SKILL IT STUDY

Ireland 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 the ***Skill IT for Youth - Integrating Digital and Future Skills into Youth Work*** **(Skill IT/Skill IT for Youth)** project.

The 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 the outcome of a partnership between Youth Work Ireland (Ireland), Camara Education (Ireland), Norsensus Mediaforum (Norway), Fundacja Samodzielni Robinsonowie (Poland) and Fundatia Danis (Romania). Skill IT for Youth wish to also acknowledge the help provided by KDYS (Ireland) during the research phase.

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EXECUTIVE SUMMARY

Context and research objectives

This report has been developed within "*Skill IT for Youth – Integrating Digital and Future Skills into Youth Work*" project. The project is a pan European initiative funded under the *Erasmus*+ programme and has a number of aims and objectives. The primary aim is to create tools and resources for youth workers and youth organisations across Europe, which in turn enables an improvement in the quality of digital youth work, leading to increased employability in young people, with a specific focus on equipping young people with the skills required for the future workplace.

The research conducted through this report aimed at providing data-driven knowledge and insights on current levels and proliferation of digital youth work in Ireland, to establish and identify digital skills levels, and indeed digital skills gaps in youth workers and young people, and to identify the key skills sought by employers. In parallel, the research aimed to establish the capacity of, and opportunities for, youth organisations to meet young people's digital and future skills needs, especially ICT, digital and social media, and the labour market skills needs.

In particular the research begins to map and evaluate, from the combined perspectives of employers, youth workers, young people and those managing youth services, the existing digital skills education programmes available to young people in Ireland, the current digital skills levels and gaps of young people and youth workers. The purpose of this is to begin to identify and assess what role NGOs and youth organisations can play in the development of digital and future employment skills in young people.

The project also aimed to identify what supports and tools youth organisations require to enable them to plan, create and develop programmes that deliver digital and future employment skills to young people - with a specific focus on better preparing young people in Ireland for the workplace of tomorrow. By extension and through the dissemination of the project results, young people from across Europe can be better supported by NGOs and youth organisations to develop their digital skills and future employment skills.

Research methods

The partners in the project are from Ireland, Norway, Poland, and Romania. Each partner has specific expertise and strengths, which will combine to deliver the project aims. In Ireland, there are 2 partners, Youth Work Ireland (the project lead) and Camara Education Ireland. Each partner carried out

different aspects of the research based on their expertise and access to the specific target groups.

Desk research was conducted by Youth Work Ireland who has a specific role in developing and driving youth policy in Ireland. The primary purpose of the desk research was to identify and analyse any available studies and reports that have a focus on the digital skills of young people.

There was an additional emphasis on analysing any reports and studies that identify current policy and policy gaps, the digital skills young people and youth workers may lack, and to highlight from existing research any digital competencies that young people need for the 21st century labour market. The desk research was helpful in beginning to evaluate the following in Ireland; beginning to map the current digital youth work landscape, the employability skills of young people, current gaps between labour market needs and the actual skills levels in young people/workers, and lastly, the emerging challenges and barriers facing youth organisations in the development of effective digital skills programmes.

For the second stage of the research, qualitative research tools, developed by Fundatia Danis, were used in conducting focus groups and interviews with four different key stakeholder groups; employers, senior managers, youth workers, and young people to facilitate the understanding of the concept "digital skills", all research tools included a common conceptual framework (Appendix 1).

- 6 employers from across Ireland were interviewed and information about the employers' needs and expectations with regards to young people's digital skills was collected. The interviews represented a cross-section of scale, including global, national, regional and local employers. The interviewees were drawn from companies in sectors as varied as IT, Energy, Logistics, Marketing, Consulting. The interviews also captured the employers' views on their expectations of the youth sector's contribution to the area of digital skills development, especially regarding the process of preparing young people for future jobs.
- The second round of interviews was carried out with 6 senior managers in youth organisations with the aim of gathering their perspective on the future digital skills needs of youth workers and young people. Also captured was the degree to which youth organisations engage with and use certain ICTs in their organisation to develop digital competencies and skills in youth workers so that they can equip young people with these skills. These interviews with senior managers also provided a valuable opportunity to gain insight into the barriers and challenges youth organisations identify in developing digital youth work.
- The next stage of the research saw the opinions of 45 youth workers gathered through a combination of individual surveys and 3 focus groups. The aim was to collect data about the needs of youth workers in terms of the competencies (knowledge, skills, attitudes, and behaviours) required to provide meaningful and sustainable programmes and services that develop young people's digital and future employment skills, and the skills gaps youth workers are faced with.

- To complete the research 54 young people participated in 4 focus groups, which aimed to collect information about the young people's perspectives on the digital skills they need to enhance their employability. It also captured the youth perspectives on their current digital skills level, its importance to future employment, and the relevance and role of youth organisations in the development of digital skills.

Main results

Both the desk research and the interviews with employers indicate that the pace of technological change and automation is speeding up still and that this will have a major impact on our future workplaces. There is a skills shortage in Ireland, and globally, across all sectors particularly those requiring higher level digital competencies for roles such as data analysts, systems architects, and software engineers. In this environment being a well-rounded individual will give young people a competitive edge. This is defined as a solid secondary or tertiary education with active participation in extracurricular activities such as sport, charity and community work and a strong work ethic.

In this context, the research highlighted a number of interesting and valuable findings and insights that will provide a solid platform for the remainder of the project. In relation to vital future employment skills, from the perspective of employers, the research highlighted adaptability, flexibility, critical thinking, teamwork, collaboration and communication as the most sought-after skill-set. When analysed against the perspectives of senior managers, youth workers and indeed young people, all agree that youth work and youth organisations make a significant contribution to the development of these valuable, transferable skills in young people. Thus placing youth work in a strong position and having a key role in supporting their development.

There was consensus across all stakeholder groups that while young people are quite "tech savvy" they will require a range of basic to intermediate technical digital skills for future employment (and current employment). Also, all agreed that the most valuable of these is an understanding and knowledge of how a technology is used in a business setting, and the ability to create rather than just merely the functional, consumer-type usage of technology. Basic data analysis, creation of reports and content were essential with coding and programming identified as a valuable skill set.

Managers of youth services and youth workers felt there is room for improvement in this aspect of youth work and identified a number of challenges to integrating these skills into the programmes they deliver to young people; the most significant of these were workplace culture, resistant mindsets, confidence, relevant resources, access to equipment and tools, and the skills level of youth workers.

There was some divergence between the opinions of young people and the other stakeholder groups about the current level of digital skills in young people. Young people felt they possess a higher level of digital skills than did employers, managers and youth workers. The discrepancy related primarily to knowledge of the software programmes such as email, word processing, spreadsheets and

presentations (such as Microsoft office packages). Employers and senior managers all considered young people to have strong social media skills and a high capacity to learn new digital skills quickly.

Young people consistently identified self-learning, trial and error, and learning from a peer as the primary ways they learn a new digital skill. In the case of the "basic" technical skills most young people said they acquire them at secondary school. When analysed against the desk research, the responses of employers, senior managers and youth workers regarding the general lack of engagement with, and availability of, digital youth work programmes in Ireland correlates with the views of the youth sector. It confirms a competence and skills gap in youth workers' ability to integrate digital youth work programmes into their practice. This is despite the strong position of youth work and non-formal learning to support young people in this area.

Overall the theme most clearly emerging from the desk research, interviews and focus groups is that in order to best equip young people for future employment youth organisations need to adopt and embed a culture of digital youth work promotion across their organisations, and to make it a part of their core, everyday work. The research indicates this will require investment in training of youth workers to upskill, the development of capacity building supports for organisations, policy change and engagement with all stakeholders. In doing so, Irish youth organisations will be in a stronger position to develop and deliver innovative digital skills programmes that provide for key future employment skills and digital competencies of young people, whilst also meeting the staffing needs of employers and senior managers.

Lastly, the research also highlights and confirms that despite challenges and barriers there is significant opportunities for the Irish youth sector in the realm of equipping young people with critical digital and future employment skills. It confirms the place and significant role of youth organisations in developing and leading this work in Ireland.

CHAPTER 1
LITERATURE REVIEW

A. Irish young people's present and future skills

National Skills Strategy 2025

Official statement of the strategy of the Republic of Ireland concerning developing skills for current and future employees. Includes general demographic information, information on the current job market, and strategies to most effectively use Ireland's workforce. Some information on the changes expected in the youth job market and what employers expect from young employees.

The relatively young population of Ireland creates both difficulties and opportunities. Current educational institutions will be strained in the coming years, but effective use of these institutions to promote 21st century skills has the potential to make Ireland into a leading nation in Europe. As such, the strategy places a particular emphasis on higher education and upskilling. In order to effectively accomplish these goals, the report details how employers and educators will have to work together and continually communicate. As the report explains:

Employers cannot source more relevant skills without responsive education and training providers nor without students pursuing the right education and training courses. Conversely, students cannot learn relevant skills without employers engaging in the skills agenda. Improved channels for ongoing stakeholder dialogue and resultant action will be provided in the regions by the new Regional Skills Fora. These fora will be supported at national level by more streamlined mechanisms that will translate intelligence on skills needs into actions prioritised on the basis of likely impact and available resources through the new National Skills Council (16-17).

By communicating needs and issues, employers will be able to access a skilled workforce while educators will be able to give their students useful skills that they will then be able to apply to this workforce. The students themselves will, ideally, learn the basic skills that employers require and then diversify after their secondary education, whether that consists of apprenticeships, higher education, or on-the-job training provided by the employer.

