Digital the new normal? Multiple challenges for the education and learning of adults

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Introduction

> Media is ever present, but at the same time also invisible. The only time we notice media is when it does not work (Rahm & Fejes, 2015, p. 137)

Digitalisation, understood as 'the way in which many domains of social life are restructured around digital communication and media infrastructure' (Brennan & Kreis, 2014), is unmistakably a global megatrend permeating all walks of life. The effects are manifest in our daily shopping activities, our banking transactions, our leisure time life, the way we communicate, listen to music, watch TV and play games. Particularly the influence of digitalisation on the world of work is considered to have drastic social and economic consequences. Scholars comment these changes in diverse ways. Otto Peters observes that, in a period of not even twenty years, a 'digital' or 'virtual' world has increasingly appeared alongside the 'real' world, due to the rapid spread of the Internet and new media such as computers, laptops, tablets and 'the incredible triumph of the mobile phone' (Peters, 2013, p. 7). Manuel Castells (2010), views digitalization as one of the – if not *the* – defining characteristics of contemporary society. Optimists, like Jeremy Rifkin (2011) euphorically welcome the digital revolution. Other observers are more sceptical and point to the double-edged nature of digitalisation. They raise serious questions about the nature of the transformations it will bring to individuals and to society. Recently in Germany, an important group of intellectuals active in universities, in the media, in literature, in the churches and in business, have expressed concerns about the unprecedented changes produced by digitalisation. The members of this group have therefore presented to the European Parliament a 'Charter for the Digital Basic Rights in the European Union' (Charta, 2016), inviting policy makers to seriously consider emerging issues related to equality, safety, the use of algorithms, free speech, artificial intelligence, robot technology, transparency, the protection of data, elections, education, work, etc.

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Contradictory voices have been observed time and again throughout history, at the occasion of the emergence of new media. Their transformative potential was often welcomed enthusiastically. Yet, the promises also encountered profound scepticism. Plato criticized the transition from oral to written culture in Ancient Greece. He believed it would deteriorate the quality of the human memory. And, often the promises did not always bring the expected outcomes. 'Historians of technology would hardly be surprised to find more failures than success stories in this field' (Flichy, 1999, p. 33). So, a critical scrutiny of how the new media affects our society in general and (adult) education and learning in particular today is an important matter.

> In any case, a wild, unfettering revolution takes place in the conditions of knowledge acquisition in the Internet. This revolution affects the economy, human relations and education itself. The development of the free acquisition of knowledges, of literature, of music, of the present-day possibility to freely distribute knowledge and art all over the planet, on the one hand opens a very broad opportunity of cultural democratisation, on the other hand, it forces us to rethink the entire educational system' (Morin, 2014, p. 119, translation DW)

The 'digital turn' definitely affects various educational practices and policies. 'The technologies that become prevalent at a certain moment and at a certain place decide to a great extent what education is all about' (Vlieghe, 2016, p. 550). Written and printed media have been part of educational processes with divergent groups for a long time. The protestant revolt against the catholic church in the sixteenth century was enabled by the invention of the print media by Gutenberg and the subsequent popularizing of biblical texts. The French revolutionaries were inspired by the writings of the enlightened philosophers. In the nineteenth and twentieth century, citizens, workers and farmers achieved emancipation through participation in reading circles, through their membership in libraries, through exposure to radio and television programmes and through participation in distance learning institutions.

> When we know that the early printing was equivalent to the reformation, religious wars, the nation state, the school system, general literacy, the enlightenment, hence, to an entire Pandora's box of ambivalent achievements, we have good reason, in view of the immense events that happen today, to be just as expectant. The extent in which these expectations are articulated in the modus of fear or hope, is a matter of temperament'. (Peter Sloterdijk, in Eichert, 2010).

Today, the new, digital media are omnipresent. They have become 'the new normal' (Hinssen, 2011). They do new things. They create new types of public sphere (Celikates, 2015). Recently the use of social media such as Twitter and Facebook has strongly influenced dramatic political changes like Brexit and the election of President Trump. They have enabled the creation of a 'post-truth' culture (Peters, 2017). The new media 'give us new powers. They create consequences for us as human beings. They bend minds. They transform institutions. They liberate. They oppress' (Silverstone, 1999, p. 10). Or, in the prophetic words of Marshall McLuhan (1964), they are 'the extensions of man'. Knowledge and information are accessible almost at any time and any place. They create opportunities but also risks for educational practices. Social media is now part of diverse educational activities. Massive open online courses (MOOCS) are welcomed as the new instrument to democratize higher education. Much has been written and discussed, about these developments in education in general (Brookfield, 1986; Wildemeersch, 1991; Losh, 2014; Peters, 2013; Walsh, 2014, Peters, 2017). The radical changes are commonly framed as challenges for education.

Prototypical in this respect is the manifesto of the the European Association for the Education of Adults (EAEA) , to create a Learning Europe:

> We are at the cusp of enormous changes – from e-governments to online shopping to automatisation and all the changes that the internet will bring. This means that we need to close the digital gap and make sure that everyone is comfortable using computers, tablets or smartphones but also all other related tools. We can also assume that many jobs are and will be disappearing and new ones will be created. Europe will need knowledge workers that can adapt quickly to these changes, and learning is the key for this capacity. Many governmental services and tools for civic participation are now available online. Digital skills ensure digital inclusion and participation' (EAEA, 2015, p. 10)

However, the critical reflection on the relevance and the effects of the 'new' media in practices and theories of adult education remains fairly underexposed. Therefore, it is highly relevant to explore the perspectives, approaches and methodologies regarding digitalisation that are currently practised in the field of research on the education and learning of adults, particularly in the European context. For the call for papers of this digitalisation issue, the editors departed from some key issues related to the major changes taking place since the introduction of the digital media. Meanwhile, they have explored these issues further.

Changing places and spaces of learning

Some decades ago, learning spaces were mainly concentrated in traditional educational institutions such as schools and adult education centres. Then came various initiatives of distance learning such as educational radio, television and open universities, creating new opportunities for adults to study at distance from these institutions and to acquire degrees at their own rhythm. Today, the digital transformation opens entire new spaces of education and learning. Smartphones (mobile learning) tablets and Apps are becoming central media for informal learning. Classical boundaries between formal, non-formal and informal education are getting blurred. Knowledge and information are now widely accessible through the Internet, with Wikipedia as the most prominent example of that development. Still, recent research in Germany shows that teachers in secondary and higher education are often afraid or reluctant to fully engage with the opportunities of digitalisation (Hartung, 2017).

Online learning platforms such as EPALE, the Electronic Platform for Adult Education and Learning in Europe (https://ec.europa.eu/epale), are being created. EPALE, funded by the European Commission, is aimed at creating a digital community : 'Members of the adult education community can network on the features of the website (forums, blogs) throughout Europe.' Also augmented and Virtual Reality is gaining pace. The immersive qualities are expected to enhance learning. Virtual museum tours and exhibitions are becoming mainstream practices. Even entirely virtual museums, such as the national Virtual Museum of Canada, (http://www.virtualmuseum.ca/) are being created.

However, these developments also give rise to diverse questions. To what extent does online education and learning provoke further isolation of individuals? What is the value of face-to-face education as compared to online studying? What are the consequences of the new forms of access to adult education provision and the possible redistribution of educational opportunities for varied groups of adults. Simultaneously – and this is definitely not a contradiction – we currently observe in the field of adult

education a renewed interest in questions related to learning spaces and new learning architectures.

All these new developments have also had profound impact on the policies and the organisation of curricula (e.g. modularisation), on the accreditation of prior learning and on the development of national and international qualification frameworks. The changes seem unavoidable. But are they also unmistakably advantageous?

Digital literacy

Digital literacy is currently a major matter of public concern for educationalists and for policy-makers, often in connection with the discourse on competences. Joris Vlieghe claims that 'there is a fundamental difference between traditional and digital literacy, or more precisely between *what it means to be a literate person in digital and pre-digital times*' (2016, p. 558). The digital times we live in create a new gap between the digital literates and the digital illiterates. Wikipedia informs us that 'Digital literacy is the set of competencies required for full participation in a knowledge society. It includes knowledge, skills, and behaviors involving the effective use of digital devices such as smartphones, tablets, laptops and desktop PCs for purposes of communication, expression, collaboration and advocacy' (Wikipedia, 2017). It further informs us about the 'digital divide', or the gap between the people familiar with the use of new information and communication technologies (ICT) and the ones who have been left out of the consecutive digital revolutions (Mok & Leung, 2012).

This may have important consequences on how to organise practices of adult (basic) education in the future. Learning to read and write will need to be complemented by learning to use the new media. However, as Freire has taught us, literacy is not simply about 'reading the word', it is also about 'reading the world' in a critical way. So, in this respect also new critical questions emerge. Are adult education practices mainly engaged in supporting individuals to accommodate to the new digital world? Or are they also prepared to take up the role of stimulating critical digital literacy? Bernhard Schmidt-Hertha and Claudia Strobel-Dümer (2013) suggest, within practices of adult education for the elderly, to look for balances between stimulating knowledge on how to handle the new media and to simultaneously raise awareness on the risks of the use of these technologies. 'Not only is it necessary to offer adequate educational programs for older people but also informal learning processes within the social environment have to be initiated and supported. These self-controlled learning processes can, for instance, take place in self-organised computer groups or on Internet forums which, in turn, can be initiated and accompanied by educational institutions' (Schmidt-Hertha & Strobel-Dümer, 2013, p. 39).

Also the self-perception of adult education institutions will probably undergo major changes. They may have to move towards a more open institutional structure, supporting self-directed learning processes and bringing learners together. However, the institutional framework is likely to remain meaningful for the individual learner. Hence, adult education institutions will also in future continue to be more than pure service or learning agencies. Future research on these institutional aspects would definitely be quite relevant.

Opportunities and limitations for adult education and learning

The digital transformation of society is definitely also affecting practices of adult education. Pierre Walter observes that there is 'an unending creative stream of new courseware, learning platforms, web-based training modules, tailored search engines, web-based surveys, and reference and assessment software. Online, distance, and blended hybrid adult education programs are popping up everywhere, in part driven by new information and communications technology but also in response to the demands and learning styles of adult educators who prefer to learn within the digital world' (Walter, 2013, p. 151-152). Optimists such as Lynda Ginsburg et al (2000) claim that there are extraordinary opportunities for ICT to bring about change for adult populations with low literacy. They argue that particularly adult education practice is well-suited for this task since it is less hampered by rigid education systems, required curricula and constraints on individual motivation (Ginsberg, et al, 2000, p. 79). They further observe that digitalisation also strongly influences classroom culture in adult education. 'Some teachers and learners find the changes in the roles and the relative power dynamics of the teacher and learners exciting, while others see them to be disconcerting and confusing. Learners have access to a greater variety and depth of information independent of the teacher, who no longer has to specify all classroom activities, but may become a facilitator who questions, encourages, helps, and challenges. Learners take more control and responsibility for their own learning' (ibid., p. 82).

In addition, the concept of 'Personal Learning Environments' is becoming increasingly significant in relation to 'Connectivism', a learning theory for the digital age (Siemens, 2005). Learners develop their personal knowledge and learning networks through selective connections with other actors – whom they not necessarily need to know. Closely related to this is the concept of, networked learning' defined as 'learning in which information and communications technology (ICT) is used to promote connections: between one learner and other learners, between learners and tutors; between a learning community and its learning resources' (Jones, 2015, p. 5). Also contiguous concepts such as co-operative and peer learning gain prominence in the discussions in the field of practice.

On the positive side there is, for example, the phenomenon digital story telling. Many researchers report about this renewed interest in a methodology that goes back on a long narrative tradition in adult education. in diverse contexts and for different groups of participants, particularly disempowered populations who, with such stories, can make their voices heard. According to Marsha Rossiter and Penny Garcia (2010, p. 37) 'digital stories are short vignettes that combine the art of telling stories with multi-media objects including images, audio and video'. There is plenty of user-friendly software available on the Internet to engage with this methodology in adult education contexts. And they also claim that digital story telling contributes to the breaking-down of hierarchies in educational contexts and hence, to the increased self-direction and autonomy of the participants. Another positive aspect is gamification. Play is an element of culture as Huizinga (1949) pointed out in his book 'Homo ludens'. Game principles are said to foster the flow of experiences and to make learning more enjoyable. In previous years game-design elements have been introduced to non-game contexts such as classes for literacy education, as well as training practices in the armed forces. In addition, some authors, like Gee and Hayes (2013) and Harding (2011) suggest that gaming brings individuals together in new ways, while creating

opportunities to experiment with new identities and fostering new forms of associational life.

However, in line with what we mentioned above about the risks of the use of new media in everyday life, various authors point to the possible negative effects of digital media use. Particularly Otto Peters is very sceptical about the effects it could have on our cognitive functioning: information overload causes anxiety and reduces performance; multitasking, promoted by social media negatively influences concentration. In response to such effects, adult education practice can develop alternative ways. Pierre Walter therefore suggests to engage in 'digital outdoor learning' initiatives. In his view, there is a growing interest in outdoor adult education programmes with positive effects on our emotional, physical and mental health. Such initiatives can easily integrate digital devices, yet they can function as 'an antidote and a complement to the digital world, not only soothing tired computer eyes, aching backs and wrists, short attention spans and nervous bodies, but also offering holistic, mentally and physically challenging learning experiences' (Walter, 2013, p. 156).

Knowledge production and knowledge diffusion

Access to the Internet currently makes knowledge ubiquitously available. The intensity with which digital media have become entangled with our everyday lives is astonishing, although we do not seem to realize it any more. Digital media have become the new normal for many citizens throughout the world. Many of us are almost permanently online, for reasons of work, of leisure, of community building, friendship and family formation. 'Media is ever present, but at the same time also invisible. The only time we notice media is when it does not work' (Rahm & Fejes, 2015, p. 137). The Web 2.0 is the generation of interactive media. It stands for the creation and exchange of user-generated content through Blogs, Wikis, Twitter and other social media. Virtual/networked learning communities may transform practices of adult education. Benkler (2006, in Brennan & Kreiss) argues that 'peer' or 'social' production can take shape for the first time on a global scale. Open source communities, making use of open source software, create new opportunities of free knowledge sharing and joint knowledge production. The rapidly falling costs of the production and distribution of digital information, enables peer production to compete with market mechanisms of producing knowledge and culture.

The rise of digital media also creates opportunities for development purposes that may help to reduce the North-South divide. Open Educational Resources (OER) are freely accessible documents and media that are used for educational and research goals. The development and promotion of open educational resources is often motivated by a desire to counter the commodification of knowledge and provide an alternate educational paradigm (OER, 2015). Stimulated by supranational organisations like UNESCO and the OECD, varied materials and resources are made available online. The ambition of these initiatives is to facilitate the access to knowledge, particularly for those individuals and communities and nations that before were deprived of advanced access to knowledge and information. However, in connection with this development, also new questions arise. Next to the interesting advantages of the OER initiatives, Knox (2013) raises five important questions/objections. (1) Central concepts of OER such as 'freedom' and 'openness' are undertheorised. (2) The relationship between educational institutions (such as universities) and OER-organisations is ambivalent, particularly regarding the accreditation of what is being learned through the media (3)

In the OER-discourse the teacher is absent and hence, there is no place for pedagogy. (4) The humanistic assumptions of OER about autonomy and self-direction should be dealt with critically. (5) The OER-discourse is strongly inspired by a human capital philosophy that aligns with present-day needs of capital accumulation. In line with these observations we wonder to what extent adult education practitioners and researchers deal with these issues related to new forms of knowledge production and diffusion. Are they mainly supporting the optimistic, humanistic discourse on that matter, or do they also enhance critical reflection on these new phenomena?

The rise of new learning industries

As mentioned before, new media affect the relationship between informal, non-formal and formal learning/education in many respects. There is an intensified policy to formally recognize self-directed learning experiences in the informal contexts of the Internet, but also an increased blurring of the borders between non-formal forms of adult and continuing education and formal educational systems. This is clearly the case for the proliferation of MOOCS (Massive Open Online Courses) provided by universities resulting into (chargeable) certificates. In spite of the fact that the initial enthusiasm for these MOOCS has decreased, the recent dynamics demonstrates an impressive transformation (Schulmeister, 2013). Three years ago, the initiative resulted from a reaction against expensive fees for university courses. Today 16 million students study at the online college Cousera, which delivers a provision across 130 institutes. Harvard University and MIT (Massachusetts Institute of Technology) have put online courses for free on the non-profit learning platform edX . They have reported that, in the four years of the existence of this initiative, 4,5 million individuals have participated and 245.000 certificates have been awarded (Chuang & Ho, 2016).

There is an increasing pressure in the field of Higher Education to introduce digital learning environments, which will surely require important investments. However, this development will not be limited to the level of higher education. This process shows, as well as the videos of the Khan Academy that have been downloaded half a billion times from youtube, that new free provisions presented on the Internet reach big numbers of target groups. The immense popularity of the TED-conferences on youtube demonstrates the power of digital provision that opens new opportunities for marketization, as the commercialization of the TED-books demonstrates. Increasingly new societal models are being experimented, which raises questions about the balance between private and public provision (Weiland, 2015). Simultaneously the digital users are becoming increasingly transparent. Their data and profiles resulting from ‘data mining’, generate automatic learning profiles that are valuable for big IT-companies/learning industries and publishers.

Inevitable political issues

The developments described above, and their related assumptions about how digital media affect society as a whole and (adult) educational practices in particular, give rise to important political issues. Policy-makers are becoming increasingly aware how digitalisation, the Fourth Industrial Revolution with the focus on cyber physical systems, transforms our culture, our economy, our individual and social behaviours. To consider digitalisation as an isolated process would be an a-political approach. The

former president of the European parliament observes that the totality of our society changes through digitalisation. 'This can only be compared – if at all - with the industrial revolution of the 18th and the 19th century, that also produced social, economic, cultural, urban and climate changes. In its wake new political powers came forth, that put emerging social questions on the agenda' (Schulz, 2015, p. 6, translation DW).

However, one could also argue that policy-makers increasingly describe digitalisation as 'solutions' to various social problems, whereby adult lifelong learning is described as a central instrument for enabling these solutions. They could be seen as drivers of the increasing digitalisation, while technology is provided by a keen industry. In line with this, digital skills are placed at the core of programmes and initiatives of the Lisbon Agenda, and they are described by the European Commission (2015) as necessary components for meeting the *Europe 2020* strategy for lifelong learning.

Challenges for adult education practice and research

> Education has now undergone the digital turn and to a large extent been captured by big data systems in administration as well as teaching and research. Criticality has been avoided or limited within education and substituted by narrow conceptions of standards, and state-mandated instrumental and utilitarian pedagogies. There have been attacks on the professional autonomy of teachers as arbiters of truth. If education is equated almost solely with job training rather than a broader critical citizenship agenda for participatory democracy, we can expect the further decline of social democracy and the rise of populist demagogue politicians and alt-right racist parties' (Peters, 2017, p. 3).

Today the rise of digital culture raises questions that inevitably also need to be addressed by adult educators, by adult education researchers and in adult education practices, if they want to remain relevant in present-day and future society. There are issues of democracy and participation taking new directions through the new media. Four companies, Google, Facebook, Amazon and Apple 'now dominate the Internet, penetrate our way of life, establish new values in place of traditional ones, and propagate the image of the new person in the fully digitalized world' (Peters, 2013, p. 8). Social media, particularly Twitter and Facebook, has recently been discovered by politicians as alternative news media, creating direct contact with the public, without the filtering by the 'fact-checkers' in traditional media such as the press, radio and television. All this clearly has important consequences for education in general and adult-education in particular.

There is the issue of digital literacy and the new divide related to it. There is the issue of a one-sided ICT skills orientation in policy-making on lifelong learning. There are the issues of privacy, of data protection, the freedom of expression, and the threat of a "digital dictatorship" (e.g. biometric identification, Vault 7 practices), which became very prominent with the rise of new forms of terrorism. There is the issue of the private and the public provision of knowledge. There is the issue of new opportunities for education and learning, but also of new dependencies and hierarchies. There is the issue, particularly for the low educated, of job-destruction and job-creation, and how to deal with it in a digitalized way. Many more issues related to the present digital transformations are waiting to be dealt with in societal debates, but also in places, spaces and courses of adult education.

Researchers have been invited to reflect on these issues and to present the results of their theoretical and empirical research and studies in this digitalisation issue of RELA. We invited them to consider following questions while preparing their submission:

- What new learning spaces and learning formats are being developed in times of digitalisation?
- How does digitalisation change practices of the education and learning of adults?
- How do the digital infrastructures influence the education and learning of adults?
- What are the consequences of the digital change for the institutions and for the adult education professions?
- How are discourses, publicity and responsibility transformed through the omnipresence of new media?
- What policy-making tendencies can be observed regarding the connection between digitalisation and adult education and learning?
- What are epistemological aspects of the digital transformation?

Diverse responses

In the responses to this invitation the editors, on the basis of the reports of the reviewers, have selected five papers for publication in this thematic issue on digitalisation.

In the first contribution, the two Swedish scholars, Lina Rahm and Andreas Fejes approach the recent discourse on digitalisation, digital competences and digital citizens in a Foucauldian way as 'a history of the present' . A central argument in the paper is that popular education aiming for digital inclusion already commenced in the 1970s. At that time, computers and computerisation were described as disconcerting, which required popular education to counter the risk of the technology "running wild". In current discourses, digitalization is constructed in a non-ideological and post-political way. Computers and the internet have become so ordinary, domesticized and ubiquitous in everyday life that they are now beyond criticism.

The second paper by the Portuguese researchers José António Moreira, Angélica Monteiro and Ana Machado focuses on social exclusion. They analyse the reality of Distance Learning and e-Learning in a prison context in Portugal. The starting point of the analysis is the assumption, that inmates without technology skills are professionally and socially disadvantaged once they are rehabilitated. The qualitative study reveals that, in spite of high motivation of the students/prisoners, there are numerous limitations due to the shortage of resources, the lack of guidance and the limited access to digital, audio-visual and multimedia contents. The research shows that the inmates are rather sceptical about their reintegration opportunities, even when they are highly motivated to improve their technological skills.

In a third paper, the Italian researcher Rita Bencivenga, presents the results of a grounded theory research, focusing on the attitudes vis-à-vis ICT of a particular group of older adults (a 1952-1961 cohort). The participants in the study are selected because they feel quite confident with ICT. On the basis of extensive interviews with these individuals, the author comes to the conclusion that the dominant negative perception vis-à-vis older people, engaging with ICT, is not adequate.The traditional distinction between non-digital (or analog) natives, digital immigrants and digital natives is not

differentiated enough to understand the IT-conduct of different subgroups. She defines the researched cohort as 'digital curious'. Curiosity drives them to engage in online interactions. Bencivenga concludes that the digital curious can be important facilitators of intergenerational learning, particularly in support of elderly people who wish to improve their computer skills.

The fourth paper by Céline Cocquyt, Nguyet A. Diep, Chang Zhu, Maurice De Greef & Tom Vanwing, from the Free University of Brussels (Belgium), analyses the participation in online and blended learning courses, from a social inclusion perspective. They define social inclusion as the combination of social participation and social connectedness, which contributes to the strengthening of bonding and bridging social capital. The research design of the quantitative study – contrasting participation in online and blended adult education – leads to differentiated findings, e.g., that blended adult learning enhances the development of bridging social capital. Furthermore, the authors suggest, that non-native adult learners experience a higher increase in social inclusion and social capital as compared to native adult learners.

In the fifth paper, Paulo Moekotte, Saskia Brand-Gruwel and Henk Ritzen, from the Open University in the Netherlands, deal with the concept of media literacy especially for the low skilled and low educated. Their analysis, based on database research, reveals a lack of relevant findings regarding the search for 'effective elements of media literacy' in order to prepare low skilled youth for a profession. The article raises questions about the traditional understanding of the relationship between literacy practices and social-economic participation and present a heuristic framework for future research regarding media literacy for low skilled adolescents. According to this framework, skills of self-presentation, self-profiling, informational availability and networking play a central role in view of enhancing economic and social participation of the low-skilled and the low-educated.

We have added to this issue also two open papers that do not relate to the digitalization theme.

The first open paper of this issue is by Pierre Walter and Allison Earl. The title is 'Public Pedagogies of Arts-based Environmental Learning and Education for Adults'. In this literature study, the authors develop a theoretical framework to interpret adult learning processes in different arts practices related to environmental issues. They investigate three types of these practices in environmental movements, in eco-art initiatives and in tactical urbanism actions. They look at these practices through three pedagogical lenses developed by Gert Biesta: pedagogy of the public, pedagogy for the public and pedagogy in the interest of publicness. In doing so, they show the practical relevance of Biesta's theoretical approach and develop an outlook to interpret arts based citizens' initiatives from an adult education/learning perspective.

The open paper of the Italian researchers Rosangela Lodigiani and Annavittoria Sarli, on migrants' competence recognition systems in the Europe Union, has a few characteristics in common with some of the published papers on digitalization. They also consider the potentiality and the ambivalence of new educational measures, such as the recognition systems. The background of their research is a EU-funded project. A comparative analysis of ten EU countries was guided by the question how recognition systems potentially promote social equality and how a recognition system can be considered to be 'migrant friendly' or, in the framework of the capability approach of Amartya Sen, be 'capacitating'. The authors discuss the ambivalence of the recognition systems as, 'invisible instruments of discrimination'. Despite the controversial results of the study, recommendations for 'migrant-friendly' recognition systems, such as the need for flexibility within all the standardization efforts or the active participation by

the stakeholders, are given. This qualitative research highlights the need to respect the ‘voice‘ of all actors involved in this recognition process.

Looking backward and forward

In our introduction we have sketched digitalisation as an extremely dynamic societal development, producing diverse challenges and efforts. In view of this, the presentation of the contributions to this thematic issue of RELA, inspires us to formulate some observations, including some reflections on ‘failing discourses’ in the present-day research and debates on digitalization in adult education.

Skepticism regarding the promises of educational technologies

There is a general skepticism in the field of adult education about the question whether we are now confronted with a digital educational revolution or not. At least since the 1970’s, and the hype of ‘programmed learning’, the history of new educational technologies remains a ‘Potentiality Debate’. New visions were being developed. However, the connection between information technologies and learning remains a prerequisite. After euphoria comes deception

The fact that only few papers concerning the theme media pedagogy, e-learning and digital technologies have eventually reached us definitely is also the consequence of the formulation in our Call for Papers. The current edition Nr. 30/2017 of the Austrian Journal for Adult Education ‘Magazin Erwachsenenbildung’ (www.erwachsenenbildung.at/magazin) presents some strong contributions on the media-pedagogical competences and the role of digital technologies for language teaching and learning.

Equal opportunities in a digitalized world

The field of adult education is often preoccupied with the question of participation. Related to this concern, the selected papers do not engage in an intensive discussion about the involvement and the learning habits of target groups. Apart from prisoners and illiterates also refugees could be considered. The questions concerning digital basic education will definitely gain importance in the future.

Digital competence, social media and political participation

The political events of the ‘Arab Spring‘ have shown, in an impressive way, the importance of social networks for democratic movements. A few years later, however, we have learned to see also the ambivalences and dialectics of the social networks. In spite of this, the social dimension of the new media and the networking and collaboration potentialities for learning processes, remains underexposed in the pedagogical discussion. Also the discussion about ‘common goods‘ or , the ‘Commons‘ are viewed in a rather defensive way in adult education.

Whilst in the previous decade the competence concept gained prominence in various policy documents and curricula, a substantial debate about the concept of ‘digital competence‘ is still more or less absent. The continued relevance of the question of media competence is shown in an impressive way, against the background of current

societal and political developments, in the 'Whitepaper on Digital and Media Literacy', published already in 2010 in the US (Hobbs, 2010, XI). 'It is vital for citizens of a pluralistic democracy who are committed to freedom and diversity to develop these competencies concerning:

- Reading or watching the news
- Writing a letter to the editor
- Talking with family, co-workers and friends about current events
- Commenting on an online news story
- Contributing to an online community network
- Calling a local radio talk show host to express an opinion
- Taking an opinion poll
- Searching for information on topics and issues of special interest
- Evaluating the quality of information they find
- Sharing ideas and deliberating
- Taking action in the community

All these ideas could be considered interesting suggestions for the programming of a relevant adult education activities on how to engage actively with social media and ICT.

Institutions and professionalisation of adult education

When digitalization is a societal megatrend, it will have various consequences for the institutions of adult education. The reflection on this aspect is still missing, particularly regarding the development of new business models (commercialization) and new legitimacy claims, e.g. the development of new learning architectures in 'educational landscapes' that support self-directed learning processes.

Also the consequences for professionalization efforts in the field of adult education remains an important developmental undertaking. Nowadays we notice in many European countries the ambition to provide resources and community building support to adult educators with the help of ‚Web-Portals'. The question whether this evolution will enhance professionalisation or, on the contrary, de-professionalisation' remains open so far.

Many challenges regarding diverse aspects of digitalization are still waiting to be dealt with by adult educators and adult education researchers. We hope that this issue will inspire them to engage with these challenges and to develop creative answers to the many questions that have been raised and that definitely will be raised in the future.

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Popular education and the digital citizen: a genealogical analysis

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Abstract

This paper historicises and problematises the concept of the digital citizen and how it is constructed in Sweden today. Specifically, it examines the role of popular education in such an entanglement. It makes use of a genealogical analysis to produce a critical 'history of the present' by mapping out the debates and controversies around the emergence of the digital citizen in the 1970s and 1980s, and following to its manifestations in contemporary debates. This article argues that free and voluntary adult education (popular education) is and has been fundamental in efforts to construe the digital citizen. A central argument of the paper is that popular education aiming for digital inclusion is not a 21st century phenomenon; it actually commenced in the 1970s. However, this digitisation of citizens has also changed focus dramatically since the 1970s. During the 1970s, computers and computerisation were described as disconcerting, and as requiring popular education in order to counter the risk of the technology "running wild". In current discourses, digitalisation is constructed in a non-ideological and post-political way. These post-political tendencies of today can be referred to as a post-digital present where computers have become so ordinary, domesticized and ubiquitous in everyday life that they are thereby also beyond criticism.

Keywords: digitalisation; computerisation; adult education; popular education; genealogy; data politics; algorithmic politics

Introduction

Historically, new technology has been seen both as representing the promise of a brighter future, and as a source of worry and fear. Technologies such as the car, the radio, and television have in different times in history been described as inhabiting emancipating

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and democratizing potentials (Winner, 1980) as well as presenting society with new kinds of accidents (Virilio, 2007). Computers are no exception.

Today, being a digital citizen has become a default mode of existence (Kaun & Schwarzenegger, 2014). New media usage is habitualised and omnipresent, making it almost inescapable in terms of everyday citizen activities. These changes have been described as demanding a new set of basic skills. No longer are literacy and numeracy skills enough in order to live life as full citizens; citizens now also need to develop digital skills[1] (European Commission, 2010; OECD, 2013). Problem-solving in digital environments was for example one of the so-called "basic skills" measured in OECD's (OECD, 2013) recent survey of adults' skills (PIAAC), and it was amongst other things concluded that:

> Proficiency in information-processing skills is positively associated with many aspects of individual well-being, notably health, beliefs about one's impact on the political process, trust in others, and participation in volunteer or associative activities (OECD, 2016, p. 18)

Digital competencies are in the above excerpt described as merging with participation in society and to be able to exercise active citizenship. However, these digital skills are not only spoken of as important to individual citizens; they are also addressed as a necessity for securing Europe's future growth and prosperity in general. As argued in a recent EC paper on lifelong learning, digital skills are essential in order "to get Europe back on track" (European Commission, 2010, p. 3) or as argued by the Swedish government and the Swedish Association for local Authorities and Regions in their united plan for digitising the public sector, the digital should be seen as a default mode of representation in society (Ministry of Enterprise and Innovation, 2015). This line of argument is also common in descriptions of the so-called "refugee crisis", where electricity and connectivity (especially through smartphones) are framed as being as essential to refugees as, for example, medicine and water (UNHCR, 2016).

The digital society thus demands a digital citizen, one who is both digitised in records and archives as well as embodying the digital skills needed in order to adapt to changes taking place in society. The overlap between digitisation and enactments of citizenship produces "digital inclusion" as normalized, desirable and non-political, thus also generating "digital exclusion" as marginalisation, and as something that adult education must change.

The above ways of speaking of digitalisation, digital skills and the citizen seem to suggest that the digital citizen holds a neutral and apolitical position. Current developments of digitalisation are construed as unavoidable, and the associated skills needed are not specified or questioned. In this article, we will argue that such ways of speaking are problematic, or even dangerous (Foucault, 1991a), as they suggest that digital exclusion is also an exclusion from society. By historicising the present way that digitalisation, digital skills and the digital citizen are spoken about in Sweden, we will illustrate how there are other possible ways to speak about these things. We will specifically direct our attention towards popular education, which in contemporary as well as historical times in Sweden, has been positioned as an important route by which adults can develop digital skills.

Popular education and digitalisation in Sweden

Popular education can be described as a mainstream activity in Swedish society that is also, to a large extent, state-integrated (Edquist, 2015; Laginder, Norvall, & Crowther, 2013). Throughout the 19th century popular education was dominated by social

movements, which during the beginning of the 20th century resulted in the emergence of study associations and the pedagogical format 'study circles'. During the 1900s, popular education further established itself, partly through increased state sanctions and support. For a very long time, study circles and folk high schools were the predominant form of education for adults in Sweden. Even though popular education since 1944 has been based on the idea of being "free and voluntary" (Government Bill, 1990/91:82), in practice, popular education has been highly dependent on state support. As such, the Swedish government has also, at different times, required popular education to perform specific educational tasks, which also shaped the site and content of popular educational institutions (Edquist, 2015). The educational task of interest for this paper is popular educational efforts regarding computerisation. The Swedish public debate on computerisation started during the 1960s and intensified in the 1970s (Ilshammar, 2007). In the 1970s computers were depicted as a 'dangerous computer force' and the suggested solution to deal with this threat was often popular education. Voluntary, extensive, state-supported information and education was seen as the most effective way to educate every citizen.

Sweden is a particularly interesting and accessible case when it comes to the interaction between citizens and digitalisation because of its long tradition of state interventions to increase adults' computer skills. From an international point of view Sweden was a computerisation forerunner. Already in 1950 Sweden had built a world class computer using state funding (Lindkvist, 1984). During the 1960s, the Swedish state was the largest customer of computer equipment in Europe, and in 1998 the Swedish people owned more home computers per capita than any other country in the world. Also, in international comparisons the Swedish state has taken a very active role in computer-citizenship debates over the last 60 years or so. For example, during the 1970s Swedish "data politics" mobilised in such a way that early instantiations still have civil repercussions (Glimell, 1989). At present, according to PIAAC's study of adults' skills, Sweden comes out on top of all OECD countries as regards problem-solving in a digital environment (OECD, 2013). Currently, Sweden is also one of the countries with the highest percentage of Internet users (however, Sweden is also one of the countries in the aforementioned PIIAC study that shows a great inequality in skills between different groups). Time spent on the Internet is increasing every year, and currently Swedes devote more than a fifth of their waking hours to online activities (IIS, 2016). In Sweden, nine out of ten people own (at least) one computer and use the Internet daily. However, this also means that one in ten do not. Nationality, as well as age, class, gender, ethnicity, mother tongue and other 'unifying signifiers' (Lykke, 2010) determine who is, in fact, "digitally included".

The aim of the article is to historicise and problematise the ways the digital citizen is co-constructed in Sweden today in relation to popular education, in order to open a space for further debate. In the next section we introduce our theorisation and empirical material, followed by our analysis, ending the article with a discussion.

Genealogy, empirical material and analysis

This paper draws on a genealogical approach (Foucault, 1983, 1991a, b, 1998) in order to historicise and problematise present ways that digitalisation, digital skills and digital citizens are spoken about. A genealogy questions the constant search for origins and beginnings or for truths about human nature or the world; it questions the search for essence and stability. The starting point is rather to destabilise and question the taken-for-

granted ways in which we think and go about doing things in the present day. A genealogy could thus be called a history of the present (Fejes, 2006; Popkewitz, Pereyra, & Franklin, 2001).

A genealogy acknowledges that histories are not objective and that the author cannot detach herself from the discourses of which she is part. Authors conducting genealogical analyses provide one possible story to tell about our present, which aims to illustrate how the present is not a logical or deterministic effect of the past. The present is rather an accidental construction composed of diverging elements with different historical trajectories. A genealogical approach could thus be described as a history of effects, which at the same time highlights complexity and contradiction. The focus of the genealogist is to trace the descent and emergence of the ideas that are taken for granted in the present so as to disrupt, question and destabilise the present (Foucault 1991a, b). The analytical focus is directed towards power relations. Here, power is not seen as something that a certain person has or wields over others. Power is rather something that exists everywhere, and something that is relational. Instead of asking the questions of where power is or where it comes from, a genealogist asks the question: How does power operate and with what effects? (Foucault, 1998).

In order to problematise the present ways that digitalisation, digital skills and the digital citizen are spoken about we have selected a range of documents that in different ways describe popular education efforts supported through state funds. For an analysis of the contemporary time, we have selected recent policy papers on digitalisation and popular education published by the government as well as the Swedish National Council of Adult Education (Andersson & Laginder, 2006; Andersson, Laginder, & Landström, 2007; Government Offices of Sweden, 2016; Ministry of Culture, 2015; Ministry of Enterprise and Innovation, 2015; Swedish Government, 2014; Swedish National Council of Adult Education, 2004, 2007, 2008, 2009, 2013, 2014a, 2014b, 2016). The latter is a non-profit association assigned (by the Swedish Parliament) to distribute government grants to study associations and folk high schools. In order to perspectivise the present time, we have further selected texts, film and audio that represent some of the earliest and largest projects addressing computerisation in Sweden:

> **Computers on our terms (Datorer på våra villkor),** 1975 –1976 – Public Service Broadcast and textbook. The material consists of four radio shows broadcast in 1976 and a textbook from 1975. The book could be used independently of the radio shows. The titles of the shows are telling: The computer as a work mate; The good computer; Should we be scared of the computer?; and The computer in the future. (Björk & Saving, 1975; Radio Sweden, 1976)
>
> **Computer skills (Datoranvändning),** 1978 – Textbook. The first and largest computer course ever delivered in Sweden. Created by distance education company Brevskolan and the Swedish Trade Union Confederation. One hundred thousand course participants. (Swedish Trade Union Confederation, 1978)
>
> **Computer Force in Society (Datakraften i Samhället),** 1978 – Report. The first large-scale popular educational effort, including many different formats and collaborations between different actors, aiming to inform about, and create discussion around, computers in society. (Swedish Council for Planning and Co-ordination of Research, 1983; Trost, 1982)
>
> **The Electronic Horse (Den elektroniska hästen),** 1979-1981 - Public Service broadcast and governmental report. One of the sub-projects supported by Computer Force in Society. The movie was shown in schools, in study circles and broadcast on Swedish national television. The somewhat awkward title of the movie is explained through an analogy with

> the old American company Pony Express, which delivered mail via horses and their riders. The company only existed for one year (from 1860 to 1861), but during that period it was the fastest and most direct means of east-west communication in the USA (just before the telegraph was established). The movie furthers the analogy by stating that the telegraph was also a "horse of a kind", carrying information on its back. (Seth & Svanberg, 1981)

> **A child for the future: a feature about the microcomputer – the atom bomb of the information age** (Ett barn för framtiden: En feature om mikrodatorn - informationsteknikens 'atombomb')**,** 1979 – Public Service Broadcast and text material. This is a play, which was broadcast on national public service radio in 1979. It was conceived in collaboration between a Swedish professor in information theory and computer communication and a number of professional actors. The play was based on interviews with researchers as well as industry and business representatives. As such, it was described as a 'docuplay'. It went on to win the Prix Futura, an annual European competition for radio shows. (Hellberg & Kristiansson, 1979)

Our analysis of these texts directs its attention towards the operation of power and its effects (Bacchi, 2009; Fejes, 2006; Foucault, 1983, 1991b). We do so by firstly focusing on what problems emerge, or rather, how certain problems are shaped in the material. Secondly, we focus on what solutions are suggested for the problems emerging. And thirdly, we identify the effects of power relations in terms of what subjectivity emerges in terms of who is the target of intervention. More specifically, during the analysis of the material, recurring patterns of problematisation have been identified, as well as breaks and disruptions. As such, the analysis is not presented in a strict linear and progressive storyline. Such a representation is necessary to reflect the complex and intertwined relationships that make up the history of digitalisation, digital skills and the digital citizen. In the following, we first introduce our analysis of the present time, followed by our historicisation.

