DigiPlace4All – Capturing the Requirements for an Online Peer Support Community to Help People with Disabilities Develop Digital Skills

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Abstract: Peer support is an important factor in helping people with disabilities develop digital skills. These skills are essential in helping them transition from Voluntary Education and Training courses to mainstream education and employment. This paper presents the results of a study capturing the user requirements for an online peer support community, DigiPlace4All, which will enable people with disabilities, educators and employers, to develop one-to-one peer support relationships and to share information about digital technologies and inclusion. The results validate the decision to provide an online space to facilitate peer support and sharing, prompt a shift of focus from assistive technology to digital technology in general and suggests a range of relevant content and functionality for the community website.

1. Introduction

Despite advances in assistive technologies and policies to promote inclusion, people with disabilities face significant barriers in accessing training in digital literacy which is essential for education, employment and inclusion. The scale and significance of the issue of digital inclusion for people with disabilities in Europe is outlined under the EC priority for e-inclusion: "Data suggests that up to one-in-five of the working age population have such a degree of disability that eAccessibility provisions may be needed for them to effectively use ICTs…" [1]. Furthermore it is predicted that "by 2015, 90% of jobs will require at least a basic level of digital skills." [2].

The paper authors work in disability support organisations in four European countries, all of which provide life skills training to people with disabilities, including training in the development of digital skills. This may be part of VET (Vocational Education and Training) delivered through accredited courses which can also be accessed in mainstream

(not disability-specific) VET centres if the training methods and materials are made accessible. The traditional model of delivering digital literacy skills training and support to people with disabilities is centred around instructor-led group or individual training at mainstream or specialist VET centres, domiciliary visits and online person-to-person support. However, this model is becoming unsustainable due to a massive increase in demand for such training and continual rapid changes in online and mobile technologies which make it difficult for training providers to keep pace.

To help develop their digital skills, people with disabilities naturally look to their peers for support, advice and information sharing. The European Civil Society Platform on Lifelong Learning highlights a culture of peer support as among the factors which make for success in promoting learning of key competences, including use of ICT and the Internet [3]. Mechanisms to facilitate the formation and maintenance of peer support relationships can therefore be very beneficial in supporting and supplementing instructor-delivered training. To help people with disabilities transition from VET to mainstream education and employment, trainers, educators and employers can also benefit from the support of their own peers as they seek to provide inclusive education and work environments. By sharing information and experiences, they can learn how best to assist people with disabilities in making that transitioning to education and work.

The European-wide DICE (Digital Inclusion Champions in Europe) project is developing an online peer support community called DigiPlace4All, where technology users with disabilities, VET trainers, mainstream educators and employers can form peer support relationships and share information and advice on digital skills and inclusion. It will provide guidance for prospective peer supporters and mechanisms to bring those in need of support in contact with those able to provide support. It will make substantial use of social media tools and user generated content to enable community members to share innovative approaches and best practice solutions. The community will be promoted and sustained by Digital Inclusion Champions.

2. Peer Support and Mentoring

The impetus for undertaking this project to facilitate peer support in digital skills building comes from the observation in the project partners' own VET training centres that peer support relationships arise spontaneously between students with disabilities, particularly when students who are coming to the end of training courses come into contact with others who are beginning the same courses.

The essential element of peer support is that the supporter and the supported person are peers. That is, they are similar in fundamental ways [4]. In the DigiPlace4All community, the fundamental similarity will be the nature of the person's disability and the types of mainstream and assistive technologies they use to access the digital world. For example, a person who is blind may access digital content through an iPhone with its built-in screen reader app, Voiceover. If that person needs support in learning how to use Facebook, the supporter will need to be familiar with using Voiceover on an iPhone to access Facebook. A sighted person may only know how to interact with the visible elements of the standard Facebook user interface. This is not helpful to the blind person who cannot see those elements and who may not be able to interact with them using Voiceover, due to lack of Voiceover support in the app. The solution may be to use a different Facebook app entirely and the supporter will need to be aware of this.

Peer support relationships between people with disabilities are well established and formalised within organisations that aim to support independent living. A typical example is the peer counselling service provided jointly by the National Council of the Blind of Ireland and the Irish Wheelchair Association to help people with physical or sensory disabilities adjust emotionally and socially to lead as independent lives as possible. Peer

counsellors are people with the same disabilities as those who they are supporting. They have received training in counselling skills accredited by the National Association for Pastoral Counselling and Psychotherapy and are supported by full-time psychologists and family therapists.

This kind of formalised peer support goes beyond what DigiPlace4All aims to facilitate, as it involves psychological counselling and emotional support for which practitioners must be trained and supervised. DigiPlace4All is concerned only with digital skills building. An example of the kind of peer-to-peer digital skills learning model that DigiPlace4All will facilitate is that of the Torbay Stroke Survivors Computer Group [5], a partnership project between Torbay Libraries and the Stroke Association in the UK. The group won the Technology4Good Community Impact Award for 2012 for its work in using peer support to help people re-learn digital skills after a stroke. The supporters are peers because they are stroke survivors themselves. They do not, however, have any specific training in teaching digital skills, counselling or providing emotional support. The peer support relationships that will be developed through DigiPlace4All are of this restricted type.

A peer support relationship is usually seen as one of equality. According to the Centre for Welfare Reform, "the defining feature of Peer Support is that it refers to relationships and interactions between people who are peers and who are equal in ability, standing, rank or value" [6]. However, in a learning environment the role of the peer supporter is to pass on their knowledge, skills and experiences to a less experienced and often younger 'student' in a relationship often known as peer mentoring [7] which involves training within a structured, private, one-to-one relationship with another person [8]. It is tempting to use the term 'peer mentoring' for the relationships that DigiPlace4All aims to facilitate. However, the experience of the Joseph Rowntree Foundation in a project to develop peer mentoring relationships among young people with disability was that concepts involving language and assumptions altered during the project and many of the young disabled people adopted the term 'peer support' in favour of 'peer mentoring' as the latter suggested a hierarchical relationship between unequal partners. For this reason, we use the simple term 'peer support' for DigiPlace4All, but in a restricted sense compared with its use in counselling and emotional support settings.

The peer support relationships that the DICE project partners have observed developing in their VET training centres are, by their very nature, informal and ad hoc. Those providing support are not trained or accredited in any way as supporters. However, the support is found to be very valuable, so DigiPlace4All aims to facilitate the development of these relationships without changing their nature.

This discussion has so far focussed on relationships among people with disabilities. However, DigiPlace4All will also aim to facilitate the development of peer support relationships among members of the other stakeholder groups – digital skills trainers, mainstream educators and employers. For example, employers who have successfully negotiated some of the challenges of supporting employees with disabilities as digital workers will be able to provide peer support to other employers who wish to do the same.

3. The DigiPlace4All Community Website

The DICE project has been funded with support from the European Commission under the Transfer of Innovation programme and one of its starting points is to transfer innovation from a previously successful project, Gateway2AT. That project developed a website (www.gateway2AT.org) providing information about assistive technologies. DigiPlace4All (www.digiplace4all.eu) is a natural progression from the Gateway2AT website and aspects of the former website which proved particularly effective, such as case studies of success, are being reproduced in DigiPlace4All. A particular aspect of Gateway2AT which is being adopted is the '3 doors' through which users with disabilities, educators and employers can

reach information and functionality specifically tailored to their needs. For example, employers will be able to find resources and information concerning office technologies and workplace adaptations, whereas educators will find information and advice about technologies used in education, such as learning management systems.

Online communities already exist where information about technology and disability could be shared and requests and offers of peer support could be made. However, the needs and voices of people with disabilities joining such communities are often drowned out by the much larger non-disabled community and the community websites, like most websites, present many accessibility barriers for users of assistive technology. Creating a dedicated community website gives a complete focus on disability, digital skills, inclusive education and employment and allows for the development of specific accessible mechanisms for people with disabilities to offer and request peer support.

Starting in the four partner countries of Ireland, Belgium, Poland and Bulgaria, the intention is first to grow the DigiPlace4All community nationally and then spread it internationally. Beyond the funded DICE project, the community will need to be sustained by its members alone. For this purpose, DigPlace4All provides a mechanism and guidance for individuals to become Digiplace4All Champions. The role of these Champions is to assist in managing the community into the future, promote DigiPlace4All to relevant national and international audiences and encourage others to become involved. This will ensure that it grows further as a dynamic resource for developing digital skills, inclusive education and employment. During this requirements gathering work, a large number of individuals have already expressed a desire to take on the role of Champion.

4. Methodology of the Requirements Capturing Study

The questions which this work sought to address are open in nature so a qualitative approach to data gathering was adopted. Instruments used were structured questionnaires and interviews, semi-structured interviews and focus groups. A total of 411 individuals participated.

Questions addressed included such things as: "What mainstream or assistive technologies do you use in everyday life, in education and at work?", "How do you get information about these?", "How do you share information with others?", "Who do you get support from?", "How does this happen and who instigates it"? "Do people understand your needs and offer support in the right kinds of ways?". Trainers, educators, employers and NGOs were asked about their own needs and the needs they observe among their students, employees or service users with disabilities.

Four separate questionnaires were developed, one for VET students and other technology users with disabilities, one for VET trainers and mainstream educators, one for Employers and one for NGOs working with people with disabilities. Each questionnaire was made available in English, Dutch, Polish and Bulgarian, in the form of online surveys for those who could fill them in. For those who could not, the questions were presented within structured interviews. A total of 241 respondents completed the questionnaires or structured interviews, including 114 technology users with disabilities (visual, hearing, speech, mobility, learning and mental health), 15 VET centres or training organisations, 16 digital skills trainers, 32 mainstream educators (universities and colleges), 16 employers, 26 NGOs and 22 policy advisors or other relevant agencies.

Focus groups were used to gather more in-depth and nuanced information about the needs of the target groups, how they share information and support each other. A total of 91 individuals took part in focus groups, including 59 technology users with disabilities, 13 VET centres or training organisations, 5 digital skills trainers, 6 mainstream educators (universities and colleges), 4 employers and 4 policy advisors or other relevant agencies.

Semi-structured one-to-one interviews were used to expand on areas of particular interest and relevance to the individual, without the constraints of group discussion. A total of 85 individuals took part in structured interviews, including 42 technology users with disabilities, 9 VET centres or training organisations, 5 digital skills trainers, 5 mainstream educators (universities and colleges), 6 employers, 10 NGOs and 8 policy advisors or other relevant agencies.

5. Results

It was confirmed that voluntary peer supports often arise naturally among people with disabilities in all countries and that sharing of information is common. All stakeholders – people with disabilities, educators, employers and NGOs – expressed a desire for more communication and collaboration with their peers in relation to digital inclusion and skills. Interaction with others is seen as crucial in solving their problems and many of those who currently don't share information themselves said they would like to. This validates the concept underpinning DigiPlace4All as a place to facilitate this supporting and sharing among peers.

Respondents with disabilities confirmed that they need help from people who understand their specific needs, taking into account their abilities and the devices and assistive functions they use.

The requirements gathering identified a number of issues that will have to be taken into account in the way the peer support facilitation works and the need for supporters and supported individuals to receive guidance. For example, respondents identified a clear need for the two parties to come to a shared understanding of the aims, commitments and boundaries of the support relationship in order to manage expectations and prevent dependencies arising. A number of respondents made the point that peer supporters need social skills as well as digital skills.

A key outcome from the requirements gathering which helps inform a direction for the development of DigiPlace4All is the finding that mainstream technologies have become as important to people with disabilities as specialised assistive technologies. In particular, a desire for more knowledge about mainstream mobile digital devices - tablets and smartphones - was strongly expressed. The increasing implementation of assistive functions within these technologies, for example the Voiceover screen reader built into Apple iOS, means that people with disabilities now use a wide range of devices, apps and services without specialised add-on hardware or software. A combination of mobile assistive functions and apps, all available and accessible on one device, are considered 'game changers' as they enable people to be more independent in everyday life tasks, including while at work and in education. There is a clear blurring of the distinction between mainstream and assistive technologies.

As well as receiving person-to-person support from peers who understand their abilities and the technologies they use, students, educators and employers all reported that they want access to reliable, up to date and trustworthy online content generated by their peers rather than by 'experts'. For example, people with disabilities said they would like step-by-step tutorials on how to apply for funding, social services, etc. using their technologies, created by people who have been successful in accomplishing those tasks.

Video was revealed to be a very important learning medium for all stakeholders. This was true even for blind respondents who appreciate videos in which all of the information is provided within the audio channel through a combination of narration and audio description. It was suggested that videos could be used to show case studies of success in accessing mainstream education and employment. Tutorials demonstrating how to use specific technologies would also be of great interest. However, people with disabilities

highlighted issues with the accessibility of video players and content (audio description, captions, sign language, translations) as barriers.

Some respondents expressed the need to ensure that online communities cater for beginners by addressing basic online skills and safety, having codes of conduct for community members, addressing cyberbullying, providing a glossary of terms, etc.

Respondents reported using a wide range of existing resources, including social networks and online forums, to develop their digital skills or knowledge of inclusion. It was felt to be important that DigiPlace4All does not try to replace these but links in with them.

The requirements gathering revealed a desire among people with disabilities for face-to-face contact. People with disabilities expressed a greater need for personal interaction than educators and employers who reported being more willing to find information through eLearning for example. Some people with disabilities are concerned about eLearning being too complicated and inaccessible. They prefer a blended learning approach in which they can meet face-to-face with trainers. There is also a very strong desire among people with disabilities for opportunities to have face-to-face meetings with their peers, including social meetings.

5.1 Country Differences

A major area of findings from the requirements gathering is the identification of some significant country-specific differences which will need to be taken into account in the development of the community in different locations. For example, the use of existing social networking tools such as Facebook and Twitter varies greatly between countries. This has implications for the way DigiPlace4all will support and integrate with these tools.

There are major variations in the specific technologies that are known about and are available to people with disabilities in each country. In Belgium, for example, digital skills trainers know very little about specialised assistive technologies (AT), even though these are still very important for many people with disabilities. This is due to a number of reasons include the strength of the AT industry in different countries, costs of AT, availability of grant support for purchasing AT, non-availability of assistive software in non-English languages, etc. In general, NGOs reported that a major source of information about technologies and inclusion is from people with disabilities themselves as expert users and digital skills trainers felt that they often lag behind their students in their knowledge of technologies. Supporting the creation of user generated content by people with disabilities can also help to educate NGOs and digital skills trainers.

In some countries there is a need to overcome barriers to collaboration within the NGO sector. Collaboration is often hampered by a culture of inter-agency competition and protection of knowledge which does not exist to the same extent in some other countries. There is also a greater need to strengthen relationships and collaboration between stakeholder groups in some countries. In particular, between NGOs and educators or employers.

6. Conclusions

The outcomes of this requirements gathering work have validated the decision to provide an online space to facilitate peer support and sharing. They provide sufficient guidance on required content and functionality for the production and evaluation of a first version of the DigiPlace4All community website. This will cover all stakeholder groups, so DigiPlace4All will enable people with disabilities to enter into one-to-one support relationships with other people with disabilities, educators will be able to develop similar relationships with other educators and employers with other employers. The findings suggest a shift of focus from specifically assistive technology, as provided by Gateway2AT, to digital technology in

general. In addition, they suggest a number of specific requirements for how the DigiPlace4All website should support users in sharing information and developing one-to-one peer support relationships.

The expressed desire for more knowledge about mainstream mobile digital devices technologies underpins some of the innovation in DigiPlace4All as the intention is to exploit the ubiquitous nature of mobile devices in an assistive technology context. It is envisaged that the responsively designed DigiPlace4All website will play an important role in reaching an increasingly mobile learning and training community, exploiting the explosion of assistive functions and apps on iOS and Android platforms.

The need expressed by people with disabilities for supporters who understand the technologies they use suggests that DigiPlace4All should provide a mechanism for members to request and offer peer supports according to user profiles that describe their needs, abilities and contexts. This echoes the earlier definition of 'peer' as encompassing the nature of the person's disability and the types of mainstream and assistive technologies they use to access the digital world. Eliciting these user profiles and using them to match peer supporters will be a major feature of the community.

The need for supporters and supported individuals to agree the aims, commitments and boundaries of the support relationship can be addressed within the mechanism for matching requests and offers of peer support through the community website. Requests and offers will be posted on the website in a listings-style as well as being sent directly to individuals as a result of profile matching. A request will describe such things as the overall goal, e.g. "to write a CV", the specific help needed, e.g. "laying out the contents professionally using Microsoft Word and NVDA screen reader", the length of time help will be needed, e.g. "for one week" and the preferred method of communication, e.g. "face-to-face meetings in the Dublin area". An online support request form will be used to elicit this type of information and compose the request listing. Offers will be composed and presented in a similar way. It will be important to allow members to control how much sensitive information about themselves is publicly available. Public requests and offers of support made through DigiPlace4All will therefore be anonymous and this anonymity will be maintained up to the point where the two parties need to make personal contact. All exchanges after the initial public posting will be private. The need for both parties in a peer support relationship for guidance on how to develop a successful relationship will be addressed by the development of guidance materials which will be made available to both parties at the onset of a peer support relationship. This guidance will cover the importance of paying attention to social skills in addition to digital skills.

In response to the stated desire for user-generated content rather than static 'expert'-provided material, DigiPlace4all members will be encouraged to create, share and discuss guidance documents, video tutorials, case studies and success stories in the community website. This will be facilitated by the website adopting a model of largely user generated blog- or wiki-style content, rather than the static pre-defined content provided by the Gateway2AT website. The shift to user generated content will present the community as a place for sharing and ensure its sustainability. Information about digital technologies and services constantly and rapidly changes and other information that stakeholders expressed a desire to share, such as training, funding, events and other opportunities, also have a limited lifespan of relevance. Static content will therefore become out of date very rapidly, as has been experienced on Gateway2AT. Adopting a user generated content model for all these information types will ensure that content is constantly updated and remains relevant.

Video will be used extensively as it was found to be a popular medium among all stakeholders. DigiPlace4All will therefore provide facilities for community members to upload their own video tutorials and create live video webcasts. Efforts will be made to ensure that all video functionality and content is accessible to all, for example by including

keyboard accessible video playback controls and supporting and encouraging content access services such as captions, audio description and sign language.

The question of how to link in to the existing social networks, online forums and other resources which all stakeholders already use is one that will need to be given a lot of consideration. DigiPlace4All will include a range of user generated content and will host its own forums but will also need to provide a route for members to reach these other important resources. How best to facilitate this is currently an open question.

Use of DigiPlace4All will be promoted by the provision of case studies showing success in accessing mainstream education and employment, particularly with the benefit of peer support.

To support the need for face-to-face contacts between community members, DigiPlace4All will include mechanisms to facilitate such opportunities. This may be through a dedicated discussion forum.

The biggest challenges going forward are to build a critical mass of community membership among stakeholder groups and put in place a management structure that will ensure the sustainability of the community and its online tools into the future, after the funded DICE project has ended. Hinchcliffe describes the role of online community manager as encompassing eleven task areas – platform management, project management, product management, customer management, professional development, brand management advertising and marketing, staff development, business planning, community management and content management [7]. The challenge will be to develop an organisational structure to guide the community through the following expected phases of its development.

1. DigiPlace4All is run by the project partner organizations with support from Champions.

2. DigiPlace4All is run by a Community Board of Champions with support from the project organizations. The President of the board could be a person from a partner organization.

3. DigiPlace4All is run by the Community Board. The Community elects a President and/or a managing committee, and recruits individuals to fulfil specific roles.

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