The report is not blind to the increasing importance of digital skills. It explicitly mentions the importance of being 'technologically literate' for all ages (69). Further, the report explicitly calls upon employers to be the change they wish to see and ensure that students are studying and developing relevant skills. Four pathways are highlighted: 1) companies need to offer more work placements to allow young people to actually develop the experience that is held as a job requirement; 2) employers need to interact more with educational institutions, whether that interaction consists of talking to more students,

collaborating with educators to develop relevant course curriculums, or even giving guest lectures; 3) companies need to make the hiring process and requirements more transparent and informing people what skills they are looking for when recruiting; 4) and finally, employers must be responsible for filling in the blanks by providing opportunities for lifelong learning and upskilling on the job that people of any financial means can take part in (69-70).

Because this report is intended to lay out the general policy, there is less information on specific programs that can accomplish the goals it sets. That being said, the overall structure appears to have solid footing and a significant chance of actually accomplishing the objectives. Increased communication between educators and employers will certainly lead to the teaching of more relevant skills, and the hiring of people with skills that are shown to be practical. Of course, there will almost certainly still be a disconnect between skills learned and skills required, but these more specific skills should be the onus of the employer.

Vacancy Overview 2016

Report on the general state of job vacancies in 2016. Fields that have a large amount of churn are identified, as are particular positions that are in high demand among employers.

Professional, scientific, and technical industries have by far the highest rate of vacancies, with an increasing trend shown over the previous four years. The next highest sectors are Information and Communications Technology (ICT) and financial industries, ICT remaining relatively stable over the previous few years and financial increasing steadily (18). The general trend across Ireland in general in the period leading up to this report is towards increased vacancies, but the financial sector especially shows higher than average rate of growth.

Vacancy data analysis has highlighted a number of emerging skills which employers are seeking. Foreign language skills are a high priority, especially depending on the sector. Additionally, there is increased demand for data analysts/scientists, quality control and quality assurance specialists in professional activities and industry, process engineers in industry, scientists (particularly chemists), risk analysts in ICT and financial activities, compliance and regulatory reporting in financial activities, and cardiac technicians/physiologists (6). All of these positions require a strong understanding and ability to make use of digital skills beyond a basic level of proficiency.

It is unlikely that employers would expect young people to leave secondary education with these skills already in existence. Most would require some level of higher education and accreditation potentially up to a doctorate depending on the profession. However, working with young people to develop the basic steps of these skills is entirely possible. Many of the fields listed have an emphasis on data analysis, which can be learned at a basic level without the necessity of higher education. For example, a workshop demonstrating how to use basic statistical software or even basic statistical concepts (e.g. probability) could significantly help young people to develop these skills that are demonstrably in high demand.

B. Non-formal education for developing young people's digital skills in Ireland

National Youth Strategy 2015-2020

Report on the official strategy of the Republic of Ireland in regards to developing a future youth strategy. Created with five goals in mind for young people: 'Active and healthy, physical and mental well-being; Achieving full potential in all areas of learning and development; Safe and protected from harm; Economic security and opportunity; Connected, respected and contributing to their world' (1). Within each of these broader goals are smaller objectives.

The report states that a central part of achieving Outcome Two is to 'Promote the use of new technologies and support the acquisition of digital skills for young people,' and states that both government departments and other stakeholders will be working on this objective. Information on what departments, what other stakeholders, and potential plans on promoting these skills does not seem to be available. The list of current policy programs does not include any that would seem to relate to developing technological or digital skills by themselves, although it is possible that some bundle these skills into the wider training program (26-7).

Outcome Four places an emphasis on enhancing the employability of young people. None of the programs listed as currently being implemented have a focus on developing digital skills. Again, it is possible that digital skills could make up a part of the curriculum of a larger program. However, because the current and future job markets place such an emphasis on technological and digital skills, the lack of a dedicated program towards developing these poses problems. The individual goals as well do not mention developing particular digital skills to increase the employability of young people. There is a mention of strengthening links between learning providers, businesses, and employment agencies, which could potentially lead to an increased emphasis on developing digital skills if the need for them is communicated between actors (31).

Overall, the National Youth Strategy raises concerns about formal governmental programs towards developing digital skills among young people. Within the report, the word 'digital' appears once, and mentions of 'online' are almost entirely paired with 'bullying' or 'survey.' Technical skills are mentioned a few times throughout, but without any indication of what they will consist of.

Dublin Declaration on Contribution of Youth Work to Youth Employment

Short article on the Dublin Declaration and attached full text of the declaration. The declaration outlines the general problems that young people are facing and explains the assistance that youth workers can offer. It was drafted following an EU roundtable consisting of 'youth representatives, academics, business leaders, industry, innovators and policy makers on a national and European level.'

Although this declaration was drafted in 2013, it remains relevant since it outlines the official stance of the Irish government towards youth work and the necessity of bringing together youth workers and young people.

The Declaration states that there exists a 'widening gap' between skills that young people have and skills that employers are seeking. Youth workers are uniquely situated to respond to this issue because of the already existing infrastructure through which they can reach out to marginalised youth and minority groups.

The skills that the Declaration defines as specifically lacking are soft and transversal skills, including social and civic competence, entrepreneurship, communication, and leadership. Youth work organisations are called upon to ensure that young people are aware of the transferability of these skills, and to create opportunities by which these skills can be demonstrably shown, such as accreditation. Further, youth workers are encouraged to 'promote and foster innovative youth work practice that is responsive to the changing needs of young people, broader society, and the needs of the labour market.'

C. Irish youth organizations' and youth workers' capacity for developing digital skills of young people

Screenagers International Research Project - Using ICT, Digital and Social Media in Youth Work

Report by the National Youth Council of Ireland about the role of digital and social media in youth work, focusing on how youth workers perceive it and make use of it. The study was mainly conducted through a survey of youth workers, but focus groups were also created, both with youth workers and with young people.

Profile of respondents:

- 283 youth workers responded to the survey. Of these, 81% were paid staff of youth organisations (21).
- The estimated total number of paid youth workers in Ireland is 1,397 (15).
- The survey is less representative of volunteers, considering that there are an estimated 40,145 youth work volunteers in Ireland (15). However, because this report is intended to look at the engagement between youth workers and young people on a continued basis, the role of volunteers is less significant than paid staff.
- The respondents to the survey are from all age groups above 18 and work with young people across all age groups (21-2).

Respondents usage of social and digital media:

- Of the respondents, 77% reported using social and digital media in their capacity as youth workers, with the main purposes being to disseminate information, arrange and schedule meetings/activities, as a part of their youth work, and as a way to recruit young people.
- The main reason given for not using social and digital media was that the youth worker preferred to work face-to-face (49%).
- Significantly, only 76% of respondents had received any kind of training in using social media (22-3).
- The actual usage of social media varied widely within the respondents surveyed.

Youth worker training:

- Interestingly, many of the youth workers educated themselves about social media without having received formal training, but used their ignorance as a way to connect with young people, whom they found enjoyed knowing more about technology than adults. Although bonding with young people in this manner represents an interesting opportunity, it is worrying to note that 'there is no specific training on the use of social media in youth work' (26).
- This lack of formal training in general can create difficulties, as relying upon young people to teach digital and social media skills to youth workers can leave critical gaps in understanding. For example, only five percent of youth workers reported using the picture sharing app Snapchat (32). This lack of use and understanding likely helped lead to some of the conclusions quoted in the report, in which Snapchat was described as 'dangerous' because it left the youth worker exposed. Although Snapchat does create potential problems, especially concerning sexting between young people, there is no reason to consider it to be innately dangerous.
- If youth workers were educated about particular social media, they would have a greater capacity to explain the dangers of these social media and assist young people in being safe online.
- Even when youth workers did receive some kind of training (amounting to less than a quarter of the total), the training was not uniform and usually did not cover a wide range of social and digital media.
- The roughly 68 of 263 youth workers who did report having training listed programs they had taken part in. There are 35 programs listed, ranging from 'Health & safety' to 'Intermediate social media skills course in UCC' (36). Likely some of these programs were completed by the same workers, but the sheer number of different programs raises questions about what kind of digital and social media education is being received. None of the programs listed appear to be national, formal education with the possible exception of 'NYCI Internet safety for youth workers 1 day course', which would necessarily be limited by the time frame.

Youth workers attitudes to social media:

- Some of the youth workers surveyed believed that there was a kind of taboo that older youth workers felt about social media. This belief was not the case among each respondent, but it appears to be fairly prevalent (34).
- One youth worker is quoted as saying that some of his older colleagues did not feel 'particularly proficient' in using social media, but made use of it regardless.
- The main barrier identified in the report is the lack of skills and knowledge, another issue stemming from the lack of any formal education (34-5).
- A major issue that youth workers identified with using social and digital media is keeping up to date with what young people are currently using. The report itself, although less than two years old, mentioned multiple social media networks that are no longer widely in use. The most prominent of these is Yik Yak, which shut down in 2017.

The rapid rate of change among social networks means that any kind of education about social and digital media would have to be on a consistent basis or to provide youth workers with the tools to continually keep up to date on what young people are currently using. Because of this rapid change, the policy discussed above of bonding with young people over learning how to use new technology may actually be an effective method to stay current. However, relying exclusively on young people would create the same problems of receiving selective information: a young person is not likely to go into detail about the sexting opportunities created by Snapchat or the people who used Yik Yak to find hookups.