Popular education and the digital citizen in the present time

Taking the point of departure in present day educational efforts, the following section will identify how the problems, solutions and targets related to the shaping of the digital citizen of today are described in the texts. Turning to current governmental guidelines for the Swedish National Council of Adult Education, it is stated that the council should make "special efforts to increase the digital inclusion of citizens". In line with this, the Swedish National Council recently stated that:

> The effects that digitisation has on society and citizens impacts the requirements for popular education now and in the future. […] Digital inclusion is becoming an increasingly important prerequisite for the enactment of citizenship. By the same token, digital exclusion is becoming societal exclusion. (Swedish National Council of Adult Education, 2014)

The excerpt above shows how popular education is described as a central actor in the work to "include" all citizens in the digitised society. The quotation further illustrates how digital skills are seen as necessary not only to keep up with digitalisation, but in order to be included in society. Another example with similar ways of reasoning emerges in the governmental bill 'Learn, grow, change' where the Swedish National Council of Adult Education is given the specific assignment to bridge the "digital divide" (Government Bill, 2005/06). Furthermore, in 'A roadmap for Popular Education' which is a politically charged publication from the study associations and folk high schools, it is stated that: 'The democratization of digitalisation is an assignment equivalent to teaching the

population to read and write' (Swedish National Council of Adult Education, 2013, p. 27). The significance of popular education is also stressed in a recent Swedish governmental report on the media, which explains how Sweden now is now in need of a new era of popular education. In the aforementioned report, citizens are referred to as 'netizens', because 'traditional and digital media, companies, organisations and media-citizens are connected in a new expanding ecosystem, where anyone and everyone can be media' (Ministry of Culture, 2015, p. 23).

The great importance assigned to the question of adults' digital skills and popular education as a way to promote societal inclusion was further confirmed by a number of so-called 'digital dialogues' intended to spur discussion and interest in a larger follow-up conference, organised by the Swedish National Council of Adult Education in 2014. A concluding report summarizing these dialogues and conferences was presented to the government in February 2015 (Swedish National Council of Adult Education, 2014b). Notably, this report is only the latest in a very long line of similar reports (Andersson & Laginder, 2006; Andersson et al., 2007; Swedish National Council of Adult Education, 2002, 2007, 2008, 2009, 2014a, 2014b). Similar reports were also published, as part of Swedish Government Official Reports suggesting that public education is a key actor for computer education initiatives (Swedish Ministry of Education, 1979; Swedish National Council of Adult Education, 2004). The concluding report on the aforementioned 'digital dialogues' describes two problems as predominantly important for popular education to address. Firstly, basic digital skills are compulsory requirements for a citizen of today (and thus their acquisition is an important mission for popular education). Secondly, that popular education must "keep up" with an increasingly digital society, and be an agency that is "contemporary". The report concludes that increased competency for teachers is a key solution to this problem (Swedish National Council of Adult Education, 2014b).

As illustrated, popular education has been seen as *particularly* suitable for projects related to digital inclusion. For example, the unique societal position and communal methodologies of popular education (e.g. in working for equality and democracy) have been identified as helping to counteract the risk of "isolated individuals in front of a machine" (Swedish National Council of Adult Education, 2002). As such, popular education has been seen as supporting discussion and enquiry as a different and/or complementary road to knowledge.

The problematisation mentioned in the texts from the present time is thus that contemporary society needs citizens who have digital skills that make it possible for them to manage life as citizens, and thus they will contribute to the further development of society. Popular education is positioned as an important solution that is expected to successfully target those who do not have digital skills, and help them to acquire such skills, and thus avoid the risk of being both digitally, as well as socially excluded. Digitalisation in itself, and the need for digital skills are not disputed nor are they problematised. Rather, the need for these skills is taken for granted.

However, even though all citizens are seen as needing digital skills, some groups are positioned as in risk of marginalisation. These are the elderly, non-natives (especially if they are born outside of Europe and have little or no education), the disabled and the homeless (which are seen as excluded groups that run the risk of being offline and thus 'off-citizens') (Swedish National Council of Adult Education, 2008, 2016). Popular education is here, in relation to digitalisation, especially given the task of directing its activities towards these groups.

Taking the point of departure in such a way of shaping the present time, we now turn to texts from the 70s and 80s in order to identify what problems, solutions, and targets for

these solutions concerning digitalisation, digital skills and the digital citizen are put forward in these texts.

What's the problem? From lurking threat to harnessed ubiquity

During the 1970s many heated public debates regarding computer technology took place in Sweden. As previously mentioned, several stakeholders became sceptical of the potential benefits of the computer. For many, the computer had become a symbol of a large-scale, technologically determined society and its impending risks. The debates during this period were mainly focused on issues such as personal integrity, the hegemony of IBM, surveillance, and questions of work pursuits (Lundin, 2015; Ministry of Industry, 1973).

Doubt and anxiety about the role of the human in these "machine cultures" challenged the previous enthusiastic and confident takes on the future (Swedish Ministry of Education, 1979). Debates on work pursuits mainly revolved around whether the computer could be the cause of mass unemployment, but also what the quality of future work would be like. In the mid-1970s, the computer policy expert at the Confederation of Swedish Trade Unions described a fear for a future where everything would be automated and all jobs would be streamlined, and then a future where only very few jobs were left, with very little real content (Emanuel, 2009). Here it could also be mentioned that in the UK, the British Trade Union ASTMS had demanded a redistribution of the income and wealth coming from computerisation. Inspired by the ASTMS report (on the potential rise of unemployment), The Swedish Computer and Electronics Committee (1981, p. 15), wrote that 'we should seriously consider the possibility to give everyone a minimum income' as a solution to this problem. From a collaborative effort between unions and work-life researchers a suggestion came that unions should be able to veto any application of computer technology until a data policy of their own had been worked out (Glimell, 1989, p. 33). Similar reasoning is also visible in the material for the course 'Computer skills' where it is stressed that unions must be given the right to approve any new computerised systems planned for certain workplaces. Furthermore, unions should be able to test systems before they are permanently implemented, and the introduction of computers should be performed at such a pace that any consequences can be safely surveyed. If the systems and their consequences are not deemed positive, an option to reverse to previous practices should be available. The course 'Computers on our terms' from 1975, highlights that many unions in Sweden stress that the entire development path, should, in fact, be reversed, before the situation becomes too difficult to handle (Björk & Saving, 1975).

Interestingly, tensions between yea-sayers and nay-sayers disappeared in the transit into the 1980s. By then, the development was instead described as unstoppable and that we needed to harness this inevitable progress before it became too inhumane. We can thus here identify a shift. From computerisation described as stoppable, to computerisation being constructed as inevitable (Seth & Svanberg, 1981)

The idea of the inevitability of computerisation is illustrated in the so-called docuplay entitled 'A child for the future: a feature about the microcomputer – the atom bomb of the information age' which was broadcast on Swedish public service radio in 1979. This docuplay starts with a quote from one of several interviewed specialists: 'We no longer ask what use we should put computers to, but what happened!? Technological progress outpaced our wildest fantasises' (Hellberg & Kristiansson, 1979, p. 1). The setting of the docuplay is a future where computer technology has had an impact on most jobs. It goes on to debate how we (humans) should think about and relate to a future where

computers even program themselves, independent of human input and limitations. In a perhaps deliberately provocative spirit, computers are proposed to become self-sustaining and perhaps even fitted with so-called 'dummy knobs' (buttons without any function) which are used to evaluate human workers by first, simply counting the number of pressings, and secondly, by also producing a certain experience of meaningfulness for the human worker. Another risk that is discussed is whether people in the future will become even lonelier by having to resort to socialising with computers rather than other human beings. In the docuplay, the computer is described as inevitable, both in the sense of technological determinism, but also in a more societal way, as inescapable for citizens in their everyday lives. Everything is described to be computerised: work, democracy, relationships, education, and even parts of the human body, but this will also enable increased survailience as depicted below (Hellberg & Kristiansson, 1979, p. 25):

> Narrator: You see, these systems of control increase the possibilities for rapidly finding people with "deviant" behaviours. People who don't perform, or people who have taken on some odd habit or strangeness that needs to be corrected.
>
> The child: But, hey? If I give you something… or lend it to you – can I have it back later on, if I want to?
>
> Narrator: Yes, of course.
>
> The child: If I give you a secret? Can I have that back too?
>
> Narrator: No…
>
> The child: But, then you can't really give me back any information that I provide to a database either?

The risk of inhumanity associated with computers is further developed in the docuplay when it warns its audience that Taylorism is on the rise, and will be even more empowered by computers. Similar reasoning emerges in the textbook 'Computer skills', where it is emphasised that Taylorism builds on a negative view of humans, where people are not intrinsically motivated to work or take responsibility for anything unless they get monetary compensation. Competition and control become central functions, and computers will enhance such governance of work places, not least because with a continuous increase of efficiency in computers, an increased efficiency in individual workers will be equally expected. Workers will have to acclimatize to this efficiency and those who cannot cope will be separated and left behind.

In the mid-1970s, most people had little contact with actual computers. The textbook from the project 'Computers in our terms' states that there were approximately 800 general purpose computers in Sweden, most which were used for administrative purposes. As such, the discussions about the risks of computerisation were, in many ways, about the *imagined future* risk. For example, the potential of stored information about an individual was referred to as a 'data shadow'. In the future, this data shadow would be what determined any decisions and valuations about the real human being. The metaphor was also used to describe how the data used to represent a person would always be a more meagre and defective version of the living being—creating a tension between the machine and the human as two distinct opposites (rather than as merging entities in the eyes of governing systems).

Likewise, discourses of today (in response to the ubiquity of digital technologies) are still about *imagined* future affects and dangers. An important shift of today´s

discourses on computerisation can be described as a shift from fear of the affordances of computers to discourses focused on a utopian view about endless possibility. While there are still critical voices being raised, the digital imperative has changed from expressed fears (at least by political actors) to warnings that are more about the potential dangers of not digitising everyone and everything fast enough.

Summing up the discussions of the 1970s: both on-going and imagined effects of computerisation were seen as worrying because of the power computers hold in terms of potential societal change. The concept of a computer revolution was a recurring one, and it was seen as bringing about thorough and uncontrollable changes. Popular education was construed as an important vaccine against these potential plagues that could haunt the future, which will be further elaborated upon in the following section.

What is the solution? From left behind to left outside

As previously illustrated, today, popular education is shaped as a solution to the digital divide providing opportunities for citizens to develop the specific digital skills needed in order to be included in society. Such skills are not specified or problematised, and are construed as needed in order for citizens to avoid being left outside society. In the 1970s, popular education was also shaped as a solution to digitalisation (computerisation), but it was thought that critical knowledge should be developed in order for citizens to be able to question and criticise computerisation, and in doing so, handle the risks identified. Or rather, the goals for popular education were to spur discussions, reduce computer anxiety, create opportunities for public assessment of new technologies, and thus create a desirable future for one and all (instead of a ruling few). However, there was a shift in the early 1980s (as mentioned in the previous section) from constructing computerisation as a threat to constructing it as inevitable. Such a shift could also be spoken of as an idea of "keeping up with the development" to avoid the risk of "being overrun and left behind". Popular education thus became a tool for people to keep up with developments. The main reason for educating citizens at this time can be defined as a techno-determinist one: 'We cannot stop the development' (Laginder, 1989, p. 11). Such a techno-determinist idea is depicted in the movie 'The electronic horse', where, even though the narrative is structured as a debate between two people, debate as a communicative tool is also presented as almost pointless. One of the debaters, the so-called technocrat – dressed in a white lab coat – expresses himself very positively about computerisation. The other, the so-called humanist, is portrayed by a female actor dressed in everyday clothes.

> The technocrat: Don't think this is a democratic vote about computerisation – it is already too late. It would be the same as voting 'yes' or 'no' to electricity. Without the power of computers this society will collapse into chaos. Chaos! This (computing) is precisely what is going to save us from the energy crisis and the crisis of the industry.
>
> The humanist: The industry? The industry?! That's all you think about! I don't give a damn about the industry. I care about people. The social price of the computerisation of society can be much higher than you can imagine, you conservative inventor! With the help of computers we are creating an information society, an electronic society, where the intrusions in our privacy and social behaviours will be severe!
>
> The technocrat: Technology in itself is not evil. The computer is nothing but an electronic horse.
>
> The humanist: And the horse is running amok! Is it not through information technology that a handful of multinational companies have seized power over the entire world? And turned

> politicians into a bunch of powerless puppets with no possibilities to influence the development?
>
> The technocrat: No, no, no, there is no conspiracy. That idea is just a crazy theory created by fevered Marxist brains. Not even IBM controls the development of computers. This development is not controlled at all. Are you listening? Not controlled! Do you know what will happen if you are allowed to keep up with this soft-humanist mumbo jumbo for a few more years? We will be overrun on two fronts! From above and from below. From above by a repressive big brother society, and from below by today's teenagers who have a non-prejudiced approach to technologies.

The two antagonists do not reach consensus. Instead the movie concludes with a scene of a child in front of a computer. The narrator declares that the best solution would be if we could "use the good bits and avoid the bad bits". Superimposed over the images of the child in front of the computer is a text which declares that computerisation is one of the most important societal questions of the 1980s. It is also stressed that even though computerisation is probably inevitable, it is also humans who decide the rules computers follow, who programs them, and who submits the data computers are supposed to compute.

The above example illustrates how the discussions on computerisation in the early 1980s can be described as "a train leaving a station". There was the option to 'jump on board' or to be 'left behind'. Today the descriptions are different – citizens are included or excluded. You are not left behind, but left outside. When digital literacy today is described as a precondition for citizenship (in policies and guidelines), this represents a particular kind of problematisation i.e. the problematisation thus shifts from digital exclusion to societal exclusion. Thus, when digital inclusion is conceptualized as a precondition for citizenship, the person not digitally included is concurrently also excluded from citizenship (and maybe even excluded from society in general)

Who is targeted for this solution? From everyone to the marginalised

Today, popular education in terms of developing digital skills is directed at those who are categorised and deemed as at risk of being excluded, i.e. those without the digital skills identified as important to live life as citizen. So even though "all" citizens are seen as needing certain digital skills, popular education intervention is directed at the few—those on the outside (cf. Fejes, 2006).

Turning to the texts from the 1970s and 1980s, the target of popular education intervention is everyone. The entire population is in need of knowledge that can be used to criticise and debate the computerisation of society, and in so doing, potentially take charge of more humane developments. The governmental efforts to reach the entire population and educate adults in computer skills made use of a range of popular education practices including study associations, libraries, and folk high schools, as well as unions and the Swedish education broadcasting company, often in collaboration with each other. Study associations, sometimes cooperating with unions, provided education in computer skills, both during working hours as well as during free time. As such, popular education became a key actor in computer education. Popular education was also described as a general remedy to an uncontrolled debate coloured by emotion and pure speculation rather than actual knowledge; thus popular education would work to generate a controlled and sensible debate on the imagined future societal impact of computers (Emanuel, 2009).

In other words, educational efforts focused on the entire body of citizens in mobilising a readiness for the future (Björk & Saving, 1975; Swedish Trade Union Confederation, 1978). Educating everyone about the possible societal consequences of

computers and thereby making citizens more equipped for an informed debate about the computer can be described as the main solution to the imagined future risk of computers. Thus, a debate between different stakeholders was described as an effective way to shape the systems of the future. In the course 'Computers on our terms' debate is presented as important because it asks us 'what do we *want* to do with computers, instead of just doing everything we *can* do' (Björk & Saving, 1975, p. 7). In the course this was described in the following way:

> So far, our possibilities to influence the computer revolution have been next to none. We have been forced to adjust our everyday lives to a technology which is being controlled by powerful economic interests. It is only during the most recent years that computers have started to worry politicians and unions. Today, more and more of us are asking the important questions: Who controls whom? Why? How can we exercise our influence on the development? The only way towards more influence (outside of experts) is wider knowledge about computerisation. The purpose of 'Computers on our terms' is precisely this: to give a broad orientation about computer society." (Björk & Saving, 1975, foreword)

Popular education was seen as the appropriate broad channel through which this kind of education was best delivered, mainly due to its foreseen capacity to develop a democratic approach towards computers in society. That is, if there is a foundation of democracy and solidarity amongst citizens, the worrying side effects of computing could be turned around to work for citizens and for positive societal development. The ambition that all citizens should take part in this assessment of the new technology would counter the risk of the technology "running wild". Thus, popular education was regarded as the main means to reach this end.

What the above analysis suggests is that there has been a shift in focus. Popular education in relation to computerisation was in the 1970s and early 1980s directed at everyone, as this was construed as essential in order to control change and use the computer in a humane way. Today, the focus of popular education in relation to digitalisation is directed at those who are deemed to be at risk of exclusion, such as the elderly, migrants etc.

Discussion

This article has shown how computerisation and citizenship have converged and historically shifted from a "fear of computer force" to digital inclusion. Remarkably, and regardless of whether it is hope or fear that dominates the discourse, popular education has been put forward as a solution to the identified problems. Thus this paper shows how government action, in the form of broad information campaigns and popular education directed at citizens, is an important but often neglected aspect of the computerisation of society, both historically and today. Furthermore, the relationship between problems and solutions has the effect of shaping not only the types of educational efforts that are already and can be further realized, but also, by extension, which citizens are and will be construed as appropriate targets for education.

During the 1970s, computers and computerisation were described as disconcerting, and as requiring popular education in order to be controlled. Today computers are described as a "harnessed ubiquity" that still positions popular education as important, but in a different way. That is, in the 1970s you, as a citizen needed to learn about computers in order to keep up with and influence future development; today, your citizenship is defined by your digital literacy because you, as a citizen, are always already

digital. The previous debate about citizens and their 'data shadows' has faded; today, citizens and their data shadows are depicted, and probably often experienced, as converging into one. In current times there is a very limited debate about how authorities are constantly seeking new ways, and using different algorithms, to automate workflow or to monitor new aspects of our lives; or how novel digital archives allow (or limit) our access to our own information and memories (which are subsequently packaged and resold to anyone interested). Historical cases show that such societal debates were more vibrant and emphasised in the past and clearly included popular education as an important part of the solution.

Today, the governing forces, and thus also popular education, instead have to work to *re-include* citizens in a society that they were already part of (but which, through the unmitigated computerisation of society, they were gradually excluded from). Digitalisation thus becomes an educational (techno)fix that cures this exclusion–a pedagogical regime that takes lifelong learning as the governing ideal. When digital exclusion is constructed as a problem for citizenship exclusion, the solution becomes "computer skills". This particular problematisation obscures how digital inclusion also results in techno-economical structures of exploitation, surveillance, and control. Today, governments are quick to adopt digital "solutions", but such solutions are also presented on a silver platter by an eager industry (Dijstelbloem & Broeders, 2015). For example, at present, more than half of the requests handled by the Swedish Social Insurance Agency are completely algorithmically automated (Andréasson, 2015). Today, the digital citizen is subject to mundane online data leakage (for example location, frequency of visit, or browser type), which are then used as proxies for individual control and observation (Burell, 2016; Deville & Velden, 2016; Skeggs & Yuill, 2016). Such a world of algorithmic culture opens up entirely new possibilities for surveillance, control and circulation of capital, thus constituting a remote politics (Latour, 2005), which is also central to the structure of contemporary imperialism (Fuchs, 2016). A prerequisite for this situation is of course that each and every citizen becomes digitally included. Thus, the non-user of computers is no longer described as left behind in the technological development, but as "outside society". The main reasons for those who do not have, or do not use, computers are described as displaying either indifference or unwillingness towards digital technologies. Therefore, the solution of today is to target *the will* of the digitally excluded, in order for them to, in fact, *desire* to be digital(ly included). It is *their will* that is in focus for educational efforts and the enabling of the future digitised society.

In current (utopian) discourses, digitalisation is constructed as a "the future has arrived" moment in history, and thereby in non-ideological and post-political ways. The political formation of the citizen as digital is made invisible by the choice of words that point to an inevitable technology development. Digitisation is thus constructed as a society-changing advanced process that is time-bound, rather than tied to a place—devoid of any capitalist, political and educational intervention and interest. The hopes of digitisation are disconnected from the material relations of production i.e. that digitisation takes place not only in a historical 'now', but also in a geopolitical 'here'. This further obscures the fact that this 'here' is made possible by placing both production and waste elsewhere, and thus placing risks 'there' and profits 'here'. Worries about how computer technologies would increase power asymmetries and control were heavily debated in the studied historical material. Today's discourses about digitalisation are better described using Margaret Thatcher's favourite slogan—There Is No Alternative.

Today computer education in Sweden is not targeting the citizenry at large. The vast majority of adults are always already digital, and educational efforts are instead directed at the few—those on the outside. The use of computers is not constructed as a privilege

but as something mundane and normalized. As various electronic artefacts become more intuitive, cheaper and perhaps even invisible, access to the Internet is no longer a privilege. Instead, self-chosen *interruptions of connectivity* are things that only some can afford to enjoy. For examples, which students in which kinds of education are forced to use a certain app on their e-readers, and which ones are free to be classic liberal arts and crafts students? Who is forced to be constantly monitored via digital technologies (Bodén, 2016) and who can start a "media diet"? If one cannot afford to buy expensive software licenses, one can depend on streaming (and monitored) services to accomplish one's school work. Swedish authorities such as the Employment Service or the Social Insurance office often require extensive reporting via digital technologies. Another example of coercion of connectivity are that elderly demented people are now equipped with GPS devices and that attempts to replace home care with digital communication is seen aiming towards efficiency. Consequently, a relevant question today is what groups of citizens are targeted in digital skills upgrade campaigns, but perhaps even more important, *which citizens are not?* Which bodies are seen as always already "tech-savvy" digital citizens who are not targeted in educational efforts but who are supposed to consume (and continuously update) the required artefacts in order to be digitally included.

The analysis in this study shows that digitisation (across different time periods) is often described as an autonomous technological development whose origins and consequences are out of our hands. However, there are, of course, a variety of policy documents that co-construct the progress of digitisation. This article has shown how some of these policies have focused on *certain* problems and thereby also focus on *some* solutions as particularly important. These problem representations make some options visible (as well as viable) and hide others. By showing how digitisation is a methodical and political form of control (which is also cheered on by an eager industry) the analysis aims to open up to new possibilities to problematise the common assumptions about the digital imperative and how it could be different. Digitisation, and the control it implements, is both material and discursive in that it has a close relationship with the specific technologies of its time. Digitisation is also a matter of how to plan for a potential future. One can say that, in a way, we not only live with the technologies of today (and yesterday), but also to a large extent with imagined future technologies and their foreseen effects. The current post-political tendencies (as expressed by the full acceptance the digital imperative) can be referred to as part of a post-digital present where computers have become so ordinary, domesticized and ubiquitous in everyday life that they are thereby also beyond criticism.

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Notes

[1] We use the terms digital literacy/competency/skill as conceptualizations of the knowledge citizens are supposed to take on in order to bridge the digital divide and become digitally included. The exhortation and proposed solution that everything (and everyone) should become digital can be referred to as a digital

imperative. Detailed descriptions of the digital or what exact skills are needed to be(come) digitally included are rarely presented.

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Adult higher education in a portuguese prison

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Abstract

Over the years, the European Union has strengthened measures that address the need to find answers to the challenges posed by the information society, which in turn underscores the importance of a focus on innovation of adult education, especially for those in conditions of social exclusion. The aim of this paper is to analyse the reality of Higher Education in Distance Learning and e-Learning in a prison context. The results from interviews, interpreted in a context of a non-positivist paradigm, show that students are rather motivated because they foresee a more attractive future if they have an academic diploma. Despite this, however, their expectations are not very high, because they acknowledge that their rehabilitation will be difficult due to the stigma of being an ex-prisoner. The results show, also, that the education process has many weaknesses and limitations mostly due to the lack of facilities, educational and technological resources, and support from teachers.

Keywords: adult education; e-learning; prison education; digital inclusion; lifelong learning

Introduction

Over the past fourteen years the EU has adopted measures to strengthen the role of ICTs, and of e-Learning in particular, to promote lifelong learning. The Europe 2020 Strategy (European Commission [EC], 2010a) aims to prepare the European economy for the coming decade, based on three key growth drivers: smart, sustainable and inclusive growth.

To achieve the aims of the EU 2020 Strategy, the "Council of Ministers Resolution on a renewed agenda for adult learning" (EC, 2010b, p.1) points to the importance of

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investing in adult learning – in formal, non-formal and informal learning activities developed after the initial phase of education and training is completed – to respond to the crisis and the challenge of aging populations. To justify this measure, the document states:

> Adult learning provides a means of up-skilling or reskilling those affected by unemployment, restructuring and career transitions, as well as makes an important contribution to social inclusion, active citizenship and personal development (EC, 2010b, p.1).

Some of the main actions planned in the Digital Agenda for Europe are to propose literacy and competences as a priority for the European Social Fund regulation (2014-2020), develop tools to identify and recognize the competences of ICT practitioners and users, linked to the European Qualifications Framework and to Europass, and to develop a European Framework for ICT Professionalism to increase the competences and mobility of ICT practitioners across Europe.

In light of this, the European Union recognizes lifelong learning processes in the wider context of adult learning, since it enables the development of personal and professional skills and, among these, digital literacy skills, that fosters smart, sustainable and inclusive growth. However, Gorard and Selwyn (2005, p. 1215) argue that 'far from being a liberator, ICTs can simply become another barrier reinforcing their exclusion'.

These concerns about adult learning and lifelong learning apply to prison education, since 'Education for prisoners should be like the education provided for similar age-groups in the outside world, and the range of learning opportunities should be as wide as possible' (Council of Europe, 2011, p.1). In fact, according to Biswallo (2011, p. 71) 'prisons play a significant role in contributing to the lifelong learning needs of their inmates who often have limited formal education and skills'. However, the conditions for developing digital competences in European prisons, are, however, not ideal, since the use of ICTs and access to the Internet are still restricted and monitored in most prison facilities:

> Although digital literacy is also becoming more and more essential for work, leisure and personal development, the current lack of access to ICT facilities in European prisons presents a barrier to the teaching of digital literacy skills (Hawley, Murphy & Souto-Otero, 2013, p. 45).

The aim of this study is to analyse the motivations and expectations of prisoners and how they assess and perceive Higher Education in the form of Distance Learning and e-Learning inside a prison in Portugal.

e-Learning and Lifelong Learning in Prison

The need to adapt to the continuing changes in the knowledge society and production methods, to the current labor market characteristics, and the fact that there is a global agenda (Dale, 2001) that points to the need of lifelong learning and of using ICTs promotes the adoption of e-Learning in adult education.

The overall aim of the 2013 EU multiannual (2004-2006) "e-learning programme" was 'to support and develop further the effective use of ICT in European education and training systems, as a contribution to a quality education and an essential element of their adaptation to the needs of the knowledge society in a lifelong learning context'

(European Union [EU], 2003, p. 345/11). So, the EU emphasized education and training as a means of adapting to the demands of the knowledge society and to the European model of social cohesion, clearly singling out the relevance of ICTs. The following stand out among the programme's goals:

- to identify the actors concerned and inform them of ways and means of using e-learning for promoting digital literacy, thereby contributing to the strengthening of social cohesion and personal development, and fostering intercultural dialogue;
- to exploit the potential of e-Learning in the context of innovation in teaching methods, with a view to improving the quality of the learning process and fostering the autonomy of learners.

The Lifelong Learning Programme (EU, 2006) aimed to:

> contribute through lifelong learning to the development of the Community as an advanced knowledge-based society, with sustainable economic development, more and better jobs and greater social cohesion, while ensuring good protection of the environment for future generations. In particular, it aims to foster interchange, cooperation and mobility between education and training systems within the Community so that they become a world quality reference (EU, 2006, L 327/48)

This general aim was implemented through youth-related sub-programmes (Comenius), higher education (Erasmus), vocational training (Leonardo da Vinci) and adult learning (Grundtvig). Today, the EU has incorporated all these sub-programmes into the Erasmus+ programme (EC, 2014). In terms of adult learning, the main aims of this program include the modernisation and improvement of adult learning through cooperation with other sectors, the recognition of non-formal and informal education, and quality assurance. To achieve these aims, the following three key actions were defined: staff mobility; strategic partnership and policy reform. Key activities were also established for each of these major actions, among which:

- Developing, testing and validating new curricula, teaching methods or innovative pedagogical approaches;
- Projects addressing the acquisition of basic skills (literacy, numeracy and ICT) and the provision of second chance opportunities/learning in later life;
- Improving the accessibility of learning opportunities for adults.

In short, the use of technology in an adult learning context can contribute directly or indirectly to achieving the three actions mentioned, given that ICT can facilitate the participation in learning activities for all, lower access barriers, and respect the specificities and different learning paces of students (Becker, Newton & Sawang, 2013; Bear, 2012).

In the view of the current challenges brought about by the knowledge society, Ouane (2011) gives lifelong learning the role of facilitator for social inclusion and sustainable development. These were, overall, the main assumptions that led many European countries to develop e-Learning in prison projects supported by European or national funds. Barros and Monteiro (2015, p. 7057) refer that the results of some European e-Learning in prison projects draw attention to the following aspects:

- this learning approach enables a collaborative learning model, student-centered with resources to different types of images and multimedia tools that provide the right to education / training of inmates ("E-learning in prison" in Italy);
- the need to start the process by educational settings, to consider the context of training, to choose the technology and establish a strategic plan ("Learning Infrastructure for Correctional Services" in Germany, Norway, Austria, Spain, Holland and Hungary).

Indeed, without technology skills, prisoners are significantly disadvantaged professionally and socially when trying to reintegrate into society (Smith, 2012). Access to technology can help prisoners:

- Communicate with and maintain relationships with their family members;
- Access information about benefits, job opportunities, and housing;
- Produce their own resumes;
- Access education;
- Access library eBooks to encourage reading and improve literacy.

e-Learning in prisons can offer more than what is physically provided at each prison in a face-to-face format, it increases the number of prisoners who receive education and training, and can be used to differentiate content and create self-paced learning – to which Lucio-Villegas (2016) refers as being a non-traditional space for adult education. Moreover, digital accounts such as course or degree progress and e-Portfolios can follow prisoners when they are transferred to another prison or are released (Hawley, Murphy & Souto-Otero, 2013).

Besides self-paced learning, the projects also address two other e-Learning models: assisted learning and collaborative training models. As regards the assisted model, the access of the material is mediated by computers and by other persons, like teachers, tutors, etc. In the collaborative model, the importance of interpersonal interactions increases. According to Diana (2011), this model can benefit the prisoners/students at the cognitive and emotional levels, as it enables them to improve their knowledge, skills and attitudes during group interaction. By 'increasing their communication abilities and better performing their responsibilities, they will have improved their personal vocational competences as well' (Hartofylaka, Arachova & Manousou, 2009).

According to Hopkins and Farley (2015, p. 38), 'Education technology interventions which aim to prepare incarcerated students for the digital knowledge economy must also consider the situated context of the postmodern prison and the social, political and cultural practices and problems that emerge around the technology'. In this sense, there are some limitations or barriers for e-Learning in prison that must be taken into account. Adams and Pike (2008, p.7) identified barriers tied with:

> Access (barriers related to security imperatives and a poor regard for education); awareness (within the prison domain there was a low priority given to e-Learning resourcing resulting in many education staff facing a dilemma of how to continue supporting students) and acceptability (there are negative perceptions of information security and control, which were identified as impeding the deployment of e-learning programmes).

In addition to these barriers, Lockitt (2011, p. 8) identified the following problems affecting education and training in prison:

- Ineffective use of new technology
- Fear of technology
- Fear of innovation
- Lack of effective leadership and policy decision making
- The quality and use of teaching and learning support staff
- The way in which teaching and support staff are employed and trained
- Short-term sentences
- Lack of fast-track enrolment for prisoners on short-term sentences
- Continuity of curriculum between prisons/the community
- No common curriculum (within prisons or linked to the community)
- Limited curriculum offer (mainly older/traditional trades)
- Poor learner tracking and e-portfolios (within prisons/release into the community)
- Lack of quality interactive multimedia learning materials
- Restricted access to technology (mainly supervised)
- Staff awareness to the potential of technology
- Lack of interactive/continuous support (SKYPE/MSN etc.)
- Adverse publicity/perception of society toward the use of technology
- Lack of a basic education/training by learners
- Poor motivation/confidence of learners (…)

In short, several projects have been introduced in Europe to achieve a deeper knowledge about the benefits of e-Learning and to prevent the barriers thereof in prisons. However, there is 'no systematic knowledge about the implementation or evaluation of e-Learning' (Arcangeli et al., 2010). In this sense, this study, the process of which we present below, has identified the motivations, expectations and perceptions of actors about the conditions of learning in a prison context in Portugal.

Methodology

Since adult education is a key element for achieving the goals set by the Europe 2020 Strategy (EC, 2010a), and in response to the need for providing a flexible, alternative and broad educational offer inside prison that meets the varying needs of individual inmates, we felt it was important to carry out a qualitative study in which direct speech is used in an interpretative approach to contextualise and explain the views of respondents, aiming to understand the perspectives of inmates regarding their motivations, expectations and learning conditions inside a male prison in Portugal.

To obtain data for the study, semi-directive interviews were conducted, also called clinical or structured interviews. A research technique capable of decoding the semi-free and apparently mixed statements was used to analyse the resulting data: content analysis (Bardin, 1977; Vala, 1986). Ethical issues were considered, namely the formal authorisation of the prison establishment, the signing of informed consent, and the confidentiality in the dissemination of the results. Access to the prison was obtained through a cooperation protocol agreement between the Portuguese Open University and the General Directorate of Prison Services and Social Rehabilitation (DGRSP).

The population consisted of a group of eleven candidates to attend higher education courses and nine students/prisoners of male Porto Prison (EPP) representing all the candidates and the students attending undergraduate degrees in the form of Distance

Learning and e-Learning at the Open University, Portugal. Tables 1 and 2 present the characteristics of all the candidates (FC) and students (ST) according to variables that allow us to understand the profile of the respondents.

ID	Age	Detention Time	Detention regime*	Open University (PT) Courses
FC01	30	2 years and 7 months	Closed	Management
FC02	42	5 months	Closed	Social Sciences
FC03	29	5 months	Closed	Management
FC04	24	3 years	Closed	Social Sciences
FC05	36	3 years and 4 months	Closed	Social Sciences
FC06	49	7 months	Closed	Social Sciences
FC07	60	1 year and 6 months	Closed	Social Sciences
FC08	23	3 years and 7 months	Open	Informatics
FC09	37	3 years	Closed	Social Sciences
FC10	33	2 anos and 5 months	Closed	Social Sciences
FC11	38	4 years	Closed	Management

	Education Level	Occupation	Training inside prison
FC01	10th year	Businessman	Completion of the 12th year
FC02	12th year (incomplete)	Accounting Assistant	-
FC03	12th year	Accounting Assistant	-
FC04	9th year	Student	Completion of the 12th year
FC05	10th year (incomplete)	Distributor of pharmaceutical products	Completion of the 12th year
FC06	6th year and adult education course	Automobile parts seller	Completion of the 12th year
FC07	9th year	Administrative assistant	Completion of the 12th year
FC08	11th year	Serviceman with the Air Force	-
FC09	8th year	Postal worker	-

FC10	6th year	-	Completion of the 10th year and computer course
FC11	12th year (incomplete)	Businessman	Mechanics training
*The detention regime can be open or close to the outside of the prison.			

Table 1. Characteristics of candidates

ID	**Age**	**Detention Time**	**Detention Regime**	**Open University (PT) Courses**	**Year**
ST01	34	2 years and 8 months	Closed	Social Science	1º
ST02	42	3 years	Closed	Management	1º
ST03	44	5 years	Closed	Social Science	2º
ST04	42	6 years and 6 months	Open	Social Science	2º
ST05	47	4 years	Closed	Social Science	1º
ST06	41	6 years and 6 months	Closed	Management	1º
ST07	35	4 years	Closed	Social Science	1º
ST08	31	4 years	Open	Management	1º
ST09	39	2 years and 2 months	Closed	Management	1º

	Education Level	**Occupation**	**Training inside prison**
ST01	12th year	Driver Assistant	ICT training
ST02	12th year (incomplete)	Clerk	Management Assistance technical course
ST03	11th year	Restaurant owner	Completion of 12th year and mechanical course
ST04	12th year /1st year of Degree in Architecture	Designer	-
ST05	10th year	Technician at an alcohol and drug abuse centre	Gardening course
ST06	12th year	Mariner	ICT training
ST07	12th year	Electrician and mechanic	Portuguese for foreigners

ST08	11th year	Serviceman with the Air Force	-
ST09	12th year	Salesman	-

Table 2. Characteristics of students

Note that the analysis of resulting data was based on two alternating phases. In the first phase, a vertical analysis was made of each interview, and in the second phase a horizontal or comparative analysis was made using the "constant comparative analysis" method (Miles & Huberman, 1994) to identify common and different aspects of the representations and perceptions of respondents. The information resulting from the interviews is also shown in tables so that can explain the relevance of some of their opinions. In our opinion, choosing this information organisational model, which allows us to study the views of respondents in a systematic and analytical way, will give us a better view of their overall ideas. Finally, it is important to highlight that because some of the records encoded with the acronym SIG relate to the actual assessment, they are marked with the expressions *Positive perspective* (+), *Negative perspective* (-) and *Hesitation/Undefined* (+/-). The acronyms FC and ST refer to Candidates to Courses and Students, respectively.

Analysis and Results

This section presents the research findings with a view to identifying the respondents' views on their motivation when choosing to attend a higher education course, their expectations regarding their future professional situation after completing the course, and the difficulties felt and the conditions available for engaging in educational activities in prison. It should also be noted that we prepared an interview roadmap to achieve the objectives defined, which allowed us to organise the information in a structured way along the three categories considered relevant for making the objectives more efficient.

For the first category, *Motivations for attending Higher Education,* with forty-three records of candidates and students, we chose the theroretical approach proposed by Ryan and Deci (2000), which considers two types of motivation: intrinsic motivation, related with psychological rewards, such as recognition, status, respect and satisfaction, and extrinsic motivation, related with socioeconomic reasons, easier access to jobs, or work-related conditions (Lavery, 1999; Vallerand et al., 1992). This dimension covers the issues related with a life project, and must be analysed based on the reasons given for their choices. We chose to analyse the two types of motivation in an integrated way, as the reasons given for most of the records are both intrinsic and extrinsic. Table 3 presents the identification of the interviewees (INT), the register number (RN), the response orientation (SIG) as well the content units.

INT	RN	SIG	CONTENT UNITS
FC07	61	+	I was curious and I like this area. I also like to study and it keeps me occupied here. I work in the archive department. I hear the comments of fellow prisoners working at the library who already attend the Open University, and they said it was cool. This is something I can do when I leave.

S T04	1 73	+	Although this area is completely different from my area, I've learned to like it here. I like working with people, I'm in a separate pavilion, in the DFU (Drug-Free Unit), where we do a lot of therapies, lot of group work, we work with feelings, behaviours, attitudes, and I've learned to like it. And because I've always wanted to take a degree...
S T06	2 17	+	I have a vision for my future and it's always interesting to have knowledge in management. However, I'm more at ease with History and Geography, and maybe Social Sciences are easier for me. But I'm not very comfortable with Portuguese because I'm Colombian.

Table 3. Motivations for attending Higher Education

Having read the results obtained and the records, we find that the main motivations of respondents are characterised by intrinsic and extrinsic factors, namely: a) personal satisfaction; b) the desire to advance professionally, looking forward to a more attractive future; c) the need to have an academic diploma for when they are rehabilitated into society; d) to escape the prison routine; and also e) the desire to become a better citizen (Fischer, Yan, & Stewart, 2003; Long, 2004; Monteagudo, 2008; Newstead & Hoskins, 2003). There is, therefore, a clear commitment to acquiring cultural knowledge, and especially social knowledge (ACE, 2007; Forrester-Jones & Hatzidimitriadou, 2006; Walker, 2006; Withnall, 2006, 2012).

However there are some negative perspectives or limitations for the motivations expressed by the inmates. In this sense, student -ST09- incorporates an inhibitory factor related to external factors, referring that:

> ST09 – Honestly, I would like to follow Informatics, but due to the conditions or limitations we have here, I ended up opting for Management (RN 279).

The second category, defined as *Expectations after completing higher education*, is based on the students' expectations on their professional situation. This dimension refers to the planning of effective and desirable futures based on an overall idea of reality.

The forty-six records, which represents the totality of the register units of this particular category, are broken down into representations of *Optimism* (+), *Reflection* (+/-) and *Pessimism* (-), mostly related to their social and professional rehabilitation. The latter had quite a large number of references, suggesting that these prisoners are very apprehensive, expectant and worried about their ability to be rehabilitated back into society. The more positive considerations, fewer in number, show that some prisoners are optimistic about their future and see the course as an important tool for their rehabilitation.

INT	RN	SIG	CONTENT UNITS
FC05	44	+	When I leave here I have a job waiting for me, I even have a document saying I will be given a job. I think the degree is a plus when dealing with clients. It shows that I have made the most with my time here. It would help me go up another step in the ladder and it might just give me new opportunities.
FC02	14	±	I don't really have an idea about what's going on outside in terms of Social Sciences, but I live in social housing in Porto and I would really like to help those people socially. There are things we can do...
ST04	176	-	Although people say it's all the same, in fact it isn't. If I look for a job where people don't know me and they find out that I've done six and a half years they might think I'm a gangster, a terrorist. In Portugal people still think like that...

Table 4. Expectations after completing higher education

As can be seen from the answers, the professional expectations of respondents are optimistic, and in their opinion having a degree means a more receptive labour market.

> ST02 – We don't just learn for the degree, we learn a lot about other things and I've made a big effort, so I have high hopes about a job. A degree makes a difference. Work can be a bit different, because it's something we didn't have before... (RN 131).

> ST08 – The degree will allow me to have deep knowledge about management that I can use outside. For me, it changes everything, because I will have acquired other knowledge and I can say I am privileged because my job opportunity is guaranteed (RN 259).

