legal information, regulations, something not related to entertainment, and, on the other hand, have the approach which seems to be saying: I know everything, no adult can teach me anything' (interview 6). The answer to this mistaken view of reality of the young generation should be '**a fundamental change in the way digital competencies are taught** in relation to what we have now'. These changes 'cannot to be addressed only in IT or media culture lessons ', because what is meant is a shift in the 'paradigm of thinking'. Public education system should consider, among others, 'issues related to democracy, social justice, critical analysis of the media' (interview 5). IT classes can no longer be taught by random people.