Overall, youth workers acknowledged the importance of integrating digital and social media skills and their normal youth work. The possible benefits include enhancing communication, increasing attendance, building rapport, and creating a sense of camaraderie and comradeship (41). Various youth workers described the possibilities offered to young people by youth workers' engagement with social media as 'upskilling' or 'empowerment' (42). Effective use of social media can benefit youth organisations greatly, but lack of training and education about how to use social media can make the situation significantly worse. Each social media is used in a distinct way, and approaching different media with the same strategy can create issues (imagine a young person's response to a youth organisation using Instagram the same way they use Twitter).

During the desk research we identified three examples of Irish NGOs that include in their mission and activity list the provision of IT-related education programs and services. The two NGOs will be presented in this section as examples of good practice.

The first organisation is Camara, one of the partner organisations involved in this research. The TechSpace Programme, is an example of a programme delivering successful outcomes that cross-cut Departmental and Statutory policy and strategy direction. Developed as a response to the need for training and support in STEM and digital youth work practice for youth work professionals. Since 2012 it has grown to a network of . Current initiatives include the training of 360 youth workers and senior managers in computer science. Another involves the training of 320 youth workers in STEM and Maker skills in partnership with the National Youth Council of Ireland. Other initiatives include the training of

educators to facilitate digital and STEM skills through the medium of the Irish minority language and the pioneering programme, a Level 8 Certificate in Digital Creativity in Youth Settings, in partnership with Maynooth University.

The second organisation is CoderDojo, an Irish founded NGO, focussed on helping young people to learn programming languages; skills they believe are increasingly important to understand in today's world. CoderDojo has grown to a network of 1925 volunteer led community based clubs in 107 countries. Volunteers run clubs and support young people, aged 7-18 years.]

Lastly, the National Youth Council of Ireland, the representative body for voluntary youth organisations in Ireland and membership organisation, provide coordinated responses to the needs of the youth sector. An example of this is the Screenagers research above, which includes the publication, Guidelines for Digital Youth Work.

D. Formal education for developing young people's digital skills in Ireland

Digital Strategy for Schools 2015-2020

Official statement of the intended practice to integrate digital and technological skills more closely into school curriculums. This report was compiled with an evidence-based method, establishing conclusions based on a census report. Overall, the stated goal of this digital strategy is to 'Realise the potential of digital technologies to enhance teaching, learning and assessment so that Ireland's young people become engaged thinkers, active learners, knowledge constructors and global citizens to participate fully in society and the economy' (5). Realising the potential of digital technologies consists of not only integrating ICT into regular classroom activities, but promoting the development of discrete digital skills as well (22).

In order to accomplish these goals, significant improvements in school infrastructure have to take place. These include an overhaul of school broadband and wireless networks, introduction of cloud networks, significantly more ICT equipment, and a solid basis of tech support networks (41-3). The financial and technical issues tied up in the funding and installation of this infrastructure on a grand scale means that the implementation of this strategy will be slow. However, once the groundwork has been laid, both in terms of educating teachers on how to use the new technologies and installing ICT with proper networks to make use of them, the report suggests that education can be changed utterly. As the report concludes:

This strategy sets out how we will work to realise the potential of ICT to transform the learning experiences of students by helping them become engaged, creative and critical thinkers, global citizens, and active and self-determined resilient learners in collaborative social-learning environments (46). The emphasis on innovative, 21st century education practices is extremely important and central to this strategy, as can be seen in the emphasis on creativity, critical thought, and collaboration.

In addition to the strategy, the Department of Education and Skills have developed a three year implementation plan, the Action Plan for Education 2016-2019, which outlined specific and ambitious actions for each 12 month period within the longer term strategic framework. Annual plans are published each year reporting on progress made to date with the integration of ICT, digital and STEM in schools featuring significantly. There is no information about the potential role of youth organisations. Were youth organisations interested in assisting with this project, there are certainly opportunities. Lending technological expertise to educators or students would help immensely, as would integrating similar ICT and digital skills into their own youth practices parallel to schools.

Trinity Access 21 Year 1 Report

Report published by Trinity College summarising the results of a three-year research project aimed at incorporating digital skills into secondary school curriculums. Over 1,500 students and 200 teachers were involved. Trinity College subsidised further education in digital skills for teams of teachers at different schools, especially those in historically underprivileged areas. These teachers were then tasked with bringing these skills into their classrooms and incorporating them as part of the key curriculum rather than as a separate set of skills. Essentially, the program was intended to determine the outcome of adding Science, Technology, Engineering, and Maths (STEM) and Computer Science (CS) skills into the normal set of reading, writing, and arithmetic.

Although this project was intended as a study rather than a permanent initiative, it provides valuable information on the importance of bringing digital skills into the classroom. The students were in secondary school. The main program providers were the teachers who taught at the schools, the main difference being that Trinity College sponsored their further education to allow them to integrate STEM and CS skills more fully into the classroom.

Unsurprisingly, furthering the education of the teachers had highly beneficial outcomes. The majority of teachers who participated in workshops introduced STEM/CS content into their classes (6). The main barriers to integration were time constraints, the necessity of teaching to the test, and lack of in-house resources (7-8). However, teachers who were able to incorporate their skills often found creative ways to do so, such as teaching Romeo and Juliet through the programming language Scratch (1). Teachers participating in the program had a much higher degree of confidence and knowledge about working with technology in the classroom and more frequently incorporated 21st century learning practices (13).

Students also benefited significantly. They reported that they felt more positively towards their school and teachers, 11% more intended to pursue higher education, and 22% more intended to enter lower and higher professions (18). A large part of this increased interest in higher education likely resulted from closer interaction with students and staff at Trinity College, which demystified the university experience. Although youth organisations may not be able to create as close a partnership with universities in the same way as the Trinity Access program, significant results can clearly be achieved

simply by bringing in university students and faculty to talk to groups of secondary school students who otherwise would have little to no interaction with higher education. On average, the participating schools experienced a .3% increase in rating for college preparedness over the first year, whereas the control schools decreased by about the same.

Although some of the results appear meagre, it is important to keep in mind that these results are only from the first year of the program, and only on a limited basis within the schools. Even on this limited basis, significant results were achieved. If similar programs or initiatives were enacted on a broader scale, there would likely be much greater results based on the differences between the experimental and control schools. Were youth workers to receive further education on STEM/CS skills, they could also assist in these kind of programs.

Bridging the Digital Disconnect

Three-year research program intended to develop online resources for those who wish to support young people primarily in terms of mental health, including youth workers. Over 900 professionals participated in the survey. As part of the survey, respondents were asked about their competencies in digital skills and the way they use them in the workplace.

At the most basic level, access and competence with technology were high. Over 98% responded that they had a work computer with internet access (14). 90.6% responded that they were confident using a computer, and only .6% responded that they were not confident at all. 94.4% stated that they use the internet every day for professional purposes. These mostly consisted of email (98.8%) and Google searching (93.1%), but over half also used the internet to search for health/mental health info and watching related videos. Youth workers were significantly above average in using social media and instant messaging in professional settings, as well as file sharing (15).

Youth workers responded that they were very likely to use an online resource promoting mental health among young people if it was made available (99.3% yes). However, this strongly positive response should not be seen as particular to youth workers, the group with the lowest percentage of positive responses still had 98.4% yes (28). Additionally, a higher than average number of youth workers believed that computers and the internet help professionals to support and enhance young people's mental health and well-being (89.3% of youth workers, 87.5% total) (35).

Based on this information, it is clear that youth workers on the whole are interested in making use of online and technological resources in order to do their jobs more effectively. However, although the overwhelming majority of youth workers report being confident using a computer, the activities they report using the computer for are very basic. A little over a third reported using a social network in a professional setting, which seems very low for a profession mainly focused on engagement with young people. It is also significant to note that the high numbers of youth workers indicating that they would use an online mental health resource to help young people were under no obligation to actually make use of it, as the survey was mostly designed to gauge interest in the development of this resource. The actual

numbers of youth workers using this resource would undoubtedly be significantly lower, likely much closer to the amount that reported using various social networking/messaging sites to interact with young people.

Gaps in Literature

Much of the literature concerning digital skills, both of young people and of youth workers, is fairly rudimentary and lays out strategies for the future rather than showing concrete results. This issue is especially clear in the various governmental strategies for the 2015-2020/25 period. Because many of these initiatives were begun in 2015, very few, if any, formal reports on outcomes have appeared. These will likely be published at the conclusion of the first five-year plan. This delay reflects the changing focus of much of governmental policy.

However, there were some topics that we were unable to find any usable information on. These gaps were mostly related to programs intended to develop digital skills of young people, both in formal and informal settings, and the ability of youth workers to develop digital skills of young people. Again, because of the shift in governmental policy towards developing these digital skills the plans are still in motion. Were this research conducted again after 2020, there would certainly be more information on the results of changing policy and different focuses of youth workers. Additionally, the overall demographic shift will likely change focuses of education and employment, especially considering that a third of Ireland's population is younger than 25 (as of the 2016 census).

Conclusions

Ireland's transition into the 21st century requires a transition into a fully modern and digital economy, necessitating the creation of a 21st century workforce. Equipping young people with digital skills is central to the development of this workforce. As such, the Irish government has been shifting the focus of education towards developing these skills, but this process has only really gained momentum in recent years. Many of these policies were enacted in 2015 and will likely take five to ten years to see significant results. In the interim, a number of NGOs are responding to the needs of youth workers and young people through innovative programmes and services. National and individual youth organisations are also endeavouring to respond to the changing needs of young people with many offering exciting programmes to develop young people's skills. Coordinated efforts at systemic level are beginning to emerge through public-private-NGO partnerships.