Many respondents say that they already have professional projects in the pipeline after they serve their sentence (RN44), thus raising their expectations. In turn, their fears are directly related with the social stigma and prejudice, due to their prison time, as stated by respondent ST04:

> ST04 – We still suffer the prison stigma. I haven't felt it much perhaps because I'm not looking for a job yet, but I'm already thinking about it. And then there is the down side... Some of my friends have a degree and last time I was on parole I heard that a friend of mine, who's a graduate and has good grades, is working at a Call Center. This is how I feel, if young 25 or 26 year olds can't find a job, what will happen to me at 42 with my past? It won't be easy (RN 177).

Expectations are seen as a probability of satisfying some of the individual's needs based on previous experiences (Hersey & Blanchard, 1986). According to Dhami et al. (2006), most studies on this topic commonly conclude that future expectations of prisoners regarding their successful social and professional rehabilitation are overly optimistic. These authors suggest that participating in activities inside the prison, having more contacts with relatives and high expectations of finding a job help increase the optimistic expectations of these individuals regarding their rehabilitation.

The category *Difficulties*, with twenty records, refers to the difficulties felt in the teaching-learning process of these students. We note that records are clearly negative, showing that the greatest difficulties are: lack of guidance on what to study; lack of bibliographical resources; and lack of access to the Internet, in particular to the UAb platform.

INT	RN	SIG	CONTENT UNITS
ST02	147	-	Our biggest difficulty is the lack of guidance and access to the learning materials. We study and we never know if it is right (...), if that's the right answer the teacher wants us to give in the exam... so it's tough.
ST04	192	-	The main difficulties are not having any guidance on what to study (...), lack of access to the platform or access to the topic. I can draw some conclusions by reading the course plan, but I only know for sure when I go outside and access the platform.

Table 5. Difficulties

Pachane (1998) states that university students have different ideas about their personal difficulties. However, in this specific context, we realise that the difficulties felt by these students are over and above those difficulties and clearly have to do with lack of support, monitoring and an academic pathway done much in isolation, which goes against Article 6 of the Jomtien Declaration (UNESCO, 1990), which states that 'learning does not take place in isolation'. These results tell us precisely the opposite, as the prisoners' autonomy is already diminished and the exercise of citizenship is decreased, making learning difficult. As mentioned, by the students:

> ST01 – It's the study itself. I don't have access to a lot of the subjects; I needed to have someone tell me what I have to do. I have to rely on myself to understand the subject. I don't have anyone telling me how this or that works. When I study, I think I'm doing it right and I always wait for the results to see my grades. It's not always easy, because I have to share the sleeping quarters with 16 other prisoners. When I'm alone I don't ask anyone for help. When I'm with my colleagues, I ask for their help... even a guy who works here at the school (RN 124).

> ST05 – When we have doubts, we do not have anyone with specialized expertise to turn to ... we support each other ... (RN 198).

> ST07 – We're not given any help or guidance on what we should study… (RN 271).

As for the category *Equipments and Resources*, with forty items, all respondents refer that there are special learning facilities for HE students, but they do not have any computer equipment or technology to assist them in their learning process.

INT	RN	SIG	CONTENT UNITS
ST01	126	+	A room was created in the school establishment for us to study and there is a library.
ST02	215	+	Yes, a room was created for university students. There is also a library where we can borrow books to study or to consult.
ST03	149	-	The school has two computers rooms for ICT training… I mean, I do have access but it's because I work here at school and I am even the one who fixes computers, but the rest of the staff do not have access.

Table 6. Equipments and Resources

After reading and analyzing all example units, presented in Table 6, we can conclude that there is only one study room (without computers) for students attending Higher Education at the school.

Furthermore, and as stated by the students:

> ST04 – We have a library, but there is no point in going there because the staff just discusses processes, sports and it's impossible… too much noise... (RN 170).
>
> ST05 – If you need one or another photocopy, you can't get it; it's difficult. There is little bibliography here (RN 189).
>
> ST08 – A room, a table and a chair, only this. I bought textbooks and materials. I have to do it myself. I know that they provide notebooks, sheets, pens, but I never asked because I don't need them. Fortunately, I never need to ask for them because my family also helps in this regard. So, I leave it for those who need it most and are not so fortunate as I am (RN 271).

This obviously limits the access to digital, audiovisual and multimedia contents provided by the teachers of the different course units in each course, especially because, as Lévy (1993, p. 75) refers: 'technologies have a key role in establishing the intellectual and space-time references of human societies'.

Considering this and the definition of e-Learning already given by Sangrà, Vlachopoulos and Cabrera (2012), who speak of an educational model that uses electronic means and devices to facilitate the access, development and improvement in the quality of education and training, it is not possible to talk of e-Learning at this prison, but rather of a "primitive" generation of Distance Learning.

As already mentioned, the resources available to students at this prison bring us back to the first generations of Distance Learning, which relied basically on printed material for educational purposes. In specific contexts, such as this one, where the digital reality is still remote, textbooks, notebooks, pens and pencils are, therefore, key resources, as they are physically tangible work tools which belong to students and can be handled by them, as they are always at their disposal. But even these resources are scarce and often depend on the support of the University and technicians who assist in the educational process at the school.

In an increasingly digital society, where education is supported by educational resources, that include e-mail and online teaching platforms, "Learning Management Systems" (LMS) and "Learning Content Management Systems" (LCMS), and discussion forums and web conference systems (Lagarto & Andrade, 2009), this type of teaching makes less and less sense.

In a prison context, based on the participants' expressed needs and perception about the difficulties, it is important to adopt a collaborative blended e-Learning approach. According to Vryonides (2016, p. 72) the strengths of this modality are:

- Replaces (rather than supplements) some in-class time with online, interactive learning activities.
- Gives careful consideration as to why (and how often) classes need to meet face-to-face.
- Assumes that certain activities can be better accomplished online – individually or in small groups – than in a face-to-face class.
- May keep remaining in-class activities more or less the same.
- May make significant changes in remaining in-class meetings.
- May schedule out-of-class activities in 24*7 computer labs or totally online so that students can participate anytime, anywhere.

In short, as referred by Monteiro and Leite (2016, p. 31), the online course must have the following characteristics: 'be based on a student-centered paradigm and skills development; be interactive and collaborative; stimulates self-confidence, motivation,

and learning autonomy and self-management processes; promotes reflection and formative assessment'. According to the inmates interviewed and the literature available, the appropriate ICT solution must cater for Internet connectivity, intuitive navigation, diverse multimedia resources in proper working conditions, and must meet accessibility requirements and responsive design.

Conclusion

If we look at imprisonment from a rehabilitation rather than punishment viewpoint, education is an undeniable factor in rehabilitation and in the reduction of recidivism. If rehabilitation seeks to support successful reintroduction of individuals in a post-release phase, which in turn can deter future criminal activity, as we have concluded in this study, there has to be more access to technology, technology literacy instruction, e-Learning, and simulated environments.

The combination of the many methods and learning technologies that involve the interaction between educational approaches and technological resources is essential to promote quality education in prisons in Portugal. The greatest challenge of higher education in prisons and, consequently, of new learning and teaching models or environments is to ensure that learners in prison develop appropriate skills and competences for their level of knowledge.

As we have seen, these students are very motivated to attend and complete the course, because they envisage a more attractive future. Even though their expectations are not very high, due to potential rehabilitation issues, it is essential that we move towards this inclusive and quality education. However, to turn this into reality, we need to thoroughly redesign the architecture of information systems in prisons in Portugal and provide them with digital platforms to allow the implementation of Distance learning and e-Learning. By reading and analysing the views of students/prisoners and applicants– the latter having a more institutional opinion perhaps more closer to reality, we have concluded that the current situation in the Porto prison, extensible to other prisons in Portugal, at this level has many weaknesses and limitations that need to be resolved as quickly as possible.

As emphasised by the students/prisoners, the IT resources must be strengthened and more technological resources must be provided to the prison, for e.g., contents and learning management platform or videoconference technologies, not available at the moment at the prison's school. Moreover, they also add the need for Internet (or intranet) and more support from teachers in educational activities in virtual classroom context, as this is very flexible in terms of time and study plans, allowing them to also continue to study in other prisons or once they are released, anywhere in the world.

To address this challenge, and considering this framework outlined by the learner prisoners, the Open University (UAb) and the General Directorate of Prison Services and Social Rehabilitation (DGRSP) have recently signed a protocol (April 2016), which states in its 2nd clause the need and commitment to create and develop a Virtual Campus specifically designed for the prison population, with safe access and specific contents for developing activities in the field of education and training in Distance Learning and e-Learning (Moreira et al., 2016).

Today, following the deepening of relations between Open University and DGRSP. This "Virtual Campus of Education/Training, Employability and Digital Citizenship" - EFEC@ is being designed with the main goal of building and developing an academic campus that responds to the organisational and training needs of DGRSP and of prisons.

The "Virtual Campus" will consist of various online services and will be supported by a technological platform that delivers e-Learning and eManagement technologies, to make the educational, academic, administrative and digital citizenship processes easier.

The e-Learning component will be developed based on the "Moodle" platform, focusing on the most important services of educational and learning content management. The eManagement component will be based on a philosophy of organisational Intranet, containing a number of applications and computer services to support and manage the administrative processes.

Besides these two platforms, the "Virtual Campus" will also have a tool – "Repository of Contents and Resources" – intended for the organisation and sharing of resources and learning objects, allowing the users to access both educational and administrative contents, and a platform with digital citizenship-related services.

The idea of the "Campus" is to design an integrated information system, with e-Learning, eManagement, workflow and groupware technologies, with a view to the automation of administrative, decision-making and educational processes, and to a more efficient management of resources and educational logistics.

This project is expected to address some of the issues referred by the respondents in this study and the challenges posed today by the digital society and the new technologies to Distance Learning and e-Learning, in particular in contexts of great social vulnerability, as is the case of the prison population. At the same time, it will contribute to ensure the right of access to education to all citizens, respecting the human rights of individuals, deprived of their freedom or not.

The construction of the "Virtual Campus EFEC@" is a complex and cross-cutting challenge that requires a collaborative commitment. The teachers and researchers of the Open University (UAb) believe that this project will also help to fulfill the mission of UAb as a world-wide university that goes beyond political and geographical borders or prison walls, providing the conditions so that everybody has the chance to invest in their education.

Finally, it is important to add that as an instrument of an active policy of public intervention and of citizenship, the "Virtual Campus EFEC@" will seek to shape a cross-cutting renewal matrix. The effective role of education as an essential frame of reference of the adequacy of citizens to the new challenges of knowledge society aims to foster a structured culture of innovation and requalification, as a tool for the development of institutions.

We need to bear in mind that the prison context is very specific, closed within itself and has very unique rules. It is also important to insist and, above all, believe that it can make a difference in the education and training of prisoners. By introducing adapted and attractive technological and educational resources that can support and motivate these students, we can create opportunities for the development of skills aimed at their integration.

'Education for all, throughout life, equally accessible to the specific nature of each and everyone, will necessarily cover the education and training of adults and, therefore, the education and training in a prison context' (Tscharf, 2009, p.148).

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The 'digital curious': first steps towards a new typology for mapping adults' relationships with others when using ICT

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Abstract

The study described in this article used grounded theory methodology to investigate adults' accounts of their relationships with others when using information and communication technologies (ICT). Ten women and ten men were interviewed. All were Italians born between 1952-1961. It was found that the participants shared a common eagerness to learn and use ICT, which led us to coin the term 'digital curious'. They recognised the growing importance of using ICT and realised that they were competent enough to support others in ICT learning or use. Their awareness of their competence and role was linked to their approach to interactions with older and younger people, not all of them easy. The study findings illustrate how the participants' relationships with older and younger people when using ICT are seen as relevant and offer meaningful experiences. The theoretical and practical implications of the results are also discussed.

Keywords: adults; digital natives; analog natives; ICT; usage

Introduction

Personal computers began to invade the market at the beginning of the 1980s, when home computers started to appear with software for personal productivity, programming and games. In September 1981 IBM launched the first personal computer; the Italian company Olivetti presented the first European personal computer (the Olivetti M20) in March 1982; and Commodore International launched the Commodore 64 in August 1982 (March 1983 in Italy). Over the space of a few years, the new technology influenced the lives and working experiences of people who were old enough to start using it (many teenagers started assembling their hardware or learnt basic programming) and young enough to be willing to learn (or considered young enough by their employers to start using computers at work) (Bencivenga, 2014). These people have not been analysed as a group when studying computer use, as the majority comes from the generation normally considered 'pre-digital (analog) users'; a minority belongs to the generation defined as digital migrants.

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In order to identify an age range for investigation, we analysed statistics on the use of personal computers and the Internet from ISTAT's Italy-wide annual surveys from 2001 to 2014. This revealed that only one age group significantly shifted in its use of computers and the Internet from non-users to users between 2001 and 2014 in Italy: people born between 1952 and 1961, who were 54-63 years old in 2015. In 2017 the older people from this cohort will turn 65 and join 'the elderly' age group; they will be associated automatically with older groups who use computers and the Internet to a different extent. ISTAT statistics show that elderly people are a significant age group in terms of numbers but are still less digitalized than younger people. In Italy, where the average life expectancy is 87 for men and 91 for women, in 2014 only 21.2 % of people between 65 and 74 and 4.7% of people over 75 say that they use a computer. The percentages of those using the Internet are very similar, respectively 21.1% and 4.3% (Istat, 2014). This confirms, at least for Italy, the widespread idea that the elderly are still far from technology, but the immediately younger cohort may show a different story.

Deeming this population worth investigating, we interviewed 20 individuals born between 1952 and 1961, selecting people who said they used ICT and had a positive attitude to computers and the Internet. The aim of our work was to understand whether these people may be considered to share a common characteristic or experience within a set period of time (in our case an interest in using personal computers originating when the new technology first appeared), by examining the relationships they have with ICT and with others when using ICT. In the following pages we will present a literature review and examine how different researchers have categorised ICT users. We will then describe the research process, including the methodology, the analysis and the results before drawing our conclusions and making suggestions for future research.

Literature review

Research on ICT and Internet use has traditionally been focused on specific age groups. Research examining older adults and ICT has been limited in the past mainly because older people made up the minority of computer users (Farris, Bates, Resnick, & Stabler, 1994; Morris, 1994). However, as early as 1983 it was shown (Weisman, 1983) that elderly people could find the experience of using a computer enjoyable, social and empowering.

In the mid '90s, when the number of computer users aged over 55 also started to rise, research into older adults' use of and attitudes toward computers (Dyck & Smither, 1996) started to increase. Several studies investigated older adults' positive attitudinal shift toward computers (Jay & Willis, 1996; Morris, 1994). Computers were considered to have the potential to aid older adults in enhancing creativity and promoting personal growth during leisure time (McGuire, Boyd, & Tedrick, 1999), have an impact on lifelong learning, access to information, rehabilitation (Ryan, Szechtman & Bodkin, 1992) and even improve productivity (Lawhon, Ennis & Lawhon, 1996).

With the advent of the Internet, research also began to explore online communities of elderly people, a typical strategy to involve this age group in using computers. Researchers (Mossm Wulf & Mullen, 2013; Trocchia & Janda, 2000) identified the positive benefits of technology such as new models of social and intellectual community; pathways to lifelong learning; access to information and resources; means for electronic citizenship and participation; and intergenerational connections. More recent research distinguishes between the young old, people born in the '60s, and the old old, people born in the '30s (Tramma, 2003: Fisk, Rogers, Charness, Czaja, & Sharit, 2004; Facchini &

Rampazi, 2006), mentioning differences in ICT use. Younger generations are the other main target group for research. In terms of technology, younger generations began to be seen in a different way at the beginning of this century. Prensky (2001) introduced the definition 'digital natives' for the first generations to grow up with digital technology, speaking of the discontinuity created by new technology as well as a 'singularity', meaning an 'event which changes things so fundamentally that there is absolutely no going back' (Prensky, 2001, p. 1).

The technological competence of digital natives, considered a generation or subgroup of expert and experienced ICT users, has also been seen as a resource for intergenerational exchanges. Intergenerational learning has been emphasised in Europe since 1990, including through an EU financing program called *Grundtvig*. The program had strands dedicated to promoting intergenerational learning, seen as a positive means of supporting non-formal and informal training for elderly people with benefits in terms of time spent together and reinforcing bonds (Vaičiūnienė, 2012). The rationale of the program was based on concerns over the growing generation gap, the result of rapidly developing new technologies. The disparity between the supposed technological competences and interests of digital natives and the supposed limited and unsophisticated technology used by older people was considered a great cause for concern.

While the *Grundtvig program* was still ongoing, 2012 became the European Year for Active Aging and Solidarity between Generations[1]. This produced numerous proposals aimed at adult education and training with intergenerational approaches. In the EU document detailing the 21 projects on ICT for seniors and intergenerational learning financed between 2008 and 2011, the use of ICT is described as 'also a privileged means of learning while creating benefits across different generations, bringing young people and seniors together and tackling the digital divide' (European Commission. The Education, Audiovisual & Culture Executive Agency, 2012, p. 5). The EU funded projects were based on the assumption that intergenerational learning is beneficial and a positive issue, thus reinforcing the idea among the general population and organizations providing ICT training for elderly people that matching young and elderly people (in many cases from the same family) can be a solution. Unfortunately little information remains on these projects apart from their websites (the Commission asks partners to keep websites alive for five years after a project has ended) and reports describing their work.

An analysis of the information available shows that no clear boundaries were drawn for defining elderly people ; projects ranged from those aimed at the over- 45s to those aimed at the over- 65s, with no clear explanations why these age groups were selected. The age range of the young people involved in projects also varied: 10 years in the 'Reading Friends' project, 13- 18 in the iSmart contest; 14- 20 in the mix@ges - Intergenerational Bonding via Creative New Media project, 15- 25 in the 'Providing Chances—Living Chances!' project (ENIL, 2013). Intergenerational learning is still seen as positive. Tatnall (2014) suggests that:

> The best approach to working with older people in engaging with technology,[…] is to work on convincing them of the value of a specific application that may be of interest to them. This can often be facilitated by the actions of their children or grandchildren. (p. 563)

He suggests that this would be a better approach than trying to convince them to use ICT in general. Peer-led ICT education programs (Clark, Fochs Heller, Rafman, & Walker, 1997) have also been an object of study, showing a variety of approaches to encourage elderly people to learn to use computers and the Internet.

In using technologies, the most important factors are the influence of other people; they may be people who are known and have a direct influence, such as mentors, or be unknown and have an indirect influence, such as role models. Academic investigations into mentoring first began in the late ’70s (Anderson & Shannon, 1988; Colley, 2002). Mentoring has also been studied through examples of volunteers and charity members offering ICT learning support to middle-aged and elderly women (Lin, Tang, & Kuo, 2012). They suggest that investigating real life experiences may help in understanding the most effective ways to offer ICT education and bridge ICT gaps between younger and older populations, including ICT gender gaps.

Typologies in ICT use

A distinction between non-digital (or analog) natives, digital immigrants and digital natives has been popular for several years:

- Non-digital natives (analog natives): People born before 1960 who have only ever used paper and are not interested in using ICT (Harris, 2014; Prensky, 2001)
- Digital immigrants: People born in the 1960s- 1970s who grew up surrounded by analog technology (television, telephones) but are now used to technological innovations, although they retain some analogical reflexes (Prensky, 2001: 2012).
- Digital natives: People born after 1980. These people have been exposed to ICT since birth. According to Prensky (2012) this is the first generation to switch from the industrial to the digital era. Sometimes they are also referred to as the Internet Generation, iGeneration, native speakers, generation Z (Bennett, Maton, & Kervin, 2008; Jones & Shao, 2011; Oblinger & Oblinger, 2005; Pedró, 2007). Tapscott (1998) coined the term ‘Net generation’.

More recently, although complex changes are recognized in ICT use, generation gaps have been criticized (Jones & Shao, 2011). Conventionally defined (Roebuck, 1979) as people over 65, and initially considered a homogeneous group, the elderly are now subdivided into at least two groups, the young old and the old old (Gergen & Gergen, 2000; Tramma, 2003; Facchini & Rampazi, 2006). The two groups have different perceptions of themselves and their role in society, as well as different approaches to technology. Alternative metaphors have now been suggested, such as that proposed by White and Le Cornu (2011). In relation to the Web, they distinguish between Visitors and Residents, choosing the metaphors of ‘place’ and ‘tool’ to represent the use of technology in contemporary society. Visitors would ‘understand the Web as akin to an untidy garden tool shed. They have defined a goal or task and go into the shed to select an appropriate tool which they use to attain their goal:

> Ehile residents would ‘see the Web as a place, perhaps like a park or a building in which there are clusters of friends and colleagues whom they can approach and with whom they can share information about their life and work. (Le Cornu, 2011, p.1).

Research has also started to look at the complexity of young people’s computer use and competences. Criticism has been raised about the limited empirical evidence and the use of anecdotes; it appeals to common-sense beliefs found in previous research which emphasise a significant divide between the new generation and all previous generations

(Bennett, Maton & Kervin, 2008). In a survey of 4374 students across 13 institutions in the United States, Kvavik, Caruso & Morgan (2004) showed that a significant proportion of students had more lower-level competences than might be expected of digital natives. Other studies found that emerging technologies were not commonly used, with only 21% of respondents maintaining a blog, 24% using social networking technologies (Kennedy, Judd, Churchward, Gray, & Krause, 2006) and 21.5% downloading podcasts (Oliver & Goerke, 2007). Thus, generalisation about 'digital natives' appears to be based on a limited subgroup of technically adept students.

Moreover, as with the recent subdivision of the elderly into subgroups, in new studies on younger generations cognitive psychologists (Berk, 2006; Carlson & Sohn, 2000) have highlighted differences in technology use throughout the key stages of infancy, early childhood, middle childhood and adolescence.

In previous research we interviewed Italians born between 1949 and 1969 who were between 15 and 35 when the first personal computers appeared in Europe at the beginning of the '80s (Bencivenga, 2014). We supposed that a cohort effect (Glen, 2005) might influence the characteristics of people born in Italy between the 1950s and the 1970s. They were young adults when computers began to be part of their lives and they learned to use and appreciate them. This set of people is unique in respect to any other group: they are more confident than older people born before 1950, but are still capable of understanding the difficulties encountered by people from the analog generation. They are not as confident as digital natives, but are still confident enough to interact with them competently in relation to ICT use. We therefore believe that instead of a clear generational gap between digital natives, immigrants and analog natives, there are blurred paths influenced by age, socioeconomic factors and an interest in exploring and discovering new technologies.

The sample considered in previous research learned to use computers in private and professional contexts through peer learning, short courses organized by public or private initiatives, their employers and courses organized by computer companies. Common features emerging from our interviews were a general interest in new technologies, a desire to keep up-to-date and a desire to share learning and using paths with others (Bencivenga, 2014). Almost none of these people used computers at school. The Italian Ministry for Education did not introduce computer training courses in schools until 1985, under its national plan for informatics (Piano Nazionale Informatica) for the first two years of professional high schools and schools specialising in mathematics and physics. Thanks to the Italian version of the educational programming language LOGO developed by Seymour Papert in 1967, geometry became associated with computers in the minds of the younger generations. Italian school pupils taking experimental computer courses were born after 1971; based on Prensky's classification, at least those of them born between 1971 and 1980 would be considered digital immigrants. This increases our perplexity over the definition of this typology, at least in an Italian context.

Italian research on ICT use and appreciation appears to have been focused mainly on elderly people (Allario, 2003; Porcu, 2006; Facchini & Rampazi, 2006) or the younger generations, (Mantovani, Ferri, 2008; Gui & Argentin, 2011; Ranieri, 2011) often applying the Anglo-Saxon rhetoric on digital natives to Italy's younger generations. Little or no research has been dedicated to the adult group in between the two extremes.

National longitudinal surveys on ICT and computer use in Italy are available through ISTAT [*the Italian National Institute of Statistics*], which has been collecting annual information on the use of computers and the Internet since 2001. Our analyses of ISTAT's raw data for the years 2001 to 2014 (available on the ISTAT website) show that there was a significant shift in the use of computers ($\chi = 14203$, df = 12, $p = .000$) and the Internet

(χ = 11488, df = 11, p = .000) in 2006 for the 45- 54 age group. Up until 2006 this age group used computers and the Internet less than expected compared to the rest of the population, as was the case for people born earlier. The shift in 2006 relates to Italians born between 1952- 1961. The most recent ISTAT data pertains to 2014 for computer use and 2015 for Internet use (ISTAT did not analyse computer use in 2014). In 2014 the population using computers and the Internet remained higher than expected for people aged 54 and younger. However, in 2015 Internet users in the 55- 59 age group were no longer using the Internet less than expected compared to the rest of the population; instead, the number of Internet users matched expectations (χ = 19020, df = 11, p = .000). As data on computer use are not available for 2015, it is not possible to confirm whether the same shift occurred for computer use, but the data collected up to 2014 show a similar trend.

The shift contributes to the hypothesis that this age group has different characteristics compared to older people (whose computer and Internet use remains low) and younger people (whose data show much higher percentages). Since the data available is merely quantitative, it is not possible to know which characteristics, if any, differentiate the three groups beyond their stated use—or non-use—of computers and the Internet. Other ISTAT tables refer to the type of competences included in research on technology use by the general population, such as 'Copy or move a file or a folder', 'Use 'copy and paste' to 'copy or move information inside a document'. This information lacks greater details on the type of relationships these people have with ICT, their perception of their use, and a whole set of information on their experiences.

It is not possible to call this cohort 'digital immigrants' for the reasons explained above. Nor can we use other definitions such as 'digital settlers', meaning people not born in a country, but an early and skilled resident (Palfrey & Gasser, 2008). This definition refers to people with specific knowledge of the ICT field, whereas we refer to people who are not ICT-skilled or working in the field of ICT. In previous research, we explored the attitudes towards ICT of people born between 1949 and 1969. ISTAT data, not available at the time of that research, show that the cohort born between 1952 and 1961 (a subgroup of the cohort analysed in the previous research) made a significant shift in the use of computers and the Internet, as described above. In the present research we decided therefore to investigate the attitudes towards ICT and towards others when using it, shown by people belonging to the cohort born between 1952 and 1961.

Grounded theory

A constructivist approach to grounded theory (GT) (Charmaz, 2006; Mills, Bonner & Francis, 2006) was chosen, not looking for a core category and with a specific request section at the origin of research. While large grounded theory projects aim to generate theory (Strauss & Corbin, 1998a), the procedures and techniques are also a useful framework for smaller studies where theory will not be generated, particularly when the focus is on understanding more about a specific issue as in our research. In this small project, GT was used as an analytical framework incorporating constant comparative analysis as a method of qualitative data analysis (Charmaz, 2006).

In line with this approach, we used semi-structured interviews and textual analysis. When analysing interviews, we did not use researcher-chosen categories (Glaser & Strauss, 1967; Charmaz, 2006). Data were examined and analysis already begun during the data collection process, allowing initial readings to guide further collection. According to the GT methodology, research started out broadly, with the aim of

identifying the phenomenon studied; it then became progressively more focused throughout the research process. Although the main themes of our research were based on discussions with colleagues, on literature review and on the author's previous research on adults' relationships with computers, as suggested by Charmatz (2006), preconceived theoretical concepts provided starting points for examining data, but did not offer automatic codes for analysis. Possible biases could be related to the fact that the researcher's age is close to that of the participants. At the same time, this closeness may have opened up more possibilities in discussing the various themes due to a perceived similarity in life experiences, regardless of whether it existed or not.

Methodology, data collection

Participants

The initial criterion for participation was candidates in the 54- 63 age range (in 2015, this meant those from the 1952- 1961 cohort) who felt they were confident with ICT and computers in particular. Their ICT competences were not verified through practical sessions, but before confirming the interview candidates were asked to describe how they use computers. To be selected, candidates had to spontaneously describe at least seven out of the ten activities and competencies included in ISTAT research on technology use by the general population. The activities are: 'Copy or move a file or a folder', 'Use 'copy and paste' to copy or move information inside a document', 'Use basic arithmetic formulas in Excel or similar software, Compress (or zip) files', 'Connect and install peripherals (i.e. printers)', 'Write a program computer using a programming language', 'Transfer files between computers and/or from other devices (i.e. digital player, mp3 / mp4)', 'Change or verify the parameters to configure software', 'Create presentations with specific software, including graphics, images, sound or videos', 'Install a new operating system or replace an old'.

The geographical distribution of those responding covered five of the twenty Italian regions: Liguria, Veneto, Tuscany, Lazio and Sicily. Twenty participants, 10 women and 10 men, undertook the individual interview. Their age ranged from 54 to 62 years.

Procedure

Recruitment

Participants were recruited by emailing databases of NGO members, companies and public organizations (with a total of approximately 300 addresses). In the e-mail we asked candidates if they were willing to take part in research, provided they met the criteria for interview, and/or would be willing to forward the email to others who might be interested. We compiled a list of 73 volunteers (42 men and 31 women) for interview, although not all of them met the criteria or confirmed their availability after the initial contacts. After verifying the inclusion and exclusion criteria, we drew up two lists (one for men, the other for women) with names listed in order of their response to our e-mail. The first ten names were interviewed from both lists. Two men dropped out of the list and contact was therefore made with the 11^{th} and 12^{th} candidates. The number of interviews was not decided at the beginning of the research. Table 1 (p. 9), shows participants' data.

Women: names	Women: profession	Men: names	Men: profession
Anna, 57	Teacher	Carlo, 61	Teacher
Claudia, 55	Employee (private sector)	Mario, 54	Employee (private sector)
Laura, 58	Small entrepreneur	Giulio, 59	Employee (private sector)
Raffaella, 57	Small entrepreneur	Matteo, 57	Small entrepreneur
Antonella, 61	Teacher	Ugo, 58	Employee (private sector)
Alessandra, 54	Employee (private sector)	Marco, 59	Consultant
Olga, 54	Teacher	Massimo, 54	Employee (public sector)
Luciana, 62	Unemployed	Ottavio, 55	Unemployed
Paola, 54	Unemployed	Alessio, 55	Consultant
Silvia, 56	Employee (private sector)	Tullio, 59	Small entrepreneur

Table 1: Name (fictitious, to preserve anonymity), sex, age and professional status of participants.

Interview format

The settings varied: in offices if the participants were working, in coffee shops, via Skype (video sessions). Before each interview began, the purpose of the study was explained and informed consent was obtained. Interviews were recorded using a digital audio-recorder. All interviews began by asking the participants for personal data: date of birth, education, professional or employment status. Each participant was then asked about his/her personal history of computer and Internet use as well as current interests. This opened up the interview to the area of research; the rest of the interview consisted of open-ended questions aimed at eliciting individual experiences and beliefs focused on:

1. Experiences in daily activities in computer and Internet use;
2. Relationships with others when using ICTs together (e.g. training/learning new competences, using specific software or strategies in using ICTs).

The style of the interview encouraged detailed description of events and the exploration of their meaning to the individual (Charmaz, 2006; Rubin & Rubin, 1995). The first four interviews were very open. Thereafter interviews became more focused on the themes that had emerged and participants were informed when some of the questions were derived from previous interviews. The interviews lasted 35 minutes on average.

Analysis process

During analysis we applied the iterative classic grounded theory process of coding, memoing, sorting, conceptualization and constant comparison (Glaser, 1965) and, as far as possible, suspended preconception (Simmons, 2011). The first four interviews were transcribed fully before further interviews were conducted. Before coding, we made several readings of the entire texts and noted ideas of interest. Open coding allowed us to identify sub-themes, topics, and issues in a systematic manner. Code words were then applied to sections of the text following Glaser and Strauss' (1967) description of open coding. A list of the code words for each transcript was then compiled and checked with

the transcripts to ensure that codes were used consistently throughout the transcript.

After following this process with the first four transcripts, the interview schedule was modified to take into account some of the patterns emerging from the data. The remaining sixteen interviews were conducted using a continual process of interview, transcription and initial analysis. Further changes were made in relation to validation (see further on for details).

On completing this stage, we reread the uncoded copies of the transcripts after an interruption of one month to refocus on the participants' views as a whole and check that the initial codes were appropriate. During the entire process, as recommended by Berg (2001) a general question was kept in mind, which was the original objective of the research. Berg's recommendations were considered throughout the process: data must not be moulded to the study and as a result, the 'original purpose of a study may not be accomplished and an alternative or unanticipated goal may be identified in the data' (Berg, 2001, p. 251).

As the interviews progressed, and in keeping with grounded theory procedure, some topics were altered and others added. For example, due to the presence of participants not belonging to a traditional, heterosexual nuclear family, care was taken not to mention grandchildren or grandparents, but to focus on age groups and letting interviewees explain the type of relationship they had with the people they mentioned. This had a positive effect on all the interviews, as the participants felt free to explore their relationships with others at a wider level. In all interviews, the questions and answers were negotiated through restating and reformulating. Comments and questions helped the participants articulate their meanings. Clarifying details were asked for when more accurate information was required, and the conversational prerogatives of the participants were respected, in particular to give their stories 'a coherent frame', 'be experts', 'choose what to tell and how to tell it' (Charmaz, 2006).

Validation and saturation

Supervision and feedback methods ensured that categories were identified and developed in adherence with proposed Grounded Theory evaluation criteria (Strauss & Corbin, 1998b). Supervision was offered by three experts in technology related issues (one ICT expert, a sociologist and a trainer in adult education courses for the elderly) who were consulted in the pre-check for participants' admission to the research and while collecting the interviews. Validation was obtained through feedback methods, cross checking interim research findings with eight of the participants. We are aware that the appropriateness of these techniques has been questioned (Barbour, 2001; Mays & Pope, 2000; Onwuegbuzie & Leech, 2007) but they were considered appropriate in this research given its size and scope. Although some validation was achieved (all participants provided information on the main themes in the analysis, offering a range of responses and adding dimensions to the themes), it cannot be claimed that saturation of the themes occurred due to the limited sample size.

Data analysis

Five main macro themes emerged from the initial analysis of four interviews, the first two related to the use of ICT, the other three to relationships with others:

1. ICT was connected with personal interests and hobbies, but also with professional activities and administrative/bureaucratic chores, thus integrating all aspects of the participants.
2. Negative experiences or difficulties were never seen as unsolvable problems but rather as challenges to be overcome, alone or through others, with no sense of embarrassment or inferiority when in need of help. Curiosity in finding solutions to problems or difficulties was considered a driving force which made up for frustration and difficulties.
3. Learning to use a computer alone or through exchanges with other people was considered more valuable than learning through courses. Interactions with others were seen as part of the ICT experience.
4. No sense of subjection in relation to younger people (identified as 'digital natives') emerged; instead the participants considered themselves capable of recognizing an in-depth competence from a superficial one. Feelings of being discriminated on the grounds of age alone were debated.
5. When speaking of older people, the participants recognized a gap in competences, interest and approach, but felt confident they could find strategies or methods to convince them to use ICT or overcome daily difficulties in using it.

The above themes were used to identify broad categories for the remaining interviews. The following categories of importance emerged throughout the analysis process. One is the growing importance of ICT in all aspects of daily life, 'ICT pervasiveness', leading to an awareness that everyone should be competent enough in using ICT, 'ICT competence'. A sense of closeness with older people's needs in relation to ICT encourages participants to offer their support while stimulating insights about intellectual and physical decline, 'Relationship with elders-analog natives'. Finally, a sense of complementary competences with younger people, 'Relationship with youngsters-digital natives', encourages contacts to offer/gain support, although this is marred by a 'perception of ageism'.

Central to the representation is the awareness of 'Personal competence' in using ICT, due to long experience and a never-diminishing interest and curiosity towards new technologies, software, social networks. This competence is seen as interdependent with the interviewees' relationships with others. It is central, not only figuratively as shown in Figure 1, in that all other categories are directly or indirectly connected with it.

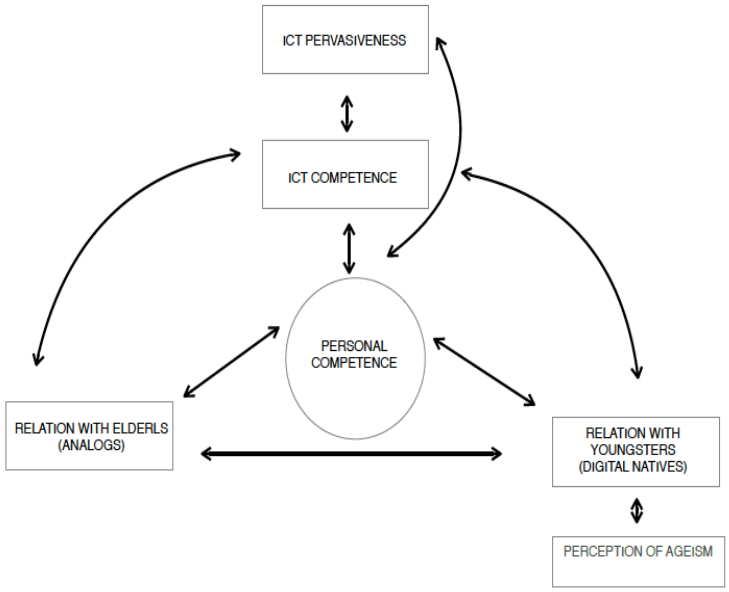


FIG. 1 PROCESS MODEL OF DIGITAL CURIOUS' RELATION WITH ICT AND WITH OTHERS IN USING IT

Extracts from the interviews illustrate the components of the diagram in the following paragraphs.

The entry point, the category called 'ICT pervasiveness', emerged from the participants' consensual view that using ICT is indispensable in contemporary societies. In the first extract, Anna illustrates the awareness that ICT competence is essential for citizens:

> In just a month my apartment was burgled and I lost my identity card. In both cases, when I called the police they told me to file an online complaint. And [I was asked] if I had photos of the stolen jewellery, proof of purchase of other items taken away ... everything was to be sent as attachments. They do not even come to see the state the apartment is in. They take it for granted that you know how to use computers, the Internet, that you have e-mail, a scanner […] otherwise you spend hours in a queue at their offices. (Anna)

Awareness of the importance of ICT knowledge is one aspect of the category of 'ICT pervasiveness'. Another aspect is being able to use ICT was viewed as essential to initiating and reinforcing interactions with others through social media, as Carlo shows in the next extract:

> I held back from using Facebook because I felt ridiculous, it seemed a kids' thing. But you can't do without it, and it's the same for Whatsapp, even my friends don't use e-mails anymore, or only for work, not in their private life. Facebook helps you understand a lot about someone you do not know. I do what employers do [laughs], I check the Facebook page of new acquaintances. You can find any information on the Internet before deciding whether or not to continue seeing someone you just met. (Carlo)

As the diagram indicates, the perception of ICT pervasiveness led to the recognition that it should be used adequately, at least to some extent, and an awareness of the importance for everyone to be competent in using ICT *('ICT competence').* The two aspects have a reciprocal influence: being aware of ICT pervasiveness encourages one to become more competent in ICT use and being competent in ICT use makes the participants more aware of ICT pervasiveness. The risks of having negative attitudes toward technology were felt

to be a lack of recognition of ICT's potential and also a lack of opportunities to become more integrated in society.

Alessandra offers an example of the type of comments made about the psychological attitudes favouring a competent approach to ICT, even when the actual competence is lacking.

> We found a solution: [her uncle, 82 years old] agrees to learn the 'theory', meaning simply what it is feasible to do nowadays with a computer or a smartphone. Without using them, actually. He simply gets the information I give him. Last year the heating system broke after a sudden frost. The company he called to fix the problem told him to record the noise the heater was making and email it to them so the technician could understand the problem. My uncle listened, did not blink, said 'ok', phoned me—on the landline!—immediately and asked me 'could you come here with your mobile phone, record the noise and send it to the technician?'(Alessandra)

The recognition of the importance of gaining *'ICT competence'* follows from the participants' awareness of *'ICT pervasiveness'* in contemporary societies. It refers both to the participants' recognition of how technology is changing continuously (although this is not always necessary in their opinion), and the growing value of technology as a tool; it interacts with activities that were not linked to ICT in the past and can even shape them, as Ugo and Fulvio's comments show:

> One thing is technical innovation. I mean, Whatsapp did not exist before; now it exists, and I've learned how to use it. That's ok. But I do not understand why the homepage of the website I use to check my email has to change every few months. I waste time learning to find my way about the homepage… my feeling is those [changes] are made just to justify the work of someone who has nothing better to do. (Ugo)

Through his awareness of how superfluous some changes are to website layouts, Ugo affirms his perceived competence when distinguishing useful from non-useful evolutions. Following the evolution in online experiences, Fulvio is changing his approach to experiencing art:

> I started [using the Internet in relation to his interest in art] looking online at the timetables of museums, then I started buying tickets online. That was ok, it was more practical than making telephone calls or waiting in endless queues. But now things have quickly changed. I can visit online exhibitions; I can use information resources that those who simply pay a visit to a museum cannot use. I have the impression that I can do things online that I cannot do otherwise. It is not a different way of doing the same things anymore, it is doing different things. (Fulvio)

Both Ugo and Fulvio made further comments about their never-ending interest in learning and exploring ICT, one which helps them stay up-to-date with new applications, software, devices. This type of comment is common to the interviews, as will be shown when analysing the interviewees' relationships with others. This feature, the eagerness to know and learn, is considered specific by the participants in contrast with the other age groups, as anticipated by this comment from Olga, the youngest participant:

> My friends and I felt like pioneers. We could not speak with older people about what we were discovering, they knew nothing. And there were no younger people, I mean, unless you spoke with toddlers. It was like discovering a new world, even better, another universe. A continuous thirst for knowledge, never satisfied. We sometimes spoke about the future, asking ourselves when all this would end. Now I know that all this [she makes a gesture

> towards the smartphone and laptop on the desk] was not even imagined in science fiction books or movies. (Olga)

For the participants, recognising the need for *'ICT competence'* was closely linked with their worries and interests about older people' difficulties and their mixed feelings toward younger people. In the next extract, Raffaella's thoughts about the importance of reaching at least a minimal competence made her aware of the difficulties that her parents may experience, and led her to teach them to use ICT.

