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The New Educational Review

Intergenerational Learning in the Virtual World. Case of the European Community-Based Educational Project

Abstract

The paper focuses on presenting the research results of a community-based project titled 'ICT Guides', in which we investigated the features and functions of intergenerational learning with the use of ICT tools, which open the way for the virtual word. This was accomplished by surveying 267 youth and seniors attending 16 ICT courses in Gothenburg (Sweden), Sheffield (the United Kingdom), Madrid (Spain), and Berlin (Germany), with the use of a questionnaire. Both groups perceive intergenerational learning with the use of ICT as a chance to get to know the other group, despite age and cultural differences. With the use of ICT tools in intergenerational learning, mobile devices make up for a lack of a good command of language when communication problems occur, through application of texts, pictures, movies and music available online. ICT also facilitates mutual understanding and contributes to breaking the polarization that can occur between immigrant youth and unrelated adults, to the mutual benefit of both parties.

Keywords: *intergenerational cooperation, intergenerational learning, ICT tools, social polarization, intergenerational learning with ICT*

Introduction

The purpose of this paper is to examine support for youth voices in decision-making as a means of working with immigrant youth within a number of

community-based projects collectively titled 'ICT Guides'. These projects were run in selected districts of four European cities (Madrid, Sheffield, Gothenburg and Berlin) and were based on a participatory approach, as this is understood as a practical way of democratizing social relations in a local area, and as a chance to build young immigrants' capacity for consciously working towards creating a more democratic and equal society. The main idea was to encourage immigrant youth to develop and conduct a series of ICT courses for senior citizens. Another educational goal was set for both age groups, and consisted in supporting their integration with each other, to involve them in the socio-cultural life of their neighborhoods, and – in the case of the seniors – to reduce their prejudice against ICT tools and help them learn how to use mobile devices.

The study underpins the socio-cultural approach that emphasizes the role of social interaction and language as key mediators of the learning process. With this paper, the authors wanted to find out how ICT tools and intergenerational learning influence common relations, and support the breaking down of polarized attitudes towards ICT, between newly-arrived immigrant youth and unrelated adults representing the local community. Findings show that intergenerational learning and ICT tools improve communication despite language difficulties. They support common understanding, develop positive attitudes to other age groups, and effectively contribute to a better understanding and harmonious coexistence between young immigrants and older adults. ICT tools also offer the young and old the opportunity to learn about each other. Additionally, intergenerational learning protects young people from having an uncritical attitude to modern technologies, while for seniors it mitigates their fear of using ICT tools. With this paper, we also want to contribute to the discussion on intergenerational learning and the role of ICT in education.

Intergenerational learning is understood in a variety of ways, and there is no one universally-accepted definition (Granville, 2002). This variety is the result of intensive research carried out over many years on the subject (Cichy & Smith, 2011; Storm & Storm, 2011; Thomas, 2009; Newman & Hatton-Yeo 2008; Silverstein, 2004; Brown & Ohsako 2003; Davis, Larkin, Graves, 2003; Noël & de Broucker 2001; Mazor & Tal 1996; Doumas, Margolin, John, 1994; Jecker, 1992; Cappell & Heiner, 1990, McClusky, 1990). Therefore, two main contemporary approaches were selected for our research into intergenerational learning, and they became the basis for formulating research problems and hypotheses.

The first perspective focuses on intergenerational learning within related generations, with studies emphasizing the transfer of family knowledge and traditions. The second field explores intergenerational learning beyond family

connections, among unrelated generations. For the research, the definition of intergenerational learning refers to purposeful activities which are beneficial to both young immigrants and senior citizens (Hatton-Yeo, 2006). The study, which fits in the second field, was conducted within informal and voluntarily-formed communities, and was focused on measuring the attitude of one generation to the other and the impact of intergenerational relations on youth' educational future. The key to the term 'intergenerational,' therefore, lies not in the 'generational', but in the 'inter' – the existence of the 'between' in relationships among people. This suggests a shift from the traditional one-way teaching pedagogy (the young learn from their elders), to learning based on reciprocal relationships between different generations. Intergenerational conflict can be resolved when both groups have clear aims for intergenerational cooperation and are motivated to help the other group. ICT, then, helps the participants avoid intercultural conflicts when using media and information from the internet to explain their different cultural issues.