The need for digital skills can be seen in reports on job vacancies and the gaps existing between the current workforce and the requirements of jobs. In order to most effectively fix this skill mismatch, employers have to communicate with educators and students about what skills need to be taught in primary and secondary schooling, as well as providing educational opportunities to fill in gaps left in the

education. Schools can meet them halfway by incorporating 21st century education practices into the standard curriculum, especially by increasing the ICT and STEM infrastructure in schools. The Trinity Access Program provides an example of how these integrations can be achieved and shows that it can have tangible results on students' preparedness for entering the workforce or attending higher education.

Youth workers as well should cooperate with employers and students, since youth workers have specialised infrastructure in place to reach out and interact with young people in both formal and non-formal settings. Youth workers can create points of contact with employers and educators and set up parallel institutions to assist in the development of digital skills. These parallel institutions could consist of formal or informal workshops to teach basic skills like data analysis, or even activities in using specific technologies so that the young people will have an introduction in a non-professional environment within which they feel comfortable.

However, in order to make youth workers effective in assisting in the development of these skills, they will have to learn the same skills. Because of the general nature of youth work, youth workers on the whole have a very solid grasp on the basics of using technology, but as technologies get more advanced they will need to adapt and be able to keep pace with young people. This adaptation is most necessary in terms of social media. Social media offers the chance to interact and coordinate young people in previously impossible ways, but requires youth workers to continually keep up to date with changing practices. The main barrier is the total lack of any formal social media training for youth workers. First and foremost, some kind of standardised training program or online resource should be established nationally to correct this oversight. Young people themselves can be an important resource in learning the intricacies of new social media, but relying exclusively on them risks preventing youth workers from being fully educated about the darker aspects.

Overall, the general trends are towards creating specific plans that should have a positive effect on helping young people and youth workers develop digital skills that can be used in a modern job market. However, much still has to be done. Youth workers can become a vital part of this process by taking the initiative and acting with educators and employers to make use of their unique positions.

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CHAPTER 2
REPORT ON FOCUS GROUPS WITH YOUNG PEOPLE

Introduction

There were a number of objectives of the focus groups which were undertaken with young people as part of the project. The primary objective was however to capture and collect information about the needs of young people in terms of the knowledge, skills and competencies they deem required to improve their future employability prospects.

Insights gained will be compared to other partner country results and help inform and steer the development of project outputs.

1. Profile of Focus Group participants

In total 54 young people participated in 4 focus groups over a two month period between June and July of 2018. The available gender breakdown of the participants was 38% male and 62% female. The age range of participants was between 13-20, with the majority being 15-17. The participants were all currently engaged with the youth services which conducted the focus groups. They were from a diverse range of programmes and backgrounds and while not perfectly representative, do provide a good insight into the opinions of young people, particularly as we managed to survey more than twice the required number of young people.

The 3 organisations each have significant experience in developing and delivering supports to young people in their individual geographical regions (Westmeath, Dublin and Kerry). Two of the three are affiliated with the Irish project partner (Youth Work Ireland). There was a good geographical spread to the participant organisations which represented both urban and rural youth work contexts. All three work with young people in non-formal settings and are committed to the principle of voluntary engagement. Each are independent organisations and offer a range of programmes and supports to young people between the age of 10-25 years.

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

All participants engaged fully in each focus group and willingly shared their thoughts and opinions on each topic. We began by requesting their opinions on what present and future skills are expected and

required by employers, and which best enhance their future employability. A number of themes emerged across all groups and there was a large degree of commonality between each.

All four groups raised communication and interpersonal skills as being important. Having good people skills and knowledge of Apps and platforms was also cited by all groups. Being free of a criminal record and a good attitude was also viewed as important. When it came to specific digital skills it was felt by the majority of young people that it will be necessary to have good or strong skills in most of the basic IT packages and tools *you need to be able to type fast, even for college notes, and know the basics of Office programmes"* (KDYS-participant 3). These skills are mostly acquired through peer learning and self-taught as opposed to school and formal education. This correlates with the view of this generation of young people as being "digital natives" and comfortable with technology and ICT.

Each of the groups concurred that a good knowledge of coding would be very beneficial and actively sought by employers. Equally there were strong references to what we largely term as "soft skills". The most important skills identified as part of this set included; critical thinking and problem solving, working as a team member, a good attitude to work and cooperation.

3. Assessment of young people's digital skills

Each focus group was asked to consider their own current digital skills attainment level and compare this to the skills employers are seeking in candidates today, and those employers are likely to be seeking from potential employees in the future.

A general consensus from each of the groups was that young people have a good level of understanding of the basic ICT tools. In fact it was almost incomprehensible to most that *"everyone knows how to use the simple ones"* (KDYS-participant 1). At the same time it was acknowledged by most that they have gaps in the area of more specialised, specific digital skills, such as coding and programming, which were both cited as likely to be particularly important skills. This prompted further examination of some of the obstacles to their attainment of these skills.

All participants also felt their level of competence and knowledge of social media platforms and channels was strong. However an interesting observation was that few of the participants recognised the value of that knowledge in different, employment and work, contexts. The majority did not recognise the likely requirement to adapt and transfer their knowledge and apply it in a work situation.

One participant (KDYS-participant 11) did observe and cite YouTube skills as being beneficial for advertising and promotion. The majority of participants viewed social media as being primarily a skill for their personal lives.

The most common skills and competencies cited as needing improvement or that the participants would like to acquire were presentation skills, coding and programming and knowing how to do research. Again in this case the participants largely failed to link their existing skills (web activity and searching) to a transferable work context (research).

4. Digital skills and future employment skills development

Each focus group was asked to consider how and from where they currently learn or engage with digital skills and where they learn new skills and competencies which relate to employment.

All focus groups highlighted self-learning and peer learning as the method most often used to develop a new skill. Of interest was also that young people frequently turn to a peer who has the relevant knowledge to look for a practical demonstration or for face to face help. Trial and error is the predominant method when it comes to technology and in particular social media and platforms.

YouTube demonstrations and tutorials were also common to all groups as was Google search functions. What was interesting here is that neither school and formal learning structures or NGOs were mentioned as a source of support for social media knowledge and skills. Online safety programmes were however mentioned as valuable by two of the groups.

When it came to the technical and specific digital skills such as Office packages and coding and programming most participants receive some level of training and support in schools, especially in 1st year of secondary school and in the Microsoft office packages. Very few participants have had the opportunity to learn skills such as programming and coding. Some have attended CoderDojo for basic coding.

The majority have attended ad-hoc trainings from youth services in areas such as Robotics, Animation, Film editing, basic Design and Photography. None of these were available through formal education.

One observation is that when it comes to digital skills that young people view as being more aligned to their personal lives they will actively seek out ways to acquire the skill. However when it comes to digital skills aligned to future employment young people are not as active in seeking ways to learn the skills. At the same time there is a lack of awareness that the skills viewed as being for personal life are important for future employment also.

5. NGOs role in developing digital skills

All of the focus groups were asked to assess how well the youth service or youth workers use ICT. All of the groups have been engaged with their local youth service for a minimum period of 2 years, so had a good insight into the organisational use of ICT. On the other hand this meant the participants were somewhat reluctant to be seen to be critical of the youth service, so findings here may not be an accurate representation.

Across all groups the participants were in agreement that the youth services used ICT very well when it came to providing information, updates on events and projects and for communicating across social media. Also highlighted as strengths were online safety and child protection / safeguarding programmes and group texting / WhatsApp groups.

The one area for improvement that was highlighted was that youth services seem to have difficulty in *"keeping up with trends and changes"*. It was also observed that youth workers & teachers are strong when it comes to delivering programmes in areas that they are comfortable and where they have expertise, when it comes to digital skills it is something that a significant number are not comfortable with, citing a lack of knowledge or a need to upskill.

6. Conclusions and observations

All the participants universally agreed that digital skills attainment will be required across a range of fields of expertise. As "digital natives" there was consensus that young people have a strong proficiency in a range of skills, to at least a basic level.

There was also widespread agreement that digital skills attainment will be critical to future employment. While viewed as important there was also a view that these skills can be self-taught as required and that some are more relevant to specific jobs or interests. Almost as if there is no benefit to acquiring new skills until a specific need arose, or that their employer will provide on the job training. The exception to this was coding and programming.

Young people have relatively limited opportunities to learn new digital skills through formal education and youth services. Hence the popularity of self-learning and peer learning. There are multiple reasons and barriers impacting this but clearly the youth sector and youth organisations are well placed to provide the relevant digital skills and competencies to young people. In fact it is acknowledged that youth work provides young people with numerous opportunities to develop the transferable skills that will be and are highly sought after by employers.

The theme most clearly emerging from the focus groups is that by developing new digital skills programmes and making programmes accessible to young people youth work can enhance and bridge the transferable skills to the digital, significantly enhancing future employability of young people.

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 regards to young people's digital skills. The interviews 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's Irish partners interviewed a total of six employers throughout Ireland. The below report presents the results obtained through this research effort.

1. Profile of the interviewees

In any debate or discussion about the labor market the voices of all actors and parties involved should be heard. Employers have always had a say about their needs and expectations regarding the quality of the human resource they are looking for in order to run their businesses. In this chapter the inputs of Irish employers will be presented, with a special focus on the perspectives they have on young people's digital skills.

The six interviewees represent two multinational corporations, one national semi-state organisation, and three small businesses. The types of businesses involved are list below and vary considerably in terms of the industry, size and market.

Employer	**Sector**	**Size - Market**
Interviewee 1	IT (management consulting and professional services)	Large - global enterprise
Interviewee 2	Energy	Large - national semi-state
Interviewee 3	Delivery and supply chain management	Large - global enterprise
Interviewee 4	IT (app development company)	Small - national
Interviewee 5	Marketing services	Small - national
Interviewee 6	Local association of businesses	Small - rural - local

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

Present skills

With six employers interviewed, the responses varied based on the size of the organisation. Larger employers require a third level qualification for professional level roles. Both larger and smaller employers require young people to have successfully completed the state examination (Leaving Certificate) for apprenticeships, administration and sales type roles.