> My sister- in-law has always turned the use of technology completely over to her husband, even when their children were needed help [at school]. Now she has a smartphone, but she has to make an enormous effort, and she is ten years younger than me [Raffaella is 57]. She keeps wasting time on chores she could easily do through the smartphone. I wonder how the elderly do, having difficulties in learning new things, difficulties in moving around in town, or queuing for a long time. When I go to the post office, nearly all the people I see are the same age as my parents. And immigrants sending parcels to their countries. That's why I insisted that my parents had to learn at least something [about using a computer]. (Raffaella)

As shown in Figure. 1 (p. 65), this awareness leads in turn to a sense of competence in perceiving the personal role she can have 'Personal competence', a recognition of the importance of interacting with the elderly in order to support them. The past learning process that led to their present ICT competence was of course crucial to the participants' positive perception of their potential to interact with others. Initial experience was gained almost thirty years ago through self-learning, informal learning paths and very occasionally through courses, paid for in general by employers. All the participants recall the sense of wonder they felt towards new technology. For some of them (those already in employment when the first computers appeared), this was part of a continuum that over the space of a few years went from the telex to the fax and to electronic typewriters; the younger participants gained a sense of empowerment from their first programming experiences with their first home computer. All the participants have since then continued using ICT and followed its evolution.

'Personal competence' in using ICT was also strongly connected to the participants' view of younger people's competence. The participants show awareness of general age-related discrimination (ageism) and how it influences younger people's perceptions of everyone who appears 'older' to them, with a flattening effect that does not distinguish between different age groups. In Massimo's case, the perceived discrimination is double:

> [Speaking about his children, 15, 22 and 23 years old, when interacting with ICT] They [only] pay you attention when they want to; they grumble if you ask them to repeat something, they tell me 'you are like Grandma!' as the worst curse. Double discrimination, by age and gender [he laughs]. **(**Massimo)

In Figure. 1 (p. 65), the central feature is the awareness of 'personal competence' in using ICT. It is central in that all other stages are directly or indirectly connected with it. In addition, this awareness is central to the way the participants interact with others when using technology. The participants were overwhelmingly positive in their expressions of competence regarding using technology and interacting with others. Nonverbal communication was also coherent: they laughed frequently, smiled when describing interactions and shrugged when describing potentially annoying situations. Silvia, Luciana and Fulvio express this awareness of personal competence regarding interaction with youngsters and the elderly:

> [Speaking about the children of her life companion, 17 and 19 years old]. Sometimes they have that gaze, as if they were pitying you, as if they were safe on the mainland and you were drowning in two centimetres of water… However, when they have to write their homework, they do not know how to use Word properly, they have no clue how to create a table of contents with Word, to format a file. Then their gaze changes and they ask for help. But they need to have a dig at me, always 'as you have been using the computer for centuries, could you please help me?' **(**Silvia)

> I programmed a software in DOS to manage the bibliography for my thesis. The professors asked me for a copy of it as at the time not even my university library had it. And, needless to say, I programmed it using the keyboard. Once I heard my son, at the time 20 years old, whispering to a friend: 'Mom believes you can use a computer without a mouse'. I went outside to do some gardening to avoid killing them both. They think they know everything, that ICT is their domain. (Luciana)

> [Speaking about her aunt, 90 years old]. She still enjoys reading, she does not care much about anything else. So I gave her a gift—a Kindle, and now everything is fine. She says she gets less tired, that she can read in bed, on the couch, at home, in the garden, if she falls asleep she does not lose track of where she is in the text, she does not have to keep the light on in the bedroom. I had to modify the font size, she needs a very big one. Conclusion: a 100% positive choice. (Fulvio)

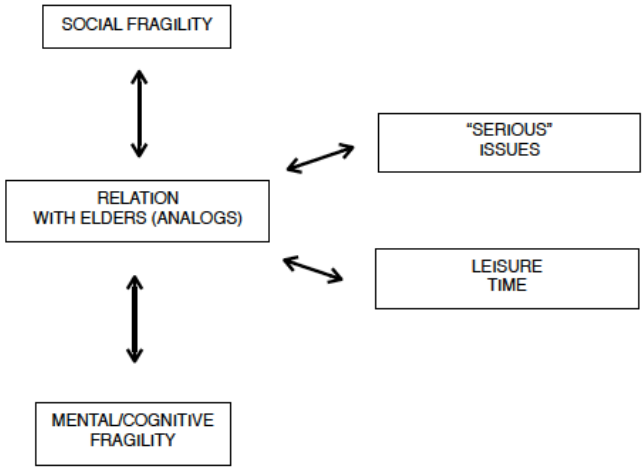
The model captures the strong connection between the awareness of personal competence and the general usefulness of technology in activities that were part of this age group's daily lives even before the advent of computers: helping the elderly in living their lives better, helping the younger in school-related activities. Technology may give a different perspective to these activities, but in the end the descriptions do not differ much from the non-technology mediated relationships among generations. The participants give several examples of how their use of ICT corresponds to what today's society expects from citizens. As Claudia's comment below indicates, this usage is both recreational and practical.

> I can do everything I like to do in life with a computer, online. Reading, improving my swimming style by watching training movies on YouTube, keeping in contact with others: friends, relatives, acquaintances but also clerks working for public organizations, like the municipality, or companies, because at our age beyond what we like to do there is also what we have to do [she laughs]. Even medical certificates for absences at work have to be done online nowadays! **(**Claudia)

To summarize, the core component of Figure 1 (p. 65), is the awareness of personal competence. This sense of competence leads to an understanding of the individual's potential in interactions with society as a whole: ICT is needed in every aspect of daily life, but citizens must be capable of detecting the role of technology in various settings. Linked to this understanding is the interaction with their elders and younger people, which reinforces – although in different ways - personal awareness of ICT competence.

A category of Figure 1 (p. 65), showing a variety of issues discussed by the participants was ''Interactions with elders/analog natives.'' All the participants explored these interactions more than those with digital natives. Figure 2 (p. 69) is a diagram of this part of Figure 1 (p. 69). It illustrates the ways the participants interact with older people and gives an indication of their values.

FIG. 2 FACETS OF RELATION DIGITAL CURIOUS HAVE WITH ELDERS (ANALOGS)



A core feature of the participants' reflections on using computers was indeed the importance they give to interaction with their elders, be they relatives, friends or even neighbours. Often during the interviews, when asked how they feel about technology, participants would explain how rewarding and useful it was to be able to help others.

As Figure 2 (p. 16) indicates, these relationships are different in nature. As Antonella and Raffaella mention in the next two extracts, practical support can be extensive and complex, ranging from important issues such as medical issues to leisure time:

> My parents have an extra pension allowance, as my father was a manager. In the last five years they have been able to deal with his company online, to send certificates, invoices etc. Since January 1st [2015] the company can only be contacted through their website. I've helped my father to use the system; I could not do it at their place, as they go so often to the doctor! I feel relieved and also for them being autonomous is important. (Antonella9

For Raffaella, the main reason for interacting with older people is her pleasure in helping them to spend their leisure time more pleasantly:

> My parents-in-law are not interested at all [in using a computer or a smartphone], but their friends are, you bet! They have children and grandchildren living abroad, and I helped them install and use Skype so they can stay in contact. Then they asked for Whatsapp on their smartphones, they are going wild! [she laughs]. (Raffaella)

So, whether out of necessity or for leisure, these two participants believe that they are helping improve the quality of life of the elderly people they interact with. Although sometimes the relationships were complicated due to memory problems on the part of the elderly person or an unwillingness to accept help, a general sense of empathy emerged. It was nurtured by the awareness that similar problems, all be they less serious, were being shared. Another important factor that emerged was the role of interaction in allowing for personal reflection on the social and mental frailty linked with getting older, as shown in the two following extracts.

> I can see that for them [his parents aged 80 and 84] it is difficult [learning to use a computer]. They have no patience, and they forget everything from one time to the next.

> But they must learn at least a little: we live too far away for me to go there and do things for them. Then they try to explain [their difficulties] to me over the phone and I can't understand what they mean because they use their own terminology. I do not know whether to laugh or cry, because then they get cross and say that I must be patient and I'll see what it's like when I'm old. I won't understand anything anymore [he starts imitating his father's voice] 'on the spaceship where you'll be living,' says my father as a conclusion. (Matteo)

> [He speaks of his father aged 88] He writes everything in that flowing, beautiful handwriting of the past; he writes each step he has to follow, a sort of algorithm, but it only takes a change on the screen or a pop-up and he gets lost. Sometimes he tries to cope by writing strange things, such as: 'click on the blue box in the top left corner under the photo of the cat food'. I try to make him understand that these are advertisements and [that they] change from time to time! Sometimes I wonder how soon my children will begin to see me as I see him. (Ugo)

Results

The results of this study, grounded in the participants' experiences and opinions, support and extend the findings of previous research. The participants are interested in and positive towards ICT, aware of their own role in interacting with others using ICT and keen to offer advice and help. They share a common perception of how they see and are seen, not always positively, by younger people (digital natives) and how they interact with older people (analog natives). Curiosity is what pushes the participants to interact with others, mainly relatives and friends, suggesting the possibility of a typology which we propose to call 'digital curious'. Previous typologies do not appear ideal for this group. The opposition of Digital Natives versus Digital Immigrants proposed by Prensky (2001) appears too rigid and unable to take account of behavioural nuances; the continuum of 'Visitors' and 'Residents' proposed by White and Le Cornu (2011) is mainly related to individuals' engagement with the Web, using the metaphors of 'place' and 'tool' as the most appropriate descriptions of technology use in contemporary society, particularly social media. White and Le Cornu do not categorise their typology according to age or background. In our view, the life experience of people who share a common set of events from the 1980s, at least in Italy, has the potential to influence their behaviour in relation to technology. The initial curiosity that drove them to use new technology might be a key factor in influencing their current behaviours, from the acquisition of ICT competence and an understanding of the importance of ICT in our society and the risk of exclusion for those who have not mastered it, to their willingness and interest in interacting with others by offering support and help.

Intergenerational ICT learning has been considered to benefit older people through the actions of their children or grandchildren (Tatnall, 2014), but no clear distinction has been made between the status of children and grandchildren. The findings of this study show how the elderly's adult children do not feel less competent than their own children; in some cases they feel more competent. This reinforces their perception that there are things they can teach younger people as well: if not technical competences, at least how to fit ICT in with school-related needs or how to use social networks wisely. At the same time they adapt well to teaching older people since they share similar problems, albeit to a lesser extent. These findings make us see the relationships between these three groups from a different perspective: the exchange of knowledge and competence may go in different directions, not only from younger to elder. Bailey and Ngwenyama (2010) affirm that intergenerational interactions are influenced by the particular competences

and knowledge of each generation. Based on the results of our research, however, we may claim that the idea of generations could be misleading. Greater emphasis should be placed on understanding sub-groups or typologies who may have different skills and knowledge than their own generation because of their past experiences and attitudes towards technologies. In other words, a more nuanced approach to classifying participants in adult learning activities or intergenerational exchanges should be sought to favour people's compliance with the activities proposed. Strengthening knowledge sharing, as suggested by Bailey and Ngwenyama (2010), as a result of intergenerational ICT collaboration is certainly important, but perhaps it is no longer true that ICT knowledge flows from the younger to the older generation. Age has the potential to make a significant difference to competences in technologies.

The younger generations are often viewed as the ICT experts. This is positive in some aspects, but it might also create conflicts regarding intergenerational interactions over perceived online dangers, as reported by Mesch (2006). Our study shows that participants feel confident enough with the Internet and social media to understand the risks faced by younger people; it opens up new research paths on interactions between the younger generations and a group of adults who are now more competent in using social media than people of the same age ten years ago, and who might be better interlocutors than in the past.

The model presented provides further support for the benefits of mentoring shown in previous studies, such as the examples of volunteers and charity members offering ICT learning support to middle-aged and elderly women (Lin et al., 2012). The participants claim that their real life experiences, closer to those of elderly people, may help find the most effective ways to offer ICT education and bridge ICT gaps between the younger and older population. Peer-led ICT education programs (Clark et al., 1997) could also benefit by including people whose age and competence enable them to teach and guide slightly older people with less ICT competence because of their age.

Previous attitudinal research has indicated a positive change in attitudes in older adults who use ICT (Jay & Willis, 1996; Morris, 1994). This is also corroborated by the findings of this study, through the participants' descriptions of the positive feedback from the elderly they helped. Parenting and pedagogical spaces have been investigated in the past (Aarsand, 2014), as have the positions of being responsible, involved and attentive in relation to children, and our study suggests that similar positions can also be experienced towards elderly parents or friends.

Biology and psychology have been at the basis of studies about ageing. A general decline is recognised to occur as part of the ageing process (Schneider, Pichora-Fuller, Craik & Salthouse, 2000). This decline is consistent across developed countries, and difficulties in the memory, agility and sight of elderly people today are very similar to those of the elderly 20 or 30 years ago. However, better lifestyles, nutrition and exercise are improving the physical and cognitive conditions of today's adults and the elderly of tomorrow. Social aspects are also important in promoting a healthier ageing process (Carr & Pudrovska, 1996). When studying how ICT influences the lives and relationships of adults and the elderly, however, we must include other factors related to the structure of the societies in which we live. Technologies that did not previously exist have rapidly become part of people's lives, allowing some of them (and greater percentages of the population over the years) to learn, live and interact in ways not experienced before. From a certain moment in time, technology changed people's lives in unprecedented ways; people themselves have helped modify technologies and the way we use them. Many stereotypes about technology and the way people experience it are linked to a time when competences were clearly distinguished across the generations. For the first time in

history, those reaching retirement age and becoming 'elderly' will have ICT competences not seen in the past.

Conclusions and implications for further research

Firstly, we would like to address three implications of this study. The 'digital curious' might be a resource for promoting ICT use among elderly people. The digital curious are competent in using technology; they are aware of its importance in being active citizens in contemporary societies, and perceive their own value as persons competent in the field.

Moreover, they do not feel subjugated by digital natives, but instead feel that discriminating attitudes are linked to their age more than their supposed lack of competence. The traditional gap between those with digital expertise and those who lack it, often a source of embarrassment (Ribak 2001; Kvasny, 2006), was not reported by participants belonging to this age group. At the same time, the 'digital curious' feel closer to older users because of their age, lifestyles and ability to understand the frailty of older people. These findings do not support the image of a generational gap between these age groups. On the contrary they provide grounds for supporting interaction between the 'digital curious' and older people to promote ICT use, seeing as the former have similar interests, empathy and patience to older people. Educators and trainers in adult education belong to a variety of age groups. They do not necessarily realise that their adult or elderly students may belong to groups with different perceptions of ICT and the relationships with others connected with using ICT. The generation gap in the use of information and communication technologies (ICTs) has been analysed for its negative and positive aspects (Roman & Colle, 2002; Valentine, Holloway, & Bingham, 2002; Ferlander & Timms, 2006;). One implication of this study is to make educators and trainers in adult education aware of a variety of ways of at least partially closing the generation gap, including sub-groups whose competencies may provide a bridge between other groups.

A second implication of this research is that it has given a voice to people often assimilated with elderly groups in their use and appreciation of ICT. People who do not recognise themselves in the mainstream view of 'the elderly using ICT', but identify themselves as 'digital curious' may find experiences closer to their own in this study. They may feel free to reflect on their relationships with other age groups, unrestricted by stereotypical concepts opposing those who know (digital natives) with those who either do not know or have difficulties with ICT.

A third implication, as evident from the interviews, is that although technological competence is undoubtedly important, it is only part of a wider set of competencies and attitudes. The digital curious also have non-digital related competencies and attitudes overlapping at least partially those of the elderly and younger people. For example, they are still active citizens but are close enough to retirement age to understand the needs and perspectives of other age groups.

Now we come to the limitations of our study. A first limitation is the small sample size, which meant that the saturation of themes was beyond the possibility of our research. If the research had been continued with more participants, the themes presented could have be given more support, or alternatively different themes might have emerged. For example, it might have been possible to find digital curious people who were not interested in interacting with and helping others but made a solipsistic use of technology. It is thus possible that additional interviews would produce different results; this is an overarching limitation of conducting qualitative research with a small sample. The focus on a limited subgroup of adults cannot lead to a generalisation about the 'digital curious'. Therefore, the findings presented in this study only reflect the responses of the people

interviewed. Another limitation relates to the generalisability of findings from qualitative research. In this study, the findings would be most generalisable with a similar population of the digital curious from other Italian regions or other countries, adapting their age to general statistics such as those provided in Italy by ISTAT. Therefore, our findings must be considered an explorative hypothesis that can be used to for further research or to inform social and/or educational practice.

Bearing in mind the limitations of our study, there are still further areas for research. To complement the work of this study, it would be interesting to explore further interactions between the 'digital curious' and 'digital natives', particularly how ageism interferes with these interactions. Ageism should be considered in both directions, as the stereotypes and prejudices of the younger generations towards adults and the elderly appear in this study to be counterbalanced by the stereotypes and prejudices of the 'digital curious'.

Finally, we hope that by providing an initial understanding of how the 'digital curious' perceive and interact with ICT and with others using ICT, this study will contribute to an updated overview of adult education approaches and strategies: one capable of valorising subgroups previously considered part of a much wider population, irrespective of characteristics, interests and availability linked to social as well as personal factors. These factors may create a shared set of characteristics which might be useful resources in adult and intergenerational education.

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Notes

1 http://europa.eu/ey2012/.

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Examining social inclusion and social capital among adult learners in blended and online learning environments

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Abstract

New learning spaces and learning formats affected the learning and education of adults. In this respect, digitalisation is believed to reduce social exclusion. Moreover, adult education, social inclusion and social capital are positively related among adults. Therefore, this questionnaire study examines how adults who are engaged in online and blended learning perceived change in social inclusion and social capital. We conceptualised social inclusion as social participation and social connectedness, and social capital as bonding and bridging ties. In the case of blended adult learners, our results show positive perceptions of social inclusion and social capital. Those perceptions are less positive among the online adult learners. In both cases, non-natives experience a higher increase in social inclusion and social capital than natives. Hence, online and blended learning holds advantages for adults particularly non-natives: it enhances social inclusion and social capital.

Keywords: adult education; online and blended learning; digitalisation; social inclusion; social capital

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Introduction

Digitalisation has impacted the educational landscape. Hence, adult education practices are affected by the introduction of technologies. In this respect, online and blended learning (OBL) have been put to the fore. The introduction of OBL in education yields substantial benefits for adult learners because of its flexibility, accessibility and affordability (Selwyn, Gorard, & Williams, 2001) and improved pedagogy (Graham, 2004).

Simultaneously, policy-makers are promoting adult education due to its effect on *social inclusion*. The OECD examined social outcomes of learning under the form of civic and social engagement (Desjardins & Schuller, 2006). The European Council (2010) also emphasised the social dimension of education and training: adult education fosters social cohesion, active citizenship, upward social mobility, and creates active inclusion and enhanced social participation. In addition, UNESCO (2015) released the Incheon Declaration striving towards inclusive and equitable quality education and lifelong learning for all. This declaration underlines the undisputable role of learning throughout the lifespan for obtaining a knowledge-based economy (Lisbon European Council, 2000) and also for 'promoting democracy and human rights and enhancing global citizenship, tolerance and civic engagement' (UNESCO, 2015, p. 5).

Next to social inclusion, adult education is interconnected with *social capital.* Field (2005) indicates that people's social relations, i.e. their social capital, play a vital part in their capacity for learning. Therefore, social capital and participation in adult education are positively associated.

Traditional forms of adult education have shown to improve social inclusion and social capital (De Greef, Verté, & Segers, 2014; Field, 2005; Tett & MacLachlan, 2007). But the influence of online learning spaces on adults' social inclusion and social capital has not been scrutinised extensively. In this digital age, it is not yet defined if and how digitalisation in adult education can serve as a solution for societal problems, such as social exclusion. In this respect, it is valuable to understand how vulnerable and disadvantaged adults are affected by participation in innovative adult education practices, such as OBL.

Therefore, this study examines how participation in two cases of technology-based learning, online and blended learning, is related to adult learners' perceived social inclusion and social capital change. Furthermore, this study focusses on the perceptions of vulnerable adults such as non-natives, low-educated, unemployed and older people. This is of utmost importance because our contemporary society is still characterised by poverty and social exclusion threatening the aforementioned groups of adults (Eurostat, 2010).

Digitalisation in adult education: impact on social inclusion and social capital

The impact of adult education has primarily been studied from an economic-instrumental point of view, examining the way adults' educational participation contributes to the development of a knowledge-based economy and an increase in human capital (Fejes & Olesen, 2010). Additionally, adult education also plays a role in strengthening the learning society (Jarvis, 2004). Nowadays, adults are considered as responsible for their own learning trajectories in order to keep up with the demands of society (Illeris, 2003). Yet, participation in adult education reflects a Matthew principle: those in the most advantaged positions participate more and thus benefit more (Boeren, 2009). Therefore, vulnerable adults have fewer chances to participate, while they are in need of increasing

their human and social capital. In this respect, the following sections review the connection between adult education and social inclusion on the one hand and between adult education and social capital on the other hand.

Adult education and social inclusion

Social inclusion: conceptualisation

Not only policy-makers, but researchers worldwide connected adult education to *social inclusion*. Generally, social inclusion is described in contrast with social exclusion, which has predominantly been aligned with poverty and disadvantages of people living on the margins of society (Percy-Smith, 2000). Burchardt, LeGrand, and Piachaud (1999, p. 230) indicated that:

> An individual is socially excluded if (a) he or she is geographically resident in a society but (b) for reasons beyond his or her control, he or she cannot participate in the normal activities of citizens in that society, and (c) he or she would like to participate.

Furthermore, social exclusion is a multidimensional concept (Burchardt et al., 1999; Percy-Smith, 2000), for example referring to economic exclusion, service exclusion or exclusion from social relations (Gordon et al., 2000). The aforementioned descriptions show that social exclusion has mainly been defined by the lack of participation in certain activities. On the contrary, social inclusion implies that citizens fully participate in society (World Bank, 2016). In addition, affective components of social inclusion, being belongingness, togetherness or connectedness, have been brought to attention (Abrams, Hogg, & Marques, 2005; Allman, 2013; Grieve et al., 2013). Nevertheless, there is no consensus on the definition of social inclusion, because it has been operationalised through a wide array of dimensions such as health, well-being, civic and social engagement, citizenship and political participation (Desjardins & Schuller, 2006; Field, 2012).

Focusing on the inherent social element of social inclusion, in this study, social inclusion is defined as the combination of social participation and social connectedness. This conceptualisation takes into account the multidimensionality of social inclusion. It captures not only its participatory function, but the emotional meaning as well, respectively referring to 'the participating citizen' and 'the relational citizen' (Vandenabeele, Reyskens, & Wildemeersch, 2011). Both dimensions, participation and connectedness, are included in the social inclusion model of De Greef et al. (2014), bearing a functional (e.g., participation) and emotional (e.g., connectedness) role. *Social participation* reflects the *behavioural dimension* of social inclusion and is defined as 'the extent to which a subject takes part in different social networks and other activities in society' (Ekström, Ivanoff, & Elmstahl, 2013, p. 459). *Social connectedness* represents the *affective dimension* of social inclusion and refers to a 'subjective awareness' (Lee & Robbins, 2000, p. 484) or 'self-evaluation of the degree of closeness between the self and other people, the community, and society at large' (Lee, Dean, & Jung, 2008, p. 415).

The relationship between adult education and social inclusion

According to De Greef et al. (2014) adult learners experience an increase on social inclusion after participation in adult education courses: 41% of the participants perceived an increase in participation and connection. Field (2012) reported that social and civic engagement is closely associated with participation in adult learning. Adults indicated that they more often go out to pubs, clubs and/or the cinema as a consequence of their

participation in adult learning (Tett & MacLachlan, 2007). In other words, they perceived an increase in social participation. Moreover, engagement in family literacy programs showed that disadvantaged women are provided with more than just academic skills (Prins, Toso, & Schafft, 2009). They were offered opportunities for getting out of the house more often and educational participation satisfied their need for affiliation and connectedness (Prins et al., 2009). As a result, it seems that adult education enhances social inclusion.

However, the effects of participation in adult education regarding social inclusion can differ. De Greef et al. (2014) found that groups with different ethnic backgrounds perceive differences in the rate of increase in social inclusion: non-natives report higher increases with respect to going out and meeting people. People who are living together and low-educated adults also report more positive changes in their social inclusion (De Greef et al., 2014). Furthermore, the Benefits of Lifelong Learning-project (BeLL) (Manninen et al., 2014) reports that adults with lower educational background, females and older adults experience more positive changes to social engagement. Additionally, disadvantaged individuals, such as low-educated, divorced, ethnic minorities or unemployed, benefit more from their participation in adult education (Panitsides, 2013). For example, the feeling of being a member of a community has been enhanced (cf. social connectedness). Finally, educational participation is positively related to social participation among older adults (De Donder et al., 2014). Hence, previous research indicates that vulnerable adults, like ethnic minorities, low-educated, unemployed, divorced or older adults, experience an increase on social inclusion due to their participation in adult education.

Adult education and social capital

Social capital: conceptualisation

'Social capital' got renewed attention at the end of the 20th century. Authors such as Bourdieu (1980), Coleman (1988) and Putnam (2000) have employed the notion of social capital to examine societal dynamics. First, Bourdieu (1980) describes social capital, next to economic and cultural capital, all of which are important to achieve social mobility. According to Bourdieu, social capital consists of the resources arising from the possession of a durable social network. Next, Coleman (1988) emphasises the functional and productive role of social capital, since it produces benefits to individuals. In contrast, social capital is a collective good, consisting of social networks, norms of reciprocity and trust among citizens (Putnam, 2000).

Bourdieu and Coleman refer to the individual benefits of social capital, whereas Putnam describes social capital as a benefit for the society or community. Additionally, Bourdieu and Coleman stress the importance of social networks in building social capital, which could be described as structural social capital. In contrast, Putnam explains the importance of values, norms, trust and reciprocity, which are attitudinal components of social capital. Williams (2006) follows the structural approach and proposes an instrument to measure social capital based on online or offline social networks. In the present study, the individual-structural approach to social capital is employed, because of the focus on an individual's social networks which produce important resources. Consequently, the following definition of social capital is proposed: 'the sum of resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition' (Bourdieu & Wacquant, 1992, p. 119).

Furthermore, social capital includes two different processes, namely bonding and bridging ties (Putnam, 2000). *Bonding social capital* consists of close personal relationships among members of the same group and refers to homogeneous networks. On the contrary, *bridging social capital* concerns outgoing social relationships, which build bridges between different societal groups. Therefore, bridging social capital pertains to heterogeneous networks. Granovetter (1973) describes bridging social capital as 'weak ties' and bonding social capital as 'strong ties'. Weak ties are especially valuable in retrieving information normally not available to people in their immediate social network, i.e. bonding social capital.

The relationship between adult education and social capital

The interconnectedness between adult education and social capital has been outlined by Field (2005), stating that social capital influences adult learning, which in turn affects social capital. The relationship between adult education and social capital is reciprocal because social capital has an impact on educational participation and achievement and at the same time participation reinforces new and wider social networks. In other words: 'Social capital is important for learning, and learning is important for social capital' (Field, 2005, p. 110). One strand of researchers investigates how social capital influences adult learning (e.g., Dufur, Parcel, & Troutman, 2013; Strawn, 2003). Other studies emphasise the change in social capital arising from educational participation. A characteristic of social capital development is building new social networks, such as new friendships (Manninen et al., 2014; Panitsides, 2013). This type of social capital refers to bridging ties. With respect to bonding ties, impact on getting help from friends has been described (Tett & MacLachlan, 2007). Moreover, participation in community-based adult education supports the development of social capital and can even contribute to the recovery of lost social capital (McIntyre, 2012). Hence, social capital, consisting of bonding and bridging ties, can be enhanced due to participation in adult education.

In accordance with findings on social inclusion, vulnerable adults benefit more with regard to social capital development (Manninen et al., 2014; Panitsides, 2013). Those vulnerable adults (e.g. low-educated, ethnic minorities) indicated that they were able to extend their social network and establish new social relationships. In other words, they have increased their bridging social capital.

The importance of OBL in adult education for social inclusion and social capital

Online and blended learning

New technologies and media are continuously reshaping educational practices. Bates (2015) represents the complexity of technology-based learning in a continuum. He identifies three main modes of delivery in education: classroom teaching with no technology, blended learning and fully online learning. In the teaching practice, each delivery mode takes on different forms (Figure 1, p. 82).

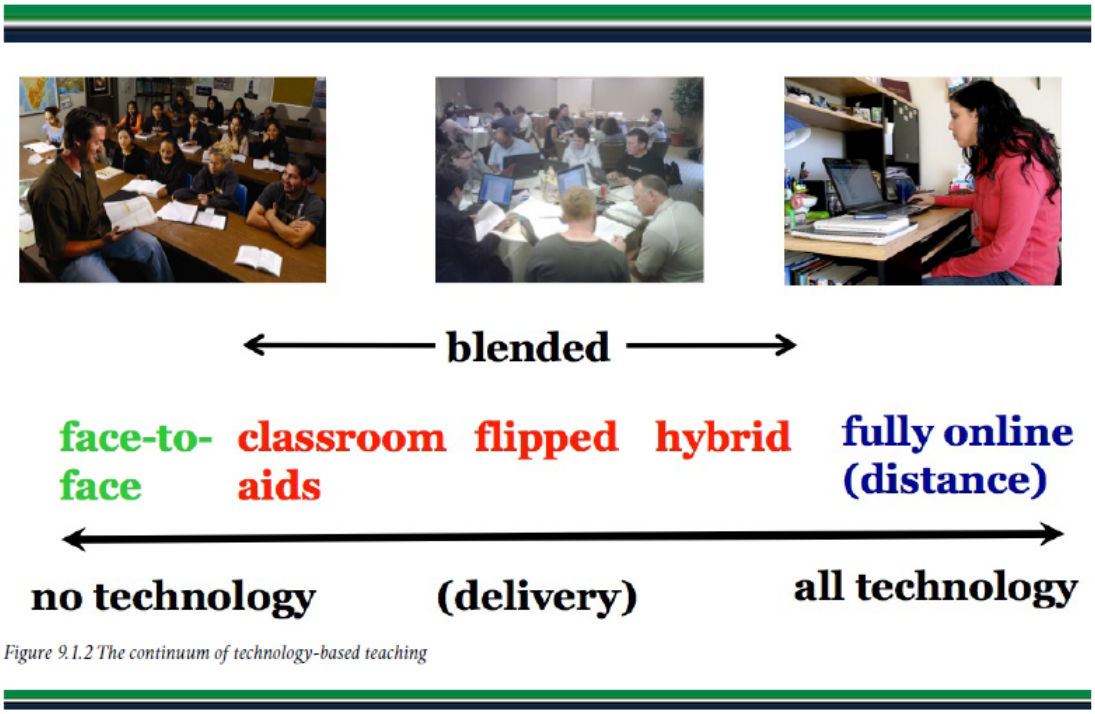

Figure 1: The continuum of technology-based learning (Bates, 2015, p. 316).

In earlier years, online learning was defined as presenting and delivering materials through internet technologies. Innovative approaches such as MOOCs follow this path by distributing knowledge online to a broad audience (Bates, 2015). These approaches are mainly built around learner-content interaction. However, there is a tendency to consider multiple sorts of interaction as a vital part of online learning (Anderson, 2008). During online learning, 'students study in their own time, at the place of their choice and without face-to-face contact with a teacher, however, students are connected' (Bates, 2015, p. 318). Ally (2008) elaborates on the interactive dimension of online learning:

> The use of the Internet to access learning materials; to *interact* with the content, instructor, and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning, and to grow from the learning experience. (Ally, 2008, p. 17)

Ally (2008) thus distinguishes three kinds of interaction: 'learner-content', 'learner-instructor' and 'learner-learner'. In building a theory for online learning, others add more interactive dimensions such as instructor-instructor, instructor-content, and content-content (Anderson, 2008). However, online interaction does not take place easily. In the case of videoconferencing, technology has shown its substantial influence on classroom interactions. Instead of building a learner-centred environment, the teacher became the main actor (Lögdlund, 2011). In our study, online learning is considered as online learning activities which are characterized by at least one type of the following interaction models: learner-content, learner-instructor or learner-learner.

Overall, blended learning is the combination of face-to-face and online instruction (Graham, 2004), incorporating the conveniences of online courses without the complete loss of face-to-face contact. Boelens et al. (2015) agree that blended learning is primarily understood as blending online and offline learning. On the other hand, blended learning can be organised in a variety of designs (Figure 1, p. 6), ranging from technology-

enhanced learning with technology as a classroom aid to flipping the classroom and hybrid or flexible learning (Bates, 2015). The latter models start from online learning and only use classroom-teaching when its particular pedagogical features have added value. Nonetheless, blended learning often takes the form of classroom-type learning. Lectures are recorded and put online or a learning management system is used in order to create a replica of the physical classroom (Bates, 2015). In our study, blended learning is considered as both models: classroom-type blended learning as well as the more innovative approaches. According to Rovai and Jordan (2004) blended learning would result in a more solid learning experience compared to traditional or fully online courses. As a consequence, online and blended learning are considered as fundamentally different from each other. Moreover, comparing blended and online approaches to face-to-face instruction, a meta-analysis showed that the effect size for blended learning was significantly larger (Means, Toyama, Murphy, & Baki, 2013).

Relating OBL to social inclusion and social capital

Warschauer (2003, p. 9) premises that 'the ability to access, adapt and create new knowledge using new information and communication technology is critical to social inclusion in today's era'. However, the benefits of OBL regarding social inclusion and social capital are scarcely examined. Nevertheless, there are indications that participation in OBL environments influences social inclusion and social capital development among learners. Social connectedness can be derived from online social interactions using the social network site Facebook (Grieve et al., 2013). Additionally, Lu, Yang, and Yu (2013) provided evidence that online social capital positively predicts learners' satisfaction and learning outcomes, revealing the relationship between social capital and online learning. Among university students, participation in computer-supported collaborative learning, as a form of blended learning, enhances social capital (Mebane et al., 2008). In virtual communities, Facebook use and online social presence contribute to bridging social capital (Oztok et al., 2015; Steinfield, Ellison, & Lampe, 2008). Nevertheless, the relationship between participation in OBL and changes in social inclusion or social capital has not been extensively studied among adults in formal educational contexts.

Previous research does confirm that online (collaborative) learning brings about positive effects on learners' satisfaction, learning outcomes and quality of the learning experience (Inayat, Amin, Inayat, & Salim, 2013; Kang & Im, 2013). However, there is a lack of studies concerning socio-demographic differences as to social inclusion and social capital development in OBL environments. It seems that online learning is not experienced in a similar way by different groups of learners. Ke and Kwak (2013) have found that learners from a minority group have more negative perceptions of online education. Next to this, older learners invest more time online and high-educated learners are less satisfied with online education (Ke & Kwak, 2013). Moreover, females tend to participate more online (Coldwell, Craig, Paterson, & Mustard, 2008), but Paechter and Maier (2010) found no difference in online learning experiences based on gender or age. Nevertheless, males and females may take different approaches to the use of technology, possibly resulting in various online learning experiences (Gunn, McSporran, Macleod, & French, 2003).

Problem statement and research questions

Building on the positive relationship between adult education, social inclusion and social capital, this study examines how adult learners perceive that their social inclusion and

social capital have changed since they have started to participate in online and blended courses. The influence of participation in digital learning environments is of special interest for adults risking social exclusion, because digitalisation is believed to reduce social exclusion. Van Dijk and Van Deursen (2014, p. 45) even stated that 'growing digital media use enables more and better participation in contemporary society'.

The current study examines two cases in which adults are engaged in technology-based learning: the first fully online, the second blended learning. More specifically we provide nuanced understanding of both situations. In the two cases, we study the dynamics of participation in technology-based learning on adults' social inclusion and social capital. First, we give a general impression of change in social inclusion and social capital perceived by both groups of adult learners. Second, we identify if those perceptions are similar or different among the two groups. Furthermore, we provide in-depth insight of the situation in each case: do we notice differences between subgroups, and if so, which socio-demographic variables are related to the perceived change in social inclusion and social capital? By answering the latter question, we can scrutinize if certain (vulnerable) groups of adult learners perceive higher increases with regard to their social inclusion and social capital.

First, the following research questions are addressed:

1. To what extent do adult learners perceive change in their social inclusion and social capital after participation in OBL?
2. How do the perceptions of change in social inclusion and social capital differ among online and blended adult learners?

Next, these research questions are raised among the two different cases more specifically:

Case 1:

3. What differences are there among online adult learners regarding their perception of change in social inclusion and social capital after participation in online adult learning?
4. Which socio-demographic variables are related to online adult learners' perceived change in social inclusion and social capital?

Case 2:

5. What differences are there among blended adult learners regarding their perception of change in social inclusion and social capital after participation in blended adult learning?
6. Which socio-demographic variables are related to blended adult learners' perceived change in social inclusion and social capital?

Methodology

Research context

The current study presents two cases of adults studying in technology-based courses: the first case represents adults learning fully online, the second concerns blended learning. Both cases differ on several dimensions, but are similar in that they took place in the Flemish-speaking part of Belgium. The case of online learning is provided by the Flemish Employment Agency (FEA). This agency provides VET-related (Vocational and Educational Training) courses, for example through 'web-learning'. It gives adults the possibility to study vocational skills fully online in a virtual learning environment on their own place and time. The courses are mainly built around learner-content interaction, complemented by learner-teacher interaction under the form of an online coach. In this case, learner-learner interaction is absent. Therefore it matches the less interactive, transmission model of online learning.

The second case consists of adult learners following blended courses in either specific teacher training (ISCED level 6) or secondary adult education (ISCED level 2-4). Six adult education centres (AECs) participated in this study. The organisation of the blended courses differed among the centres and courses, due to the fact that each centre and instructor has an autonomy to decide on the implementation of the online activities. Yet, all online learning activities included learning paths or online collaborative work through wiki's or discussion forums. Therefore, three types of interactions are realised: learner-content, learner-teacher and learner-learner.

Sample

Adult learners engaged in blended courses in AECs (n=125) as well as those who were enrolled in online 'web-learning' (n=161) provided by the FEA, answered the questionnaire at the end of the schoolyear. Table 1 (p. 86) shows the socio-demographic variables of both groups of participants. Among the adults who joined a blended course in an AEC (hereafter referred to as 'blended adult learners'), 34.4% took part in a specific teacher training and 65.6% followed courses in secondary adult education, of which 54.4% were registered for second chance education. Regarding the learners of online courses provided by the FEA (hereafter referred to as 'online adult learners'), adults mainly followed courses on ICT, languages and office management. The main socio-demographic difference between both groups is that the online adult learners are primarily unemployed, while most blended adult learners are employed. Additionally, the age groups are more equally distributed among online adult learners compared to blended learners in AECs, who are younger in general. Furthermore, blended adult learners are more often low-educated, while most participants from FEA at least have obtained a secondary degree. Most of the AEC- and FEA-learners are not married, i.e. they are single, unmarried, living together, divorced or widow / widower. Finally, the division of gender and native language is almost equal in both groups, revealing that women and natives are the majority. Yet, almost 20% of AEC online learners do not speak Dutch as a native language. We consider this group as non-natives, since additional socio-demographic information about their country of birth showed that the vast majority of them were not born in Belgium as well.

	Blended courses provided by adult education centres (AEC's) (N=125)		Online courses provided by the Flemish Employment Agency (FEA) (N=161)	
Gender				
Male	40.0%	50	37.9%	61
Female	60.0%	75	62.1%	100
Age group				
-25	22.4%	28	13.7%	22
25-34	39.2%	49	18.0%	29
35-44	20.8%	26	24.2%	39
45-54	17.6%	22	31.1%	50
55+	0.0%	0	13.0%	21
Native language				
Dutch	80.8%	101	86.3%	139
Not Dutch	19.2%	24	13.7%	22
Marital status				
Married	26.4%	33	33.5%	54
Not married	73.6%	92	66.5%	107
Employment status				
Employed	72.8%	91	29.2%	47
Unemployed	11.2%	14	63.4%	102
Outside the labour market	16.0%	20	7.5%	12
Educational attainment				
Lower secondary degree	39.0%	48	14.3%	23
Secondary degree	18.7%	23	42.2%	68
Higher education degree	42.3%	52	43.5%	70

Table 1: Participants' socio-demographic variables by course provider.

Instruments

The first section of the questionnaire requested information about the participants' socio-demographic characteristics and background, including: gender, age, ethnicity, marital status, employment, educational attainment, the educational program in which they were enrolled and the provider of the courses.

In the second part of the questionnaire adult learners' social inclusion was operationalised through social participation and social connectedness. Besides this, social capital consists of bonding and bridging ties. First, adult learners were asked to indicate the change in social participation they perceived since they have started the course. The presented items were adjusted from the SIT-instrument's dimension 'participation and connection' of De Greef, Segers, and Verté (2010) (Table 2, p. 87). Thereafter, the change in social connectedness was measured using the social connectedness scale (Grieve et al., 2013) (Table 2, p. 87).

After careful screening of the social connectedness scale, two items have been removed due to interpretation difficulties for both groups of adult learners. Finally, adult learners' social capital has been measured using the scale of Williams (2006) (Table 2, p. 87).

The initial items were evaluated by three experts in the field of adult education. Based on the content validity, one item has been removed from the bonding social capital scale and three from the bridging social capital scale. Finally, all scales were translated into Dutch, using back-translation. An overview of all items is provided in Appendix (p. 25).

Variable	Source	Number of items	Scale	Cronbach's Alpha	Exemplary items
Social inclusion					
Social participation	De Greef, Segers, & Verté (2010)	8	1: this activity has significantly decreased to 5: this activity has significantly increased	.935	Visiting family and relatives Taking part in activities and events in your neighbourhood
Social connectedness	Grieve et al. (2013)	8	1: completely disagree to 5: completely agree	.953	Due to following this course, I feel close to people. Due to following this course, I am able to connect with other people.
Social capital					
Bonding social capital	Williams (2006)	9	1: completely disagree to 5: completely agree	.929	Due to following this course, there are several people I can talk to when I feel lonely.
Bridging social capital	Williams (2006)	7	1: completely disagree to 5: completely agree	.912	Due to following this course, I am interested in things that happen outside of my town.

Table 2: Instruments for measuring social inclusion and social capital.

Data collection

Online and blended learning is not yet common practice in Flemish adult education. Therefore, we had to search for educational organisations who offered online or blended learning to adults. Due to this, convenience sampling was administered to include six adult education centres who offered blended learning. Since the AECs do not organise fully online courses, the FEA was selected as a provider of online education. All adults participated voluntarily in completing the questionnaire, administered electronically in a

computer room of the adult education centres if possible. Otherwise, the participants filled in a paper version of the questionnaire. The involved teachers and researchers supported the learners in case of questions. As for the FEA, the questionnaire was solely distributed through the online learning environment, since there was no physical contact with the learners.

Data analysis

The data from both samples has been merged into one dataset. Initially, the incomplete and unengaged answers were removed. Given that the questionnaire was constructed based on previously validated scales, Confirmatory Factor Analysis (CFA) has been conducted to confirm validity after translation. According to Table 3, (p.12) fit indices on all scales show acceptable values. The reliability of all administered scales is also considered as satisfactory: social participation (α=.935), social connectedness (α=.953) and bonding (α=.929) and bridging (α=.912) social capital (Table 2, p. 11). The general dataset offers overall descriptive statistics and is used to test differences between the two cases. Thereafter, statistical analyses, such as Independent Samples *T*-test, one-way ANOVA and MANOVA, were performed on both cases separately using SPSS 23.

Variables	CFI	RMSEA	SRMR
Social inclusion			
Social participation	.958	.125	.037
Social connectedness	.957	.136	.036
Social capital	.930	.090	.046

Table 3: Results of confirmatory factor analysis.

Results

Perceived social inclusion and social capital of online and blended adult learners

In addressing the first research question it seems that online and blended adult learners perceive a decrease in social participation (*M*=2.74, *SD*=0.58) and bonding social capital (*M*=2.88, *SD*=0.77). On the other hand, an increase in social connectedness (*M*=3.13, *SD*=0.74) and bridging social capital (*M*=3.16, *SD*=0.79) is reported (Table 4, p. 13). Regarding the second research question, all *t*-tests are significant. This indicates that the two groups differ significantly regarding their perceived change in social inclusion and social capital. Adult learners in both cases perceive a decrease in social participation since they have followed the course, yet blended adult learners report a more negative tendency. Whereas blended adult learners experience an increase with regard to social connectedness, online adult learners are neutral towards change in social connectedness. Blended adult learners perceive an increase in bonding and bridging social capital. In contrast, there are no significant reported changes of social capital among online adult learners due to their participation in the online courses. In addition, the dependent variables are being predicted by the categorical predictor 'group' through MANOVA. Using Wilks' Lambda, there is a significant effect of group on the two dimensions of social inclusion ($\lambda = 0.88$, $F(2, 283) = 18.08$, $p < .001$) and bonding and bridging social

capital ($\lambda = 0.93$, $F(2, 283) = 10.56$, $p < .001$). According to the analyses, the variable 'group' explains 10.2% of the variation in social inclusion and 11.3% in social capital.

Testing variables	General	Blended	Online	Results of *t*-tests
Social participation	2.74 (.035)	2.56 (.065)	2.87 (.031)	$t(284) = 4.383$ $p<.001$
Social connectedness	3.13 (.044)	3.29 (.052)	3.00 (.065)	$t(284) = -3.289$ $p<.001$
Bonding social capital	2.88 (.046)	3.07 (.056)	2.72 (.066)	$t(284) = -4.026$ $p<.001$
Bridging social capital	3.16 (.047)	3.39 (.052)	2.97 (.069)	$t(284) = -4.833$ $p<.001$

Table 4: Descriptive statistics of social inclusion and social capital among AEC blended and FEA online adult learners *M(SE)*[1]

Case 1: Differences among online adult learners with regard to social inclusion and social capital

To address the third research question, we explore the extent to which online adult learners differ from each other with respect to perceived change in social inclusion and social capital depending on their socio-demographic background. According to Table 5 (p. 90), non-natives report significantly higher increases in social connectedness (t=-3.810;p<.001) and bonding (t=-3.768;p<.001) as well as bridging social capital (t=-5.573;p<.001). Table 5 (p. 90) shows that the youngest age group differs significantly from the 35 to 44 year olds in their perception of change in social participation (p<.05). The latter group experiences the biggest decrease in participating in social activities. Furthermore, age reveals no other significant differences, just like gender, marital status, employment status and educational attainment do not show significant differences among the online adult learners.

Socio-demographic variables	Social participation	Social connectedness	Bonding social capital	Bridging social capital
Gender				
Male	2.93 (.052)	2.98 (.107)	2.73 (.107)	2.96 (.112)
Female	2.84 (.038)	3.02 (.082)	2.72 (.085)	2.99 (.088)
Age group				
-25	3.02 (.122) *	3.23 (.201)	2.89 (.166)	3.10 (.192)
25-34	2.93 (.068)	3.12 (.129)	2.85 (.133)	3.04 (.127)
35-44	2.69 (.071) *	2.94 (.136)	2.69 (.152)	2.96 (.145)
45-55	2.90 (.041)	2.93 (.124)	2.65 (.124)	2.94 (.135)
55+	2.92 (.052)	2.91 (.150)	2.58 (.177)	2.86 (.197)
Native language				
Dutch	2.87 (.032)	2.91 (.069) ***	2.63 (.071) ***	2.87 (.075) ***
Not Dutch	2.89 (.106)	3.60 (.127) ***	3.33 (.128) ***	3.61 (.107) ***
Marital status				
Married	2.85 (.041)	2.92 (.108)	2.69 (.109)	2.96 (.118)
Not married	2.89 (.042)	3.05 (.081)	2.74 (.083)	2.98 (.085)
Employment status				
Employed	2.97 (.035)	3.09 (.114)	2.83 (.120)	3.06 (.117)
Unemployed	2.85 (.044)	2.99 (.085)	2.67 (.087)	2.93 (.093)
Outisde the labour marker	2.70 (.115)	2.73 (.168)	2.72 (.146)	3.02 (.156)
Educational attainment				
Lower secondary degree	2.94 (.072)	3.25 (.120)	3.02 (.137)	3.21 (.108)
Secondary degree	2.82 (.054)	2.94 (.121)	2.58 (.113)	2.86 (.123)
Higher education degree	2.90 (.043)	2.98 (.083)	2.76 (.094)	3.01 (.097)

* Group means significantly differ on $p<.05$ level ** Group means significantly differ on $p<.01$ level
*** Group means significantly differ on $p<.001$ level

Table 5: Group means (SE) among FEA online adult learners.

Subsequently, social inclusion and social capital are predicted based on online adult learners' socio-demographic variables through MANOVA (RQ4). In predicting social inclusion, consisting of social participation and social connectedness, age group and native language are included as categorical predictors. Using Wilks' Lambda, there is a significant effect of native language on social inclusion ($\lambda = 0.91$, $F(2, 150) = 7.25$, $p< .001$). It seems that native language has a significant effect on social connectedness only (Table 6, p. 91).

During the prediction of bonding and bridging social capital, native language is considered as a categorical predictor. Using Wilks' Lambda, there is a significant effect of native language on social capital ($\lambda = 0.91$, $F(2, 158)=7.72$, $p<.001$). Table 6 (p. 91) shows that native language has a significant effect on both bonding and bridging social capital.

Consequently, for the online adult learners, native language significantly predicts change in social connectedness and social capital, but not social participation. The effect sizes are small to medium (Cohen, 1988).

Dependent variable	Categorical predictor	*Df* model	*Df* error	*F*	Partial Eta Squared
Social inclusion					
Social participation (R^2 = .087; Adjusted R^2 = .033)	Native language	1	151	0.697	.005
Social connectedness (R^2 = .108; Adjusted R^2 = .054)	Native language	1	151	14.25***	.086
Social capital					
Bonding social capital (R^2 = .082; Adjusted R^2 = .076)	Native language	1	159	14.20***	.082
Bridging social capital (R^2 = .082; Adjusted R^2 = .076)	Native language	1	159	14.22***	.082

* p<.05, ** p<.01, *** p<.001 level

Table 6: Results of univariate ANOVA's among online adult learners.

Case 2: Differences among blended adult learners with regard to social inclusion and social capital

Next, we examine to which extent the blended adult learners differ from each other concerning perceived change in social inclusion and social capital depending on their socio-demographic background (RQ5). The most prominent result is that the native language of the blended adult learners reveals significant differences on all social outcome variables (Table 7, p. 92). First, non-natives perceive higher increases in social connectedness (t=-3.865;p<.000) and bonding (t=-2.694;p<.01) as well as bridging social capital (t=-3.188;p<.002) compared to native learners. Second, natives tend to indicate that participation in blended adult education decreases their social participation, whereas non-natives are rather neutral on this dimension (t=-2.694;p<.01). Third, males and females significantly differ as to social participation (t=2.524; p<.05), females perceive a higher decrease in social participation compared to male participants. Next, the youngest age group experiences a higher increase in both bonding (p<.05) and bridging social capital (p<.05) compared to older adult learners (45-55 year). Fifth, Table 7 (p. 90) shows that married adults indicate a significantly higher increase in their feeling of being socially connected compared to unmarried adults (t=2.774;p<.01). Finally, employment status and educational attainment reveal no significant differences among the participating blended adult learners.

Socio-demographic variables	Social participation	Social connectedness	Bonding social capital	Bridging social capital
Gender				
Male	2.74 (.084) *	3.34 (.091)	3.10 (.094)	3.40 (.083)
Female	2.43 (.090) *	3.27 (.063)	3.06 (.069)	3.39 (.066)
Age group				
-25	2.69 (.135)	3.51 (.109)	3.34 (.136) *	3.71 (.121) *
25-34	2.65 (.089)	3.20 (.068)	3.02 (.083)	3.30 (.073)
35-44	2.52 (.139)	3.25 (.133)	3.11 (.115)	3.36 (.121)
45-55	2.21 (.191)	3.27 (.145)	2.80 (.112) *	3.24 (.104) *
55+	N.A.	N.A.	N.A.	N.A.
Native language				
Dutch	2.47 (.069) **	3.20 (.057) ***	3.00 (.064) **	3.31 (.058) **
Not Dutch	2.91 (.159) **	3.69 (.092) ***	3.37 (.088) **	3.72 (.089) **
Marital status				
Married	2.56 (.134)	3.53 (.096) **	3.18 (.078)	3.53 (.083)
Not married	2.56 (.074)	3.21 (.060) **	3.03 (.070)	3.34 (.063)
Employment status				
Employed	2.56 (.073)	3.32 (.059)	3.07 (.060)	3.39 (.059)
Unemployed	2.45 (.215)	3.39 (.164)	3.26 (.211)	3.47 (.205)
Outside the labour market	2.61 (.180)	3.11 (.147)	2.96 (.161)	3.35 (.111)
Educational attainment				
Lower secondary degree	2.56 (.108)	3.37 (.088)	3.19 (.101)	3.47 (.094)
Secondary degree	2.56 (.131)	3.21 (.124)	3.02 (.108)	3.31 (.111)
Higher education degree	2.54 (.104)	3.23 (.077)	2.97 (.081)	3.32 (.068)

* Group means significantly differ on $p<.05$ level ** Group means significantly differ on $p<.01$ level
*** Group means significantly differ on $p<.001$ level

Table 7: Group means (SE) among AEC blended adult learners.

Finally, the last research question is focused on. In predicting social inclusion, consisting of social participation and social connectedness, among blended adult learners, gender, native language and marital status are simultaneously included as categorical predictors. Using Wilks' Lambda, there is a significant effect of native language on social inclusion ($\lambda = 0.84$, $F(2, 116) = 11.03$, $p < .001$). Univariate ANOVAs (Table 8, p. 93) reveal that native language has a significant effect on both social participation, and social connectedness. Additionally, using Wilks' Lambda, there is also a significant effect of gender on social inclusion ($\lambda = 0.94$, $F(2, 116) = 3.61$, $p < .05$). However, Table 8 (p. 93) reveals that gender only has a significant effect on social participation. Furthermore using Wilks' Lambda, there is a significant effect of marital status on social inclusion ($\lambda = 0.94$, $F(2, 116)=3.47$, $p < .05$). As reported in Table 8 (p. 93), marital status has a significant effect on social connectedness.

During the prediction of social capital, including bonding and bridging social capital, age group and native language are considered as categorical predictors. Using Wilks' Lambda, there is only a significant effect of native language on social capital ($\lambda = 0.92$,

F(2, 116)= 4.75, $p< .01$). Table 8 (p. 17) shows that native language has a significant effect on both bonding and bridging social capital.

Dependent variable	Categorical predictor	*Df* model	*Df* error	*F*	Partial Eta Squared
Social inclusion					
Social participation (R^2 = .153; Adjusted R^2 = .102)	Gender	1	117	4.25*	.035
	Native language	1	117	9.41**	.074
	Marital status	1	117	0.50	.004
Social connectedness (R^2 = .170; Adjusted R^2 = .120)	Gender	1	117	3.29	.027
	Native language	1	117	13.58***	.104
	Marital status	1	117	6.61**	.053
Social capital					
Bonding social capital (R^2 = .176; Adjusted R^2 = .126)	Age group	1	117	1.21	.030
	Native language	1	117	6.46**	.052
Bridging social capital (R^2 = .215; Adjusted R^2 = .169)	Age group	1	117	1.20	.030
	Native language	1	117	9.23**	.073

* $p<.05$, ** $p<.01$, *** $p<.001$ level

Table 8: Results of univariate ANOVA's among blended adult learners.

Therefore, native language is the only socio-demographic variable that significantly predicts social inclusion and social capital among blended adult learners. Additionally, gender significantly predicts social participation and marital status has a significant effect on social connectedness. The effect sizes are small to medium (Cohen, 1988).

Discussion

The current study has contributed to our understanding of adult learners' perception of change in social inclusion and social capital after participation in OBL. The study has been conducted in two different cases, namely blended learning provided by the AECs and online learning organised by the FEA.

Contrasting two cases: Blended versus online adult learners

In general, our results showed that online and blended adult learners perceive a decrease in social participation and bonding social capital, but an increase in social connectedness

and bridging social capital. In addition, it has been found that blended and online learners differ significantly from each other regarding their perception of change in social inclusion and social capital. Blended adult learners perceive more positive changes compared to the online adult learners in this study. This significant difference could have been related to the different nature of the learning modes (Rovai & Jordan, 2004). There is a lack of research which contrasts OBL regarding outcomes such as social inclusion and social capital. If different delivery modes are compared, most often, learning effectiveness, academic scores or satisfaction are the focus (e.g., Larson & Sung, 2009; Means et al., 2013). The results of these studies are mixed: some show no significant difference (e.g., Larson & Sung, 2009), others indicate that blended learning environments show more advantages (e.g., Means et al., 2013, Rovai & Jordan, 2004). However, they have a common base, stressing the importance of an appropriate pedagogy, which supports (online) interaction and collaboration instead of independent online learning (Means et al., 2013). In this study, learner-learner interaction was not facilitated in the online learning environment of the FEA. Therefore, it seems that the pedagogical approach, next to the mode of delivery, might be an additional factor, which explains the difference in perception of change in social inclusion and social capital between online and blended learners. As being stated by Tamim et al. (2011):

> It is arguable that it is aspects of the goals of instruction, pedagogy, teacher effectiveness, subject matter, age level, fidelity of technology implementation, and possibly other factors that may represent more powerful influences on effect sizes than the nature of the technology intervention. (p. 17)

A decrease in social participation has been observed among both blended and online adult learners. This finding is not surprising because adults spend a lot of their spare time studying. Theoretically, this can be interpreted according to the rational choice theory (Allingham, 2002), which states that adults perform a cost-benefit analysis before engaging in an educational experience. One of the possible costs might be lack of time, which results in no time for leisure activities (Boeren, 2009) and thus explaining the decrease in social participation.

Furthermore, a discrepancy in the perceived change of social inclusion among blended adult learners has been identified. They indicated that their social connectedness increased, whereas their social participation decreased. A possible explanation could be that their social participation was affected by the extensive engagement during participation in the courses, because this reflects the behavioural dimension of social inclusion. In other words, blended adult learners perceive that their social participation has been limited due to their educational participation. Notwithstanding the decrease in social participation, blended adult learners still experienced an increase in the feelings of social connectedness attributed to their participation in the blended course. The combination of the three modes of interaction—learner-content, learner-instructor and especially learner-learner—seems to be a factor which explains the increased social connectedness reported in the blended case. The results suggest that the behavioural and emotional dimensions of social inclusion are affected in opposing ways for learners participating in blended adult learning.

Furthermore, the results imply that blended adult learners perceive more positive change regarding bridging social capital compared to bonding social capital. In this respect, Field (2009) specifies that participation in learning leads to extending social networks, which refers to bridging ties. Hence, it seems that participation in blended adult learning primarily supports the development of new social relations and networks (cf.

bridging ties), while the close, bonding ties are not directly affected (Oztok et al., 2015; Steinfield et al., 2008).

Almost no change in online adult learners' social inclusion or social capital has been identified. It seems as if the majority of online adult learners did not perceive an influence on social inclusion or social capital due to their participation in the online courses. Moreover, if they experienced a change, it was slightly negative. This finding can be related to pedagogical characteristics of the learning environment, but also to the activation approach towards the unemployed. First, the lack of online learner-learner interaction in the adopted online learning environment might be an explanatory factor. Interaction with peers was absent. Yet an online coach was available upon the request of the online learner. The instructional design did not take into account the utmost importance of online learner-learner interaction (Inayat et al., 2013; Kang & Im, 2013). This suggests that the presence of online learner-learner interaction could be of major importance if the enhancement of social inclusion and social capital is aimed for. Second, the activation approach towards the unemployed influences the change in social inclusion and social capital as well. According to Ó Tuama (2016) a 'restrictive approach' focuses merely on directing citizens towards courses and employment, without taking into account the adult's circumstances. Most practices in our current societies lean towards this restrictive approach. Some unemployed adults might benefit from this approach, which enhances their human capital through (online) courses. However, 'others need not only help with their human capital, but also with their social capital in order to leverage their education and training' (Ó Tuama, 2016, p. 116). Certainly for vulnerable unemployed adults, 'reflective activation' could be beneficial in order to enhance their social inclusion and social capital (Ó Tuama, 2016).

The relationship between adult learners' socio-demographic background and their social inclusion and social capital

In the two cases, our results indicate that *native language* is related to the differences between adult learners with regard to their social inclusion and social capital development. Moreover, it is the only socio-demographic variable significantly related to social inclusion and social capital, among both groups of adult learners. This partly contradicts the finding of Ke and Kwak (2013), who reported that learners from minorities have more negative experiences in online learning. But our finding is in line with previous research, which highlighted that vulnerable adults, such as non-natives, benefit more from their educational participation regarding social outcomes (Manninen et al., 2014; De Greef et al., 2014; Panitsides, 2013). This supports the assumption that vulnerable adults (e.g., non-natives) experience a greater need and urgency towards social, personal and educational development compared to those who are more privileged.

Furthermore, other socio-demographic variables (i.e., gender, marital status and age) reveal differences among adult learners with regard to their social participation and social connectedness. Female learners from the blended learning group perceived less social participation compared to their male peers. Also in the blended learning environment, married adults show more social connectedness in comparison to unmarried participants. For this finding, one might suggest that married adults participate in adult education because of other motivational orientations, such as social stimulation (Boshier, 2006). In addition, the results indicate that significant differences exist among various age groups. Younger adults participating in the blended learning environments perceive that they have built up more social capital compared to older adult learners. These findings support the claim of the BeLL study (Manninen et al., 2014) which states that for younger participants adult education serves as a 'stepping stone' into society. Yet, no other socio-demographic

variable seems to explain adults' social inclusion and social capital development, whereas educational attainment, for example, was assumed to account for differences among adults (Manninen et al., 2014).

To sum up, this study has identified that non-natives perceive more benefits regarding social inclusion and social capital development compared to native adult learners in blended as well as online learning environments. In other words, non-native adult learners experienced to a greater extent benefits in the blended and the online case. This entails that both modes of delivery bring about perceived positive benefits for non-native adult learners. For non-native adult learners the engagement in whichever learning environment might yield substantial benefits because of the multiple types of interaction which feed their social relations. Additionally, in the blended learning environment, gender, marital status and age group revealed differences among the adult learners.

Limitations

Nonetheless, attention should be paid to the interpretation of the results of this study. First, the questionnaire referring to social inclusion and social capital has been based on self-reported perceptions of the adult learners. However, while conducting a research of such complex phenomenon, the meaning-making experiences and perceptions of the central actors should be taken into account. Furthermore, it was not possible to compare blended and online learners from the same type of organisation due to the fact that the research has been conducted in authentic contexts to ensure ecological validity. In Flanders, adult education centres did not organise fully online courses at the time of data collection. Therefore, the differences in institution (AECs versus FEA) and their various target groups might have contributed to the findings of this study. Next to that, the course duration and institutional characteristics have not been taken into account in this study. These variables also could have accounted for differences in social inclusion and social capital. Finally, all adult learners filled in the questionnaire in Dutch, which might have entailed problems for the non-native adult learners. However, in order to follow the courses, all learners should possess an appropriate level of Dutch language skills.

Recommendations for future research

In order to examine diverse technology-based learning environments in the future, extensive (quasi-)experimental studies are needed in order to scrutinize the role of different pedagogical factors. Next to quantitative research, future qualitative research on the meaning-making processes and experiences of adult learners is recommended. This may be useful to deepen the findings of this quantitative study with more nuanced and in-depth information concerning adults' perception of change in social inclusion and social capital. Moreover, longitudinal studies could analyse the impact of participation in adult education with respect to social outcomes more closely. Above all, case studies focusing solely on the experiences of vulnerable adults, such as non-natives, could enhance our understanding of this specific target group. Finally, other variables next to individual learner characteristics should be included in future research. It is not merely the mode of delivery that explains effects of educational participation (Bates, 2015). Elements of the learning environment are of major importance in creating conditions supporting social inclusion and social capital in OBL environments.

Conclusion

In the context of digitalisation, this study examined how adult learners perceive changes in their social inclusion and social capital triggered by participation in blended and online adult learning. First, results show that online and blended adult learners differ significantly in their perception of change in social inclusion and social capital. Blended adult learners perceive more positive changes, but the behavioural and emotional dimensions of social inclusion are affected in opposing ways. This study also suggests that participation in blended adult learning primarily supports the development of bridging social capital. Online adult learners, on the other hand, have not perceived any change in social inclusion or social capital due to their participation in online courses. Second, although engaged in different learning environments, similar findings on the influence of native language in supporting social inclusion and social capital have been reported in both cases. Non-natives experience a higher increase in social inclusion and social capital compared to native adult learners in the two cases.

This study provides a theoretical framework for the exploration of social inclusion and social capital among adult learners, through the concepts of social participation and social connectedness, complemented by bonding and bridging social capital. The findings suggest that participation in OBL is valuable for non-natives' social inclusion and social capital. Therefore, online and blended learning should be encouraged among adults whose life biographies contain more transition phases, certainly in times of increasing migration. Furthermore, a reflective approach towards activation of unemployed adults is recommended. This approach does not only take into account the enhancement of adults' human capital, but social capital as well. Finally, the findings highlight the importance of OBL's pedagogy. Online learner-learner interaction seems to be necessary, not only in order to bolster high quality learning, but also to support social inclusion and social capital.

Notes

[1] The values are presented on a 5-point Likert scale, ranging from 1 to 5. This entails the following for interpretation: values below 3 indicate a perceived negative change, a value of 3 indicates no perceived change, values above 3 indicate a perceived positive change.

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Appendix

Social participation

Since I have started to follow this course, I feel like the following social activities have … 1: decreased significantly, 2: decreased, 3: neither decreased, nor increased, 4: increased, 5: increased significantly

Visiting family and relatives
Visiting friends and acquaintances
Taking part in local activities and events in my neighbourhood
Taking part in artistic activities with others (making music, performing, dancing, …)
Taking part in cultural activities (going to the theatre, movies, museums, …)
Taking part in sportive activities with others
Organizing activities in my neighbourhood or for an association I am involved in
Spending time with others, for example in a pub or restaurant

Social connectedness

By following this course, … (1: completely disagree—5: completely agree)

I feel comfortable in the presence of strangers.
I am in tune with the world.
I fit in well in new situations.
I feel close to people.
I see people as friendly and approachable.
I feel understood by the people I know.
I am able to relate to my peers.
I am able to connect with other people.

Bonding social capital

By following this course, … (1: completely disagree—5: completely agree)

There are several people I trust to help solve my problems.
There is someone I can turn to for advice about making very important decisions.
There is someone that I feel comfortable talking to about intimate personal problems.
There are several people I can talk to, when I feel lonely.
I know someone I can turn to, if I needed financial support.
There are several people who would put their reputation on the line for me.
There are several people who would be good job references for me.

I know people well enough to get them to do anything important.
There are several people who would help me fight an injustice.

Bridging social capital

By following this course, ... (1: completely disagree—5: completely agree)
I am interested in things that happen outside of my town.
I want to try new things.
I am interested in what people unlike me are thinking.
I am curious about other places in the world.
I feel like part of a larger community.
I am willing to spend time to support general community activities.
I have new people to talk to.

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Participatory perspectives for the low skilled and the low educated: how can media literacy influence the social and economic participation of the low skilled and the low educated?

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Abstract

We assume that social media use contributes to employability and sociality and media literacy complements a basic set of skills. Especially the low skilled and low educated lack media literacy, which contributes to their precarious situation and increases a participation gap. A database search for peer reviewed articles covering effective elements of media literacy did not return any useful results. The retrieved literature was scarce and media literacy concepts were inconclusive, conflated or ambivalent. We then broadened our scope, using a snow ball technique and Harzing's Publish and Perish for control purposes. This approach lead to literature indicating that self-presentation and self-profiling are important literacy practices, involving knowledge and skills related to participation in social and economic contexts and understanding of the relations between sociality, employability and networks. Media literacy is best approached as hands-on, situated and experiential, taught in a democratic and critical fashion and related to the attitudes and perspective of the low educated and the low skilled. There is however no clear answer what the complementary role of informal learning is and how literacy related skills and knowledge demanded for lifelong learning may change during the life course. It is also important that policies focussing on inclusion and participation broaden their perspective beyond individualistic notions and , consider the influence of structuralizing mechanisms that create inequality and extend their explanations beyond those framed by economic theories, models and categories.

Keywords: media literacy; low skilled; low educated; social participation; economic participation

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Introduction

The information age and proliferation of new media pose new questions and dilemmas. Research indicates that the proliferation of social media has widened a participation gap, also known as the digital divide, which affects mainly the low skilled and the low educated, because they are not media literate enough, to use digital information in an effective, helpful and strategic way (Van Dijk, 2009). The risk of labor market exclusion has been worsened by employment flexibilization and deregulation of employment and spread systematically in specific, already disadvantaged labor market groups like young adults and labor market entrants. The risk of social exclusion is in turn highly dependent on their success in the labor market and on their access to stable long-term employment (Buchholz & Kolb, 2011). Evidence-based initiatives have demonstrated that there are major potential benefits to equip low social-background students and low-skilled workers, to acquire better skills and compete for better-paying jobs (OECD, n.d.). We therefore narrow our study to the categories of low educated and low skilled.

In our study, we are especially interested in the role media literacy can play in in coping with flexibilization and deregulation of employment and competing for jobs. In order to determine the empowering role of media literacy, a number of problems have to be addressed that relate to the concept of media literacy, the literacy practices that may influence social and economic participation and the question how the literacy concept and practices may inform educational policies and contribute to learning opportunities devised to close this gap.

First problem: the concept of media literacy

The first problem we encounter relates to the inconclusiveness of the concept of media literacy. Media literacy and literacy practices have been studied in disciplines like social science (Derksen & Beaulieu, 2011), media studies (Ito, Horst, Bittanti, boyd, Stephenson, Lange, Pascoe, Robinson, 2008; Valkenburg & Peter, 2011), media education (Buckingham, 2007, 2013), youth studies (Drotner, 2008) and educational design (Suthers, 2006). This disciplinary diversity has led to tensions and struggles concerning conceptual framing and definition, which in turn has resulted in a variety of concepts and a diversity of advocates who champion these concepts vigorously (Bawden, 2001; Martens, 2010).

Second problem: literacy practices that may close the participation gap

Many studies follow or propose a dichotomous perspective, divide the general population for example into literates and illiterates and propose an autonomous, 'right literacy' for all. Great divide theories, theorizing fundamental differences in human cognition and social conditions, related to literacy, already emerged in the post-World- War II period and were conceived as 'technology of the intellect' (Collins & Blot, 2003). This presents the idea of 'literacy' being an autonomous, individual matter of intellect, in combination with education as an important social condition, that augments the cognitive abilities.
The recently touted problems of the 'information poor' do not necessarily indicate a mere literacy-related digital divide that can be attributed to an individual lack of access and/or a matter of intellect or skills. Problems of the 'information poor' may for example relate to relationships, social networks and being the first in the appropriation of information (Van Dijk, 2013). Exploitation and opportunity hoarding (Tilly, 1998) may result in

distantiation, or a stretching continuum of social positions across the population (Van Dijk, 2013) and can best be countered by 'rapprochement' or the 'catching up' by those wo lag behind (Therborn, 2009). This presents the idea of 'literacy' being an ideological matter of situated interaction between intellect and socializing constraints or opportunities. It points to a certain behavior, ranging from the behavior of those who are hoarding opportunities to keep their lead to those who are trying to catch up and diminish their backward social position. Hence, literacy could also be framed as the 'technology of the social'.

It is as yet unclear how social media use relates to a the threat of economic obsolescence and social exclusion and how media literacy may help solve this problem. Before we frame our research questions we first clarify what specific type of media we refer to when talking about media literacy in relation to participation issues. We also briefly introduce the concepts 'low skilled' and 'low educated' we distinguish and the literacy levels that generally apply to these concepts.

Social Media: classifying the concept

For a simple classification of the concept of 'social media', we use the key theoretical concepts of 'social presence' and 'self-presentation', which define the degree of perceived presence or salience and the degree of deliberate control on one's impression (Kaplan & Haenlein, 2010) as well as 'social relevance' and 'professional quality', which define the relevance and quality of 'participation' in online networks (Carpentier, 2009). Following Kaplan and Haenlein (2010), we define social media as:

> (...) a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content. (2010, p. 61)

Following Kaplan and Haenlein's definition, when using the term social media we also refer to social networks or platforms. Following Carpentier we consider participation as co-deciding in a communicative process. We argue that affordances provided by social media that promote interactivity and participation enhance users' social and economic opportunities.

Social presence is influenced by the intimacy (interpersonal vs. mediated) and immediacy (synchronous vs. asynchronous) afforded by the medium. These aspects influence the degree to which media allow for exerting social influence: higher levels of perceived (interpersonal and synchronous) presence allow for higher degrees of influence.

New media are also seen as interactive or participatory media. According to Carpentier and De Cleen (2009), participation is a two-way, discursive process of decision-making whereby the degree of participation (ranging from minimalist to maximalist) is partly determined by the audience's perception and valuing of the quality and relevance of the information that is presented and shared. Professional quality refers to basic conventions about aesthetic, narrative and technical quality that audiences still expect, even when confronted with products of online mediated participation. Social relevance is expressed by the degree to which information is perceived by the audience as transcending the private and personal.

By adopting these concepts for classification purposes, we explicitly frame literacy practices as being situated practices that involve socializing, starting with the technology-mediated presence and self-presentation. Literacy practices are also interactive and

participatory practices that involve learning, starting with the quality and relevance of the content or information to be generated and shared.

The Low Skilled and The Low Educated

In general, the low skilled and the low educated are defined on the basis of the occupational level (ISCO08 9th occupational category) respectively their level of educational attainment (attainment up to the ISCED 2 level). It is not uncommon to equate both categories in research and statistics, effectively presuming a direct relation between the two.

Research questions

Media literacy is an important element of the social and professional development of students in vocational education. At the same time, media literacy is a problematic issue in vocational education because it is both scientifically and pedagogically contested and therefore surrounded with ambiguity and uncertainty. Because media literacy lacks a common understanding, it also suffers from a limited functional operationalization in classrooms. In recent years, exploratory and theoretical studies have been produced with regard to media literacy education (Buckingham, 2013; Martens, 2010; Van Deursen & Van Dijk, 2014). What is still lacking however are insights and publications that specifically address, theorize and explain how media literacy relates to participation in society and on the labor market by low educated and low skilled. Empirical evidence is scarce and fragmented, leaving teachers at odds how to design programs that effectively address the media literacy of low educated and low skilled. To sum up, there is a need for an overview of empirical research on proven design principles concerning effective media literacy related interventions and the outcomes of these interventions. In our study we treat literacy practices from a social and economic perspective in the context of vocational education targeting young adults.

The aim of this review is to contribute to a sound, evidence informed conceptualization and operationalization of media literacy. Our main question is:

> What are effective elements of media literacy that contribute to the preparation of low educated and low skilled youth for a profession, getting into a job and staying employed?

We are not only interested in finding out what kind of approaches or interventions are used in vocation oriented educational settings to develop the media literacy of the low skilled and low educated. We want to explore how certain uses of social media produce positive economic and social outcomes. That is, we are interested social media use or literacy practices that contribute positively in closing the participation gap. A second question we aim to answer is:

> How does social media use contribute in a positive way to the social or economic participation of the low skilled or the low educated?

Our research questions are mainly framed by the context of secondary vocational education and training (VET). Labor market entrants as well as low educated and low skilled who are at risk, are often if not predominantly served by VET and vocational programs. We argue that vocational programs and training should offer disadvantaged

groups the media literacy skills and attitude that support disadvantaged in coping with flexibilization and deregulation in an increasingly competitive labor market.

Method

We used three academic databases (Web of Science, Academic Search Elite and ERIC) as our primary sources for selecting relevant studies. Solely restricting the search to publishers' databases can be too rigid and is not necessarily the most efficient method, regardless of the number of databases used. Complementing our search with a snowball approach can also avoid bias in favor of any specific publisher. We therefore complemented our database search with the snowballing technique and controlled for author related relevancy with Harzing's Publish or Perish. We finally studied literature and reports with regard to literacy practices pertaining to social and economic participation.

The databases were searched with a combination of key words: 'media literacy', 'social media', 'social network sites', low/lower/less skilled, low/lower/less educated, 'youth at risk' and 'early school leavers'. We added the last two terms because descriptive statistics by government agencies tend to categorize the low skilled or the low educated up to the age of 23 years old as 'youth at risk' or 'early school leavers'. As a result, the latter two categories effectively represent the low skilled or low educated in research concerning youth up to the age of 23. We used and combined three categories of terms to search for studies that possibly related the concept of media literacy with socio-economic categories, that is, being low skilled or low educated, and the use of certain types of media. We used different filter settings, provided by the academic databases to narrow the search to education related journals (Table 1). In all cased we searched for academic peer reviewed articles published in English in the period 2007-2014, that are related to the field of education. Not all databases provided exactly the same kind of options to filter and narrow the search.

Our snowballing approach consisted in different steps (Wohlin, 2014) and started with identifying key documents, followed by using references and citations for backward and forward snowballing. Snowballing, that is, looking at where papers are actually referenced and cited, complements the findings of database searches in a systematic way. As a means of controlling for our snowball approach and narrowing the growing amount of material we used Harzing's Publish or Perish (5.0) to narrow this amount by using Hirsch's h-index to look for the impact of authors in the field.

Criteria for Studying Exclusion and Inclusion

We excluded articles that focused on traditional media, such as television and newspapers, studied literacy merely in a local context, producing diverse skill-based literacies but that were ignorant of the broader political, economic, social and personal contexts and the rationales that shape social, economic and educational policies and local practices (Myers, 2006; Moore, 2006; Papen, 2005).

We included studies that viewed social media as online applications or platforms that allow participatory and collaborative creation and exchange of information or content. We included studies that approached literacy as a situated practice, that acknowledged the plurality of literacies and explored the governing rationales. In part, we additionally

used secondary studies by the OECD for descriptive purposes regarding reported literacy-related skills levels.

The articles we selected were processed and filtered after screening the title for leads, next screening the abstract and finally screening the body text of the article.

Results

In this section the results will be presented. In next section we will analyze the results and return to aspects related to education and learning relevant for the low skilled and the low educated.

Conceptualizations of Media Literacy Related to Social and Economic Participation

In this section we address our first research question:

"What are effective elements of media literacy that contribute to the preparation of low educated and low skilled youth for a profession, getting into a job and staying employed?"

Table 1 gives initial results for the number of hits for the different search strings and their combinations. The final number of unique hits was 12 (Web of Science), 6 (Academic Search Elite) and 6 (ERIC) (appendix A).

Search engines: • WoS (Web of Science) • ASE (Academic Search Elite) • ERIC	WoS/ASE/ERIC	WoS/ASE/ERIC
Search strings	("youth at risk" OR "early school leavers")	("low-skilled" OR "low-educated")
Search mode	Boolean/Phrase	Boolean/Phrase
Refined using available limiters and filters provided by the respective search engines.	25/83/25	26/53/29
AND "social media"	0/3/0	0//0/0
AND "media literacy"	5/0/0	1/0/0
AND ("social media" AND "media literacy")	0/0/0	0/0/0
AND ("social media" OR "media literacy")	3/3/0	0/0/0

AND "social network sites"	0/1/0	0/0/0
Search strings	("social media" OR "media literacy")	("social network sites")
Search mode	Boolean/Phrase	Boolean/Phrase
Refined using available limiters and filters provided by the respective search engines.	290/290/521	26/88/39
AND ("low-educated" OR "lower educated" OR "less educated")	3/2/1	0/1/1
AND ("low-skilled" OR "lower skilled" OR "less skilled")	3/0/1	0/0/0
AND ("youth at risk" OR "early school leavers")	0/3/2	0/2/1

Table 1 *Media literacy practices in education related peer reviewed journals*

Although we searched Web of Science with the explicit terms 'media literacy', the search engine still returned alternatives like 'critical literacy' (1), 'web literacy' (1) or 'media health literacy' or heath related alternatives (5). This would indicate that the search mode, that is Boolean phrase, is less accurate than expected. Neither do all articles target low(er) educated, low(er) skilled or youth at risk. The articles retrieved via Academic Search Elite neither provided any relevant hits. ERIC also provided articles that referred to different types of literacy - computer literacy or information literacy (2), different age groups - K12 or preschool children (2), or activities that are not relevant for our study like breast feeding and dating. This left us with only three articles that were remotely related and interesting but, after screening the body text of the article, nevertheless provided no concrete information about design principles or labor market related practices or outcomes. As we considered this number of relevant articles too small for our purposes, we did not pursue studying the selected articles (see Appendix A) in further detail.

Our snowballing technique produced the following two definitions of media literacy that are often quoted and most used by scholars (Martínez-Cerdá, Torrent-Sellens, & Pegurer Caprino, 2015):

A. "the ability to access, analyze, evaluate, and create messages in a variety of forms"

B. "the ability to access, analyse, evaluate and create messages across a variety of contexts"

It is unclear how these two alternative definitions came into existence. It is also unclear how the definition changed over time from 'a variety of forms' to 'a variety of contexts'. Definition A was found 47 times with Google Scholar, and mainly cited as drawn from a few different sources (e.g., Aufderheide, 1993; Aufderheide & Frost, 1993; Christ & Potter, 1998; Livingstone, 2004). Definition B was found 44 times with Google Scholar and cited as drawn from a similar set of different sources (e.g., Aufderheide, 1993; Christ & Potter 1998; Livingstone, 2003, 2004).

Neither of these two definitions was actually reported by Aufderheide. Aufderheide's definition is: "the ability of a citizen to access, analyze, and produce information for specific outcomes" (1993, p. 6) and appeared in the report of the National Leadership Conference on Media Literacy. This conference did not agree upon a specification of effective outcomes but did however produce the fundamental objective of media literacy as *critical autonomy in relationship to all media*.

The definition that is mostly used in non-scientific literature and reports has been adopted by the European Commission: 'the ability to access the media, to understand and to critically evaluate different aspects of the media and media contents and to create communications in a variety of contexts'. (2007; p. 3)

Both the National Leadership Conference and the European Commission stressed the importance of literacy for all, leaving no one out, and the importance of a critical attitude towards media and critical assessment of online content, regarding both quality and accuracy, as key elements with regard to literate behavior.

Using the snowballing technique, we found that media literacy concepts are not only sometimes conflated with concepts like ICT-literacy, computer literacy, digital literacy, library literacy and so on, but that these concepts may also encompass each other. For some it includes the 'competence' aspect, i.e. the ability to make effective use of information, as this term has gained leverage in education (Ala-Mutka, 2011). Framing literacy as competence, may give the impression of a new perspective on media literacy, that is 'new literacy', as media literacy pertains to new media and not old media (Van Dijk & Van Deursen, 2010). Following the EU's point of view that media literacy relates to all media (2007), and the use of this extended literacy concept in large surveys (Fraillon, Schulz, & Ainley, 2013), we propose an extended concept which presupposes a convergence of old and new media (Jenkins, 2006).

Due to its relation with the concept of competency, the aspect of learning, and thus formal education, has evolved as a consistent theme and context in the development of the concept of media literacy (Bawden, 2001). Researchers who take a broader, socio-cognitive or socio-cultural perspective, view media literacy as situated and defined in context (Buckingham, 2013; Street, 2003). Situatedness has produced a number of skill-based literacy definitions, a growing range of emphases in media literacy training as predicted by Aufderheide (1993, p. 1) and no end to the continuing conceptual struggle (Collins & Blot, 2003). Following Bawden (2008) these kinds of skill-based definitions and successive training lack substance, when they are not complemented with:

- 'underpinnings', i.e. the basic skill sets without which little can be achieved, like literacy and numeracy;
- 'background knowledge', i.e. the necessary understanding of the way in which digital and non-digital information is created and communicated, and of the various forms of resources which result;

- 'attitudes and perspectives', including moral/social literacy, i.e. the idea that the ultimate purpose of digital literacy is to help each person learn what is necessary for their particular situation.

'Attitudes and perspective' link an emerging concept to older ideas that should be grounded in some moral framework and understanding of what it means to being an educated person and are the most difficult to teach. With regard to levels of basic skills, the literature shows that advanced, technology-related communication skills and interpersonal skills are extremely important for sociality and employability, as well as social and creative intelligence. Sometimes referred to as soft skills, these skills are conceptually controversial and contested, difficult to measure and therefore difficult to teach and assess and as a result rarely present in modern-day curricula. Bawden's elaboration of attitudes and perspective actually implies that a grounding moral framework and understanding of the creation and communication of information demands an individual to transcend the mere personal and material when one is learning 'what is necessary for their particular situation'.

Elements of Literacy Practices Relating to Economic and Social Participation

In this section we address our second research question:

'Which elements of media literacy are proposed as being relevant to the economic or social participation of the low skilled and low educated?'

In seeking to answer our second question, we first report on technology-related or -mediated participation in economic contexts and then turn to technology-related or -mediated participation in social contexts. In essence we are trying to determine the effect of social media use on participatory processes and in this process, attempt to combine understanding, meaning and context, as proposed by Bawden (2001). Finally, we compare our findings from these two contexts, in a search for similarities and commonalities that may .

The economic context

Computers have served as a substitute for labor for many routine tasks or exhibited strong complementarities with labor performing cognitive non-routine tasks (Borghans, Ter Weel, & Weinberg, 2014; Wulff Pabilonia & Zoghi, 2013). The skill-biased technology change model devised by Autor, Levy and Murnane (2004) proved helpful for more than a decade in predicting and visualizing these effects of computerization on tasks in a range of studies that replicated their first results. Yet the model did not incorporate the shift in skills demand in low skilled jobs that resulted in the demand for so-called new basic skills like, math, problem-solving, communication skills and creative and social intelligence (Frey & Osborne, 2013; Maxwell, 2006). As late as 2003, it was still claimed that there was no need to offer computer related courses or training to low skilled employees: "large investments in computer skills and intensive educational programs to teach pupils how to use computers are unlikely to be effective. Computer skills are therefore unlikely to become a basic skill, such as writing and math. (Borghans & Ter Weel, 2003, p. 16)"
According to Stroobants, Jans and Wildemeersch (2001), individual learning during the life course requires establishing meaningful connections between individual life and society, via work and adult education. Suggesting a kind of biographicity, an engaging type of informal, socializing media use in different social contexts is seen as an opportunity to get disadvantaged groups, like low educated or low skilled online, engaged

and have them develop the necessary skills to ensure that they participate actively (De Haan & Adrichem, 2008; Livingstone, Van Couvering, & Thumim, 2005; Paus-Hasebrink, Lampert, & Hasebrink, 2009).

The low skilled or low educated are often profiled as not able or willing to maintain or increase their skills. Because of this profiling, employers are not willing to invest in the development of low skilled workers and education is not focussed on designing programs for the low educated or low skilled (Buisman, Allen, Fouarge, Houtkoop, & Van der Velden, 2013). An individual's educational attainment level however is by no means fixed or static, as it may rise through lifelong learning and drop through age-related factors (Buisman et al, 2013; Grotlüschen, Mallows, Reder, & Sabatini, 2016). There is even a surprisingly large proportion of educated workers employed in low skilled jobs (Toner, 2011) and an unexpected high number of adults with a low proficiency level that do not exhibit the expected characteristics concerning socio-economic background and level of educational attainment (Grotlüschen et al., 2016). There are also workers with a lower level of education attainment and lower proficiency level in jobs that require extensive training. These people may very well possess complementary skills not measured by the PISA and PIAAC initiatives, like complex communication, and use these to compensate for the lack of skills that are measured (Buisman & Houtkoop, 2014). So the use of certain social categories and the profiling techniques may negatively affect the opportunity structure, that is the provision of for example public employment services and education.

Resources that can be used as an opportunity, are not necessarily limited to those provided for by employers or the ones that have been created with colleagues and co-workers. Learning opportunities can also emerge from other resources, as for example professional communities on the Internet (Brown, Bimrose, & Merrill, 2014). Converting, that is, accessing, adopting or appropriating these kinds of resources has become increasingly important. But this process of converting resources into opportunities is also determined by the way existing networks constrain solutions of organizational problems. Explaining the structuralizing effects of technology on the distribution of opportunities, in terms of individual's access, adoption or appropriation of information, requires a relational view, meaning that an individual's position within networks and the relation with other network members can explain the effects that produce, reproduce or reinforce inequality (Van Dijk, 2013). This is apparent when we look at the gender and income inequality that is still visible in an innovative and meritocratic domain as ICT, corroborated by the fact that even Silicon Valley, well-known for innovation and meritocracy, remains a white and male-dominated landscape where black Americans and women are significantly underrepresented (Valsamis, De Coen, & Vanoeteren, 2016). Factors that are not directly related to individual characteristics and attributes, like age, ethnicity and gender, are less frequently reported or stressed in research.

Self-profiling and career control

Changing and challenging job conditions or career transitions, like those induced by technological change, are best met with networked, informal learning activities (De Grip, Loo, & Sanders, 2004; Kirschner, Caniëls & Bijker, 2012). Two individual career competencies seem particularly relevant to informal learning when low skilled are challenged by the changing conditions of their job: self-profiling and career control (Preenen, Verbiest, Van Vianen, & Van Wijk, 2015). Self-profiling is conceptualized as a communicative competency, while career control is considered a behavioral career competency.

'Self-profiling' refers to presenting and communicating one's personal knowledge, abilities and skills to the internal and external labor market. This career competency becomes visible in the proficient use of social media in and across organizations targeted at self-profiling that is, pro-actively showing others what one wants to achieve in one's career (Akkermans, Brenninkmeijer, Huibers, & Blonk, 2013). Disclosing this personal career related information is the first step in a process towards achieving valuable career goals. Low-skilled workers' self-profiling is hindered by a number of factors. The most commonly reported factors are motivation and conflicting preferences, namely, future orientation, versus preference for leisure (Fouarge, Schils, & De Grip, 2013).

'Career control' relates to actively influencing work and learning processes related to one's career by setting goals and planning how to reach them (Akkermans et al., 2013). Informal learning at work depends, among other factors, on individual actions like the development of relations with colleagues and co-workers (Brown et al., 2012). In part, setting intermediate goals and planning activities targeted at relational development, involves the use of influencing skills, engaging people for particular purposes and supporting the learning of others (Brown et al., 2012).

For individual, self-responsible learners, accessing and developing knowledge and resources through social media requires an active attitude and network competencies (Kirschner et al., 2012; Stauber & Walther, 2005). Low skilled workers' career control is mostly hindered by personality traits, namely, locus of control, exam anxiety, and (lack of) openness to experience (Fouarge et al., 2013). Education meanwhile has little attention for the attitude and competencies that relate to developing knowledge and resources at work (Kirschner, Caniëls & Bijker, 2012).

The social context

Social interaction and participation are deeply affected by social media. Cooley, who coined the term social media, saw media and communication as an evolutionary mechanism determining the reach and influence of the environment in affecting social change and the growth of individuality. He observed the emergence of new means of communication causing a liquefaction of society by a multitude of small changes or 'waves' and producing "as many social media as there are specialized groups of sympathetic and communicating individuals" (1897, p. 80). Over the past decade, social media have penetrated deeper into the mechanics of everyday personal life, affecting people's informal, social interactions and professional routines as well as the formation of new social, economic and institutional structures (Ester & Vinken, 2004; Van Dijck & Poell, 2013). Due to these affordances, new interactive media are often dubbed social media without further clarifying the distinctiveness that is suggested by the use of the adjective (Derksen & Beaulieu, 2011). Opinions and facts about these socializing effects that are afforded and mediated by technology are diverse.

As an instantiation of social technology, social media are seen as part of the experimental assemblages or arrangements that represent new, distinctive types and forms of sociality (Derksen & Beaulieu, 2011). Human based needs, interests and the motivation to communicate and evocate interaction, act as drivers for these participatory actions through media (Drotner, 2008; Ito, Horst, Bittanti, boyd, Stephenson, Lange, Pascoe, & Robinson, 2008; Jenkins, 2006; Turkle, 2004). The distinctiveness of the social may be illustrated by social media use that supports, affords or structurizes the expressive and evocative creation and exchange of information serving the creation of identity and sociality.

Social media use for example enhances the reach and fabric of social networks as part of one's opportunity structure. Many migrants and low-skilled for example obtain

employment through social networks and ICT's enhance the reach of social networks and possibilities to create social capital (Green, De Hoyos, Barnes, Owen, Baldauf, & Behle, 2013; Zinnbauer, 2007). Social media use can positively co-constitute new, alternative and innovative forms of solidarity, connectedness and civic engagement (Ester & Vinken, 2004), but also contribute to a fragmentation or tribalization of social life (Sunstein, 2001). Social media use may co-constitute developmental tasks, such as the formation of one's identity and of social relations (Paus-Hasebrink et al., 2009). Social media however also threaten individuals' psychological well-being by fragmenting identity in terms of a difficult to manage and maintain a multiplicity of identities (boyd, 2014). The effects of social media use are diverse and it is not always clear whether these effects are the result of individual intent and choice or of structuralizing forces.

So how should social media use be framed and conveyed in order to support strategies for self-realization and socialization of the low skilled and low educated?

Selective self-presentation and participation

Benefitting from social media as resources or spaces of sociality (Walther, Stauber, & Pohl, 2005; Zinnbauer, 2007) often requires network membership or tangible 'social relevance' in networked structures (boyd, 2014). How are users then to take their first steps in becoming accepted and appreciated members of a network? This relevance may be achieved by producing social presence (Kaplan & Haenlein, 2010; Carpentier, 2009). An important aspect of online social interaction in networks, and therefore of networking abilities, with the goal of achieving some kind of desired outcome is strategic or 'selective' self-presentation.

Selective self-presentation

Selective self-presentation is an important aspect of identity formation (Valkenburg & Peter, 2011) and can best be understood as the intentional control of how one is perceived by others by selectively presenting aspects of one's self to others. Self-presentation relates to social processes of identification and socialization and is influenced by one's ability to create a fashionable or favorable impression. It also relates to one's degree of self-disclosure, that is the disclosure of personal information. As pointed out before, information should transcend the personal in order to evoke appreciative reactions.

Social media provide new environments and ways for identities to be constructed, visually presented and narrated (Paus-Hasebrink et al., 2009;Valkenburg & Peter, 2011) and to establish or maintain relations and friendships (Valkenburg & Peter, 2011). These online identities and relations offer positive, enabling outcomes (Valkenburg & Peter, 2011). Connected peers are important 'others' that recognize new patterns of behavior (Drotner, 2008; Strano, 2008) and function as resources within an opportunity structure (Walther et al., 2005).

Participation

'Participation' primarily deals with motivated action exercised in social formations which share a degree of interaction, common objectives, and interests (Jenkins, 2006). Explicit participation mostly refers to discursive decision-making in terms of collective understanding about the purposes and policies that govern networked activities (Preece & Shneiderman, 2009) accompanied by the assembly or appropriation of technology use in terms of ways of thinking and fixed patterns of interaction (Derksen & Beaulieu, 2011; Schäfer, 2008).

Online identities are embedded in socio-communicative relationships, that is, they are bounded by the extent to which audiences recognize the quality of the disclosed information (Carpentier, 2009). They are also often grounded in offline relationships, thus participation is also bounded by the extent to which desirable or favorable identities result in a positive offline 'Hegelian' recognition of subjectivity and social sanctions (Strano, 2008). This implies that participation in online networks not naturally results in the creation and use of egalitarian opportunities and that participation can be constrained or structured by mechanisms, like power relations, that extend from the offline world to online communities and networks and vice versa (Mariën, Heyman, Salemink, & Van Audenhove, 2016; Van Dijk, 2013).

Networked learning and socializing activities posing demands that refer to participation, entail:

- 'orientation', which means developing interests and goals and dealing with setbacks and demands;
- 'adaptation', which means relating needs and capabilities to the environmental setting and conditions, compromising on goals, balancing competencies;
- 'networking' (Stauber & Walter, 2006).

Low educated and low skilled lack the a future orientation (Fouarge et al., 2013) and see networks as places for hanging out with friends or to keep in touch with relatives (Ito et al., 2008; Van Deursen & Van Dijk, 2012). They favor leisure network activities and lack the skills to present themselves strategically in online networks (Van Deursen & Van Dijk, 2012). They also lack the ability to reflect on their social media use and are not aware of social media's relevance and potential for social and economic participation (Moekotte, Brand-Gruwel, Ritzen, & Simons, 2015).

The educational context

Although schools have been useful in addressing the first digital gap, that of access, they lack a sense of direction that would help in tackling the second digital divide (Pedró, 2010). Or as Livingstone, Papaioannou, Grandío Pérez, & Wijnen put it:

> (…) the responsibility for those that do not learn all that is needed in a digital age is differently conceived depending on whether media literacy is considered an individual or a societal prerequisite. (2012, p. 3)

Part of the subtlety of this problem lies in educational and institutional policies governing the implementation of technology in schools and their curricula. National policies tend to limit media literacy issues to the economic and commercial use of ICT and to limit the skills that match this use to educational outcomes that reside on economic agendas (Celot, 2012; Livingstone & Bulger, 2013). Institutional policies tend to limit the use of ICT and the skills that match this use to aspects of the organizational and administrative effectiveness of the school organization (Hrastinski, Keller, & Lindh, 2009). Meanwhile, the rather functionalist classroom perspectives on technological skills that came with the large-scale introduction of technology, hampered expectations about equality and performance (Myers, 2006; Pedró, 2010). For example, Dutch teachers criticize the lack of consensus within schools about the role and function of ICT in pedagogy and curricula, which affects intrinsic issues concerning second-order barriers such as motivation, confidence and beliefs. Dutch education still lacks a comprehensive media literacy

program. However, school leaders are more concerned with addressing traditional first-order barriers such as infrastructure and resources (Meelissen, Punter, & Drent, 2014).

When we look at the motivation and trainability of the low skilled and low educated, a media literacy *program* would suggest the need to further investigate student needs, as well as students' motives and preferences (Christ & Potter, 1998; Kerstiens, 1975). People with low proficiency are easily caught in a what is called a 'low skills trap', as they are less likely to experience the need for participation in learning activities, are not literate enough to perceive, recognize and take advantage of opportunities or rationalize their non-use in an attempt to cope with their anxieties and failures. As a result of this reported attitude and capability, they may even be excluded from further analyses and deliberately left out when interventions are arranged (Buisman et al., 2013).

Although social media use entails informal learning which may produce positive social and economic outcomes and peers or audiences exert mitigating 'socializing effects', youth still display or inadequate use and risk behavior, and are in need of mediation, guidance or instruction (Livingstone, Mascheroni, Dreier, Chaudron, & Lagae, 2015; Pfaff-Rüdiger, Riesmeyer, & Kümpel, 2009). Knowledge concerning the adequate use of social media in terms of adequate social behavior seems to be the least significant predictor of adequate behavior (Pfaff-Rüdiger et al., 2009). Media literacy learning is therefore best approached as hands-on, situated and experiential (Buckingham, 2007), democratic and critical (the teacher is researcher and facilitator), and process-driven (Aufderheide, 1993).

Finally, the low educated and low skilled face an increasing number of critical transitions in their life course. They are in need of support in a time were support structures are dismantled, rapidly digitalized or rigidly inadequate. Non-traditional learners have profoundly different motivations and agendas for their education. These learners have to recognize and accept the structuring principle of self-realization forced upon them by modernity and have to learn how to cope with challenges and convert the provided or structured opportunities into capabilities. And if opportunities are not provided as support structures erode, these learners have to learn how to create these opportunities for themselves. This requires rethinking education geared towards lifelong learning, that is, help students cope with transitions and structure and convert opportunities. Future post-initial learning opportunities outside of the education system are believed to be largely dependent on and supported by technological innovation, that is the provision on online courses and online educational resources (Redecker, Leis, Leendertse, Punie, Gijsbers, Kirschner, Stoyanov, & Hoogveldtherborn, 2010).

Kerstiens (1975) was probably one of the first to suggest that the use of various media could provide a way of "de-monopolizing instructional space", for example, decoupling programs for non-traditional learners from brick and mortar schools, allowing non-traditional learners the choice of when and where to encounter instructors in order to develop and prove their competencies.

Education has to support low educated and low skilled develop different levels of media literacy at different stages in their life course. So in effect, educational institutions will have to adjust their programs to meet these needs in order to better prepare youth or adults who are at risk of facing a low skills trap and a precarious future. Education will also have to adjust their delivery modes in serving these youth and adult learners throughout their life course and provide new modalities that better fit the stage of the life course these learners are in and the kinds of challenges and issues they have to cope with during these stages.

Conclusions

Effective elements of media literacy

With regard to our first question we found no relevant notions or clues in peer reviewed articles concerning effective educational practices and design principles (see Appendix A). The type of research we queried, has not been conclusive with regard to the concept and the literacy practices educators should envision when designing programs for low educated and low skilled who face exclusion and a precarious future.

The definition proposed by the National Leadership Conference (1993) that is most commonly referred to research, although often misquoted. The misquoted version largely resembles the one adopted by the European Commission (2007) and was intended by the Commission to inform and direct educational policies in the member states. More important, both definitions are complemented with the fundamental objective of a critical attitude towards all media, old and new, and a critical assessment of media messages, including those online. The concept of media literacy also faces contamination from and competition with related concepts such as digital literacy, computer literacy, ICT literacy, information literacy, and the like (Bawden, 2001).

Researchers are seemingly only interested in certain specific groups, leaving the stories of many who struggle with literacy issues untold (Livingstone & Bulger, 2013). Their initiatives do not cover the possible relation of (critical) media literacy with the transitional needs or tasks during the adult life course (Heckhausen, Wrosch, & Schulz, 2010). These initiatives are rightly critiqued because they focus research on either a single, economic goal (Celot, 2014), a single generation or age group (Grimes & Fields, 2012) or a single type of network like Facebook (Lovink, 2012).

The research that we found on media literacy regularly limits itself to age-related developmental issues and questions. Narrow attention to age-related and age-graded topics, such as identity development in the formative years, is rightly critiqued (Grimes & Fields, 2012; Lovink, 2011), because certain age groups are underrepresented in the research, and certain alternative media and networks are not covered. Research literature indicates that challenging conditions emerge across the entire life course; there is no life stage without social and economic challenges that require learning through social interaction (Heckhausen et al., 2010). Yet non formal, lifelong learning, which has become extremely important for older generations of non-traditional learners, is sparsely addressed in research on media literacy. This means that developmental topics, which we consider essential in understanding the transformative years of adults and which relate to issues and questions of lifelong learning, are barely covered in research on media literacy.

Elements of media literacy practices relevant to social or economic participation.

From research literature and reports, it became clear that effective social and economic participation rely on the ability to create, share and evaluate information in collaboration. The ability to create and communicate information in an effective way requires different skills, starts with a learning process but most importantly demands continuous learning. Socio-communicative elements that are relevant and important for the creation of mutual understanding are:

- creating and managing a favorable or desirable impression of the self;
- technical skills;
- acceptable degrees of self-disclosure;

- awareness of network mechanisms and affordances
- willingness to invest time and effort.
-

Behavioral elements that are relevant and important for the creation of interpersonal relationships are

- influencing skills;
- communication skills;
- networking skills.
- willingness to invest in supporting of and sharing with others.

A broader view or frame of reference and generalisable criteria do however not suggest transferability of media literacy as a narrow set of skills, as for example proposed by Lonsdale and McCurry (2004). Either of these skills should be complemented by basic skills, a more general understanding of how information structures relations and opportunities and thus relates to power and equality, and attitudes and perspective related to morality and sociality (Bawden, 2008).

Education as a strategic building block.

Learning takes place in the context of opportunity structures within which individuals operate. These opportunities are either provided by institutions like public education or employment services, the employer or they have to be organized or created by the individual. According to Markauskaite (2006), the provision of learning opportunities and programs depends on the rationale who benefits: the individual or society. This implies that political choice can structure or constrain the opportunity structure and the resulting education system may even produce segregation or inequality (boyd, 2014; Mariën et al., 2016; Van Dijk, 2013).

Considering learners' preferences, traits, attitudes and perspectives as the bottlenecks of sociality and employability, we argue that attitude and motivation are the critical points of engagement that should be addressed by educational interventions aiming at enhancing the participation of the low skilled or low educated through a comprehensive media literacy programs. Addressing motivation and attitude however requires a situational approach without the bias of a-priori categorical pairs that may (be set out to) reproduce middle class behavior (Boonaert & Vettenburg, 2011; Verdegem & Verhoest, 2009).

The use of technology and social media appears as the overall normative stance of how Western societies are being organized. The Dutch government for example has chosen to digitalize all governmental services by 2017. The effects of deregulation and flexibilization on the majority of digitization processes, implemented by public and private institutions without an in-depth consideration, may lead to the formation of excluded or disadvantaged individuals (boyd, 2014; Mariën et al., 2016).

Low skilled face precarious situations instead of stable long-term employment. They will have to navigate support structures more often and more intensely when there are no lasting effects created during transitions. A similar effect, although unintended, may be produced when the process of reconfiguration and digitalization is ignorant of the educational opportunities that should accompany rapid changes in the precarious life course of the low skilled. There are for example concerns that the expansion of

employment mechanisms and services delivered through ICT risks leaving behind the most disadvantaged (Green, 2013).

Limitations of our study

The limitations of this study in part concern the methodology, that is, selection of a representative body of literature on the subject of media literacy in relation to the economic and social participation of the low skilled and low educated.
Searches in databases are challenging for several reasons, including selection of databases, publishers' bias, different interfaces for the databases, different ways of constructing search strings, different search limitations. Our approach to media literacy has a few important methodological caveats. The first concerns the use of the search terms, especially the term 'media literacy'. Looking for the impact of authors is problematic when there is no 'single field', that is when a field is paradigmatically or theoretically divided or when a concept and can be traced back to authors in a number of comparable fields.

One of the limitations of using descriptive OECD statistics and reports is the fact that the measured constructs, such as basic skills, core skills or foundation skills, do not necessarily map onto the concept of 'media literacy'. They did, however, provide an impression of the corresponding levels of technology-related literacy that we assume being at least indicative of being low skilled and low educated.

Discussion

Looking back we can conclude that the relation between research and vocational education is one of the factors that may account for the lack of relevant findings concerning our first question. What education lacks is a set of generalisable criteria by which to operationalize and assess media access, adoption and appropriation in the context of social and economic participation.

For more than a decade, researchers have repeatedly stressed that ICT's in education has had no effect on the skills and use patterns of students (Van Dijk, 2009; De Haan & Sonck, 2012). The fast development of Internet technology and social media partly explain this problem. This indicates that most researchers are not able to predict the outcomes of technological development in all domains, explain how technology may influence differences in outcomes or may even produce inequalities (Van Dijk, 2013).

A prediction of patters and benefits of social media use requires more than sticking to individualistic notions and adding variables as indicators for the (inequalities of) outcomes (Van Dijk, 2013). It is important to note here that not all individuals in low skilled jobs fit the profile of low skilled (Grotlüschen et al., 2016) and that there is ample reason to redefine the concept of low skillness (Kureková, Haita, & Beblavý, 2013). It is as yet unclear how causal relations between the training and development of core skills by adults, including media literacy, can possibly be measured and described, as scores achieved on core skills appear to be also positively related to various aspects of informal learning (Buisman et al., 2013). It is also questionable whether these surveys like PIAAC, measure all skills that relate to employability (Buisman & Houtkoop, 2014) and hence do not necessarily corroborate the validity of a one on one relation between educational attainment and occupational level. When low skilled persons learn how to profile

themselves, they may even escape these categorical mechanisms that predominantly profile them as unwilling or unable.

The profiles, predictions and policies concerning the low educated and low skilled based on economic theories and models alone, prove to be flawed and should at best be extended with insights and results from other fields and disciplines in order to explain mechanisms that produce social and economic gaps and combat the resulting inequalities. Our results indicate that policies should not solely be restricted to and based upon economic studies in order to esteem what low educated and low skilled workers of the 21st century need for their wellbeing and welfare. There is too much belief in the workings of economic mechanisms and too little consideration for and recognition of the precariousness of those who are profiled as low educated and low skilled. In line with these findings, educational programs should not be narrowed to functionalist and utilitarian approaches to literacy skills and practices.

The number of peer-reviewed articles we encountered turned out to be too small for our purpose of informing educational design, other than proposing a pedagogy that rests on critical reflection on situated literacy practices and complementing skills with purposeful understanding, that is sense making, and a sense of morality and sociality. We do, however, propose a model (Figure 1) that may function both as a heuristic framework for future research on media literacy, i.e. a field specific participatory habitus, and as a reflexive model that may inform critical pedagogy concerning media literacy in relation to social and economic participation and the media logic that governs both types of participation.

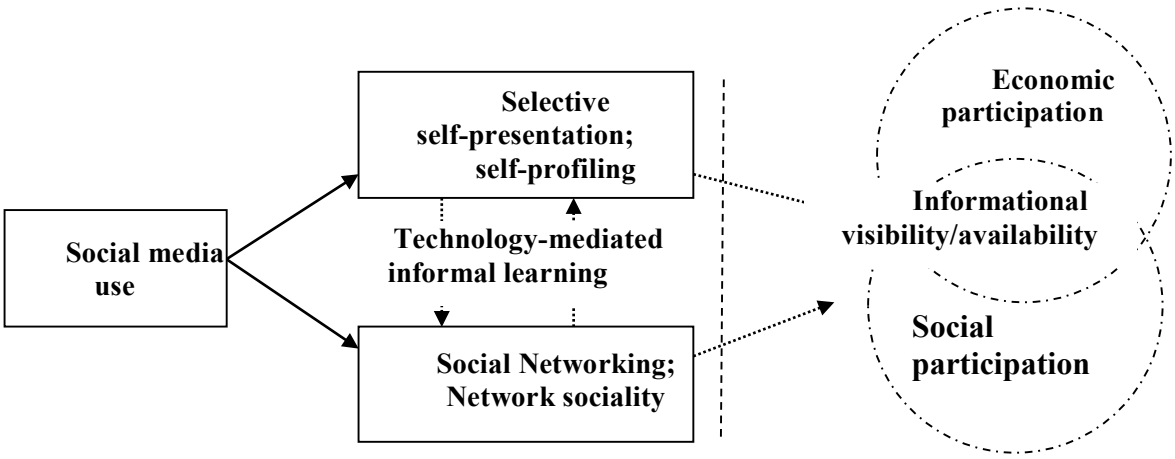

Figure 1. Technology-mediated informal learning

This framework presumes that the social and the economic contexts or participation are no longer strictly divided. Dissolving this demarcation implies that social and economic categories can be identified, studied and elaborated in unison. This would possibly be useful when economic issues, like the fact that a growth in productivity is not accompanied by a growth in income, keeps puzzling researchers. An example of such an elaboration is the economic concept of markets, which, according to Smith, 'are not simply embedded in social relations, they *are* social relations' (Stark, 2000, p. 3). An elaboration would be the 21st century labor market were meritocratic effects, like the qualifications of labor market entrants, are still trumped by categorical inequalities like gender or race. Another example is the concept of business value, which according to

Maes (2003) transcends monetary value and is socially constructed meaning in many business contexts and organizations.
Finally it would be relevant to explore whether the relations implied in our framework by the direction of the arrows may actually prove to be bi-directional. This would be relevant for our understanding of how the structure and functioning of networks and the relation with others in these networks, account for the inequality of social and economic outcomes.

Therefore it also seems important to consider and question whether individuals' motives measure up to the demands of being active, engaged and self-responsible learners. The question then is not simply whether individuals possess the skills to access and develop knowledge and resources by means of experiential learning in informal networks, or how the concept of media literacy can be operationalized and assessed for educational purposes. The question is mainly whether individuals are motivated to develop the attitude of active, self-responsible lifelong learners, what these motives consist of and what they are related to in diverse contexts. Perhaps acknowledging and exploring a third divide, that is the mechanisms of durable inequality, will bring us nearer to understanding the problems of motivation and attitude surrounding literacy practices and the gap these practices relate to.

Our framework presumes that technology use, that is access, adoption and appropriation, influences the participation in networks and hence can diminish social or economic inequalities within these networks in terms of the distribution of opportunities. The effects may however also work the other way. Van Dijk (2013) claims that the (re)configuration of networks may cause or influence the uptake and appropriation of technology and information and hence reproduce or reinforce inequalities in the distribution of opportunities. As such, online networks extend these mechanisms to the online world.

If our understanding of literacy practices and social and economic participation is to encompass processes of acceptance and rejection, inclusion and exclusion, appropriation and disappropriation, moralizing and justification, we have to broaden our view of media literacy and incorporate attitudinal and motivational factors related to technology use and literacy practices. If our scope and intention is to endow our youth with the capabilities to envision new knowledge (Langer, 2011), forge their own possible, social futures (The New London Group, 1996) and use networked sources as individualized systems of social capital (Stauber & Walther, 2006), there is no reason to leave out older generations who are apparently already living their futures. They have by no means forfeited their right to shape and redesign these futures by accessing and appropriating resources. So the major question remains whether learning opportunities concerning media literacy are offered at the right time, in the right form and distributed over the lifespan in the best possible way serving the needs of all who need support.

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Migrants' competence recognition systems: controversial links between social inclusion aims and unexpected discrimination effects

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Abstract

An adequate incorporation of migrants in the labour market, able to fully unleash their potential, is a major challenge for EU development. In this direction, the recognition of migrants skills, knowledge and competence acquired in formal and non/informal contexts represents a crucial issue. Based on a comparative research work conducted at European level, this paper highlights the ambivalence of competence recognition systems which, whilst representing potential means of social inclusion, in certain condition risk becoming invisible instruments of discrimination. Moreover it provides some recommendations for improving the substantial universalism of EU competence recognition systems and their impact on migrants integration.

Keywords: competence recognition; formal and non/informal learning; inequalities; migration; capability approach

Introduction

Among the various challenges posed by the integration of migrants, especially third country nationals (TCNs) in Europe, their adequate incorporation into the labour market is one of the most important for social cohesion, as it has important consequences on inter-ethnic relations, overall social well-being and the prevention of social dumping. In this context a key imperative is represented by a cultural change in relation to the conception of migrant workers, from a perception of their contribution as instrumental workforce, to fill labour shortages and to meet the contingent labour market's needs, to a view of their human capital as a structural resource for the common growth and general wellbeing of society (Zanfrini, 2015). This transformation is also crucial from an economic standpoint, both to satisfy short-term labour needs and, above all, to contribute to long-term workforce development, with a view to driving economic growth. Within

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such a perspective, valorising migrants' human capital and finding ways to unleash their potential represent fundamental challenges.

In accordance with these premises, moving from some of the main findings of the international project DIVERSE- *Diversity Improvement as a Viable Enrichment Resource for Society and Economy* (Zanfrini, 2015), this paper reflects on the role and functioning of competence 'recognition systems' in the EU. More precisely, it considers both the recognition of formal qualifications obtained abroad and that of skills, knowledge and competence (SKC) acquired in non-formal and informal contexts, by focusing on their actual effectiveness for the integration of migrants and particularly TCNs. Special attention is directed towards the investigation of the 'friendliness' of both systems, namely their accessibility, usability and beneficial effects with respect to this specific target group. The issue of recognition is considered in the light of the Lifelong Learning (LLL) perspective promoted by the EU and the OECD (Commission of the European Communities, 2000; OECD, 2001), according to which learning contexts may be both formal—e.g. education and training systems—and non-formal and informal—e.g. working life, daily and family life, volunteering, hobbies, and socialization experiences such as migration. From the same approach, we have drawn the definition of competence underpinning this work. We are dealing with a holistic conception of competence, the latter seen as an integrated and multi-faceted combination of cognitive, functional and social dimensions. In this perspective, the notion of competence encompasses the use of theory, concepts or tacit knowledge, functional skills (e.g. technical skills) as well as behavioural or attitudinal aspects (e.g. social or organisational skills) and ethical values (Cedefop, 2006:2014).

The empirical background to the paper derives from, firstly, the qualitative and multi-situated research work conducted on national and local systems of recognition in the 10 EU countries involved in the project (Estonia, Finland, Germany, Hungary, Italy, The Netherlands, Poland, Portugal, Spain, and Sweden) and, secondly, the cross-country comparison carried out using selected qualitative indicators as depicted in the following pages. The results of the analysis are interpreted in the light of the notion of 'capacitating institutions and policies' borrowed from the capability approach of Amartya Sen (1992), in order to scrutinize the consistency between the normative basis underlying recognition systems and policies, and their objectives of social justice, inclusiveness and individual empowerment. In so doing, we follow the wake of the flourishing literature that utilizes the capability approach as a framework to assess public policies, such as labour policies (e.g. Bonvin & Farvaque, 2006) and educational policies (e.g. Robeyns, 2005), just to make some herein relevant examples.

Within this framework, the comparative analysis was guided by two main research questions: *i*) Recognition systems potentially promote social equality and the democratization of opportunities; how and to what extent does this actually happen in the EU with reference to migrant populations?; *ii*) The more migrant friendly these systems, the more they are able to promote the social and professional inclusion of migrants and the valorization of their human capital; is this assumption confirmed by EU recognition systems? When and how can a recognition system be considered to be actually migrant friendly? And, to say it in capability approach terms, when and how a recognition system reveals to be 'capacitating', able to function as a 'conversion factor', which helps migrants converting formal resources and rights into capabilities for work, further education, training and voice?

By critically analyzing some of the unexpected and controversial results emerged from the research, the paper discusses, on the one hand, the ambivalence of recognition systems which, whilst representing potential means of social inclusion, in certain

conditions risk becoming invisible instruments of discrimination, and, on the other, makes some recommendations for improving the substantial universalism of EU recognition systems and their impact on migrant integration. The paper is organized as follows: The first section describes the research premises, the second gives a brief, general description of the recognition systems analysed within the DIVERSE project, the third presents some critical considerations about the potential for inclusion of recognition systems and their actual shortfalls, and the fourth provides some indications for improving their level of migrant-friendliness. Finally, some remarks conclude the paper.

Research background: recasting the European model of migrant labour incorporation

As the wide range of literature available has long documented, the EU model of migrant labour incorporation revolves around the principle of complementarity. The presence of migrants tends to be welcome only as long as they fill labour shortages, usually in those professional sectors considered undesirable by natives. This logic generates several problems, such as the ethnicization of the labour market and the professional segregation of migrants, including actual exploitation (Zanfrini, 2007; Urso & Schuster, 2011). These are processes with repercussions in the long term, due also to the transmission of disadvantage from one generation to the next (OECD, 2010). All these phenomena imply a waste of migrants' human capital and the inefficient allocation of their SKC.

Over-qualification is a widespread feature among migrants residing in the EU. According to the OECD *International Migration Outlook* 2014:

> Highly educated immigrants show lower employment rates than their native-born counterparts in virtually all OECD countries. And, even when they are employed, they are 47% more likely to be in jobs for which they are formally over-qualified. (p. 37)

This is an urgent issue to be addressed if we consider that in OECD countries the proportion of highly educated migrants is increasing sharply: +70% since the beginning of this millennium (OECD-UN/DESA, 2013).

Looking more in depth into the phenomenon of over-qualification, we can identify three different underlying conditions. A certain proportion of migrants holding a recognized diploma are prevented from using it in the receiving country's labour market due to the above-mentioned situation of professional segregation. At the same time, a large percentage of TCNs do not have their foreign qualifications recognized within their immigration context, a fact that hinders their professional mobility. This is particularly relevant for those migrants with competences that enable them to be employed in regulated professions, for which recognition is mandatory. While the two categories described above experience a situation of 'formal over-qualification', there is another group of migrants who are exposed to a form of 'substantial' over-qualification, i.e., those who have acquired SKC in non-formal and informal learning contexts, but who do not possess any documented credentials. This is quite common among migrants who, in their home, transit and receiving countries, may have accumulated a very heterogeneous capital of professional SKC, through very diverse occupations also in the shadow economy. Moreover, migrants may have acquired relevant but not certified transversal competences through migration (e.g., intercultural and linguistic competences, skills in coping with stress or in-context analysis). If it is not to be given for granted that transformative learning processes linked to migration are linear and positive, as social context play a crucial role in determining their actual outcome (Morrice, 2014), the

competence potentially linked to the migratory background represent an asset often disregarded. In this concern we observe a sort of mismatch of SKC regarding less educated migrant workers, who are employed in the medium and low levels of the labour market, but whose specific competences could be better valorised in other professional sectors.

Besides, a new demand for skilled work is developing in EU countries (European Commission, 2015). For instance, in recent years an important labour shortage has emerged in the healthcare sectors of several EU countries, which currently employ a significant part of the migrant labour force. In countries which have been experiencing a process of brain drain for many years, such as Eastern EU countries, this labour shortage and subsequent need for a qualified migrant labour force is expanding to several occupational sectors. Furthermore, in recent decades the process of economic globalization has generated a transnational migratory élite (finance or ICT workers, managers, researchers). Despite constituting a small minority within the EU migration landscape, this cosmopolitan élite must still be taken into account when reflecting on the issue of recognition. Finally, even if tentatively, in some contexts a new awareness is emerging about the role that migrants and their offspring could play in the internationalization of businesses and trade, thanks to their linguistic and intercultural competences. All these trends are leading some countries to ask themselves how to attract more qualified immigration flows and, more interestingly for our purposes, how to valorise the potential which already exists among the migrant population residing in their territories.

More broadly, a profound reflection is urgent on the model of migrant labour incorporation which has developed over time in the EU and its sustainability in the long term. Especially (but not only) due to the recent economic recession, the need for a general rethink of productive models and labour policies is emerging, and the short-sighted nature of the current incorporation model becomes increasingly clear. The urgency to put in place corrective measures for the governance of the labour market and the fruitful management of human resources is compelling. In this context, the issue of formal qualification and SKC recognition is highly strategic.

The implementation of instruments envisaging well-designed, migrant-friendly processes of formal recognition of and non-formal/informal learning could be beneficial for a more careful recruitment of human resources and a better capitalization of migrants' human capital. This would improve migrants' awareness of their potential and the visibility and transparency of their SKC, hence enhancing their employability, and the possibility of finding jobs corresponding to their skills. It would also foster their professional mobility and career development by favouring re-entry into the LLL process. In addition, the valorisation of TCNs' SKC could well have a positive impact on the professional path of future generations, counteracting the long term effect of labour market ethnicization. Initiatives of recognition carried out in the country of origin, during the pre-departure period, could also favour more effective management of labour migration flows, as it may help attract labour migrants whose specific skills are needed in the receiving country's labour market.

Given the precious potentialities of recognition for a more adequate incorporation of migrants in receiving countries' labour markets, this paper reflects on the actual impact of the EU's existing recognition systems on migrant integration, in particular for valorizing their diversity and reducing social inequalities. This reflection has a significant heuristic value. On the one hand, recognition systems have the potential to be particularly beneficial to migrants who have acquired their qualifications and SKC in many different countries, contexts and professional sectors and have special difficulties in documenting

them due to their transnational existences. At the same time, migrants represent the top of the iceberg, the visible part of a much wider trend.Indeed migrants may be considered to be an ideal-type of the contemporary man or woman, whose life story and career are increasingly versatile and mobile (Zanfrini, 2015). Hence, reasoning on the effectiveness of recognition systems for migrants produces a 'mirror effect' (Sayad, 1999) which gives insights for improvements beneficial to all citizens, especially vulnerable groups.

Recognition systems and migrant beneficiaries: research methodology and main findings

Against this background our project was aimed at investigating the national (and some selected local) systems of recognition of the 10 EU countries involved in the project, by focusing on their capacity to be effective and empowering with migrant beneficiaries.

A qualitative, multi-situated comparative research work has been carried out in all the countries involved. The collection of data was carried out on the basis of a shared research protocol, including desk analysis and field work, with semi-structured interviews to relevant stakeholders and key informants (exponents of: social partners, national/regional and local institutions, migrants' associations, consulates/embassies, civil societies, companies, educational institutions, employment services; leading experts in assessment of training programs and systems). Then, a qualitative cross-country analysis was conducted separately on the two systems of recognition (formal and non-formal/informal) which present significant points of contact, but also important specific aspects to be examined separately. This qualitative analysis revolved around some analytical dimensions, namely: systems seniority and maturity, universalism or selective trends, occupational or learning goals, formalization/bureaucratization or flexibility of procedures, levels of friendliness in relation to migrants, stakeholders' participation and cost sharing. Here below we present and discuss the main findings of this qualitative cross-country analysis, trying to take a step forward by reading the results in the frame of the capability approach and investigating—quoting Hemerijck's (2012)—the 'capacitating qualities' of the policies, measures, services implemented, that is, trying to catch under what conditions recognition processes help migrants to reach their objectives of inclusion in the labour market and more broadly of personal well-being and agency.

First of all, our research has shown that meaningful steps have been taken towards the recognition of qualifications and of non-formal and informal learning (see also OECD, 2007;Werquin, 2010). Despite the problems still to be solved and the improvements to be sought (Méhaut & Winch, 2012), much work has been done in many countries, as well as at EU level, to facilitate the international transferability of qualifications and SKC. Nevertheless, the ten countries taken into consideration in this study present very different types and levels of development, organization and equipment.

By way of an overview of the scenario which emerged from the qualitative cross-country analysis, we first briefly report on the categorization of the countries investigated, grouped according to the seniority and maturity levels of their recognition system. It is important to note that this evaluation simultaneously assesses the system as a whole and its capacity to be TCN friendly. Considering recognition of formal qualifications, Sweden, Germany and the Netherlands may be clustered together as those countries with the 'most consolidated' systems. They display a good balance between centralization and territorial diffusion, providing beneficiaries with some pivotal reference points at a national level, whilst at the same time offering at the local level widespread services of information, orientation and assistance. Systems such as the Estonian and the Finnish may

be defined 'consolidated but less challenged', i.e. they are well designed and organised, but the relatively low share of migrants, and particularly of TCNs, residing in these countries make it rather difficult to explore their actual functioning (Tammaru et al., 2015). The Italian, Spanish and Portuguese systems are 'quite developed in legal terms', but also very 'fragmented and complex' at both territorial and institutional level. For this reason, they lack efficiency and user-friendliness, especially with migrants (and TCNs). Finally, the Hungarian and Polish systems appear to be fairly poor and as yet incomplete: they undoubtedly need innovation and adjustment both at a legal and operational level. Despite their 'incompleteness', however, they are 'under construction', revealing interesting pioneer experiences at the local level.

Considering the recognition of SKC acquired in non-formal and informal contexts, the ten countries can be grouped slightly differently. In Sweden and the Netherlands the issue has reached the highest level of 'maturity' and 'seniority' as witnessed by the degree of institutionalization and centralization of the procedures and their country-wide homogeneity. In addition, these systems have implemented procedures aimed at recognising SKC wherever and however acquired both for gaining credits for re-entering the education system and for obtaining better inclusion in the labour market. Conversely, the SKC recognitions systems of Finland, Germany, Italy, Spain and Portugal may be defined as 'consistently evolving'. In some of these countries (i.e. Italy, Germany and Spain) the system is characterised by regional sub-systems, differently developed and structured, notable for the involvement of many stakeholders within a complex set of different institutional competences (Zanfrini et al., 2015). Finally, Hungary, Estonia and Poland could be defined as 'starting cases'; their systems are still not institutionalized, as a central body responsible defining national guidelines for SKC recognition does not exist, neither at national nor at local level. Their first aim is to develop connections between LLL and different levels of study.

Summing up both types of recognition systems, we observe that the degree of maturity tends to be proportional to the development of the related national LLL system, the length of the country's migration history, the volume of migration flows and the policy approach to migration. Certainly different cultures of recognition exist, and procedures show different degrees of accessibility and usability. Nevertheless, especially in relation to migrants and particularly TCN beneficiaries, some problematic traits common to all systems can be identified. The issue of recognition of formal qualifications acquired in third countries has reached a certain level of articulation in all the countries analysed, due also to the input provided at a supranational level[1]. Nevertheless, several obstacles such as lack of information, high costs and long and complicated bureaucratic procedures tend to account for the large proportion of TCNs who, despite being entitled, do not have recourse to the opportunity of recognition. It is important to consider that, in the case of migrants, the barriers mentioned above are often hampered by linguistic difficulties, a limited knowledge of the cultural and institutional receiving context, precarious working conditions and difficulties in combining professional and family life, due also to reduced social networks.

The issue appears to be particularly critical with respect to regulated professions for which, as already pointed out, official recognition is mandatory. These regulations, put into place to guarantee the quality of certain professional sectors, often have the collateral effect of inhibiting the utilization of human capital acquired abroad by qualified professionals (Sumption, Papademetriou, & Flamm, 2013; Sumption, 2013). Certain sectors appear to be even more inaccessible to TCNs in those contexts where, beyond

national regulations, professional orders play the role of gatekeepers by adopting very strict, often exclusionary membership criteria.

On considering systems of recognition of SKC acquired in non-formal and informal contexts, our research findings show that, apart from a few cases, the national systems investigated appear to be very fragmented, and often almost totally lacking norms, structures, procedures and tools. This is in line with the most recent and wide-ranging research in the field (European Commission et al., 2014). There are undoubtedly several interesting projects in the field, but they are often limited to specific local or sector contexts. Besides, serious evaluations are lacking in this area, as well as mechanisms for the exchange of good practices.

Even in those countries, regions or sectors where a certain level of systematization and expertise has been reached in the field of recognition of non-formal and informal learning, migrants tend to be hardly involved. This is linked to several factors, such as the mechanisms set up for the involvement of beneficiaries, the nature of the professional sectors concerned (which tend to be the most qualified) and the costs implied by validation procedures (which are often high and borne by the candidate). As already mentioned, a crucial inhibiting factor is the linguistic barrier, which hampers both the correct implementation of procedures, and the description of competences, very useful in the validation process and strongly dependent on the candidates' expression ability. Indeed, also cultural understanding of the receiving society's norms, LLL opportunities, labour market functioning, and employers' expectations are crucial.

Certainly, while formal learning is in many ways easy to document and valorize, it is more complex to recognize and certify non-formal and informal learning, mostly for target groups with special needs. Nevertheless the EU is promoting efforts in this direction and important developments are taking place to address the main problems (Werquin, 2009). More broadly, despite the common critical knots discussed above, our research brought to light several innovative experiences related to both forms of recognition, in all the countries investigated and especially at the local level. These experiences, which help to identify the levers to be activated and the steps necessary for improvement, will be considered in the section 'Migrant-friendly systems: approaches, methodologies, tools and strategies of involvement'. Before tackling this point, in the next section we think it advisable to develop some further observations on the criticalities to be addressed to assure to each migrants (and each citizen) the right to access the SKC recognition process and to contrast the institutional, social and individual factors which hamper—in Senians' terms—the conversion of formal resources and rights concerning SKC recognition (if and where guaranteed) into capabilities, that is, the capacity to fully exploit the opportunities formally available.

Universalism and selective options: two sides of the same coin

An interesting lens for the observation of recognition systems is an assessment of their level of inclusiveness or selectivity. All recognition systems are in principle founded on a universalistic approach but, as has emerged from our research, they actually leave space for selective options. As a result, recognition systems and procedures can produce both inclusive effects and further unexpected inequalities, between migrants and nationals, or even among migrants themselves.

With regard to the recognition of qualifications acquired abroad, one initial important consideration concerns the Directive 2005/36/EC (cf. note 2), on the right to recognition of professional qualifications for EU citizens who acquired them in another EU Member

State. This directive, evidently aimed at facilitating labour mobility across EU countries, lays the basis for an important differentiation between EU and non EU migrants in terms of opportunities of incorporation in the labour market. EU holders of professional qualifications, even when requested to fill some knowledge gaps through compensation measures, can rely on a positive outcome of their investment in the recognition process, and hence on the possibility of eventually entering a regulated profession in the receiving country's labour market. On the contrary, for the latter the outcome of the recognition process is uncertain, depending on more or less well defined procedures of formal evaluation of their previous training and professional experience, or on tests assessing migrants' competence. These processes are usually complex, costly and time-consuming, and risk discouraging non-EU citizens from the outset. This is particularly true in national contexts where, due to an incomplete legal framework and to non-efficient operational mechanisms, the recognition of professional qualifications appears to be essentially impossible for those TCNs who, as we will see further on, do not fall in categories with privileged channels of recognition. If it is certainly necessary to base the recognition of professional qualifications on a good level of knowledge and trust in the issuing training system, something that has been achieved reciprocally by EU countries after years of harmonization, it is also important to identify and avoid obstacles such as those mentioned above. For the reduction in the differential treatment between EU and non EU citizens, an important step could be the stipulation or strengthening of intergovernmental agreements, for instance with those sending countries who provide, with reference to each receiving context, the highest proportion of the migrant labour force. Similarly, it would be beneficial to implement a process geared towards the extension of the EQF and EQVET experience to third countries.

Pursuing our reasoning on selective tendencies, it is also useful to observe whether the systems taken into account pay special attention to recognition in specific professional sectors or education/training levels. Some of the countries investigated have, in recent years, adopted options geared towards the facilitation of the recognition of qualifications possessed by highly skilled migrants. These options are usually accompanied by normative provisions, in the form of migration policies, aimed at attracting qualified migrations. For example, Portugal, whilst envisaging the simplification of the bureaucracy in admission procedures for highly qualified foreigners, also promoted a system of automatic recognition of higher education degrees obtained abroad. For the qualifications pertinent to this scheme, the recognition procedure is considerably simplified compared to other foreign diplomas. Also in Poland highly skilled TCNs appear to be strongly favoured with respect to other TCNs, in terms of social mobility prospects. In fact, the national law transposing EU Directive 2005/36/EC on the recognition of professional qualifications envisages some categories of TCNs who can benefit from the same right to recognition conferred on EU citizens, including highly skilled migrants. Therefore, in Poland, highly qualified TCNs undergo similar qualification procedures as EU citizens. In this way they are treated preferentially in comparison to other TCNs, who are usually obliged to enter the Polish training/education system to obtain recognized credentials. This privileged situation is reflected also in terms of migratory policies. Currently in Poland TCNs cannot change their employer, as this would mean the expiry of their residence permit. The only exception are again TCNs holding a residence permit linked to a highly qualified profession. In this way the existing law only allows the professional mobility of this category of TCNs, substantially excluding any such opportunities for other non EU migrants. Furthermore, some systems tend to envisage particularly favourable conditions of recognition for TCN with specific professionalization. One meaningful example is that of health professionals, in particular

physicians and nurses, due to the labour shortage in this field. An interesting case is the 'Professional Integration of Migrant Physicians' programme, aimed at supporting the professional integration of migrant physicians legally residing in Portugal.

All these reflections and examples highlight the contrast between the declared universalistic and inclusive aims of qualification recognition systems and their tendency to envisage privileged channels of recognition for specific categories of beneficiaries. Some considerations can also be made with respect to universalistic and selective options in the recognition systems of SKC acquired in non-formal/informal contexts. The universalistic approach implies that migrants can see their SKC recognized and certificated through a process analogous to that envisaged for citizens, and not conceived specifically for non-nationals[2]. Migrants residing legally in the receiving country can enjoy the same services as the native population and can benefit from technical assistance, in particular with regard to information and career guidance, access to training and LLL, and employment and unemployment benefits.

This universalistic option, adopted, at least in general terms, in all the countries investigated, undoubtedly depends on the shared principle of non-discrimination. This tendency is certainly also linked to the fact that the issue of recognition of SKC, acquired whatever the learning context, has been developed according to the European approach on lifelong learning, clearly expressed since the beginning of the 2000s through both the Lisbon Strategy and the Memorandum explicitly dedicated to this topic (Commission of The European Communities, 2000). This approach supports the development of an LLL system capable of including and enhancing any learning context and its outcomes, pursuing goals such as offering a 'second chance', promoting the democratization of opportunities and the reduction of learning inequalities.

Whilst this idea is formally at the foundations of every SKC recognition system analysed, there are differences in the ways it is implemented. For instance, we can mention the Dutch case, where the lack of specific attention to TCNs depends on a solid cultural framework of equality, and where recognition procedures which are meant for all citizens are also to a large extent potentially able to fulfill migrants' specific needs as well as other specific individuals (e.g., less educated or disabled people)[3]. Conversely, in Spain there are no *ad hoc* procedures for the recognition of competencies for TCNs and the latter have to follow the same route as nationals or migrants coming from EU countries, but the 'merits' that are valued—especially professional experience – must have been obtained in Spain, as the professional activity carried out in another country is not valued. In some countries, the universalistic basis of SKC recognition systems does not impede the emergence of a more or less structured and developed attempt to utilize specific procedures and tools for promoting the access of foreigners, in particular TCNs. The assumption is that, as mentioned above, migrants generally have to deal with stronger weaknesses and higher barriers. This attempt is carried out mainly through pilot projects and local experimentations.

This kind of focus on TCNs shows, on one hand, the will to make equality of opportunities concrete and substantive. In Hungary, for example, the Artemisszió Foundation, an NGO that promotes intercultural communication and multicultural values, in cooperation with the Menedék Association has deployed a tool to recognize TCNs' SKC. The integration programme is customized for each participant based on his/her different needs. With a tool called 'Digital Life Cycle Map' (*Digitális Életpálya Térkép*), the individual's SKC are mapped and measured, basing on the person's whole life cycle

and not merely on work experiences; the priority is to favour the individual's awareness about his/her own competencies. On the other hand, in some cases this focus becomes itself a factor of differentiation that can produce forms of inequalities between nationals and migrants or between different categories of migrants. For example, in Sweden, the so-called 'individual establishment plan' for newly-arrived migrants is accessible only to TCNs under international protection and their relatives, while no clear division of responsibilities or direct entry route to the system of validation exist for other migrants, who remain penalised (Länsstyrelsen Västra Götalands Län, 2012).

It is thus advisable to underline the importance of focusing specific attention on TCNs' special needs, without at the same time disregarding the unforeseen, sometimes paradoxical effects of a selective approach and of the implementation of *ad hoc* procedures.

Certainly, in the absence of measures which take into account migrants' specific needs, the implementation of recognition procedures, in principle so important for tackling migrant discrimination in the labour market, risks becoming itself an instrument of discrimination between those who are in a position to access the system and successfully accomplish the procedures, and those who are not. However, our analysis led us to observe that the degree of inclusiveness of recognition systems does not depend directly on the presence or absence of *ad hoc* measures, but rather on the approach, methodologies and tools adopted. These aspects actually make recognition systems more or less migrant-friendly, as will be seen in detail in the following section.

Migrant-friendly systems: approaches, methodologies, tools and strategies of involvement

The comparative analysis highlighted both some cross-cutting issues and trends and several interesting practices implemented in specific contexts. This provided us with a rich basis from which to study more in detail the theme of migrant-friendliness. What are the choices in terms of approach, methodologies and tools which increase the level of access and usability of recognition systems on the part of migrants? What are the strategies for their active participation and the involvement of the different stakeholders? Which are the factors that can promote the 'capacitating qualities' of the services provided?

Flexibility and relational approach

One important initial consideration is the tension between the standardization and formalization of recognition systems on one hand and the flexibility and capacity to adjust to each single recognition case, on the other. The latter capacity, which is favoured by a relational approach and is able to provide the beneficiary with all necessary support, is obviously more suited to the fulfilment of migrants' specific needs and the valorization of migrants' human capital.

Nevertheless, this positive tendency implies some risks which need to be adequately faced. Concerning the recognition of formal qualifications acquired abroad, flexibility is certainly much higher in the more consolidated systems of the Netherlands, Sweden, and Germany. Here, notwithstanding a high level of structuring and standardization, widespread local services are available and are capable of adopting a relational approach and, to a certain extent, adjusting the process to the needs of the specific beneficiary. Portugal also seems to be quite advanced in this respect, thanks to the attention focused since 2007 on the recognition of qualifications by the governmental Plans for Immigrants'

Integration. This institutional input implied the creation, *via* partnerships between public and non profit stakeholders at a local level, of several services of information, assistance and support for migrants willing to undergo the recognition process. Nevertheless, this flexibility is mainly possible within the framework of specific projects. Due to the financial burden, these initiatives are sporadic and linked to specific funds, and have not yet become an integrated, stable element in the institutional systems analysed.

We are clearly dealing with a field where quality assurance mechanisms, as well as the minimization of risks of discretionary behaviours, are essential factors. If in the field of professional qualifications the degree of bureaucratization and standardization always remains quite high, in the field of recognition of academic qualifications the situation is slightly different. This is particularly true in cases such as Italy or Hungary, where recognition is entrusted to individual higher education institutions. If this solution appears positive in terms of flexibility, it may also lead to less transparent, possibly arbitrary decisions. Indeed, the recognition process may well have different outcomes depending on the evaluating institution. Controlling possible arbitrary behaviours is particularly important if we consider that the dimension of prejudice may compromise an objective assessment of diplomas and determine the devaluation of migrants' qualifications (Guo, 2015; Webb, 2015). For this reason, the activation of effective evaluation mechanisms is essential. This aspect appears to be quite weak in all the countries investigated, as shown by the general scarcity of statistical data on the outcomes of recognition procedures. In fact, even the most meta-reflexive systems, such as those of Sweden, Germany or The Netherlands, have yet to establish complete and efficient evaluation methods.

This leads to a further, interesting aspect, i.e. the tendency of the analysed systems to concentrate merely on the formal evaluation of documents attesting the possession of certain skills, or combining this operation with a thorough evaluation of the applicant's competence. Although both tendencies may be observed in all the countries investigated, given that - mostly in the case of professional qualifications - recognition is usually subordinated both to formal evaluation and language or aptitude tests, bureaucratic obstacles tend nevertheless to prevail. This can severely hinder the recognition of TCNs' competences, which may remain hidden behind linguistic barriers and organizational problems in dealing with complex, bureaucratic procedures. An emerging shift in the approach towards a more practical recognition of migrants' knowledge and experiences, instead of simply looking at formal educational attainment, is perceptible only in Sweden. This appears to be a very promising path for improving the existing mechanisms for the recognition of migrants' formal qualifications acquired abroad, and indicates a possible synergy between recognition of formal qualifications and of non-formal and informal learning, as the former field could benefit from methodologies and instruments borrowed from the latter.

Similarly to formal qualification recognition, in the case of SKC validation wherever acquired the promotion of more standardized procedures is a key issue for ensuring the transparency, cost-effectiveness and efficacy of validation systems. Moreover, the presence of mechanisms of evaluation and control is decisive in limiting arbitrary behaviours on the part of professionals in charge of the service. But the issue is controversial. On the one side an excess of bureaucratization risks preventing the system from understanding the heterogeneity and complexity of the skills needing to be identified, assessed and certified, and of the different routes leading to their acquisition. It risks decreasing the level of awareness of the actors involved in terms of the meaning and objectives of the process. The Dutch case provides some interesting elements for consideration. The effort to regulate and standardize procedures risks promoting a kind of 'procedural thinking' that hinders the beneficiary's empowerment and active

involvement (Pijpers et al., 2015). It also overshadows the importance of tailor-made solutions which, as such, are capable of meeting individual needs and specificities and, in the case of TCNs, valorising migratory experiences and intercultural competences. On the other side, when procedures are less bureaucratized and standardized, and the high number of involved players widens the flexibility of recognition paths, the beneficiaries' difficulty in choosing from different opportunities also increases.

The presence of a caseworker—intended as a counsellor that is specifically devoted to help individuals choose, combine and coordinate different employment and social services and recognition tools which are appropriate to his/her situation – could help to mediate between standardization and flexibility of procedures. In Sweden, for example, it is through caseworkers at the employment office that an individual can access different measures for validation. The presence of a caseworker/counsellor and the development of specific instruments for guidance and 'skills balance' are crucial for enabling procedures to meet differentiated individual capacity, needs and objectives, and to put in place personalised and tailor-made solutions (MacKay et al., 2016). An appropriate level of training of recognition operators is also crucial, especially for developing their intercultural sensitivity and multicultural competence (Spinthourakis, 2006). In fact, in Sweden, some field studies give a lot of examples of failings in the SKC recognition system, caused by the low level of training and interest of the assessors (Diedrich & Styhre, 2013).

Stakeholders' active participation

As has been seen throughout the paper, migrants do not fully benefit from recognition opportunities even when offered by well-designed systems. Regarding this, our analysis reveals some criticalities and ambiguities in the functioning of the recognition systems.

Firstly, the active involvement of the beneficiaries is clearly the keystone for the successful implementation of recognition procedures, as it produces their higher engagement, with positive consequences in terms of empowerment, motivation and subsequently employability.

Nevertheless, delving more deeply, if this is a pre-requisite, the centrality given to individuals, especially where the recognition systems are lightly structured, can lead to unforeseen effects: the penalization of the 'weakest' individuals, with less ability to move independently and less power to enforce their rights, or fewer possibilities to take advantage of opportunities for family or occupational reasons. Beneficiaries are required to be responsible and motivated to continue LLL while employed, to be actively engaged in the validation process, combining, when needed, training, work and family life, and to support the costs of the recognition process.

Whilst competence recognition has been conceptualized with the aim of potentially furthering social justice in relation to individual opportunities, and increasing individual self-confidence, self-esteem and power, under some conditions the recognition process can have the opposite effect for TCNs, as some studies suggest (Diedrich & Styhre, 2013; Guo, 2010a). As an extreme consequence, recognition systems instead of being a 'capacitating institution' could become a 'divisionary tool', enabling to the selection of the immigrants considered to meet certain standards (professional or otherwise) while excluding others, or favouring some and penalizing others (Andersson & Osman, 2008).

This risk emerges more explicitly when we consider the rationale behind the system of SKC recognition. The latter is effective to the extent that it leads to a certification (that is, it identifies competences as corresponding to some professional or learning standards and referentials). Borrowing a metaphor often utilized by scholars to speak about the recognition of prior learning (Jones & Martin, 1997), we can affirm that by pursuing this

objective the system of SKC recognition risks 'bonding' individuals to a sort of 'Procrustean bed', which instead of finding flexible solutions for everyone, forces the individual to fit the unique solution available. It recalls what the logic of 'competencies' tends to do, compelling individuals to meet certain predefined standards (Lodigiani, 2011), far from considering competence in a holistic way[4].

Moreover despite the best intentions, any process of selection and assessment—as well as any learning practice and context – is inevitably influenced by wider power dynamics and special interests (Andersson & Osman, 2008; Fejes & Fragoso, 2014; Shan & Fejes, 2015). Considering all these critical aspects, our research work clearly shows the importance of acting in at least two directions.

Firstly, as already hinted at, mostly when the process of recognition is long lasting and especially if it is connected to some additional training initiatives, it is crucial to find flexible solutions able to suit individual needs and to enable the person to better balance this experience with work and family engagements. Financial aids also appear to be important, especially for TCNs, who are mostly employed in unskilled, low income jobs, and for whom the costs of competence validation could be unaffordable. In this regard, our analysis shows that recognition measures can have a meaningful impact on the social and economic inclusion of migrants only if combined with other services of active labour policy (training, guidance, internships) aimed at promoting the incorporation of migrants into the regular labour market. For this reason, public services should envisage recognition practices as instruments to be inserted in an integrated strategy towards social and economic inclusion.

Secondly and even more relevant, considering the 'voice' of the actors involved in recognition processes, starting from the direct candidates to the many indirect stakeholders, is fundamental, as we are going to argue.

In order to be considered as such, a competence must be socially recognized: its definition relies on three elements: the subject's self-perception, the interaction with objective indicators (standards, referential) and social recognition. It is the last one which gives meaning to the first two. This awareness highlights the importance of participation in processes of social construction of recognition mechanisms and tools, including competence repertories. In relation to migrants, the possibility for them to have a voice and to be involved, either directly or through their representative organisations, in the designing of recognition systems is crucial, especially for the goal of enhancing, from a social standpoint, a series of competences which otherwise would remain hidden, despite their potential for economic growth. This is particularly relevant to those competences which have been acquired by TCNs through their migratory experience. Among the latter it is worth mentioning intercultural competences, which constitute a paramount asset in the current globalized economy, but still tend to be neglected in the productive system (Sadjed, Sprung, & Kukovetz, 2015). Through the use of portfolios or other *ad hoc* tools, these competences can undergo a process of registration, but for their formal recognition and translation into certifications that can be effectively used in the labour market, their social acknowledgment is essential. In other words, migrants and their representative organisations, if empowered to express their claims, could have a strategic role in the social recognition of a migrant's specific competence. We can again refer to the capability approach to deepen this matter, by borrowing the concept of 'capability for voice' from Bonvin and Farvaque (2006, p. 127). In the Senian framework developed by the two authors, 'capability for voice' stands for 'the ability to express one's opinions and thoughts and to make them count in the course of public discussion'. Transposing this

concept in our field of concern clearly emerges that both in the case of individual beneficiaries and of migrant representatives this capability is crucial for promoting recognition systems able to look at cultural diversity as desirable resources (Guo, 2010b), as it implies the possibility of valorising migratory background and individual life-course together with the possibility of participating in the discussion concerning the definition of standardised referentials.

However, the involvement of employers and all the different stakeholders (from educational institutions and labour market actors, up to organizations of the third sector) is also fundamental to ensure that recognition, once acquired, can be used in any learning, working or life context. This is strategic for promoting the 'culture of recognition' and the awareness that the recognition of SKC wherever and however acquired is an asset not only for workers or jobseekers (migrants and natives!), but also for labour demand, and for society overall. Crucially, our research work shows that where SKC validation systems are more advanced, stakeholders' participation is also better developed. The Dutch system is once again a case in point, because of the effective cooperation among the National Knowledge Centre for recognition of prior learning, the Ministry of Education, the Ministry of Social Affairs and Employment, the Ministry of Economic Affairs, and social partners. In particular, the latter have an important function as they include the right to recognition in collective agreements, promote employer responsibility as regards the costs of procedures, and request financial benefits both for employers and employees. In countries that pay particular attention to the positive occupational and economic implications of SKC recognition, the involvement of companies and employment services stands out, as in Sweden (MacKay et al., 2016). The involvement and awareness of the latter stakeholders is particularly important, as sometimes also in cases of successful recognition, the employability or professional mobility of migrants may be hindered by prejudice in receiving societies, and especially in labour demand. As has emerged in some countries, invisible discrimination dynamics may lead local employers to mistrust competences acquired in another country or outside an education and training system perceived as the norm.

Furthermore, promoting the involvement of different stakeholders has important implications in terms of cost sharing. In many countries it is not clear whether, and to what extent, candidates should bear the costs. While there are reasons for promoting individual responsibility, the cost should be shared among all the stakeholders, since individual users are not the only beneficiaries of validation. Conversely, with specific reference to migrants, financial compensation appears to be needed also for the institutions in charge of the validation process, as registering migrants' SKC may be particularly time and resource consuming. The expenses related to validation procedures represent the main factor which discourages public authorities, companies, and public or private services from promoting validation mechanisms, and which, at the same time, prevents individuals from requiring and undertaking them. In fact, the financial sustainability of national validation systems is becoming a key national issue, at least for policy-makers and stakeholders (Cedefop, 2009).

From all the considerations above it is clear that active participation of all the different stakeholders, far from being limited to a formal, merely institutional, dimension, should imply the presence of an actual space of action and the possibility of substantial contribution by all the actors involved.

Closing remarks

Consistently with the literature, on the basis of our research findings we can conclude that systems of recognition of formal qualifications and of SKC however and wherever acquired may represent a crucial lever for fully appreciating, in receiving countries, the patrimony of hidden and unutilized competences held by migrants. However, as our research has shown, a step forward needs to be accomplished, so as to build systems really capable to identify and valorise this patrimony through more accessible, effective and 'capacitating' measures.

Benefits that may result are manifold and would include not only the employability of TCN migrants and the overall competitiveness of the system, but also the development of equal opportunities and the democratization of work and life chances for all citizens. Considering the effects on TCNs' individual life and work paths, adequate recognition systems and procedures would foster the capitalization of knowledge and competence acquired over time, allowing for their progressive accumulation, accelerate the process towards stable inclusion in the labour market, favor professional and retribution mobility, shorten the route towards qualified and socially-recognized positions, reduce the risk of contamination with shadow economy or segregation in marginal employment situations, and offer better protection during economic downturns. From a macroeconomic and societal standpoint, thanks to well-functioning recognition measures. companies and, generally, employers could better utilize, valorise and allocate migrants' human capital by taking advantage of the transparency of the competence stock at their disposal. A more efficient match between labour supply and demand would contribute to counteracting the brain waste process and the phenomenon of over-qualification. Enhancing the transparency and valorization of migrants' human capital would favour the attraction and retention of a skilled foreign workforce, help reducing the labour market ethnicization, foster the internationalization of the economic system, and promote migrants' financial contribution to the welfare system. Furthermore, well-developed recognition systems would facilitate exchanges among learning, working and life experiences, fostering the democratization of occupational, educational and training opportunities, favouring human capital development and helping educational and training institutions to better plan and maximize the impact of their activities (Zanfrini, 2015).

Nevertheless, while not forgetting the numerous expected advantages and the significant number of positive reasons which motivate the need to support the development of systems of recognition of formal qualifications and of SKC however and wherever acquired, it is also important to highlight the various problems which currently exist. Addressing these criticalities is crucial to preventing these systems, while representing potential means of integration and democratization of opportunities, from becoming, in certain conditions, invisible instruments of discrimination among different groups of citizens: natives and migrants, EU and non-EU nationals, migrants with different education levels or, broadly, those who do or do not have the resources or conditions to get through recognition processes. Furthermore, it is essential to consider that not every subject has the same negotiating power within the recognition systems in accordance with his/her special interests. For instance, migrant beneficiaries tend to have little voice for fostering, within recognition systems and their competence repertories, the valorization of those specific competences which are not yet codified and linked to the migratory background (such as intercultural competences). As has been illustrated by our research work, a relational approach, the use of innovative and flexible methods and tools, and the active involvement of all stakeholders are strategies particularly suitable for promoting migrants' access to and use of recognition systems. In fact, as shown by our

work, the most "capacitating" systems are those which tend to promote measures featured by all these elements. Promoting a holistic interpretation of the concept of competence, able to take into account both a cognitive, functional and social dimension, those kind of systems prevent recognition systems from becoming a sort of 'Procrustean bed' which forces individuals to meet some imposed standards, regardless of their needs, ability, expectations and personal characteristic, reducing the space for negotiation and voice.

Finally, it is important to remember that recognition systems as well as all the practices and instruments for their functioning and implementation, have profound meanings at the social, economic and cultural level. As with any kind of policy, they are far from being neutral, but rather they embody values, norms and preferences, as they are embedded in a socio-economic, institutional and cultural context which influences them. This should be taken into account in order to understand their explicit and implicit objectives, critical aspects, and unforeseen effects (Lodigiani, 2011). This normative dimension becomes evident, for instance, when criteria for access and use are established, decisions are made about who will be in charge of expenses, the range of competences that can be recognized is defined, the standards of reference are identified, or goals of recognition are established. At the same time, precisely due to this normative dimension, recognition systems and practices can influence the context where they are put into practice. For this reason innovating recognition practices and processes, building systems friendly to all users, promoting frontline workers' relational approach, intercultural sensitivity and multicultural competence, developing flexible tools, and sustaining different stakeholders participation can be a powerful way to foster a new culture of integration and inclusion of migrants, and/or any group of vulnerable people, which is able to valorize the social and economic contribution of each single person in his/her diversity.

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Notes

[2]In particular, we refer to the EU Directive 2005/36/EC on the recognition of professional qualifications which affirms that professional qualifications issued by an EU country must be recognized by any other member state; the Lisbon Recognition Convention promoted in 1997, concerning Higher Education in the European Region; the Bologna Process initiated in 1999, to ensure comparability in the standards and quality of higher education qualifications, and the Copenhagen Process., launched in 2002, which aims at improving the performance, quality and attractiveness of vocational education and training through enhanced cooperation at EU level. These processes defined the frameworks of reference for the European Qualification Framework (EQF) and European Credit system for Vocational Education and Training (EQVET).

[3]It is also for this reason that the availability of statistical information on TCNs' competence recognition is generally very limited or totally missing, since tracking beneficiaries' nationality is not deemed to be relevant.

[4]In general, in contexts where particular attention has been paid to special categories (not only migrants, but also less educated or disabled people), some interesting and innovative methodologies have been developed, such as portfolios comprising photographic or video recorded materials which are helpful for overcoming language barriers. Moreover, the presence of effective supporting measures, such as personalized coaching services implemented by professional operators, can be found in many countries or regional areas, e.g., the Netherlands, Sweden and Germany.

[5]We do not have the space here to delve further, but we would like to underline the contrasted distinction between the term 'competence' (pl. 'competences') used in the EU language (and in this article) and the term 'competency' (pl. 'competencies') mainly widespread in assessment procedures. While the first refers to a holistic conception of the competence, the second reflects (generally) a behavioral perspective (Delamare Le Deist & Winterton, 2005). Indeed, the debate about the respective definitions still remains wide open and in the literature the two terms basically fall short of consistency (Cedefop, 2006, 2014).

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Public pedagogies of arts-based environmental learning and education for adults

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Abstract

This paper examines how current theorizing on public pedagogy can be used to understand scholarship on creative, arts-based pedagogies in informal environmental education for adults. In particular, the study applies Biesta's (2012, 2014) typology of public pedagogies to three bodies of literature: arts-based adult learning and education in the environmental movement, eco-art, and Tactical Urbanism, respectively. Each of these is about public art, displayed or performed in public spaces, and connected to environmental learning and education. The scholarship reviewed came mostly from Canada and Australia. In the public, democratic spaces of these countries, we found that arts in the environmental movement and eco-art could be characterized by Biesta's pedagogy of the public, and partially by a pedagogy in the interest of publicness. The performance of Tactical Urbanism corresponded most closely to pedagogy in the interest of publicness. The paper concludes with a discussion of directions for further theorizing and research on public pedagogy and arts-based environmental learning and education for adults.

Keywords: environmental adult education; arts-based pedagogies; public pedagogy; eco-art; Tactical Urbanism; social movement learning

Introduction

In the field of Environmental Education (involving mainly formal schooling), a variety of arts-based pedagogies have been practiced and documented for many years (Filho, Murphy & O'Loan, 1996; Inwood, 2008; Song, 2012; Turner & Freedman, 2004). Arts-based environmental education pedagogies have also been researched and debated in Art Education (Bequette, 2007; Gradle, 2007; Graham, 2007) and to some extent in Environmental Studies (Curtis, 2003; Curtis, Reid & Ballard, 2012). Arts-based approaches are also increasingly recognized as viable, effective options for adult

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learning and education across the lifespan, as well as being a powerful avenue towards social change (Butterwick & Roy, 2016; Clover, 2005; Clover & Stalker, 2007; Hayes & Yorks, 2007). In environmental education for adults, these pedagogies are credited with helping to raise environmental awareness; promote problem-solving, critical thinking and creativity in addressing environmental issues; change individual and community behaviors toward the environment; and foster transformative learning, environmental sustainability and social change (Bequette, 2007; Branagan, 2005; Clover, 2000; Inwood, 2013; Ramsey, 2002; Roy, 2000; Walter, 2012). However, these arts-based environmental education pedagogies for adults remain relatively under-theorized and under-researched.

The purpose of this paper is to review the literature on arts-based approaches to adult environmental education through the theoretical lens of public pedagogy (Burdick, Sandlin & O'Malley, 2014; Sandlin, Wright & Clark, 2010). In particular, we aim to understand how various forms of arts-based learning and education for adults function as public pedagogy in the public sphere (Biesta, 2012; Welton, 2001) and public spaces (Ellsworth, 2005; Wildemeersch, 2012). We understand the arts to encompass both visual and performing arts. For this review, we have limited ourselves to the English language literature of North America and Australia, where the authors are based. We have selected three widespread forms of informal arts-based adult environmental education along a spectrum of political aims and educative intent. We move from art in environmental protest (radical politics and transformation of the social order) to eco-art (often not overtly political, but aims to promote conscientization), to the community-focused, "guerrilla" design interventions of Tactical Urbanism (liberal politics, no direct focus on learning per se). For each, we consider how the approach might act as public pedagogy, following Biesta's (2012, 2014) theorization of three forms of public pedagogy: *for the public*, *of the public*, and *in the interest of publicness*, respectively.

However, we do not take up Biesta's first concept of *public pedagogy for the public*, since this largely refers to the state instructing the public. This first concept is very useful as a conceptual foil for Biesta's other two public pedagogies, but is largely beyond the scope of this paper.

The first section of paper findings examines literature in Adult Education on how the arts, as public pedagogy, are seen to be generative, educative cultural codes for conscientization and social movement learning within environmental protest movements (Branagan, 2005; Clover, 2000; Walter, 2012). These catalytic cultural codes – found in demonstrations, marches, protest camps, the digital world and other social movement spaces – may include folk music, dance, comedy sketches, street theater and narrative sketches, culture jamming, creative costumery, poetry, puppetry, satirical song, photos, videos, internet memes and so on. Such art can be spontaneous, mobile, temporary and co-created by participants or may be more purposefully designed by movement leaders as "political art" to highlight particular environmental issues and provoke critical thought and action. We characterize this pedagogy, following Biesta's (2012, 2014) typology, mainly as a *pedagogy of the public*. However, we take issue with his contention that in this form of pedagogy, social and political problems necessarily become individual rather than collective learning problems. Although we acknowledge Biesta's caution that educational agents may facilitate their own learning agendas for political change, we argue that this form of conscientization and educative-activism (Clover, 2002) can also be an unpredictable, pluralistic, and liberatory collective learning process in the public sphere. As such, it can also share characteristics of Biesta's *pedagogy in the interest of publicness.*

The second findings section considers outdoor, public eco-art as arts-based environmental education for adults, again, as a form of both *pedagogy of the public* and *pedagogy in the interest of publicness* (Biesta, 2012, 2014). Many eco-artists see themselves as activist-environmentalists educating a citizen-public about environmental issues through their art. However, other eco-artists do not intend that the public conform to a particular interpretation of art, environmental issues or politics, but see eco-art as contributing to a more open, public and democratic learning process. Their artworks focus attention, create, reclaim, inform and re-envision possibilities for human-nature interactions, and have many educative outcomes depending on who is creating and viewing them at a particular time and place. In considering eco-art, we also note the anthropocentric bias of Biesta's *pedagogy in the interest of publicness*. That is, Biesta's conception of the public sphere is (ironically) "disrupted" by eco-artists themselves, who understand the 'public' to be not just the plurality of human beings, but also the plurality of "all our relations;" that is, the public includes non-human beings inhabiting the natural world as well.

The third findings section of the paper considers Tactical Urbanism as a form of arts-based *pedagogy in the interest of publicness*. Tactical Urbanism is based in deliberate citizen action for environmental change, but without an overt educational directive or specified political agenda. Tactical Urbanism is usually a disruptive, educative process, where citizens engage in milder forms of civil disobedience and social action to test out creative, alternative ways of using public space to improve their neighborhoods. Such collective public actions are led by unrelated citizens, can be spontaneous, temporary, mobile and unsanctioned, and are without purposeful 'educational agents' or 'public pedagogues'. Tactical Urbanism exists in the public sphere, largely outside of the market and the state, and, in Biesta's (2012, 2014) terms, embraces an ethic of experimentation and human togetherness to show that alternative ways of being, acting and doing are possible. As such, of the three arts-based pedagogies reviewed here, Tactical Urbanism conforms most closely to Biesta's ideal of unfettered *pedagogy in the interest of publicness.*

The paper now elaborates on current theorizing about public pedagogy, explains the study methodology, and presents findings. This is followed by a discussion of findings, theoretical implications, and directions for research on the public pedagogies of arts-based adult environmental learning and education.

Theoretical Framework

In the last decade, North American scholarship on public pedagogy and adult education has grown in leaps and bounds, led most obviously by the work of Jennifer Sandlin (Burdick, Sandlin & O'Malley, 2014; Sandlin, O'Malley & Burdick, 2011; Sandlin, Schultz & Burdick, 2010; Sandlin, Wright & Clark, 2010). In her own research, Sandlin (2010) looked at popular culture as a site of critical pedagogy (Giroux, 2004), and proposed that the disruptive, educative power of culture jamming allowed it to act as a 'pedagogy of the unknown' in public spaces (Sandlin, 2010). In this, she drew on Ellsworth's (2005) ideas of 'transitional spaces' (a relational practice in between self and public others) and a 'critical transformational pedagogy' focused on 'embodied, holistic, performative, intersubjective and aesthetic aspects of teaching and learning...' (Sandlin, 2010, p. 298). Sandlin (2010) argued that when the known 'script' of consumerism in corporate retail stores (Starbucks, Wal-Mart, Victoria's Secret, etc.) was disrupted by a costumed performance artist ('Reverend Billy' preaching the

'Shopocalypse,' accompanied by the 'Stop Shopping Gospel Choir'), this caused dissonance, discomfort and critical learning about consumerism for spectators. That is, Reverend Billy's performance, and culture jamming at large, were acts of critical public pedagogy involving the (unscripted, unpredictable) unknown; they were understood as arts-based public pedagogy which 'jammed' common cultural norms through disruption and disjuncture (DeLaure, Fink & Dery, 2017).

Other research on 'urban art interventions', 'artistic and cultural interventions', Tactical Urbanism (to which we turn later), 'mobile radical theater' shows similar patterns involving the artistic, educative disruption of public space and of citizens' 'common sense' understanding of daily life (Brigden & Milner, 2015; Butterwick & Roy, 2016; Desai & Darts, 2016; Lydon & Garcia, 2015; Wildemeersch, 2012; Zorrilla & Tisdell, 2016). Many of these arts-based pedagogies are understood to create 'a space for dialogue with people on the streets about the increased corporatisation of the public sphere' and help to reclaim it from private interests in the service of participatory democracy (Desai & Darts, 2016, p. 183). However, as Wildemeersch (2012, p. 82) notes, the effects of these art interventions – designed to 'shock the spectator to make him/her more reflective' – are in fact unknown and paradoxical: 'the one who interrupts, be it an educator, a designer, an artist, or an architect, never knows precisely what will be the effect of his/her act, since both the addresser and the addressee live in a world of plurality and difference'. Educators and artists may create disjunctures, but 'cannot predict if there will be transformation and, if so, what it will look like' (p. 82). In fact, as Wildemeersch's (2012) research on cultural interventions in the public spaces of Leuven, Belgium shows, these interventions may in some cases involve 'learning from discontinuity' in anomalous, transitional spaces, and interruption of the "normal", but others, by contrast, involve 'learning from continuity' and the 'confirmation of the familiar' (pp. 92-94).

In research and theorizing on public pedagogy, there is a profusion of definitions, nomenclature and concepts, but all seem to indicate the educative importance of these acts of disruption. As Ellsworth (2005, p. 41) puts it in discussing the 'political public art' of artist Krzysztof Wodiczko (whose work includes projecting disturbing, provocative images on the walls of public buildings; a mobile 'homeless vehicle' and so on), '..communicative instruments assemble with the force of pedagogy when they create their potential to disrupt habitual ways of inhabiting space and reconfigure ways of knowing both the inside and the outside – both self and society'. This is not the passive acquisition of knowledge 'as a thing made,... the trafficked commodity of educators and producers of educational media...the decomposed by-product of something that has already happened to us', but rather an active, 'knowledge in the making' as a 'sensing of ourselves in the making; ... the root of what we call learning' (p. 1). Public pedagogy thus becomes a 'pivot place'; a hinge between 'inside and outside, self and other, personal and social relation' (p. 38). To exist as this place, it must be both creative and noncompliant (pp. 37, 165). As such, the designers of these 'anomalous places of learning... shape space, time, experience, and objects with pedagogical intent. They seek, in other words, new ways of knowing that also transform knowledge, self-experience, awareness, understanding, appreciation, memory, social relations and the future' (p. 37).

Noting the importance of Ellsworth's and others' work in theorizing public pedagogy, Burdick, Sandlin and O'Malley (2014) comment that much of the extant scholarship on public pedagogy cites the term 'without adequately explicating its meaning, context, or location within differing and contested articulations of the concept' (p. 3). However, the authors raise these and other important questions about public

pedagogy 'to start the conversation' (p. 10), not to provide a composite theoretical framing of public pedagogy. For this, we turn to the work of Gert Biesta (2012, 2014).

Biesta (2012) offers a framework of three variants of public pedagogy which can be used to understand informal adult education and artistic interventions in the public sphere, with the aim to 'articulate a notion of public pedagogy that connects the political and educational and locates both in the public domain' (p. 684). Drawing on Marquand (2004) and others, Biesta (2012, 2014) begins his argument with the decline of the public sphere, wherein neoliberal privatization of the public sphere and the rise of identity politics have consumed, constricted and controlled both the physical and relational spaces of public learning. Then, building on the work of Hanna Arendt and the idea of the public realm as the collective, plural 'space where freedom can appear', and a 'citizenship of strangers' who share a common interest in the world, Biesta (2012, p. 691) addresses the problem of how public pedagogy might be conceived in relation to 'questions about citizenship, democracy and the public sphere'. To do so, Biesta (2014) proposes three forms of public pedagogy: (1) *pedagogy for the public*, (2) *pedagogy of the public* and (3) *pedagogy in the interest of publicness*.

The first, *pedagogy for the public*, refers primarily to the instruction of the public by the state. As Biesta (2012, p 691) explains: 'This involves telling them what to think, how to act and, perhaps most importantly, what to be. Such a form of public pedagogy is therefore basically orientated towards the erasure of plurality and difference'. This coercive public pedagogy operating through the state's "schooling of the citizenry" is normalized in regulatory laws, rules, ideologies, rewards and punishments and so on. However, Biesta (2012) also argues that we find this *pedagogy for the public* in 'situations where citizens are being mobilised or feel inclined to teach each other a lesson, thus revealing the moralistic undertone of this interpretation of public pedagogy' (p. 692). However, Biesta provides no further explanation of this concept enacted by non-state actors; therefore, we do not speculate on this non-state variant here.

Biesta's (2012) second mode of *pedagogy of the public,* captures Paulo Freire's conscientizing pedagogy for social change (i.e. Pedagogy of the Oppressed) which acts 'within democratic processes and practices', rather being imposed from without. Although Biesta describes this pedagogy with the (unfortunate) metaphor of 'the world as a giant adult education class' (thus re-inscribing the notion of learning taking place in classrooms rather than the informal spaces of the public sphere), his focus is clearly on informal adult learning and education outside of school. As Biesta notes, *pedagogy of the public* has no predetermined direction, but is arrived at through collective political learning and democratic activism. However, he also sees in it the danger of educational agents facilitating 'a particular kind of learning aimed at a particular kind of understanding' (determined by facilitators), and the imperative of learning, understanding and agency for political action (p. 692). The demand for learning, Biesta (2014) argues, has 'the tendency to turn social and political problems into learning problems so that, through this, they become the responsibility of individuals rather than being seen as the concern for and the responsibility of the collective' (p. 23). As a result, *pedagogy of the public*, like *pedagogy for the public*, negates the plurality of the public sphere and erases the 'very conditions under which action is possible and freedom can appear' (p. 23). In opposition to these restrictions, Biesta proposes a third form of public pedagogy; namely, *pedagogy in the interest of publicness*.

Biesta's (2012, 2014) *pedagogy in the interest of publicness* seeks to remove at once the (coercive) agents of adult education (i.e. the state and 'political' facilitators), the purposeful intention of educating (teaching), and the imperative for individuals to learn towards any particular political aim. These unfreedoms are seen to follow the

limiting logic of schooling, and are, as such, barriers to the public sphere as a quality of human togetherness; they are restrictions on Arendt's 'space where freedom can appear' and the unfettered 'citizenship of strangers'. In a *pedagogy in the interest of publicness*, citizens work together in Ellsworth's anomalous, transitional spaces – at the intersection of education and politics – against the erasure of plurality and difference. They share and enact a common interest in *publicness*; that is, a 'concern for the public quality of human togetherness and thus for the possibility of actors and events to become public' (Biesta, 2012, p. 693). In this public space, citizens reclaim 'public ways of acting in concert' and collectively engage in an 'experimental activism' aimed at 'the creation of alternative ways of being and doing, that, on the one hand, resist and push back the logic of the market and that, on the other hand, resist and push back incursions from the private sphere' (Biesta, 2014, p. 23). Thus, this form of public pedagogy has a political aim, but is not directed from outside the public sphere of human togetherness. Rather, it performs as a collective 'pedagogy of demonstration' where freely associating citizens (albeit with a moral imperative to protect the public sphere) '*demonstrate* that it is possible to do things differently; ... that there is *always* an alternative, that things not only *should* be done differently, but actually *can* be done differently'(p. 23, italics in the original).

In this third mode of public pedagogy, there are still educational agents, but these cannot be purposeful educators, cannot aim to instruct, nor have any particular political agenda for learning. As Biesta (2012) argues, the 'educational agent – the public pedagogue – is neither an instructor nor a facilitator but rather someone who *interrupts*' through 'dissensus' (p. 693, italics in the original). Biesta (2012) explains this motion of 'staging interruption' as a 'test' of publicness:

> To 'stage' dissensus is to introduce an incommensurable element - an event, an experience and an object – that can act both as a test and as a reminder of publicness. It is an element that can act as a 'test' of the public quality of particular forms of togetherness and of the extent to which actual spaces and places make such forms of human togetherness possible. The aim of such interruptions is not to teach actors what they should be, nor to demand a particular kind of learning, but to keep open the opportunities for becoming public or, in Arendtian terms, to keep open the possibility of a space where freedom can appear (p. 693).

To illustrate this idea, Biesta (2012) gives the example of a 'permanent breakfast'. Here, one person simply organizes a breakfast in a public place for at least four other people, who then commit to do the same in the future in different public locations. Importantly, organizers do not ask for permission to hold breakfasts in public places. These breakfasts, Biesta argues, and indeed all such staging of artistic interventions in public places, serve as a political 'litmus test' for the 'publicness' of the space (p. 684). Permanent breakfasts occupy public space, but do not instruct: 'they are not study circles, discussion groups or political awareness meetings'; they do not rely on 'the superior knowledge of an educator', nor the facilitation of learning (p. 694). The breakfasts appear to be 'out of place', they 'stage dissensus' to reinvigorate 'core democratic values of equality and freedom' (p. 694); that is, they enact a *public pedagogy in the interest of publicness*, of the free performance of human togetherness in creating the public sphere.

We now turn to an explanation of our study methodology, followed by an application of Biesta's *pedagogy of the public* and *pedagogy in the interest of publicness* to our review of scholarship on informal arts-based adult environmental education for adults.

Methodology

This is a qualitative conceptual study in the academic literature (Jickling, 2014; Xin, Tribe & Chambers, 2013). That is, it is a literature review seeking to clarify a particular set of concepts in adult education; namely, public pedagogy, and arts-based public pedagogies for adult environmental learning and education.

We now provide a narrative of our journey through the literature we reviewed and the decisions we made about which areas and works to include in our study. Both authors of this paper are artists (potter and architect, respectively), environmental activists and adult educators who have for many years integrated arts-based learning and scholarship into courses we teach in adult environmental education. Most recently, we have done this in a graduate course we co-taught in a new M.Ed. program in Education for Sustainability which partners with city planners and community groups. Driven by questions arising from our own experiences as adult educators (and learners), we sought to better understand the range of arts-based adult environmental education, and how it is has been conceptualized and researched in the literature of Adult Education.

We started our research by reviewing all the leading journals in the field for publications on this topic (*International Journal of Lifelong Education, Adult Education Quarterly, Canadian Journal for the Study of Adult Education, Studies in the Education of Adults, European Journal for Research on the Education and Learning of Adults, Convergence, Australian Journal of Adult Education*). We found that that there were few articles specifically on arts-based environmental education for adults, and most of what did exist focused on Freirian conscientization and educative activism in the environmental movement, the first area of our findings.

We then broadened our search to include academic journals in Environmental Education, a much larger field concerned mainly with K-12 schooling, but also with a rich area of scholarship on 'free choice' environmental learning in public spaces (Ballantyne & Packer, 2005; Falk, 2005). Here, we found almost no scholarship on arts-based approaches for adults. However, related work on children's learning led us to a third body of literature on ecological art (i.e. 'eco-art') in the fields of Ecology, and Art Education, respectively. It also led us to the artistic work and websites of eco-artists such as Marina DeBris, Jeff Hong and Lynne Hull who perform artistic interventions in public spaces. We made no attempt to cover the work of all such eco-artists in our review. There were simply too many. Instead, we examined the educational practices of an illustrative sample of eco-artists who appeared to us to be particularly disruptive, disturbing and dissonant as educational agents in the public sphere (Biesta, 2012; Sandlin, 2010), and who had a corpus of academic publications describing their work.

In examining the eco-art literature on large installations in public spaces, such as Dan Peterman's *Running Table in Chicago* and Wolfgang Weileder's *Stilt House* in Singapore, we then came across a third body of scholarship on Tactical Urbanism, a form of grassroots urban intervention which often involves small, temporary, non-sanctioned arts and cultural installations on public spaces. One of the authors had herself participated in Tactical Urbanism events, with inspiring results, and we both became interested in further exploring this area of scholarship. In a developing body of the scholarship on Tactical Urbanism, we found a rich and intriguing vein of public arts-based environmental learning and education for adults. Unlike eco-art and arts-based adult environmental education, Tactical Urbanism had no official artists, facilitators or explicit pedagogical intent, but existed mainly as direct citizen action to creatively reimagine, reclaim, occupy and physically reshape their local urban environments.

In our literature review, we did not count articles or themes or apply any particular named form of data analysis to the publications we reviewed. Instead, we relied on our analytical ability – in recursive, dynamic and holistic fashion (Merriam, 1998) – to identify common patterns and themes in the literature we reviewed, and thereby to generate composite findings in relation to our study purpose. When we submitted these findings as a manuscript to reviewers in this journal, they suggested that we theorize our findings more precisely in terms of public pedagogy. This made very good sense to us. (We also abandoned a summary of scholarship in Indigenous education which now seemed less relevant to the focus of this paper). We then re-analyzed our findings in terms of current theoretical insights on public pedagogy (Burdick, Sandlin & O'Malley, 2014; Ellsworth, 2005; Wildemeersch, 2012), primarily in relation to Biesta's (2012, 2014) work. Our findings are elaborated in the next section.

Findings

In this section, we argue, first, that arts as public pedagogy within environmental protest movements can be characterized primarily as a *pedagogy of the public* (Biesta, 2012, 2014). However, we add the caveat that this involves not only educational agents facilitating their own learning agendas for individuals (thus disallowing an ideal democratic space of freedom), but also the performance of unpredictable, pluralistic collective learning processes (which are liberatory). Thus, there is some overlap here with a *pedagogy in the interest of publicness*. Second, we consider outdoor, public eco-art as both a *pedagogy of the public* and a *pedagogy in the interest of publicness.* We note the anthropocentric bias of this latter characterization. Finally, we characterize Tactical Urbanism as the form of arts-based environmental learning and education which mostly closely resembles Biesta's *pedagogy in the interest of publicness.*

Arts in Environmental Protest

The area of social movement learning, and informal adult learning in the environmental movement in particular, is a rich arena for arts-based environmental education (Branagan, 2005; Reinsborough, 2010). Social movement learning refers to 'several interconnected phenomena: a) informal learning occurring by persons who are part of any social movement; b) intentional learning that is stimulated by organized educational efforts of the social movements themselves; and c) formal and informal learning that takes place amongst the broad public, the citizens, as a result of the activities undertaken by the a given social movement' (Hall, 2009, p. 46). In the environmental movement, such learning can take place through (but not limited to) visual arts, street theater, film-making, poetry, puppetry, song, dance and music. Here we provide illustrative examples of the arts as a *pedagogy of the public* within the environmental movements in Canada and Australia.

Along the inner harbour of the city of Victoria, Canada, for example, 'Mr. Floatie', a man costumed as a large piece of excrement, used humor and feelings of disgust to draw public attention to the dangers of untreated sewerage being pumped into the local waterway, and invited people to discuss sewage treatment proposals at various public events (Walter, 2012). In another example, community artists, environmentalists and sanitation workers in Toronto painted large murals ('mobile canvasses') critiquing the city's waste management practices on the sides of garbage trucks (Clover, 2000). The city government then ordered the trucks whitewashed, causing political outrage,

'"critical" dialogue and debate around democracy, censorship and City's decisions on waste', and the public positing of alterative waste disposal systems (p. 28). In another instance in Nanaimo, Canada, women who had created colourful quilts to protest the construction of a gas pipeline first wore their quilts in protest outside of public hearings (to which they were denied access), and then hung them surreptitiously on the walls of City Council chambers (Clover, 2013). As Clover tells us, the quilting project showed the 'potential of the arts as an instrument of environmental adult education, of creative subversion, of public intervention and of engagement that confronts, includes, mobilizes, educates, and challenges for a better world' (p. 61); that is, it opens up democratic, political space for dialogue when this is denied to citizens.

In Australia, among other scholar-activists, David Curtis (2003, 2009, 2011) has spent several decades developing and researching the possibilities for visual and performing arts in fostering public education for environmental restoration, natural resources management, and environmental science. In an early work, Curtis (2003) demonstrated how a community-based performance of *The Plague and the Moonflower* – a 'musical pageant and ecological love story' with orchestral music, choral singing, dance, theater and visual arts – was both educational and catalytic for a drought-stricken community in Armidale, Australia (p. 164). The performance left organizers, performers and audience members with a strong emotional attachment to the environment, a sense of shared community, increased environmental awareness and a better capacity for learning and consolidating their knowledge of environmental restoration (p. 167).

Music and song play a crucial role in creating alternative, counter-hegemonic narratives in other sites of popular environmental education as well. The connection between music and nature – including musical sounds in nature, the fusion of natural sounds and human music, and music inspired by nature – 'can inspire environmental action and advocacy while also helping to foster empathy for the natural world' (Turner & Freedman, 2004, p. 45). Canadian educators such as Doug Ramsey (2002) suggest that folk music and the lyrics of environmental crisis can also be used as part of a curriculum of environmental education. These are songs, for example, about the collapse of the Cod fisheries in Atlantic Canada and the Dust Bowl drought of Oklahoma, U.S. in the 1930s. Likewise, the folk songs of North American musicians such as Pete Seeger, Joni Mitchell, Bonnie Raitt, Joan Baez, Bruce Cockburn, John Prine, Tom Paxton, and more recently, Walkin' Jim Stoltz, Livebroadkast and Dirt Farmer Band have not only educated the public about environmental issues, but have brought countless people together with a shared sense of commitment to environmental action and advocacy (Clark, 2008; Dreier & Flacks, 2014).

Groups such as the Raging Grannies (elderly North American women activists who dress in vintage "granny" clothing, write and publically perform protest lyrics about environmental issues to promote social change) similarly provoke public debate on environmental issues and disrupt stereotypes of elderly women (Roy, 2000). In another example of the catalytic effect of music and song for environmental education, for some 40 years, U.S. activist Pete Seeger, his music, and the sloop *Clearwater*, led a successful public education and advocacy campaign to clean up the once heavily polluted Hudson River in the state of New York, U.S. (Forbes, 2004; Ingram, 2008). Along with 'My Dirty Stream', 'This Land is Your Land', and 'Where Have all the Flowers Gone?', one of the songs Pete Seeger regularly performed was Bill Steele's 'Garbage', with its clear and compelling environmental education content (excerpted here) (Steele, 1992):

> Garbage (garbage, garbage, garbage) Garbage!

> We're filling up the sea with garbage (garbage...)
> What will we do when there's no place left
> To put all the garbage? (garbage...)
>
> Mr. Thompson starts his Cadillac and winds it down the freeway track
> Leaving friends and neighbors in a hydro-carbon haze;
> He's joined by lots of smaller cars all sending gases to the stars.
> There they form a seething cloud that hangs for thirty days.
> And the sun licks down into it with an ultraviolet tongue.
> Till it turns to smog and settles down and ends up in our lungs, oh,
>
> Garbage (garbage...) Garbage!
> We're filling up the sky with garbage (garbage...)
> What will we do
> When there's nothing left to breathe but garbage (garbage...)
> …
>
> Garbage (garbage...)
> We're filling up our minds with garbage
> ….

In considering adult education literature on arts environmental protest, we thus see a good match with Biesta's (2012, 2014) *pedagogy of the public*. The educator-activists of arts-based environmental education have a clear political agenda for socio-environmental change, and promote a learning agenda for conscientization and activism around particular environmental issues. They hope that citizens will challenge common sense, hegemonic notions defining the public debate on environmental issues, and that this decolonizing of the mind's "garbage" will be catalyzed through music, visual arts, song, theater and so on. Educative-activism will also have the effect of opening up informed democratic debate in the public sphere, thus helping to protect it from encroachment by the state, corporate capitalism and neoliberal ideology (Clover, 2002, 2003). However, returning to Hall's (2009) definition of social movement learning above, we also know that such informal learning can be directed, but not controlled, especially in regard to "nonintentional" informal learning that occurs among public citizens affected by a social movement, but not necessarily part of it. As such, we see present here a fluid, dynamic and undirected learning, both individual and collective, and an overlap with Biesta's *pedagogy in the interest of publicness*.

Eco-art

The practice and scholarship of public eco-art are vast and varied, and share a long history within and beside the environmental, feminist, Indigenous, other social justice movements, and most recently, in climate change activism (Blandy, Congdon & Krug, 1998; Guy, Henshaw, & Heidrich, 2015). Like the arts in environmental protest, eco-art can be positioned in the somewhat overlapping categories of *pedagogy of the public* and *pedagogy in the interest of publicness*. However, in comparison to art in environmental movement, we understand eco-art to be less uniformly and overtly activist in orientation: it is less imbricated in public protests, marches and other direct actions. On the one hand, eco-art as a *pedagogy of the public* refers to 'a movement that uses art that is restorative to promote awareness, engagement and activism around major environmental issues' (Song, 2009, p. 5). Such art may be created by artist-activists or ordinary citizens, where citizen artists are usually facilitated by educators. On the other hand, eco-art as a *pedagogy in the interest of publicness* is art where the artists, both

professional and lay citizens, may be inspired by nature and use natural materials and landscapes to create their work but do not have a specific political or learning agenda. Artists and citizens may simply desire to commune with nature through art: to find creative, experiential and spiritual ways to connect their self-identities with the broader non-human "public" of the earth and all its relations (i.e. animals, plants, rocks, insects, gods, water, sky, etc.).

In the first instance, eco-art as a *pedagogy of the public* may purposefully disrupt "common sense" knowledge and understandings of environmental issues and provoke new perspectives and environmental practices. It may help to encourage a creative re-imagining of the world, educate adults about environmental problems, and allow for innovative and creative solutions to emerge (Guy, Henshaw, & Heidrich, 2015; Inwood, 2010). In this sense, eco-art can be taken as a subsector of 'activist public art' (Duncum, 2011). However, it is not generally intended to be a part of collective public protests or educative-activism in the environmental movement *per se*; instead, eco-art simply involves the display or performance of art in public spaces, including both the human and non-human. The Green Museum (2010), perhaps the largest on-line "museum" of eco-art characterizes eco-art as:

> a global movement that involves artists, community groups, scientists, arts professionals, students and educators, park and resource managers, government organizations, philanthropists and concerned citizens and countless other groups and individuals. We're doing what we can to interconnect people, information and ideas to help inspire the creation of more art that heals our communities and ecosystems. For the idea of sustainability to work, it needs to engage our culture effectively. Through collaborations with artists of all types, we can make existing remediation projects and environmental education more fun, beautiful, culturally and historically resonant and better integrated into our cities, parks and communities.

Examples of provocative public eco-artists positioned within a *pedagogy of the public* are Marina DeBris ('marine debris'), who reuses plastic beach trash to create 'trasion' (trash fashion) and raise awareness of marine pollution; Jeff Hong, who superimposes cute Disney cartoon characters into scenes of pollution and animal cruelty (The Little Mermaid struggling on an oil-slicked beach; Mulan in a polluted Chinese city); and Aviva Rahmani, who creates large arts-based landscape restorations (Gabardi, 2014). Numerous public eco-art projects have used human trash as their material and educational inspiration. In Singapore, for example, artist Wolfgang Weileder constructed *Stilt House*, a traditional-style local house constructed of recycled plastic waste, in part to demonstrate sustainable building construction, but also to 'draw attention to issues of urban conservation and the scarcity of the remaining kampong in modern Singapore, ... (highlighting) the inherent irony in the clearance of the kampong, a housing typology providing low technology ventilation to past generations' (Guy, Henshaw, & Heidrich, 2015, p. 47). A further example is Chicago artist Dan Peterman's *Running Table*, a 100' long picnic table in the city's Millennium Park, constructed of the equivalent of 2,000,000 recycled milk bottles, and focused on sustainable construction and food consumption (Isã, 2008). In this case, the generation of plastic trash by picnickers at the table continuously supplies the materials needed for its (infinite) extension, thus highlighting environmental problems of consumption and its impacts. All of these eco-artists hope to stimulate public learning and action on the environmental issues they engage through their art. As such, they have a (political) learning agenda for their audiences in keeping with a *pedagogy of the public.*

There are also eco-artists positioned more in the tradition of a *pedagogy in the interest of publicness*. These artists see themselves not so much as educating the public to conform to a particular version of reality, but as catalytic agents for a democratic educational process where they focus attention, create, reclaim, inform and re-envision through eco-art. Indeed they hope that their eco-art creations will be interpreted in diverse ways by diverse citizens with unpredictable outcomes, and that participants viewing or creating eco-art may sometimes simply commune with nature as a way of understanding it, spiritually, bodily and through all five senses. In the public sphere, eco-artists work to (Ecoart Network, 2011):

- Focus attention on the web of interrelationships in our environment – to the physical, biological, cultural, political, and historical aspects of ecological systems;
- Create artworks that employ natural materials, or engage with environmental forces such as wind, water, or sunlight;
- Reclaim, restore, and remediate damaged environments;
- Inform the public about ecological dynamics and the environmental problems we face;
- Re-envision ecological relationships, creatively proposing new possibilities for co-existence, sustainability, and healing.

The potential of eco-art as a *pedagogy in the interest of publicness* can be seen in the example of 'trans-species' eco-art of U.S. artist Lynne Hull, who creates art not only to educate humans, but also in the service of non-human species (Hull, 2016, Song, 2009). As Hull (2003) puts it, 'I believe that the creativity of artists can be applied to real world problems and can have an effect on urgent social and environmental issues. My sculpture and installations provide shelter, food, water or space for wildlife, as eco-atonement for their loss of habitat to human encroachment'. To this end, Hull works together with environmental scientists, interpreters, landscape architects, and local communities to create artworks for both humans and wildlife in often remote natural areas. As explained by Song (2009, p. 6), Lynne Hull believes that:

> her work is viewed and appreciated by both human and non-human audiences. She draws in viewers with the beautiful, balanced images that she creates, while also engaging them intellectually in thinking about how her work restores balance to the area and aids non-human species in the area. A goal is to evoke strong emotion and provide a clear call to action and awareness. For non-human observers, the works represent a carefully planned intervention that often undoes longstanding human abuses.

Thus, Hull's installations in U.S. parks and other natural areas include, for example, *Desert Hydroglyphs* – rock carvings that capture rainwater for desert wildlife, *Raptor Roost* sculptures – perching and nesting sites for hawks and eagles, and *Floating Islands* – installations which restore habitat for a wide range of aquatic species (Hull, 2016). Song (2009, p. 11) aptly characterizes the eco-centric conscientization of Hull's eco-art:

> Hull's work raises hard questions, it elevates consciousness, and it asks people to move out of their customary patterns of thought and of behaviour...Most radical is her trans-species idea – if people begin to take seriously that other species have needs different from the human, if they are really confronted with that idea, then they are changed and will fundamentally alter their perceptions and perspectives on many issues. Once they recognise the truth of it, their position in the world changes, and they must *move over*, and

> share the planet...Once they create a habitat for other species, they are making the profound admission that humans are not at the centre of the planet's life.

In sum, we understand eco-art as a *pedagogy of the public*, in many cases directly invested in conscientization and learning outcomes; however, these are less exact (more open to interpretation) than those of arts in the environmental movement. We also see eco-art as a *pedagogy in the interest of publicness*, wherein the concept of the public sphere can be expanded to embrace eco-centric perspectives on human identity, an idenity constructed not only in relation to other human beings, but in relation to the natural world as a whole.

Tactical Urbanism

Citizen experiences in Tactical Urbanism, our third site of adult environmental learning in the public sphere, appear to most closely approximate Biesta's (2012, 2014) *pedagogy in the interest of publicness*. 'Tactical Urbanism', a term attributed to Mike Lydon and Anthony Garcia of The Street Plans Collective (Lydon & Garcia, 2015), is increasingly used to describe citizen participation in strategic arts-based events or projects implemented in the urban public realm. Rather than positioning the community as spectators or onlookers, in such interventions, local citizens actively participate in and interact with environmental issues. Through the experience of participating in tactical public events, participants' awareness on an environmental issue is raised, as well as their agency to inspire long-term change, in creative and unpredictable ways.

Incorporating tactics to improve, activate, and adapt the urban environment, Tactical Urbanism is generally associated with small-scale, short-term interventions as catalysts for long-term change. Participatory, disruptive and policy-related projects and events provide learning opportunities for citizens and leaders by raising awareness of local environmental issues and consciousness of citizens as change-agents (Lydon & Garcia, 2015; Pfeifer, 2013).

Projects and events that fall under the banner of Tactical Urbanism are generally community-focused, citizen-led, informal initiatives. These are typically small-scale temporary interventions, aiming to inspire planners and municipalities to advance these experiments into piloting low-cost projects for local improvements. The intentions behind such projects are varied. Pfeifer (2013) offers a list of goals that includes boosting economic revitalization, improving pedestrian safety, and offering opportunities for citizens to connect with one another (i.e., in a 'citizenship of strangers'). We would add to this the implicit, but non-coercive goal of educating citizens and leaders. With the overarching aim of long-term physical change in the urban fabric through a legacy of continued stewardship, projects and events aim to become permanent or recurring features in the city indicating that the community (both citizens and leaders) have *learned* from the process. In this sense, we propose that the power of Tactical Urbanism lies not only in the achievement of the projects themselves, but through active participation of the community, powerful learning opportunities arise in the public sphere; in a 'space of freedom'.

Widely known examples of Tactical Urbanism include guerrilla gardening, park(ing) day, open streets, play streets, pop-up parks and parklets. Examples such have these have now been widely documented and shared on social media and through open access online guide books such as those produced by the Street Plans Collaborative (http://www.street-plans.com/research-writing/) or CoDesign Studio (http://codesignstudio.com.au/getting-started/). These publications serve as educative resources enabling citizens to take an active role in improving their cities, guiding them through a

range of possible community-led projects and events (Lydon, 2012). Taking the 'learner' beyond the level of ordinary citizen, Pfeifer's (2013) Tactical Urbanism guide (2013) is specifically aimed at educating what we might call 'citizen-planners'. Pfeifer's guide identifies five themes emerging from an analysis of various case studies in Tactical Urbanism, which we have connected below to five sources of learning (p. 10):

1. 'Working with citizen initiatives – responding to and learning from informal citizen-led tactical projects'. Here, citizens are the "teachers" from whom planners learn;
2. 'Demonstrating what's possible – using temporary projects to highlight opportunities for other actors'. Here, projects themselves become 'teachers' from which both citizens and planners learn;
3. 'Getting internal buy-in – championing tactical projects and working with other municipal departments'. Here, a cooperative form of learning occurs as planners both 'teach' and learn from other planners;
4. 'Adapting ideas to your context – integrating tactical projects and ideas from other cities'. Here, cities themselves are the 'teachers', enabling learning from other people, contexts and projects;
5. "Using existing resources – leveraging current policies and publicly owned resources to support and advance new ideas." Again, this a cooperative approach to learning from others.

A commonly cited example of Tactical Urbanism illustrates the various forms of adult learning. 'Open Streets', an initiative formalised through events such as Miami Bike Days, was inspired by Bogota's Ciclovia, where 112km of interconnected streets were closed to cars and opened up to people (Lydon & Garcia, 2015). Lydon and Garcia (2015, xv-xvii) explain,

> As an event, Bike Miami Days was a success. And it served a much greater purpose. It allowed a few thousand participants to experience their city in an entirely new and exciting way. It also gave them a chance to imagine a different urban future, one where walking, bicycling, and the provision of more public space could be made easier...(The event) proved to be a critical tactic for building public awareness and interest in the city's incipient bicycling strategy.

In this sense, Tactical Urbanism can be understood as a collective process of arts-based, experiential, citizen learning; that is, people learn by actively participating in the design, creation and/or experience of arts-based events and/or projects in the public realm. The projects and events are experiments in themselves, going through a series of iterations, as participants learn from the process, including learning from mistakes or failures. That is, they perform as a collective 'pedagogy of demonstration' where freely associating citizens show that it is possible to do things differently (Biesta, 2014). This idea is expressed directly in the Street Plans Collaborative (2012) online guide, which explains that 'Tactical Urbanism projects intentionally create a laboratory for experimentation' (p. 8).

In sum, under Tactical Urbanism, the urban environment itself is an outdoor experiential site for citizen action, learning and dialogue in the public sphere, with endless possibilities for imaginative, arts-based adult environmental learning and education. Tactical Urbanism's lack of overt educational directive or specified political agenda, without purposeful 'educational agents' or 'public pedagogues', finds direction instead from groups of unrelated, freely associating citizens taking democratic action for

environmental change. Tactical Urbanism embraces Biesta's (2012, 2014) ethic of experimentation and human togetherness to show that alternative ways of being, acting and doing are possible, and as such, conforms closely to Biesta's ideal of *pedagogy in the interest of publicness.*

Conclusion

As this conceptual review shows, there are no simple characterizations of public pedagogies and arts-based environmental learning and education for adults. All of the scholarship we have reviewed is about public art, displayed or performed in public spaces, and somehow connected to informal adult environmental learning and education. The contexts of the scholarship we reviewed are the democratic spaces of pluralist democracies, mostly in Canada and Australia. In the public spaces of these countries, as in the democracies of Europe, we found Biesta's *pedagogy of the public* enacted in arts in the environmental movement and in eco-art, and to some extent, a *pedagogy in the interest of publicness*. We found the potential for *pedagogy in the interest of publicness* most clearly in the performance of Tactical Urbanism.

However, we also appreciate that *pedagogy in the interest of publicness* is an ideal type, the possibility of which might only truly exist in pluralistic democracies, and then only as a model of freedom towards which citizens might strive. In fact, citizens inhabiting the public sphere of all societies, no matter how democratic and pluralistic, will suffer the inequities of race, class, gender and various other oppressions in unequal measure, and thus have unequal opportunities for public dialogue and participation, even in liberal democracies. That is, we need to consider who is allowed to speak most and loudest, and whose speech is taken as 'sensible' and most valued (for example, around Biesta's 'permanent breakfast' table). Voices of dominant majorities (men, whites, non-immigrant, educated classes, etc.) will likely be valued above others and carry more implicit "weight" in public discourse, even in spaces of freely associating citizens – the 'citizenship of strangers' – with a common concern for the world (Biesta, 2012). Oppressive systems of patriarchy, racism, classism and so on do not disappear through the good intentions of committed public citizens alone: they must acknowledged, understood and "unlearned" by those who benefit and are privileged by them to the detriment of others. Anomalous places of learning – the pivotal places between self and other – are not neutral spaces, but are imbued with relations of power and privilege, as Ellsworth (2005) readily acknowledges.

It is for this reason that we see some moral imperative and educational necessity for arts in the environmental movement and eco-art as *pedagogies of the public* which promote conscientization and educative-activism, to address not only environmental issues, but also the interconnected oppressions of patriarchy, racism, classism, capitalism and so on (Clover, 2002). Perhaps only after these forms of oppression have been addressed through *pedagogies of the public* can we then not just imagine, but also begin to enact, a *pedagogy in the interest of publicness* in the newly created pluralistic, democratic spaces of our human societies (and indeed, of the 'public sphere' of our earth). To our knowledge, this democratic, public 'space of freedom' does not yet exist; however, this does not mean we should not strive for it as an ideal. Thus, in some respects, our characterizations of protest art, eco-art and Tactical Urbanism as *pedagogies in the interest of publicness* are predicated on a willfull ignorance of the various axes of inequality and oppression which exist in our societies. We do this in service of an ideal type which we admire, and perhaps with some hopeful naiveté about

a better future. As best we can determine, many, if not most, of the proponents of, and actors in the pedagogies we reviewed are white, educated middle class citizens, likely mostly men too (although this is changing; in fact, eco-art is a somewhat feminized field of art).

We take a lack of theorizing on power and inequality to be a limitation of Biesta's (2012, 2014) theoretical work, and of our own analysis in this paper. We hope that others might extend this theorizing to provide a more comprehensive theory of public pedagogy which encompasses inequality and oppression in their various forms. We further hope to see theorizing which moves beyond North America and Western European democracies to understand how public pedagogies function within oppressive states with very restricted democratic spaces, often brutally repressive of civil society, communicative dialogue and citizen action (Holst, 2002; Walter, 2007), including the creation of public art.

In completing our review of the literature, we found many illustrative and inspiring examples within the three areas of arts in environmental protest, eco-art, and Tactical Urbanism, but very little empirical evidence to back up claims. We now better understand the motivations, pedagogies and intended outcomes of artists, activists and educators within the three areas, but much of this is taken on faith. We theorized how each might represent particular forms of public pedagogy following Biesta's typology, but beyond many descriptive case studies, we do not really know how these translate into practice. In fact, we are not alone in pointing this out; it is a common complaint in scholarship on public pedagogy as whole (Burdick, Sandlin & O'Malley, 2013). Questions about public pedagogy, as yet largely unresearched, include who the pedagogues are, what the pedagogical process is and what spaces it inhabits, what the various actors are intended to learn, who determines this learning, and how is it transferred to others, to what effect. Germane to the present paper is also the question of public pedagogy as hegemonic or counter-hegemonic; in particular, 'how does pedagogical public art convey political meanings to a broad audience without resolving itself in propandistic techniques/ discourses?' (Burdick, Sandlin & O'Malley, 2013, p. 8). It is in this sense that Biesta's (2012, 2014) coercive, instructive *public pedagogy for the public* might be applied to frame research about the arts and public education denying climate change, the propaganda of mega-corporations around oil spills, food safety, nutrition and animal farming, public campaigns on the need to build expressways and roads rather than train tracks, and so on.

Finally, we acknowledge that Biesta's typology of public pedagogies breaks down, blurs and overlaps to some extent in our application to arts-based environmental learning and education for adults. We have provided no mutually exclusive, categorical fit between a given pedagogy and each arts-based approach. This is largely because we did not start with theory and look for cases to illustrate it; rather, we began with cases and looked for theory to explain them. As such, we have presented a somewhat messy analysis of the literature we reviewed. At the same time, however, the work of Biesta (2012, 2014), Ellsworth (2005), Sandlin, (2010) and Wildemeersch (2012) did help us to understand the three variants of adult learning and education we reviewed as public pedagogy. In the end, we believe our knowledge of these pedagogies is richer for it, and avenues for further theorizing and research made clearer for the field.

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Aims & Scope

The European Journal for Research on the Education and Learning of Adults (RELA) is a refereed academic journal creating a forum for the publication of critical research on adult education and learning. It has a particular focus on issues at stake for adult education and learning in Europe, as these emerge in connection with wider international and transnational dynamics and trends. Such a forum is important at a time when local and regional explorations of issues are often difficult to foreground across language barriers. As academic and policy debate is increasingly carried out in the English language, this masks the richness of research knowledge, responses and trends from diverse traditions and foci. The journal thus attempts to be linguistically 'open access'. Whilst creating a forum for international and transnational debate, contributions are particularly welcome from authors in Europe and other locations where English is not the first language.

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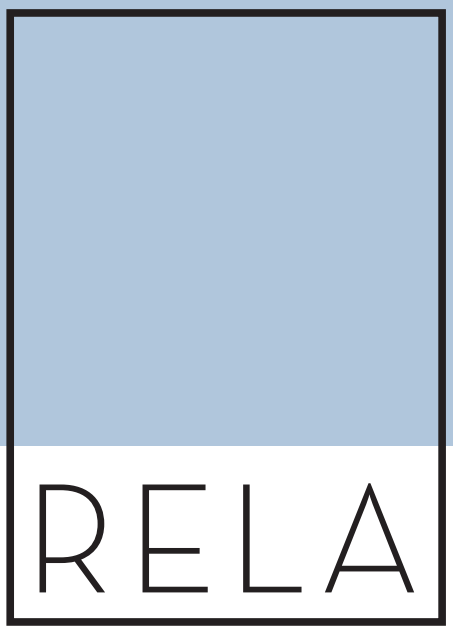

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