Research Problem

The presented study was conducted to analyze the experiences of older adults and immigrant youth living in Gothenburg (Sweden), Sheffield (the United Kingdom), Madrid (Spain), and Berlin (Germany), with intergenerational learning in the virtual world, to find out whether it can be used to break down the polarization between immigrant youth and unrelated seniors resident in each European metropolis. This study is part of a larger research study that uses an interpretive methodology, focusing on the interpretation and understanding of the experiences of immigrant youth and seniors. The research was conducted between May 2017 and January 2018 (results of the pilot studies, cf.: Leek, Rojek, 2019; Leek, Rojek, 2017).

Research Methodology

The case study method was used to explain a range of topics and purposes in intergenerational learning with ICT tools, and to illuminate the understanding of the complexity of this phenomenon. In accordance with the assumptions of the case study method, the research was conducted in *real life settings* and answered the research questions '*how*' and '*why*', and less frequently '*what*'. Robert K. Yin describes this approach as a 'realist perspective' and focuses on maintaining objectivity in the methodological processes within the case study design (Yin, 1994, p.

16). The main research technique was a survey with closed and open questions, prepared separately for the immigrant youth and for the seniors. The survey was conducted at the beginning and end of the ICT courses, to identify the changes that occurred in the intellect and personality of the participants during the courses. The second technique was qualitative analysis of photographs taken by the participants during the courses (visual data), and materials (applications, drawings, notices) produced during the course as a result of intergenerational cooperation.
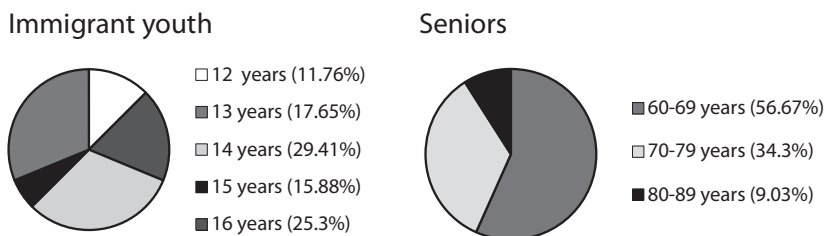
Table 1. Respondents involved in the research

City	Baseline surveys for youth	Endline surveys for youth	Baseline surveys for seniors	Endline surveys for seniors	*Total*
Berlin	14	0	12	1	**31**
Gothenburg	22	19	8	7	**68**
Madrid	17	15	10	14	**65**
Sheffield	40	22	23	17	**103**
Total	**93**	**56**	**53**	**39**	**267**

Source: Original research by the authors

Table 2. Course participants by age

Youth		Seniors	
12 years of age	11.76%	60–69 years of age	56.67%
13 years of age	17.65%	70–79 years of age	34.3%
14 years of age	29.41%	80+ years of age	9.03%
15 years of age	15.88%		
16 years of age	25.30%		

Source: Original research by the authors

Immigrant youth

- ☐ 12 years (11.76%)
- ◼ 13 years (17.65%)
- ☐ 14 years (29.41%)
- ◼ 15 years (15.88%)
- ◼ 16 years (25.3%)

Seniors

- ◼ 60-69 years (56.67%)
- ☐ 70-79 years (34.3%)
- ◼ 80-89 years (9.03%)

Source: Original research by the authors
**Figure 1.** Course participants by age

Research Results

The increase in human life expectancy has led to an extension of our old age, and also to simultaneous coexistence with neighboring generations in that period of extended old age. These 'extreme generations' mean that great-grandparents can now know their great-grandchildren. Within a single generation, representatives of different cultures can clash, often over contradictory values and diverse lifestyles. Modern technologies have further divided people into those who can use them, and those who are digitally excluded. This means both physical access to modern technologies, and the ability to actually use them.

Studies of intergenerational learning and ICT use have so far focused on intergenerational learning within the family and with the internet (Stevenson, 2011; Hertlein, 2012; Ebrahimi, Saives, Holford, 2008; Raquel, Osorio, 2016; Van Rompaey, Roe, Struys, 2002). Our research takes a closer look at the relations that develop between unrelated groups of completely different social and cultural backgrounds when they engage in intergenerational learning in the wide cyberspace. There is also a growing interest in research on intergenerational perceptions and attitudes, communication, mutual aid and emotional support between family members (Power & Eheart, 2001, p. 721; Keith & Wacker, 2002, p. 201; Drury, 2003, p. 65; McConatha, Schnell, Volkwein, Leach, 2003, p. 210; Anderson, 2005, p. 287). The study expands upon this work and shows that intergenerational learning with ICT, despite different age or cultural backgrounds, supports intergenerational interaction and empowers both generations involved. Similar to learning within families, intergenerational diversity provides numerous benefits because participants can share and discuss their own perspectives, which differ between generations in attitudes, value systems, communication and learning styles.

When planning the courses, young immigrants were asked what they would like to learn from their elders. The most common answers were fluency in the language of the country, learning how to communicate with older people, and learning about the history, traditions and customs of their new country. At the end of the courses, the youth stated that each of these aims had to some extent been achieved, but the dominant result was rapprochement between the immigrant youth and the local senior citizens, in their attitudes to information and communication technology. The courses offered both generations the opportunity to get to know each other better, despite language difficulties, using ICT tools to facilitate their mutual interaction and learning, especially through the use of online translators. In the old and young participants' opinion, the internet supports and fosters first contact and knowledge exchange in intergenerational learning, and allows people to get to

know each other using non-verbal communication, maps, photos, pictures and music from the internet as a means of sharing personal information (country of origin, favorite food, etc.). In all the four metropolises, intergenerational learning in the virtual world reduced intergenerational distance, and was run spontaneously, depending on the needs and possibilities of the participants. The virtual world played different roles for these two cohorts, the youth achieved specific, relevant goals with them. For the seniors, it not only facilitated their learning, but was itself an object of learning. This means that the seniors learned with its help, while also learning about the virtual space.
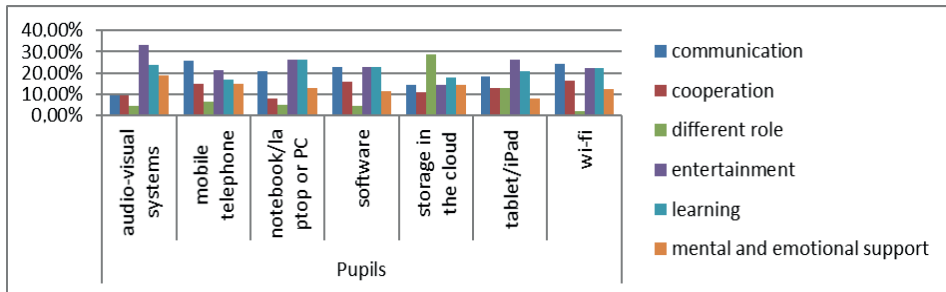
	communi-cation	coopera-tion	different roles	entertain-ment	learning	m. & e. support
Youth	**19.93%**	**12.94%**	**8.04%**	**24.13%**	**21.68%**	**13.29%**
audio-visual systems	9.52%	9.52%	4.76%	33.33%	23.81%	19.05%
mobile telephone	25.53%	14.89%	6.38%	21.28%	17.02%	14.89%
notebook/laptop or PC	21.05%	7.89%	5.26%	26.32%	26.32%	13.16%
software	22.73%	15.91%	4.55%	22.73%	22.73%	11.36%
storage in the cloud	14.29%	10.71%	28.57%	14.29%	17.86%	14.29%
tablet/iPad	18.42%	13.16%	13.16%	26.32%	21.05%	7.89%
wi-fi	24.49%	16.33%	2.04%	22.45%	22.45%	12.24%
Total	**19.93%**	**12.94%**	**8.04%**	**24.13%**	**21.68%**	**13.29%**

Source: Original research by the authors

Figure 2. The role of ICT tools for immigrant youth

Despite the immigrant youth's proficiency in surfing the virtual world, this cohort represented low technological maturity. This is defined as readiness for independent, effective, responsible and innovative use of information and communication technology, as well as readiness to formulate expectations of technology in terms of current and future needs. Technological maturity determines

the satisfactory and constructive functioning of an individual in an information society, while a lack of ICT competence can lead to the risk of social exclusion. Competence with ICT tools is important in the context of access to (virtual) education and the (virtual) labor market, as they are broadly understood, and is listed as one of the most important human competences ("key competences") of the 21st century (Valentine, Marsh, Pattie, 2005, pp. 5–7). Because of their low technological maturity, the virtual world plays an important role in the youth's life, but nonetheless consumes time that could be dedicated to school learning. Courses based on intergenerational learning in the virtual space support the development of contemporary key competences and soft skills, especially communication and language skills. According to the respondents, though, improvement of their language and communication skills mainly resulted from the use of ICT tools in their intergenerational cooperation with the seniors. Both the youth and the seniors declared that the courses definitely had an impact on common understanding, and offered an opportunity to introduce themselves, learn about each other, and share their knowledge and skills.

From the seniors' point of view, the main goal of the intergenerational cooperation in the course was to share some knowledge with the youth and teach them some relevant life skills – 'life wisdom', as a complement to 'school wisdom'. This means that while virtual intergenerational learning cannot replace schooling, it can support schools in their work. The senior citizens offered the young immigrants a path to inclusion in the community, by sharing their life experiences of the local area, by introducing the youth to their new neighbors, and by facilitating contact with others. In the open questions we asked, the seniors responded:

> *"I can help the young people to understand the other people in the district and vice versa"*
> *"I can lead them around and introduce them to everything"*
> *"I can tell my friends about my experiences with immigrant youth"*
> *"I can give the young people tips on how to get along better with others"*
> *"I can tell the teenagers a lot about the district and the people"*

The regular meetings of the course were opportunities to show the youth the meaning of commitment, and to help them succeed in life.

> *"By getting to know each other on the course, young people were learning to appear regularly at appointments and meetings"*

"I can explain how important it is in life to graduate from school. Maybe I will be able to convince the young people that school is important"
"I hope I can show that experienced people like me can help adolescents with problems in life"

When asked what they had learned from the youth, the seniors gave the following answers:

connect me on skype
use the internet
use some of the [ICT] tools
look for documents, addresses of institutions ….
better manage the computer
*make better use of new technologies*
I learned to handle a mouse
to manage a computer and be able to look for what interests me
I have learned to better manage ICT
not really, because it's basic
That technology helps us and makes learning and day-to-day stuff easier

The study showed the participants' tendency to understand intergenerational learning as "learning about each other". Other kinds of intergenerational learning, such as "learning with each other" and "learning form others" were of secondary importance. This was underlined by the seniors when they listed knowledge, skills and competences with ICT tools as being secondary to their interaction with, and understanding of, the immigrant youth.
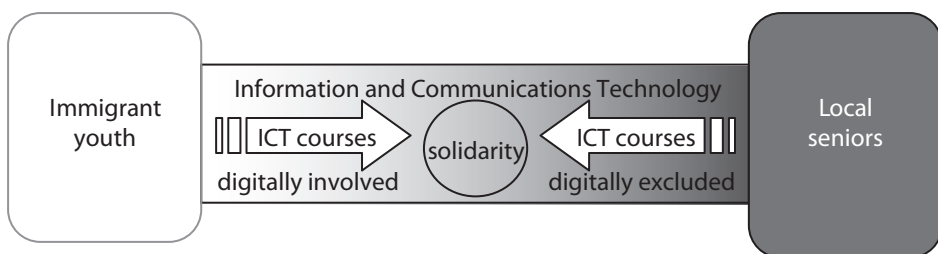
Source: Original concept by the authors

Figure 3. The role of ICT courses in breaking digital polarization, using the 'ICT Guides' example

According to the immigrant youth, their ICT knowledge gave them the confidence necessary to interact with the seniors on equal terms. This conclusion is compatible with an emerging consensus among researchers that when youth, as part of different programs, take on roles traditionally reserved for adults, they gain a greater sense of belonging and the ability to make a difference in their own lives and the lives of those around them. The results showed that virtual intergenerational learning empowered this immigrant youth to do better at school, and work independently outside of school. After the courses, the youth were also much more motivated to go to school, because the seniors had tried to instill in them the belief that a good education is a way of succeeding in life.

Discussion

There are three dominant conclusions. Firstly, the virtual world was used by the immigrant youth and older adults intuitively, and usually in the optimal way to achieve their goals at that moment. Because of their varying functions and accessibility, the ICT tools were used by the two groups for different purposes. Both age groups were interested in using mobile devices because they understood that the ability to use them is one of the key skills of contemporary times, and that their significance will only increase in the future. However, cyberspace plays different roles for these two cohorts: in the case of the youth, it is a means of achieving relevant, specific goals, but in the case of the seniors, it is an object of learning. Paradoxically, this difference fosters the potential for intergenerational learning, as it intrigues people and arouses their interest in others.

Secondly, the research shows that there are three main functions of ICT tools in intergenerational learning: educational function, emotional function and communicational function. The first, educational function, is based on the fact that ICT extends the cognitive field of learners through the wide-spread online reality available to them, while at the same time developing their perceptual, intellectual and executive processes. It is obvious that virtual intergenerational learning cannot replace a formal education, but it can be treated as a complement to it. The second, emotional function emphasizes the fact that intergenerational learning and ICT tools not only draw out strong intellectual experiences, but also evoke emotions and emotional, expressive experiences, thus stimulating commitment, curiosity and interest in the teaching material. The last function, the communication function, is based on the assumption that cyberspace not only transmits messages but also enables mutual communication and dialogue that can stimulate intellectual

development and learning. Intergenerational learning in the virtual world breaks down the polarization between immigrant youth and unrelated native senior citizens, when all the three functions appear in both groups, having intrinsic motivation to work together. In both cases, the motivation to cooperate and meet was a willingness to help the other group succeed in life.

The third conclusion is that the process of computerization of every area of life, as it is broadly understood, facilitates people's everyday functioning. At the same time, this process carries with it many different threats. Humanity is entering a virtual word what makes life easier and enables people to exceed their physical limits. However, it is not known how many of them can use ICT tools, and in a consciously effective way. Social stratification could mean that the majority of humanity is excluded from the technological world. In contrast, there will be a growing number of people suffering from virtual addiction. A person addicted to the virtual word loses their subjectivity, physical, mental and moral health. Furthermore, what youth learn from the oldest generation is conservatism, skepticism in relation to newness, to experimenting and scientific knowledge, suspicions and distrust towards the educational authorities. Seniors impose their own vision of the (virtual) world, making it difficult for youth to choose their own life strategy. In this sense, intergenerational learning in the virtual world carries the risk of preserving *status quo*, while the present day is full of changes. This risk should be constantly examined, diagnosed and combated. One of the possibilities for its prevention is to include ICT tools in intergenerational relations, as the 'natural' equipment of the human being.

Given the exploratory, qualitative approach in the four countries under study, in which intergenerational learning in cyberspace is a relatively new concept, these findings should be interpreted with caution. The research results cannot be considered generally representative. But the link between intergenerational learning, virtual world and ICT tools outlines prospective new areas of both research and educational practice, and that this paper only initiates discussion. Cyberspace makes an effective contribution to a better understanding and harmonious coexistence between young immigrants and older citizens living together in big cities, in different contexts. In the surveys, the youth indicated that the courses had a definite impact on common understanding, and gave them the opportunity to introduce themselves, learn about each other and share their knowledge, skills and competences. Future research would benefit from taking multi-method approaches to data collection. Interesting avenues for future research include longitudinal analyses of how intergenerational learning influences immigrant youth and senior citizens outside of specific courses, and whether that affects changes in the well-being of either group.

Conclusion

The findings from this exploratory study suggest that the drawbacks of inter-generational learning in the virtual world can lead to social and digital exclusion, as well as polarization of various social groups (Dutton et al., 2014; Selwyn, 2004). Nevertheless, used intentionally and in a professionally-planned way, ICT can limit this risk. In this study, it was found that intergenerational cooperation and intergenerational learning in the virtual world facilitated better interaction and understanding between immigrant youth and senior citizens by helping to overcome stereotypes and eliminating cultural differences. The ICT Guides project was an opportunity for the young immigrants to show their ICT knowledge and, at the same time, improve their grasp of the language of the country they were now in. Their meetings with the seniors gave the immigrant youth a feeling of being included in the local community. The youth also felt emotional support from the seniors, who showed them how to live in their new country and succeed in life there.

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