Adaptability, flexibility, critical thinking, teamwork, collaboration and communication emerged as the main skill-set employers currently look for when recruiting young employees. These findings reflect the learning and innovation skills, known as the 4Cs (creativity, critical thinking, communication and collaboration), outlined in the Framework for 21st Century Learning Framework. Interestingly, creativity was not explicitly cited as a skill required by employers yet regularly appears in the top 5 future skills required by employers.

All employers identified basic computer skills and software packages as essential. Interpersonal skills were also listed particularly for customer focussed roles. Interviewee 3 identified that basic literacy and numeracy skills can be lacking in younger employees when joining their company.

Each employer noted the importance of young people being able to demonstrate certain behaviours and attitudes. These include reliability, strong work ethic, initiative, organised, attention to detail and a positive approach to their work. Interviewee 2 indicated how their company prioritises employing well-rounded individuals:

> "We are not just focussed on educational results. We look to hire well-rounded employees who are involved in extracurricular activities such as sports, charity work and community work."

This is a positive finding as youth organisations are highly effective in supporting young people to develop across all of these competency areas.

Future skills

Across society, it is widely acknowledged the future is less obvious due to the pace of technological change. Interviewee 4 discussed how their employees need to be agile, open to change and adapt much quicker than they do right now. Change is now the norm as disruption is happening within all sectors. For specialist roles in the past employees would not have needed to be adaptable and flexible, however, this has changed and brings new challenges for more experienced employees (Interviewee 2).

Interviewee 1 identified two emerging skill-sets as a major focus for their company, and for a lot of employers; innovation skills (creativity, ambiguity, measured decision making and ability to assess risk) and a growth mindset (resilience, complexity, ambiguity to help drive innovation). The market gap in digital skills over the next 1-3 years continues to be within software engineering development within 3-5 years. A greater shift to automation through artificial intelligence, applied intelligence and machine

learning is expected. Also, the ability to design and implement something new is also key - a skill-set that is different to project management, and more aligned to product management.

Resilience was specifically cited by a number of employers with Interviewee 4 noting:
"Adaptability to change is the key piece because tech will drive a lot of change over the next 3-5 years. The pace is increasing compared to the last 10 years and the 24/7 access is also causing a big work life balance challenge – staff need resilience".

Interview 6 reiterated the need for young recruits to be flexible and resilient:
"Willing to pitch in and work hard, that will automatically mean that people will know how to be flexible and will cope with and deal with the fast moving work environments we now have, regardless of sector".

Lastly, the ability to work as part of a global workforce; to lead, collaborate and work in diverse contexts and environments is critical particularly for those working multinational companies.

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

Young people's worlds are "digital" and the employers find young people learn quickly and are not afraid to use technological tools. There's an expectation they can use software packages to create documents, to write reports, analyse data and create presentations.

"Use of programmes like Excel, Word, Powerpoint: the level is not as good as one would expect. Young people learn fast and adapt, and are good on social media, but don't actually know how to DO stuff." (Interviewee 4)

For three of the six companies, appropriate workplace communications was indicated as an area that young people need to pay attention to. The 9-5 working day has changed and access is available 24/7 leading to more communication being done via email and chat. Written communications are open to interpretation and can be an issue for employer/employee relations. Understanding how to write effective communications, tailored to a specific audience is essential. Additionally, employers highlighted the need for young people to use correct grammar, not use "text speak" or write how they would on social media or to friends. In saying that, social media was identified by Interviewee 3 as an important tool for recruitment. More young people are applying for jobs via a phone or iPad than a computer.

Another key competency cited by a number of employers is the ability to research information.

"Access information efficiently and effectively through critical thinking and research. Cut through the overload of content, distinguish between what is useful in the moment - rather than a nice to know and do - a sharp eye is needed to assess it." (Interviewee 1)

The two IT employers indicated that an understanding of computational thinking was considered a distinct advantage (Interviewee 4). Not everyone needs to be able to code - but everyone needs to understand the concepts and what it can do (Interviewee 1).

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

Due to technological change career paths are no longer linear. Companies are more open to recruiting young people with diverse skill-sets and supporting them to find their career path (Interviewee 1).

"We provide training once in place however we also try to use the recruitment process to make sure we are hiring the right person, with the skills that are a fit with the business" (Interviewee 6)

This supports the findings above that soft skills are considered more important than digital skills and can give young people a competitive edge when looking for work.

The key skills gap amongst young employees is the use of internal systems and processes, which they pick up quickly. In house, on the job training is provided for new recruits by all employers. Two of the larger companies have graduate programmes to train new employees across their specialist business functions. One of these employers has a longstanding and reputable apprenticeship programme. The other indicated an urgency for employers, who like themselves traditionally only offer graduate programmes, to develop apprenticeship models. This will enable young people, who do not progress to third level education, to have equitable career pathways. Thus helping to fulfill the huge demands for talent in Ireland, and globally, over the next 2-3 years.

Once people are in a role there is an expectation they stay up-to-date with developments and trends in their areas (Interviewee 5). This would indicate a need for employees to adopt a positive attitude to lifelong learning. A good example of this in practice is a Reverse Mentoring Programme developed by Interviewee 2. Senior managers are matched with new recruits who provide 1:1 training in digital skills such as include how to use cloud technologies, Skype for business calls and how to set up a new smartphone for business use. The initiative is highly successful and the young recruits benefit from building relationships with and learning from senior management.

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

According to the EU Digital Economy and Society Index 2017, Ireland ranks very high at 6th in Europe when it comes to the integration of digital technologies by businesses. Irish businesses are excelling online and the country has emerged from recession with the youth unemployment rate 11.4% in August 2018, down from an all time high of 31.5% in February 2012. However, the digital skills of our youth population ranks very low when compared to other EU countries. This disparity between digital businesses and the digital skills of our youth population may explain the surprised reaction of all interviewee when presented with this youth statistic.

The interviewees cited a number of potential factors contributing to this low statistic. These can be summarised as six categories; policy, industry, formal education, innovative education initiatives, parental and family responsibility, and young people themselves.

Policy

In terms of policymakers, employers highlighted the need for a coordinated digital skills plan that supports all citizens to acquire these skills starting at preschool through formal education and continued through lifelong learning. This should include investment in areas such as infrastructure, equitable access to broadband and equipment. Significant work has been conducted for the formal education sector, however, the NGO/non-formal education sector and other areas of learning are considerably behind.

Industry

Industry is considered to have a major role to play in partnership with the other actors mentioned here. Through an interdisciplinary model there is opportunity for new and innovative initiatives to be developed and implemented nationally. Some successful examples of this are corporate foundations funding NGOs to design and implement innovative programmes for schools and youth organisations.

Formal education

The lack of digital skills education within the formal education system in Ireland is perceived as a major obstacle to young people. Teachers are pressured to deliver the curriculum to meet examination requirements, leaving little room for technological innovation. Some interviewees considered the education system to be archaic with teachers lacking the interest and motivation to integrate technology - resulting in them being ‘out of touch’. A comparison was made to the UK education system with children taught computational thinking from the age of 6 years.

"The recession had a huge impact on funding; training and development was often the first thing to go and it was short-sighted. We are seeing this with some of our best colleges ranking lower than before due to lack of investment." (Interviewee 3)

Innovative education initiatives

Interviewee 6 discussed the the need for more innovative education and training opportunities to be made available outside of the urban centres. Initiatives such as apprenticeship programmes and non-formal youth education, such as the TechSpace Programme, are considered to be key in the development of young people's digital skills.

Parental and family responsibility

A number of references to parental and family responsibility in terms of young people acquiring digital skills were made by the interviewees. One expressed concern at citizens having a consumer only attitude to the use of technology at home. The risk here is the lost opportunity to use technology for creative purposes. A new Government report supports this concern with Irish consumers spending around €850,000 per hour online, 24 hours a day, which represents more than a 20% increase since 2012. 88% of Irish consumers research products online before buying, compared to 79% across the EU.

Personal responsibility

Whilst the above four factors are important, employers felt young people should demonstrate personal responsibility to be interested and motivated to acquire digital skills and continuously improve technological know-how.

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

A surprising finding from the research was that the interviewees did not list NGOs as having a role to play in the development of digital skills in our youth. However, when prompted all agreed that NGOs were key providers and gave examples of successful Irish initiatives such as the TechSpace Programme and iWish. A general opinion was that youth organisations, in particular, are well placed to support young people access information and develop new competencies. This can be achieved by offered fun and innovative initiatives that build transferable skills for the future workplace.

None of the interviewees thought smartphone and social media usage by young people, known as the "millennials", had a negative impact on the workplace and generally does not infiltrate their professional lives. In saying that, a number of factors associated with smartphone and social media usage were flagged as areas of concern. Reduced social interaction, a lack of acceptable written communication,

poor etiquette around online behaviour and breaches of data security were noted as challenges for managers and employers.

7. Conclusions and other relevant insights

The findings from the research presents significant opportunities for NGOs to contribute to preparing young people for the future workplace. The pace of technological change is showing no signs of slowing down and automation will have a major impact on our future workplaces. There is a major skills shortage in Ireland, and globally. It was positive it hear employers are open to and actively responding to new and innovative recruitment and employment models such as apprenticeships, non-linear career pathways and flexible working.

Soft skills of adaptability, flexibility, critical thinking, teamwork, collaboration and communication emerged as the main skill-set employers look for when recruiting young employees. These are generally considered more important than having advanced digital skills, unless the role specifically requires this.

Being a well rounded individual will give young people a competitive edge. This is defined as a solid secondary or tertiary education with active participation in extracurricular activities such as sport, charity and community work. An understanding of the economic reason behind an employer's business, being revenue focussed, is also key to making a young person the most valuable person to be hired.

The youth population (millennial generation) are respected by employers in Ireland for having an appetite for innovation and a thirst for trying out many different things. The number of people who have founded an organisation or lead a cause is unprecedented. They work on personal projects in their spare time, on social missions and have a strong appetite for risk (Interviewee 1).

Future roles have never been more uncertain because of the emerging nature of technological change with disruption happening across all industries. Some of the key growth areas are expected to be in automation, data analytics, green energies, environmental and regulatory, compliance and security. Thinking beyond digital industries and digital careers is vital for young people to get ahead.

> "A few years ago there was panic to 'be digital'. I think it's just a buzzword unless you are working in a specific role such as digital marketing. We are digital and have been for a very long time". (Interviewee 2)

NGOs must capitalise on the opportunity to work more closely with employers to develop public-private-NGO partnerships. Together we can drive the digital skills agenda of our youth population to improve our EU digital skills ranking, increase the future employability of our youth and provide an inclusive society for all.

CHAPTER 4
REPORT ON FOCUS GROUPS WITH YOUTH WORKERS

Introduction

There were a number of objectives of the focus groups which were undertaken with youth workers as part of the project. We aimed to capture and collect information about the needs of youth workers in terms of the knowledge, skills and competencies they deem required to enable them to develop or deliver programmes and services which enhance digital skills in young people, and thereby increase and contribute to the future employability prospects of young people.

In parallel we also aimed to capture information from youth workers about the digital and future employment skills they identify as critical for young people to attain to enhance their future employability, and in the process identify barriers and challenges facing Irish youth workers and youth organisations in equipping young people with these skills.

An additional aim was to identify which skills and competencies youth workers view as lacking in their organisations, or those that with improvement would be a catalyst for better digital skills programmes for young people.

Insights gained will be compared to other partner country results and help inform and steer the development of project outputs.

1. Profile of focus group participants

In total 45 youth workers participated through a combination of 3 focus groups (Carlow Regional Youth Service, Youth Work Ireland Midlands and Kerry Diocesan Youth Service) and surveys (8 individual participants from one youth service, Clare Youth service) over the summer of 2018. The available gender breakdown of the participants was 45% male and 55% female. The professional experience level of participants varied across the focus groups with a roughly even breakdown between those with less than 5 years' experience, those with 5-10 years' experience and those with more than 10 years' experience. This gave a good cross section of opinion and experience and included younger youth workers who are "digital natives" themselves. The overall number we surveyed was twice the required target number, which enhances the quality of the information collected.

The 4 organisations each have significant experience in developing and delivering supports to young people in their individual geographical regions (Westmeath, Clare, Kerry and Carlow). There was a good geographical spread to the participant organisations which represented both urban and rural youth work contexts. All four work with young people in non-formal settings and are committed to the principle of voluntary engagement. Each are independent organisations and offer a range of programmes and supports to young people between the age of 10-25 years.

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

All participants engaged fully in each focus group and willingly shared their thoughts and opinions on each topic. We began by requesting their opinions on young people's present and future skills that are expected and required by employers, and which best enhance the future employability of young people. A number of themes emerged across all groups and there was a large degree of commonality between each.

All four groups identified a strong knowledge of IT tools and packages as being a basic requirement for any future employment, coupled with strong communication and interpersonal skills. It was observed that a lot of young people currently have good or strong skills in most of the basic IT packages and tools (Carlow Regional Youth Service), mostly acquired through peer learning and self-taught or through school and formal education. Most of participants felt that their own skills in this area are good to strong and hence are comfortable delivering this type of digital skill programme.

Each of the groups concurred that a good youth work environment delivers an additional set of valuable skills, those which through their transferable nature would be actively sought by employers. These are traditionally referred to as “soft skills”. The most important skills identified as part of this set included; critical thinking and problem solving, working as a team member, a good attitude to work and personal resilience. All of the participants were of the view that these skills are a key strength of youth work and “*almost all youth work delivers these skills in some shape or form”* (KDYS focus group-participant 3).

It was widely agreed that the most valuable skills for young people to attain will compliment those above and help young people and employers in the future employment market. The main skills highlighted as most important to future employer needs were *“Human to human-social skills”* & *“Specialisation”* (Carlow Regional Youth Service) in addition to an understanding of how technology works, and with that the ability to create (coding & programming). Alongside this is the “*ability to transfer and adapt their knowledge to different platforms and situations”*, such as “*using what they know about social media to promote the business they work in”* (Clare Youth Service-participant 5).

3. Assessment of young people's digital skills

From their direct engagement with, and knowledge of young people each focus group was asked to consider the current digital skills attainment level of young people and compare this to the skills employers are seeking in candidates today, and those employers are likely to be seeking from potential employees in the future.

A general consensus from the experience of youth workers is that most young people are *"very tech and social media savvy"* (Clare Youth service-participant 8) and have a good understanding of the basic ICT tools (Carlow Regional Youth Service). At the same time some youth workers felt that young people while having these skills lack knowledge of the "simpler" packages; "*Young people* are generally extremely familiar with internet based media and even game production to a *certain extent, I see a skills deficit in young people being able to use simpler programmes i.e. word / publisher / photo editing beyond the bare minimum"* (Clare Youth Service-participant 5).

Additional digital and future employment skills gaps were identified across the focus groups. These were a mixture of quite technical skills such as coding and programming. It was felt that skills which are key to understanding the infrastructure of technology, and then create new technology such as "wordpress", "python", "unity" and "c++" are not evident in young people, *"They have not had the opportunity to explore these programmes in a fun and dynamic way. Not many young people have had the opportunity to explore coding"* (Clare Youth Service-participant 3).

Other deficits highlighted by the groups related to how young people manage their lives, their organisation skills such as coping with deadlines, self perseverance, research skills and patience (Carlow Regional Youth Service). Others highlighted were; working under pressure and on their own initiative and managing multiple responsibilities; *"Young people need to be better able to balance work responsibilities with the ability to self-care. This requires greater degrees of organisation in both professional and personal life"* (Clare Youth Service-participant 4).

4. Current digital skills and future employment skills programmes

Each youth worker and focus group was asked to consider what programmes they and their organisation currently provide in the area of digital skills, and which address the development of skills and competencies required for future employment of young people. All organisations have a range of programmes which support the development of "soft skills" and transferable skills in young people, these included programmes which support the development of many of the cited most valuable skills such as; interpersonal skills, teamwork, resilience, critical thinking and decision making and a positive attitude to work and others.

There was a divergence across the groups in terms of programmes that each organisation offers in terms of specific digital skills attainment. Some are more active and engaged in the development and

delivery of digital skills programmes. Further analysis highlighted that the primary reasons for the different levels of engagement and programme provision is due to different levels of resources, youth workers with different skill sets and perhaps more importantly a difference in approach to digital youth work by each organisation.

The difference could not be explained merely by resource imbalances, each organisation has resources, the difference that emerged is in the way organisations allocate the available resources, and it was felt that this is largely based on the degree to which each organisation values digital youth work and the degree to which digital youth work has been embraced by each organisation. This is evidenced by a variance in the levels of training available to youth workers to upskill themselves in digital skills programme delivery. This prompted a need to further examine barriers and obstacles to digital skills attainment in young people.

5. Barriers to digital skills attainment

Having given their view on the competencies which could be further developed in young people to support their future employability, and having highlighted key skills deficits each group was asked to identify barriers which are restricting or preventing the digital skills development in young people.

Each group highlighted a number of significant barriers. What is interesting about those cited is that the barriers are in place at numerous levels and sectors, including at Government Policy level, at employer level, at formal education level and in the non-formal and NGO level, and finally at resource and programme level. In fact at almost every level and point where digital skills can be acquired by young people a barrier is in place.

At Government Policy level it was the view that *"Govt slow moving policy on nationwide broadband rollout is making access difficult in rural areas for young people"* (KDYS-participant 2). In the case of employers and NGOs they are slow to adopt and commit to the new digital world, primarily because of a skills gap in existing management / senior employees, this creates a fear of change and of new technologies; *"the funding required to deliver programmes and to train workers is very limited and organisations and businesses budgets go to other activities instead of supporting staff to incorporate new digital skills into their work, this would have long term benefits to all companies. It's the fear of the unknown and because the managers don't know and aren't familiar they fear the change"* (KDYS-participant 2).

Resources, and the lack of, were also raised as significant issues, both in the case of the formal and non-formal education settings. Schools don't have adequate resources; particularly in rural Ireland (Carlow Regional Youth Service) and NGOs often don't have either the resources (hardware and software) or the skill sets to deliver digital skills programmes; *"the number of staff who have the skills and are trained to deliver these types of programmes is quite small, we usually have to buy in the programme. ideally we would deliver it ourselves"* (KDYS-participant 4). This view correlated with the result of the question which asked

youth workers to score their own level of digital skills and competency. The average score was 5.5 out of 10.

Another interesting barrier highlighted was the cost of mobile data to young people, when coupled with broadband access difficulties this can prove to be a significant barrier for young people (Carlow Regional Youth Service).

It was a common view that despite the multiple barriers in place young people have nevertheless attained and acquired significant levels of digital skills, mostly through self-learning, a willingness to explore and learn with and from each other, and peer learning. With the removal of some of the existing barriers it was felt that these skill levels and competencies in young people can undoubtedly be enhanced.

6. NGOs role in developing digital skills

All of the participants agreed that NGOs can play a central role in developing and enhancing digital skills, and the future employment skills in young people. It was a widely held view that youth work organisations are extremely well placed to lead this work. However it was felt that a significant cultural shift would be necessary to support this; "*it's about culture..divert more time and funding to programmes that are worthwhile in this area. Focus on the programme as a core skill to working with young people rather than an added extra. Commit to the process*" (Clare Youth Service-participant 6). One suggestion on how to address the issue of culture, and embed a culture of digital skills in youth work organisations was to include it in organisational mission statements (Carlow Regional Youth Service).

The view from all focus groups was that currently NGOs are somewhat fearful of the change presented by rapid digital and technological developments, and that a lot of youth workers don't have the skills themselves that are needed by young people, thus creating fear and apprehension "*remove the fear for the worker and give them the confidence to deliver youth work related digital skills development programmes*" (Clare youth service-participant 3). This will require investment in training and upskilling for staff by NGOs *"supportive training programmes that span a few weeks / months, the organisations need to make allowances for time for the worker needs to upskill and for this to be built into their work plans each year"* (Clare youth Service-participant 7).

7. Conclusions and observations

All the participants universally agreed that digital skills attainment in young people is a must. Without exception it was agreed that the level of digital skills required for the workplace of tomorrow will be significantly higher than that of today. It was also agreed and felt by all that youth work and NGOs can play a central role in helping young people to acquire these skills and competencies.

Youth workers are confident that they already deliver (through a range of youth work programmes) critical skills and competencies that young people will require in future employment. Much less confidence exists when it comes to specific digital skills programmes.

Some of this lack of confidence comes from a perceived lack of resources and investment in the area by all stakeholders. Some stems from an acknowledgement that upskilling by youth workers is needed. There are also barriers which are restricting the ability of youth workers to develop and deliver digital skills programmes for young people.

The theme most clearly emerging from the focus groups is that in order to best equip young people for future employment youth organisations need to adopt and embed a culture of digital youth work promotion across their organisations, and to make it a part of their core, everyday work. This will require investment in training of youth workers to upskill. In doing so Irish youth organisations will be in a stronger position to develop and deliver the digital skills programmes which provide the key future employment skills and competencies to young people.

CHAPTER 5
REPORT ON INTERVIEWS WITH SENIOR MANAGERS OF YOUTH SERVICES

Introduction

The main purpose of the 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 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, the SKILL IT Irish partner interviewed 6 senior managers from youth organizations. The below report presents the results obtained through this research effort.

1. Profile of the interview participants

For this part of the research the Irish partner conducted a mix of individual interviews either face-to-face, or by phone and email with representatives of five NGO organisations working with youth. Three of the six participants hold a CEO role and three hold service managers roles in their organisations. The interviewees come from organisations that vary in terms of the size, type and location:

- Two from a large, national affiliated membership youth organisation located in large rural towns (Interviewees 1 and 2)
- One from a mid-size, all-island youth organisation (Republic and Northern Ireland) located in a large city (Interviewee 3)
- One from a another large, national youth organisation located on the urban-rural fringe of the capital city (Interviewee 4)
- One from a large, regional youth service in a dense urban area in the capital city (Interviewee 5)
- One from a national, homelessness service located in the capital city (Interviewee 6)

The types of organisations involved are well-established and operating youth services for many years.

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

Present skills

The priority focus for youth organisations in Ireland is the personal and social development of young people. When entering today's labour market, the interviewees agreed that young people need to be able to show flexibility and adaptability. In addition to this, they need to be able to work collaboratively with teams of people who can come from diverse professional and personal backgrounds (Interviewee 2). Other soft skills considered to be important are to present themselves well, be on time and to fit into the culture of the workplace. A young person's attitude and interpersonal skills were noted as being more essential than academic achievement or digital skills by a number of interviewees.

Future skills

The interviewees considered soft skills to be the key competencies required by young people, more so than digital skills. Communication skills are key along with those related to change due to the pace of technological advancement.

> "Developing confidence, leadership, dealing with change, critical thinking, these types of skills will be more and more important. They will be what helps young people to be more flexible and adaptive and ultimately more successful. The ability to work in multidisciplinary and diverse teams is going to become an increasingly important competency (Interviewee 1)."

Analytical skills around the application of information is quite evident in youth work and becoming increasingly important for young people to have (Interviewee 2). Resilience was also cited for young people to help them cope with the challenges they are faced while looking for work such as disappointment when they don't get a job (Interviewee 6). Collective working and sharing of knowledge, issues and ideas, are increasingly important for the labour market (Interviewee 5).

3. Assessment of young people's digital skills

ICT literacy is considered important for those leaving second level education. This includes basic skills in Word, Powerpoint and Excel along with basic file management (Interviewees 1, 5). The level and type of digital competency will depend on the type of role a young person is going for. Generally young people have quite strong digital skills, especially when it comes to social media. Where they fall down is with the interpersonal skills (Interviewee 1).

> "Unless schools have dedicated classes in ICT – we see little evidence of young people's competence (knowledge, skills or behaviour) towards the application of ICT in life, school or

through career planning. Their knowledge of ICT is limited to their social environments (friends, family) and generally linked to mobile phone usage or leisure time" (Interviewee 2).

Digital skills, whilst important, are not a priority focus for the majority of youth organisations in Ireland. The digital skills acquired by young people are considered quite basic by the interviewees. Interviewee 5 has also experienced similar evidence of young people's limited knowledge of how to use a computer as a creative tool; instead they use technology as consumer gadgets.

Whilst the digital skills level is low, youth services are addressing these needs in new and innovative ways.

"Youth services are developing technology and STEM learning opportunities, which are enhancing basic digital competencies - we now ensure as many young people as possible get access to these opportunities." (Interviewee 2)

In terms of the types of digital skills required by employers, a number of the interviewees felt that the labour market, including the youth sector, does not always know the specific skills needed.

"The skill sets being sought are more about what we need to cope with today as opposed to dealing with tomorrow's requirements. We (as employers) have a sense of what skills we will need but the pace of change makes it really difficult to plan, especially when there isn't huge budgets allocated to sourcing the skills, through training or elsewhere. That makes skills like flexibility, a strong work ethic, willingness to adapt and change, resilience and ability to change even more important." (Interviewee 1)

The traditional interface of a staff person and their dedicated PC is now redundant and employers require staff to be flexible in relation to the type of software/devices that they use (Interviewee 3). Lastly, coding was mentioned by just one of the six interviewees as a skill to acquire.

Main obstacles for young people to acquire digital skills

Senior managers had similar opinions to employers in relation to the main obstacles facing young people in acquiring digital skills. The main factors can be attributed to six areas; policy, formal education, funding, infrastructure, parents and young people.

Policy

Unlike formal education, there is no digital strategy or digital learning plan for the youth and community sectors. Interviewee 6 stressed how such a strategy will need to teach social and personal development skills through a holistic approach, with technology used as a tool to achieve this.

Other opinions related to a lack of joined-up thinking amongst the various actors involved in young people acquiring digital skills. Interviewee 5 cited the Finnish youth work sector as an exemplary

leader in the provision of a digital youth strategy based on a holistic approach to equip young people with future skills. In Finland, youth services are centrally funded and resourced at local level. This enables youth service providers to develop innovative responses to youth issues, enabled by technology. An example of this is one service that delivers support to young people experiencing mental health crisis situations. Support is facilitated through online gaming activities led by youth workers and mental health professionals.

Infrastructure

Infrastructure varies hugely between urban and rural youth services with wifi and accessibility to resources a major barrier for young people. Other factors include young people's ability to access youth services due to their physical location in rural communities and a lack of good public transport. It was felt that the Irish economy may too focussed on providing infrastructure for entrepreneurs and tech start-ups to the detriment of the non-formal education sector (Interviewee 5).

Formal education

A number of interviewees were sympathetic to the pressures on the formal education system. The curriculum at both primary and secondary level is overloaded. This leaves little space for major innovations to effectively integrate technology into the curriculum.

> "Teachers and youth workers are lacking in skills. We need to get real about the pressures teachers are under to deliver the curriculum." (Interviewee 3)

Some indicated that formal education is too focussed on getting young people to college, while some young people are not attending school at all. These individuals are often supported by vocational educational programmes within youth services.

Funding

A lack of sufficient funding was highlighted as a real need by all. Investment in youth work services by the Department of Children and Youth Affairs is below the levels in 2008 - from €73.1 million to €54 million in 2017.[1] In addition to this, Ireland has one of the youngest populations in Europe, with the number of young people aged 10-24 years set to grow by 13% by 2020.[2] How the sector is structured and funded means the provision of services is inflexible to change and funding is heavily restricted so specific programmes.

> "In youth work in Ireland there is another significant issue which is largely unaddressed. For any youth work funded by state sources such as DCYA there is virtually no scope within the terms and conditions of those contracts for any innovation, it is viewed as deviation. Whatever funding received MUST be seen to be used for those, and ONLY those purposes. This makes incorporating

[1] http://www.youth.ie/sites/youth.ie/files/FINAL_NYCI%20Pre%20Budget%20Submission_2018%20W-acc_0.pdf
[2] https://www.carealliance.ie/userfiles/file/Joint%20Press%20Release_FINAL.pdf

innovation, such as digital skills or whatever, into these programmes extremely difficult, if not impossible. This means new programmes will need to be funded differently." (Interviewee 1)

Parents

Parents' lack of understanding, and a consumer attitude to technology, limits young people's acquisition of digital skills with some parents believing that their children having social media skills is digital literacy. Another obstacle that senior managers have seen is the cultural norms amongst some minority ethnic groups in Ireland that can prevent young people from accessing digital skills through youth services.

Young people

Young people can often be technically good but unable to articulate their skills in an interview situation. The youth sector is well placed to help them understand how to apply their transferable skills to the workplace.

Whilst the opinions above were similar to employers, a key difference emerged. For senior managers funding was highlighted as a key challenge for the sector whereas employers indicated an opportunity for industry to form multidisciplinary partnerships to help progress the digital skills agenda for our youth population.

Disadvantages/limits to using ICTs

Whilst society widely acknowledges the benefits of ICT the disadvantages are also quite real for young people. The interviewees noted the following obstacles for young people:

- Differences between online world and real life.
- Need for downtime from technology
- Danger of believing online information because it appeals more.
- Without critical thinking technology has many disadvantages.
- Technology can be disrupting and overwhelming. This can block people in their desire to upskill thinking they need to learn everything before they start using it.

Another limiting aspect for youth services is the initial costs associated digital technology; from the purchasing of equipment to the time to invest in the upskilling of staff. This prevents youth services from offering more digital and STEM technologies.

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

All interviewees agreed NGOs had a critical role to play in young people developing digital skills and are often best placed to do so within the education systems. The have the capacity to provide spaces for young people to experiment in fun environments, meeting them on their own terms (voluntary participation) compared to formal education. By developing new, innovative and engaging programmes and services, and facilities to support this youth work can be leaders in developing digital skills in young people (Interviewee 1).

> "There is also a role in encouraging staff and volunteers to engage in a collaborative process with young people to identify their gaps in skills and work together to find solutions and responses that are realistic." (Interviewee 2)

There is also a responsibility on NGOs to ensure their staff are not only competent, but confident in their own digital skills and have access to up-to-date systems and equipment. Lastly, Interviewee 6 highlighted the need for some form of knowledge transfer system and support groups within the youth work profession to share what works in the digital space.

From the research, it is evident that a huge amount of innovative digital and STEM programmes and services are taking place throughout the country. A number discussed how they rely on the additional support from external sources, for example, the TechSpace Network and specialist volunteers to deliver these activities to young people.

The breadth of digital and STEM programmes and services offered can be summarised into three service areas:

- Accredited vocational training at QQI Levels 2-4
- Youth work programmes
- Youth information

Examples of the activities delivered include 3D fabrication, filmmaking, graphic design coding via gaming, music production, electronic circuit building. Additionally, young people receive support in more practical areas such as looking for accommodation, dealing with tax registration and applying for further training or education.

All agreed that young people are at the heart of the decision making in their organisations in terms of what digital programmes and services are offered, which are planned in consultation with them. When designing programmes Interview 5 said:

> "The solution is not to fear going online but to make the YP responsible for themselves around online boundaries because they are going to be doing it anyway - inside or outside the youth service!"

Sometimes it is dependent on the skill level of the the youth worker to deliver a particular programme. The needs of the young people are generally feed direct from the young people themselves, through the youth workers and volunteers, to the senior management team.

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

The main digital competencies needed for staff in the youth sector are practical tools such as Word, Excel and Powerpoint. In their direct work with young people the emphasis is on face-to-face interactions and building relationships. Most interviewees rated their staff as having strong ICT literacy, except in the area of social media. The interviewees were largely happy with the ICT skill level of their staff. Assessment of digital skills level is not formally undertaken in organisations. Training tends to be offered in other area such as entrepreneurship, LGBT or child protection.

In terms of the current skills gaps amongst youth workers Interviewee 1 said:

"Across the sector staff are aging, and many have been in place for a number of years, so that the platforms that young people are using they are not familiar with, this can cause a relevance issue sometimes."

The following summarises additional points made by all the interviewees Surprisingly, a lot of the work is still done on paper with very little done electronically except maybe to create a poster or similar. Insufficient and lack of ICT equipment plus poor broadband connectivity also poses issues in using social and digital media within youth services. A lack of funding means youth workers cannot access adequate equipment or training to support and enhance the use of social and digital media in their work. Additionally, a lack of working hours impacts on youth workers ability to effectively master the various technologies so that it doesn't impact on them achieving their other youth work goals. Youth workers often rely on volunteers with digital expertise to facilitate projects with the young people, and they take on a more coordinating role for the group.

6. NGOs' digital readiness

Each organisation recognised the importance of having a digital strategy and vision, however, just one organisation has included this as part of its strategy. A further three interviewees advised of their plans to incorporate a digital strategy as part of their next strategy cycle starting in 2019. No specific plans were indicated for the remaining two.

In terms of day-to-day usage, the youth organisations are relatively flexible in how they are using ICT. The most widely used software is Microsoft Office with Google's cloud platform, GSuite for Education,

used by two organisations. Other platforms and softwares used are customer relationship management (CRM) tools, content management systems (CMS), packages for payroll and finance, and Erasmus+ mobility tool. For communications, email, WhatsApp, Hangouts and Skype are widely used. Hardware is mostly PCs with some Macs, which are generally accessed by the young people to do more creative work. Other hardware and equipment includes Chromebooks, smart phones, digital cameras, 3D printers. Other creative tools are also popular along with social media online tools.

Most organisations have plans to expand their use of new technology to improve productivity and efficiency within the organisation. Broadband continues to be a limiting factors in some organisations. Data management and information systems are in the planning stages for some organisations. Some drivers of this are a need for better knowledge management, donor management and secure systems to collect impact stores and data. Additionally, from May 2018 there is a requirement for organisations to be compliant with General Data Protection Regulations (GDPR).

> "Need to talk to the ETBs too and funders around the issues because they need to be in the loop/willing to support it." (Interviewee 3)

7. Conclusions and other relevant insights

The findings presents significant opportunities for NGOs to contribute to preparing young people for the future workplace. It was positive to hear that senior managers within youth organisations have similar standpoints to that of industry employers and share similar challenges in recruiting staff.

Soft skills of flexibility, adaptability, collaboration and working within multicultural teams emerged as the skillset senior managers regard as essential for today's workplace. The future competencies that emerged from the research are a strong work ethic, confidence, leadership, change, critical thinking, resilience, collective knowledge sharing and analytical skills.

The current digital skills level of young people evidenced by youth organisations is considered to be basic ICT literacy. Technology is used as consumer gadgets with limited knowledge of how to use it as creative tools. This echoes Mark Smith's seminal work, 'Creators not Consumers; Rediscovering Social Education' published in 1982. However, have we reached a tipping point and created a paralysis amongst youth workers? Is a more balanced message needed - let's use technology to create *and* consume?

> "Ireland suffers from a culture of instant gratification society and ICT adds to that – there is no appreciation of the journey to get somewhere or to learn something or to cultivate things." (Interviewee 6)

Maybe then youth workers can overcome their fear of technology, understand they do not need to be expert users of technology and collaborate with young people to co-design programmes and services that better meets their needs.

There are six main obstacles for young people in acquiring digital skills. These can be summarised as a lack of effective policy and digital strategy the youth sector, poor and inequitable ICT infrastructure including broadband and public transport, formal education is overloaded and unable to teach digital skills, lack of funding or restricted funding stifling innovation, parental understanding limiting young people's acquisition of skills, and young people's inability to articulate transferable skills from non-formal education to the workplace.

There are numerous disadvantages and limitations to using ICTs, however, youth organisations are often best placed within the education system to help young people negotiate any associated risks.

NGOs are in an opportune position to support young people and with additional investment through public-private-NGO partnerships innovative programmes and services can continue to deliver better digital outcomes for young people. More joined-up thinking and the provision of a knowledge transfer system and support groups for the youth work profession is also key to this.

Youth workers have sufficient ICT skills to conduct their day-to-day administrative type work. Relationship building with young people is at the core of their practice and digital competencies are secondary. Infrastructure, professional development training, time, funding and external expertise and support remain the key challenges for youth workers to be able to effectively deliver digital and STEM activities to youth.

There was little evidence of a coordinated digital learning vision and plan at organisational level. While each organisation shared evidence of the strong use of ICT business tools (cloud platforms, software, hardware and online communications) a coordinated plan on how these are used to effectively integrate technology across the organisation to achieve better youth development outcomes was lacking. However, the findings highlighted an awareness and intention amongst most senior managers to develop and incorporate this as part of their next strategy planning cycles. Unlike the formal education system, the youth sector do not have a digital strategy and action plan to reference for strategic direction. Efforts across the sector are currently driven by individuals in organisations and tend to be disjointed.

The data collected for this part of the research will provide support in developing other intellectual outputs, mainly the ones that also touch on the dimension of 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.

APPENDIX 1 - INFORMATION, MEDIA AND TECHNOLOGY SKILLS (P21 FRAMEWORK)

INFORMATION LITERACY	MEDIA LITERACY	ICT LITERACY
Access and Evaluate Information Access information efficiently (time) and effectively (sources) Evaluate information critically and competently **Use and Manage Information** Use information accurately and creatively for the issue or problem at hand Manage the flow of information from a wide variety of sources Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information	**Analyze Media** Understand both how and why media messages are constructed, and for what purposes Examine how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media **Create Media Products** Understand and utilize the most appropriate media creation tools, characteristics and conventions Understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments	**Apply Technology Effectively** Use technology as a tool to research, organize, evaluate and communicate information Use digital technologies (computers, PDAs, media players, GPS, etc.), communication or networking tools and social networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies