Learning Civic Attitudes through Intergenerational Cooperation with ICT Tools

Promising Practices from Local Communities

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Abstract

The idea of this paper comes from community-based projects under the Erasmus+ programme which brought together immigrant young people and unrelated older adults for ICT courses. In this chapter, we first describe ways in which educational activities using information and communication technologies (ICT) in out-of-school local communities can promote civic attitudes, prevent radicalization and extremism, and have the potential to help assimilate immigrants into the local environment. Second, we present how ICT-based learning influences a common understanding, communication, a willingness to help each other, and the sharing of mutual concerns and passions. We claim that ICT within intergenerational learning can be perceived as a sociocultural construct and that it can facilitate mutual interactions and promote the building of subjectivity, self-determination, and an awareness of social and cultural potential. Activities that support ICT within intergenerational relations can provide opportunities for preventing destructive behaviours, accepting the binding patterns of civic activities, and developing lasting and far-reaching learning experiences. ICT-based intergenerational learning further helps participants build their status as citizens based on trust and cooperation.

Keywords

citizenship education – sociocultural learning – school and out-of-school activities in Europe – immigrants – ICT

1 Introduction

Immigration is the 'new normal' for many children and young around the world, and it is impossible for these children and young people to foresee all

of the problems that may result from immigration. Being an immigrant is generally perceived as stressful. Taken out of their familiar environment of family, friends, and neighbours, and taken away from their predictable, everyday routines, young people experience doubts and feelings of helplessness, loneliness, and alienation. Immigration forces them to change their behaviours and ways of thinking in order to deal with their new living conditions, which, in turn, requires them to *learn*. However, this learning does not only take place in schools (which they are used to) but is closely intertwined with their everyday experiences in their new country. This results in behaviour and thought structures being developed in new social and cultural contexts. Therefore, both formal and non-formal education is required to support immigrant young people.

Schools and local communities are the settings in which many of the acculturative struggles of immigrant young people unfold, and these settings have traditionally served as the vehicles for the acclimatization of immigrants in Europe. Thus, local community and school activities that focus on developing civic values have the potential to help assimilate immigrants into the local environment. They can provide the opportunity to prevent destructive behaviours and intervene directly in the primary environment which shapes the immigrants' experience, providing lasting and far-reaching learning experiences. Isolation and frustration lead to different emotional disturbances and to behaviours that contradict generally accepted norms.

Two European projects that support citizenship education are relevant for this chapter: project EUCiTec, which was run in several schools in Poland, Cyprus, and the United Kingdom; and the ICT Guides project implemented in local communities in Gothenburg (Sweden), Madrid (Spain), Sheffield (United Kingdom), and Berlin (Germany).The results of these projects show that local communities can provide an avenue for engaging school students in activities that promote civic values by using information and communication technologies (ICT).

In this chapter, we will present how educational activities using ICT undertaken by local communities outside of the school context can promote attitudes that support learning with others, mutual understanding, and education for citizens. We claim that research on cultural issues in globalization and radicalization within social relations are crucial to understanding and explaining 'learning'. The advancing technological revolution, especially in the area of sociocultural communication, has produced new perspectives on public involvement and citizenship. In this sense, new learning communities and practices have appeared that can be perceived as a new way of participating in culture, classically understood as a

[…] patterns, explicit and implicit, of and for behaviour, acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of further action. (Kroeber & Kluckhohn, 1952, p. 181)

In this new way, a new type of social and cultural interaction is created by ICT in the online environment. Learning with ICT tools promotes the building of subjectivity; self-determination; awareness of internal, social and cultural potential; and enables knowledge-sharing and the participation of various entities in their sociopolitical reality as it is broadly understood. For its participants, ICT-based learning makes it more likely that they will accept the binding patterns of civic activity in their society and that they will abide by the general rules for social behaviour. ICT-based learning further helps participants build their status as citizens and their sociocultural relationships based on trust and cooperation.

2   Learning Civic Attitudes to Live Together in Society: The Sociocultural Perspective

Society and culture shape the mind, they provide people with tools thanks to which they function efficiently in the world, but also create a concept of self and possibilities. Learning always are embedded in a cultural environment which constitutes its important context. It refers to formal learning but mostly to informal learning.

As Livingstone (1999, p. 51) points out, informal learning can be defined as 'any activity involving the pursuit of understanding, knowledge or skill which occurs outside the curricula of educational institutions, or the courses or workshops offered by educational or social agencies'. This kind of learning may not have specific learning objectives. Informal learning may occur at the initiative of the individual, but also happens as a by-product of organized activities, which may or may not have learning objectives. On the other hand, in formal learning, information is exchanged between teachers and learners. Informal learning takes place spontaneously in the course of various sociocultural activities, with knowledge being constructed through the human relationships embedded in the culture. In some cultures, the importance of learning

in childhood and adolescence is emphasized as necessary for successful entry into adulthood and a satisfying life, while in other cultures, learning is considered important throughout life. Lifelong learning is characterized by the fact that it can happen anywhere, not just in schools, universities, or other educational institutions. If it occurs in public and cultural spaces, it happens more by choice than by coercion. Lifelong learning often takes place when permits, qualifications, and assessments are not needed.

The direct sources of modern thinking about learning can be found in the 1970s and 1980s. At that time, the field of psychology was seeing intensive development while fast-growing industry and new industrial theologies required educational solutions that could prepare young people and adults quickly for the new challenges arising on the job market (Lengrand, 1975). The search for new methods of learning included not only psychology, but also sociology, cultural studies, management, and anthropology.

At various times, different theories of learning in society and culture have been developed by Jean Piaget, Jerome Bruner, Benjamin Bloom, David Ausubel, and Howard Gardner. These theories are still important today for planning actual educational processes and inspiring further research. In relation to immigrant youths, they are linked with a phenomenon of early school leaving that has a social and cultural complexion. Early school leaving is a multi-faceted problem caused by a cumulative process of school or training disengagement. It starts at different levels educational path and has got individual, usually personal reasons. Young people leaving education and training prematurely usually are coming from socially disadvantaged backgrounds, from vulnerable groups, this includes young people with special needs, or with migration background. The risk of early school leaving is closely linked to the lower socioeconomic status of migrants, language barriers and their limited access to sufficient learning support. That is why migrants need to be offered educational opportunities which support prevention and intervention when school or training disengagement occurs. (Lubeck & Garrett, 1990, pp. 325–340; Finn, 1989, pp. 135–142; Fagan & Pabon, 1990, pp. 306–354; Traag & van der Velden, 2011, pp. 56–62).

Constructivism, especially social constructivism, can be regarded as the genesis of these theories. Its founder, Lev Vygotsky (1896–1934), assumed that learning is a thought process taking place in relation with culture. Social relations, cultural norms, and values have a strong impact on learning and even intensify the process (Vygotsky, 1978, 1986). According to Vygotsky, the most important element in children's learning is the development of their learning skills, that is, the tools enabling the full use of their potential. A child's ability to think clearly and creatively, to plan, to implement plans, and to communicate

are much more important than the factual knowledge itself. Just as technical tools extend our physical abilities, 'tools of the mind' expand our mental abilities, allowing us to solve problems and find solutions in the real world. This means that to be able to function successfully, children should learn to use their minds. They will then become responsible for their own learning, learning consciously and becoming sensitive to the social and cultural context in which they grow up or to new contexts. It also means that the society and culture in which the children grow up does, to some extent, determine their future learning and path through life.

This strong connection between learning and culture was also emphasized by Jerome Bruner. In his opinion, learning takes place in interactions with culture, which affect better understanding of cultural processes and their course (Bruner, 1963, 1973). Children's active participation in social and cultural practices is the main condition for discovery learning as a technique of enquiry-based learning and is considered to be a constructivist approach to education. The more a child treats learning as discovering (as opposed to simply memorizing), the more it will develop a tendency towards autonomous learning in the future.

Both Vygotsky and Bruner are representatives of the sociocultural approach to learning. According to these two psychologists, learning is not memorizing but critical reflection on one's own social position, interactions, and place in culture. Understood in this way, learning leads to social and cultural integration as well as active and creative participation in social and cultural practices.

A detailed exemplification of the sociocultural approach to learning is the concept of cosmopolitan learning developed by Rizvi (Rizvi, 2009, 2014; Rizvi & Lingard, 2010). It resonates strongly with immigrants and is worth recalling, especially regarding reasons for early school leaving. Referring to the sociocultural determinants of learning, Rizvi postulates that learning should draw on experiences formed at the intersection of ethnic and social origins and the interpersonal interactions taking place at the global level today. The result of such learning is a 'morally coherent fashion' (Rizvi, 2009, p. 258). In his opinion, 'if learning about global connectivity is to become cosmopolitan, then it must have the potential to help students come to terms with their situation in the world—the situation of their knowledge and cultural practices, as well as their positionality in relation to the social networks, political institutions and social relations that are no longer confined to particular communities and nations, but potentially connect up with the rest of the world' (p. 264). According to Rizvi, the movements driven by globalization on the one hand and by immigration on the other are not complete opposites but have many similarities, which can be explained as follows. With migration, the movement

of people is often permanent. Migrants leave one place in search of another and are often forced to assimilate into their new cultural milieu. With globalization, many people are constantly on the move while others are joining communities—now typical of many parts of the globe—that have already become linguistically and culturally heterogeneous. Such a dynamic cultural context has given rise to so-called third cultures in which stories of movement are best told under the auspices of hybridity and cultural melange rather than cultural adaptation. Hybridization differs from the earlier modernist requirement of assimilation because its cultural politics do not have a cultural 'centre of gravity' (Rizvi, 2014, p. 115).

Rizvi underscores the importance of recognizing that the globalization of the political, economic, and cultural arenas has a strong impact on how immigrants relate to the world on a daily basis. As a consequence, new rules for responding to the exertion of influence within political, economic, and cultural dimensions have arisen. Therefore, learning needs to become more cosmopolitan to enable immigrants to enter new modes of thinking. Learning can foster personality traits such as criticality, critical and independent thinking, and creativity. Immigrant learners are permanently confronted by the social and cultural conditions of their new places of residence. Moreover, a deeper approach to learning can enable the development of a personal understanding that can encourage the development of qualities in their ways of thinking. With regard to the theoretical framework outlined above, the general conclusions for preventing immigrants from leaving school before completing their education can be summarized as follows:

– *Learning is a lifelong process*: Due to globalization, migration, and general social mobility, formal education is not able properly to equip pupils with the knowledge that will sustain them over time and that will be suitable for various social and cultural contexts. Therefore, learning is perceived as a lifelong process, taking place in institutions and in society and culture simultaneously, involving all generations and methods. As new information and communication technologies begin to play important roles in contemporary children's and young people's lives and become an important part of culture, mediating and creating relationships between people, so they should also be deployed in learning.

– *Changing attitudes to learning*: People always move in real or symbolic social structures, and building a social life helps shape these structures. Learning appears as an activity determined by life experience and as a process entangled in qualitatively new social situations. The results are a permanent changing of relationships between the individual and the outside world. The character of individuals' learning is influenced by the culture in

which they live as well as by agents of socialization. Therefore, the connections between learners and their culture are important. Culture offers people specific development opportunities (aside from other opportunities) that are available to communities participating in different cultures and in other interpersonal relations. Framing this assumption around the issue of reasons for immigrants' early school-leaving and how to prevent it suggests the hypothesis that if education was not perceived as a positive value in the society or culture in which immigrants grew up, they will continue to perceive it negatively. Attitudes to education can, however, be changed through learning in a new society and culture consisting of relatively stable and inherited traditions, norms, patterns of behaviour, and material possessions.

– *Learning underpinned by research*: Cultural studies and critical research into the processes of globalization and radicalization are necessary to understand and explain learning (Rizvi, 2009, pp. 253–268). Therefore, learning and other educational activities should be planned simultaneously with research. This will not only allow the results of learning to be better identified but will provide a better understanding of learning processes and enable future educational activities to be optimized.

– *Harness insights from the sociocultural approach to learning*: The sociocultural approach to learning does not fully explain or resolve the problem of immigrants leaving school before their education is complete. However, knowledge of the main assumptions of this approach can be used to explain the course of learning and development and to identify the origin and symptoms of the radicalization of views and attitudes. This knowledge could also be helpful in planning and implementing preventive measures.

3   ICT as a Sociocultural Construct

The role of ICT in education is becoming increasingly important and well recognized, which is evidenced by multiple research projects and scientific studies. Online worlds have quickly gained in popularity with children and young people, have become part of popular culture, and can be considered a sociocultural construct. Online platforms allow people to communicate and provide them with information and resources. However, apart from functioning as a communications channel, they are a social space in which people meet and form communities (e.g. chat, ICQ, Skype, WhatsApp, Viber, LinkedIn, Facebook, Twitter messenger, MOOC, Cloud, LMS, webinars, Educasting podcasting, forums, virtual classrooms, online games, etc.). The development of ICT and virtual, online spaces has significantly transformed the ways in which we

use and interact with cultural works. Technical capabilities enabling the fast transfer of data and the idea of free access to information and sociocultural resources has made the internet a place of social relationships and cultural participation. Moreover, according to outstanding internet expert Marc Prensky (2001, pp. 3–6), participation in virtual worlds proportionately increases the learning skills of the younger generations. It stimulates innovation, creativity, and originality. Long-term use of online social spaces has social, cultural, and educational value. ICT and virtual spaces democratize access to knowledge, social relationships, and cultural values. Online worlds are a place in which young immigrants who have found themselves in a new, different culture, can come together and in which they spend time frequently. They are forced to unlearn and learn all over again, and this can be a particularly unpleasant feeling. In a foreign country, they are in some sense regressing in their personal development back to childhood and to a child's mental state and have to learn the simplest things all over again. If they can, many migrants avoid this unpleasant confrontation with their new reality, seeking asylum in cyberspace. There, everyone is knowledgeable and can learn and teach others, and everyone potentially has full access to modern open knowledge resources. This openness changes many of the traditional patterns of social and cultural relationships in which the hierarchical, conventionalized social contacts associated with assigned social roles and specific places in the social and cultural structure cease to count. Online, knowledge is not usually transmitted only one way but is negotiated and constituted socially. There is a certain interchangeability between the student and teacher roles in which young people learn to act responsibly, which is characteristic of teachers—and teachers can look at the world from the student's perspective. ICT tools are conducive to the development of creativity and creative inventiveness, which are qualities required today for the independent shaping of one's life, self-fulfilment, and learning. Modern times require people who perceive new challenges as a chance for success, who can accept and introduce changes, and who are capable of original ideas and bold projects. These kinds of people are important to help prevent immigrants from leaving school too soon. This is because with the use of ICT tools, immigrants can establish contacts and even long-lasting relationships with members of other groups in their host country and participate in its society and culture while also maintaining part of their own cultural identity. ICT tools allow them to build social relationships and function better as individuals or groups in their new sociocultural environment. ICT tools also allow them to learn the language and build cultural competences in their new country. Integration—with the exception of certain knowledge, skills, and competences—is primarily the quest to become a part of society.

4   **An Example of ICT-Based Citizenship Education: The *Inspiring European Citizenship through Educational Technology* Project**

The modern world is confronted with a huge number of threats with potentially catastrophic consequences on a continental scale. None of the threats is a new phenomenon, but their accumulation and scale of intensity in recent years have increased mainly due to globalization and technological development. There are many reasons for this and they form a complex set of issues and problems that the search for solutions is extremely difficult. However one tendency is expressive: formal and informal education has been recognized as an effective and feasible tool for counteracting terrorism and protecting against it. Preparing society to properly behave and respond to terrorist threats has become a priority of education in many European countries and USA.

Preventing radicalization should be at the centre of educational activities both in and out of the school environment for two reasons: first, because radicalization is a destructive process, and second, because it takes various forms and is sometimes confused with other unfavourable processes.

Therefore, education has a special role to play in development of citizenship. Moreover, research results on the challenges of societies in the twenty-first century shows that the health and stability of European democracies does not depend on good governance of the state as much as on development of the values of their citizens (Sas et al., 2020; Schuurman & Taylor, 2018; Youngman, 2018; European Commission, 1998;). In the opinion of Sas et al. (2020, p. 1),

> Research has shown that radicalized individuals are not uneducated, but have often completed secondary or tertiary education. Additionally, it became clear that some extremist groups consider the school environment as an attractive recruitment place. These findings led to a new approach where the education sector is considered as a prominent partner in preventing and combating the radicalization of young individuals.

In the context of citizenship education, the need for a sense of responsibility, solidarity, and tolerance towards the common good of humanity as a whole is emphasized. Citizenship in this sense is a competence that should be developed in schools and beyond: in families, peer groups, and in the neighbourhood.

Citizenship, according to Antal (2008), has functioned as a tool of legitimization and as a way of excluding and discriminating against different groups such as ethnic, religious, and cultural minorities. For Enslin (2000), citizenship confers membership, identity, values, and rights of participation. Concepts of the

education of citizens have been defined in different ways, but as Hoskins (2006) or Nelson and Kerr (2006) emphasize, despite the differences in approaches to citizenship concepts, the core definition of citizenship includes participation in civil community life and engagement in issues of concern to citizens.

In the context of education for citizens, the term 'active digital citizenship' is used. To Hoskins (2006), active citizens participate in community life and values, political life, and civil society, and the term 'active engagement' in the context of citizenship encompasses a range of actions such as voting, protesting, and participating in the everyday life of the community. Recently, digital citizenship has become the focus of research. Studies on this topic emphasize the need for education in responsible citizenship (Berson & Berson, 2004). The multidimensional concept of digital citizenship assumes technical skills, local and global awareness, networking agency, internet political activism, and critical perspective (Choi, 2016). Another important aspect of digital citizenship is working with others, which is directly associated with a person's proficiency with ICT tools (Aesaert et al., 2015; Livingstone & Helsper, 2009).

For several years now, the European Commission has run different initiatives to promote youth actions in support of social cohesion and the promotion of equality and mutual understanding. Prevention of the radicalization of young people is also now of growing concern in Europe and beyond in both formal and informal transnational projects. One example of European transnational cooperation that takes a holistic approach to the promotion of social cohesion through citizenship education is the three-year (2017–2020) *Inspiring European Citizenship through Educational Technology* (EUCiTec) project, developed by higher education institutions (HEIs) and schools from Poland, Cyprus, and the United Kingdom (project number 2017-1-UK01-KA201-036710). The project uses the idea of virtual reality and online tools supporting civic education in schools. For Dioniso (2013), virtual realities, also called virtual worlds, are 'computer-generated simulations of three-dimensional objects or environments with seemingly real, direct, or physical user interaction' (p. 38). The distinctive features of virtual realities are imagination, immersion, and interaction (Burdea & Coiffet, 2003): users can explore structures that only exist online to practice or experience certain tasks and activities.

According to the definition by Sherman and Craig (2003), virtual realities are a medium composed of interactive computer simulations. Students using such media are users, or participants, that simulate actions to gain a feeling of being mentally immersed in the simulation or virtual world. The idea and the benefits of virtual realities have been recognized by the military, architects, and doctors, among others. With the EUCiTec project, they are now also being explored as part of citizenship education in schools. The project's

main objective was the development of an imaginative digital learning tool kit for primary and secondary school teachers and teacher educators at HEIs in England, Cyprus, and Poland to support them in assessing their current abilities to use ICT (virtual worlds) to teach citizenship. A virtual world is an interactive program that enables and enhances the engagement of young people in the collaborative exploration of identity, culture, religion, and social and ethical values in ways that promote citizenship values and skills. The basic assumption of the EUCiTec project is that through the use of virtual interactive spaces, teachers, teacher educators, and young people can identify shared, underlying moral, ethical, cultural, and religious social perspectives and values that support their civic education in the school environment. The application can be used by teachers in their curricular activities and includes workshop ideas for students of different age groups, a tool kit, and guidance materials developed within this project. It can support teachers in their use of virtual and online spaces during curricular and extracurricular activities. The virtual world program covers different topics within the area of citizenship education, such as human rights, intercultural communication, and individual and community responsibilities, and has been designed in line with the United Nations Educational, Scientific and Cultural Organization's guidelines for global citizenship education in the twenty-first century (2004). All of the materials were free to use after logging in and easy to adapt to students' needs.

Project implementation and effects were evaluated using a quantitative approach (Clarke et al., 2013). The aim was to estimate to what extent educational practices and innovative digital resources developed in the project allow young people to explore, develop, and practice citizenship in a safe environment representing real-world contexts that deal with issues of direct relevance to them, their lives, and their growth as citizens in a pluralistic democracy. Our study has a diagnostic nature focused on the description of the values and features of dependent and independent variables, and the results obtained are the basis for formulating judgments about the presence or absence of relationships between variables. The main findings indicate that virtual environment of citizenship learning meets the needs of youth to use online tools in curricular activities in school environment. These learning opportunities with ICT tools have become a compelling activity for youth, particular those with language difficulties (i.e. with specific language impairment or language difficulties that relate to immigrants' backgrounds). Such programs prove previous findings on youth in digital environment, that they are 'Digital Natives' (Prensky, 2001), 'the Net Generation' (Tapscott, 2008), and 'Millennials' (Howe et al., 2009) and want to use virtual learning opportunities in school education, more often than it is present in curricular activities.

5   The *ICT Guides* Project: An Example of Intergenerational Learning
         Using ICT to Reduce Early School Leaving and Develop Responsible
         Citizenship

Another project conducted in Europe that supports sociocultural learning
using digital technologies is the ICT Guides project (see Leek & Rojek, 2019,
2020, for a previous publication of this section, including more detailed find-
ings from the ICT Guides project). Compared to the EUCiTec project, the ICT
Guides project supports civic education in out-of-school environments using
the concept of intergenerational learning with digital tools, such as tablets
and mobile phones. The idea of running the project in Gothenburg (Sweden),
Madrid (Spain), Sheffield (United Kingdom), and Berlin (Germany) was influ-
enced by the high percentage of young people, especially immigrant young
people, at risk of early school leaving (ESL) in these cities. In addition, these
cities also feature a high percentage of older immigrants who are perceived
as being at risk of social exclusion because of their age. The main aim of the
project was to help young immigrants to acclimatize to their new homes
and to develop their sense of citizenship by helping them run a series of ICT
courses for older people on how to use their mobile devices. Accompanying
the courses was a research study on the challenges in supporting young immi-
grants through intergenerational learning in order to increase their success at
school.
    The ICT Guides project was conducted in 2017 and 2018 as a set of ten ICT
courses bringing together immigrant young people and native adults in the
four participating cities. It sought to answer the following question: how can
ICT tools and intergenerational learning facilitate a mutual understanding
between newly arrived immigrant young people and older, native adults so
that they can live together in one society? To answer this question, a mixed
research approach was adopted, with qualitative and quantitative research
being conducted simultaneously. In our understanding, the social world is
not empirically measurable and society is not simply the sum of its individ-
uals. Therefore, intergenerational learning can be understood and explained
as a phenomenon embedded in culture, which is the exonormative matrix of
the behaviour of individuals and groups. Based on this assumption, the main
concept of the ICT Guides project was to use our understanding of intergen-
erational learning in relation to culture and to encourage immigrant young
people to develop and conduct digital courses for unrelated older adults. The
research concept included baseline (before the courses started) and endline
(after courses finished) qualitative questionnaires. In choosing this approach
with two questionnaires we applied a process perspective (expectations

towards the course and experiences after the course) to study in-depth inter-generational learning efforts that immigrant young people and unrelated older adults employ when participating in an online course.

The project showed that ICT tools are very useful and indeed necessary during the first few months of school education in a new country or in a new social environment when young people are facing new challenges. They allow immigrant pupils to keep in touch with their families and friends and to adjust to their new realities. During the courses, the use of ICT tools in intergener-ational classes reduced social and personal barriers between young people and older people and facilitated their learning about each other. It turned out that most immigrant students are fluent in the use of ICT technologies and tools such as smartphones, tablets, laptops. This proficiency is their strength, and it can be leveraged by teachers in schools and in informal education (e.g. street working). On the other hand, there is a low level of technological matu-rity among the young immigrants; in other words, while ICT tools do play a very important role in their lives, young people tend to use them more for fun and entertainment rather than for learning. For example, before the courses started, most students watched YouTube for entertainment, but the adult participants made them aware that YouTube can be used for learning as well. They pointed out that most universities have YouTube channels with videos of at least some of their lectures. In this way, ICT tools enable access to almost unlimited sources of knowledge and communication. In addition, ICT tools help people to overcome language barriers in intergenerational relationships. The young people explained that their main reason for participating in the ICT Guides courses was to improve their language competence.

One of the aims of the study was to determine, via baseline questionnaires given out prior to the start of the courses, what the young people wanted to learn from their adult counterparts and to compare these expectations to what they had actually learned by the time the course ended. The young people's expectations of intergenerational learning were to do with language and the kinds of knowledge that would be useful to their day-to-day lives in their new country. After the final meeting, the pupils were asked about their perceived benefits of the course; in their responses, they emphasized the benefits of lan-guage learning and the practical information they had obtained. The pupils also appreciated getting to know the older people and finding out more about the life of the older generation, which they had not expected before the course began.

Several dominant findings arise from our study. In our initial interactions and conversations, both the immigrant young people and the local adults were aware of the significance of ICT tools. During the actual courses, the tools used

gave both groups the opportunity to get to know each other better despite language difficulties. In particular, online translator apps or programs were excellent at facilitating communication. The young immigrants offered the following feedback: 'The iPad was important when I met the elderly people. We had something to concentrate on'; 'I could help the older people with their apps and we talked about the iPad'; 'The iPad worked as a way of us talking to each other'; and 'we had something to talk about, we had plenty conversations' (Leek & Rojek, 2019, p. 99; 2020, pp. 143–147). Language and communication skills were a recurrent topic among the young immigrants, while the older participants on the courses offered feedback such as: 'We know that without this iPad, it would not be possible to start a conversation' (Leek & Rojek, 2019, p. 99).

Our study also showed that an inability to speak the dominant language fluently, unfamiliarity with cultural codes, and uncertainty about how to deal with different social groups can sometimes be challenging for young immigrants. In the opinion of the course participants, the internet greatly supported first contacts and knowledge exchange in intergenerational learning and helped the two groups to get to know each other. Other helpful ICT elements included pictures, maps, and music from online sources. These items can sometimes replace language and thus facilitate learning. In this way, ICT tools reduce intergenerational distance and help to overcome the polarization between younger and older citizens. Depending on the needs of the participants and the tools available, ICT tools were used spontaneously in participants' intergenerational collaboration. Both age groups were interested in using ICT tools together because they both knew that the ability to use these tools is one of the key skills of our contemporary times and that the significance of ICT tools will only increase in the future.

However, ICT played a different role for both cohorts individually. The young cohort primarily used ICT to achieve specific goals and for entertainment purposes. For the older participants, ICT tools not only facilitated learning but were also in themselves an object of learning. In other words, the older cohort learned with the help of ICT while learning about it. Paradoxically, this difference fostered the potential for intergenerational learning as it intrigued people and made them interested in others. Additionally, it turns out that while the young people were proficient at using ICT, they were not usually prepared to function independently and effectively in our information and knowledge society in real life. This is evidenced by the fact that they primarily used ICT for entertainment and pleasure and to alleviate boredom. So, despite their proficiency with ICT, the young people exhibited low technological maturity, whereby technological maturity can be defined as readiness for the

independent, effective, innovative, and responsible use of ICT. Technological maturity includes the readiness to formulate expectations for technology in terms of current and future needs (Till, 2016). Technological maturity determines the satisfactory and constructive functioning of individuals in an information society, while a lack of competence puts individuals at risk of social exclusion. ICT competences are important for accessing education and labour markets and are considered among the most important human competences of the twenty-first century, a so-called key competence.

As a result of the young people's low level of technological maturity, the use of ICT plays an important role in their lives but nonetheless consumes time that should be dedicated to learning. Courses based on intergenerational learning with ICT support the development of key contemporary competences and soft skills, especially communication and language skills. According to both the young and adult participants of a survey we conducted as part of the project, improvement of their communication and language skills mainly resulted from their collaborative use of ICT tools. Both the young people and the adults told us that the courses definitely had an impact on their mutual understanding and gave them the opportunity to introduce themselves, learn about each other, and share their knowledge and skills.

It can therefore be seen that in order for immigrant pupils and students to increase their acquisition of key European citizenship competences as defined by European Commission (2013, 2019), initiatives can be designed using intergenerational collaboration with the use of ICT tools. However, ICT tools only make educational sense when collaborative purposes are their main function. Otherwise, ICT tools themselves become a goal and effect of learning without having any impact on the immigrant pupils' educational lives. ICT tools cannot replace face-to-face interaction, but they can effectively contribute to a better understanding and harmonious coexistence between young immigrants and older local people living together in big cities.

6   Conclusions

The two projects for developing citizenship skills examined here—EUCiTec and ICT Guides—situate learning about citizenship within communities of practice in which young people develop an understanding of citizenship through sociocultural and personal interactions but also learn more complex civic behaviour through their interactions with other ICT users. We follow here the interpretation of communities of practice based on Wegner (1998), which claims that these are groups of people that share mutual concerns or a passion

for something they do, and that they learn how to do it better through regular interaction. Practices in our understanding include working with their peers in school (EUCiTec project) and with older people (ICT Guides) and are a way of personal meaning-making, all in the context of sociocultural learning. The EUCiTec and ICT Guides projects show that although ICT can support citizenship education, it still requires the internal motivation of the students or users, their need to participate, the desire for a sense of belonging to society and culture, as well as good attitudes, such as a readiness to take action. In a borderless European Union, which in the traditional sense is a place of protection for refugees and in a non-traditional sense is where ICT does not have any 'borders' for its users, both curricular and extracurricular activities using online spaces are a source of information, knowledge, and the foundation of civic attitudes. Community activities then provide the opportunity for learners to practice their citizenship skills in real life.

The EUCiTec and ICT Guides projects provide young people with opportunities for constructing their own attitudes to citizenship and sharing in the practicing of it. Banks (2008) posits that citizens can cultivate multiple and overlapping identities based on national, ethnic, racial, religious, class, gender, and cultural attachments. Our research shows that the use of ICT in out-of-school environments creates promising perspectives for the emotional dimension of civic attitudes like personal responsibility or self-efficacy in undertaking actions, and that it supports intercultural and intergenerational learning. Another distinctive feature of ICT within citizenship education in out-of-school activities is the bottom-up involvement of young people (coming from and led by students) in community-based actions. Involvement is directed by the sense of purpose; in the case of immigrant young people, this purpose was the need to help older adults with using digital devices in order to promote their inclusion in the digital society (i.e. the elderly participants may then be able to book doctor's appointments online or check local bus departures online). A sense of purpose comes from believing that one's actions will be helpful for others; this, in turn, might contribute to preventing violent extremism, as Borum (2014) claims. In contrast, citizenship education in schools is more knowledge focused, supports civic actions, equips learners with an understanding of the social world, offers a source of information about others (i.e. the internet), and develops learners' readiness to participate in society; it is, however, like other school activities, more curriculum focused. In this way, students learn how to process social information and discuss injustices in the world, which, as Borum (2014) describes, supports the prevention of violent behaviours.

The advancing technological revolution, especially in the area of sociocultural communication that is exemplified by developments in ICT, has forced new perspectives on public involvement and citizenship. Subsequently, new learning communities and practices have appeared that can be perceived as new ways of participating in society and culture and with which new types of social and cultural interaction are created in virtual and online spaces. Moreover, dynamically developing information and communication technologies are an attractive and effective form of informal learning because key ICT features, such as interactivity, limitlessness, and accessibility, attract great attention from people of all ages, educational backgrounds, and nationalities, becoming a keystone of contemporary non-formal education.

Learning through the use of ICT promotes the building of subjectivity, self-determination, and awareness of internal social and cultural potential and enables knowledge-sharing and the participation of various entities in our sociopolitical reality. It makes it thus much more likely that people of all legal statuses, from established nationals to new and old immigrants, will follow the patterns of civic behaviour that are binding in society, that they will accept the general rules of that society, and that they will therefore build their status as citizens in their community on foundations of trust and civic cooperation.

Acknowledgements

References

Aesaert, K., van Braak, J., van Nijlen, D., & Vanderlinde, R. (2015). Primary school pupils' ICT competences: Extensive model and scale development. *Computers & Education, 81,* 326–344.

Antal, C. (2008). Reflections on religious nationalism, conflict and schooling in developing democracies: India and Israel in comparative perspective. *Compare, 38*(1), 87–102.

Banks, J. A. (2008). Diversity, group identity, and citizenship education in a global age. *Educational Researcher, 37*(3), 129–139.

Berson, J. B., & Berson, I. R. (2004). Developing thoughtful cybercitizens. *Social Studies and the Young Learner*, *16*(4), 5–8.

Borum, R. (2014). Psychological vulnerabilities and propensities for involvement in violent extremism. *Behavioral Sciences & the Law, 32*(3), 286–305.

Bruner, J. (1973). Beyond the information given. In J. M. Anglin (Ed.). *Beyond the information given: Studies in the psychology of knowing* (pp. 218–238). WW Norton.

Bruner, J. (1963). *The process of education*. Harvard University Press.

Burdea, G., & Coiffet, P. (2003). *Virtual Reality Technology* (2nd ed.). Wiley.

Choi, M. (2016). A concept of digital citizenship for democratic citizenship education in the internet age. *Theory & Research in Social Education*, *44*(4), 565–607.

Clarke, V., & Braun, V. (2013). *Successful qualitative research: A practical guide for beginners*. Sage.

Council for Cultural Co-operation. (2000). *Project Education for Democratic Citizenship. Basic Concepts and core competencies for education for democratic citizenship*. Office for Official Publications of Council of Europe, DGIV/EDU/CIT (2000) 23.

Dioniso, J. D. (2013). 3D virtual worlds and the metaverse: Current status and future possibilities. *Electrical Engineering & Computer Science Faculty Works*, *45*(3), 36–42.

Enslin, P. (2000). Education and democratic citizenship: In defence of cosmopolitanism. In M. Leicester, C. Modgil, & S. Modgil (Eds.), *Politics, education and citizenship* (pp. 149–150). Falmer Press.

European Commission. (1998). *Education and active citizenship in the European Union*. Office for Official Publications of the European Communities.

European Commission. (2017). *Early school leavers*. https://ec.europa.eu/info/sites/info/files/european-semester_thematic-factsheet_early-school-leavers_en_0.pdf

European Commission. (2013). *Co-creating European citizenship*. Publications Office of the European Union.

European Commission. (2019). *Key competences for lifelong learning*. Publications Office of the European Union.

Fagan, J., & Pabon, E. (1990). Contributions of delinquency and substance use to school dropout among inner-city youth. *Youth & Society, 21,* 306–354.

Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, *59,* 117–142.

Hoskins, B. L., & Mascherini, M. (2009). Measuring active citizenship through the development of a composite indicator. *Social Indicators Research*, *90*(3), 459–488.

Howe, N., Strauss, W., & Matson, R. J. (2009). *Millennials rising: The next great generation*. Knopf Doubleday Publishing Group.

Kroeber, A. L., & Kluckhohn, C. (1952). *Culture: A critical review of concepts and definitions*. Peabody Museum of American Archaeology and Ethnology.

Leek, J., & Rojek, M. (2019). 'ICT Guides' project as an example of educational support of young immigrants through intergenerational learning and ICT tools. In E. Gutzwiller-Helfenfinger, H. J. Abs, & P. Müller (Eds.), *Thematic papers based on the*

conference 'Migration, social transformation, and education for democratic citizen-ship' (pp. 87–106). DuEPublico. https://doi.org/10.17185/duepublico/47639

Leek, J., & Rojek, M. (2020). *Exploring the virtual world of learning across generations. Information and communications technology for the educational support of immi-grant youth.* University of Lodz & Jagiellonian University Press.

Lengrand, P. (1975). *An introduction to lifelong education.* Croom Helm.

Livingstone, D. (1999). Exploring the icebergs of adult learning: Findings of the first Canadian survey of informal learning practices. *Canadian Journal for the Study of Adult Education*, *13*(2), 49–72.

Livingstone, S., & Helsper, E. (2009). Balancing opportunities and risks in teenagers' use of the internet: The role of online skills and internet self-efficacy. *New Media Society, 12*(2), 309–329. doi:10.1177/1461444809342697

Lubeck, S., & Garrett, P. (1990). The social construction of the 'at-risk' child. *British Journal of Sociology of Education*, *11*(3), 327–340.

Nelson, J., & Kerr, D. (2006). *Active citizenship in INCA countries: Definitions, policies, practices and outcomes*. National Foundation for Educational Research & Qualifications and Curriculum Authority. https://www.nfer.ac.uk/active-citizenship-in-inca-countries-definitions-policies-practices-and-outcomes/

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, *9*(5), 2–7.

Rizvi, F. (2009). Towards cosmopolitan learning. *Discourse: Studies in the Cultural Politics of Education*, *30*(3), 253–268.

Rizvi, F. (2014). *Encountering education in the global: The selected works of Fazal Rizvi.* Routledge.

Rizvi, F., & Lingard, B. (2010). *Globalizing education policy*. Routledge.

Sas, M., Ponnet, K., Reniers, G., & Hardyns, W. (2020). The role of education in the prevention of radicalization and violent extremism in developing countries. *Sustainability*, *12*(2320), 1–12. https://doi.org/10.3390/su12062320

Sherman, W. R., & Craig, A. B. (2003). *Understanding virtual reality: Interface, applica-tion, and design*. Morgan Kaufmann Publishers.

Schuurman, B., & Taylor, M. (2018). Reconsidering radicalization: Fanaticism and the link between ideas and violence. *Perspectives on Terrorism, 12*(1), 3–22.

Tapscott, D. (2008). *Growing up digital*. McGraw-Hill.

Till, A. (2016). *Measuring technology maturity: Operationalizing information from pat-ents, scientific publications, and the web*. Springer Gabler.

Traag, T., & van der Velden, R. K. W. (2011). Early school-leaving in the Netherlands: The role of family resources, school composition and background characteristics in early school-leaving in lower secondary education. *Irish Educational Studies*, *30*(1), 45–62.

United Nations Educational, Scientific and Cultural Organization. (2014). *Global citi-zenship education: Preparing learners for the challenges of the 21st century*. Retrieved October 7, 2020, from https://unesdoc.unesco.org/ark:/48223/pf0000227729

United Nations High Commissioner for Refugees. (2019). *Access to education for refugee and migrant children in Europe.* https://www.unhcr.org/neu/wp-content/uploads/sites/15/2019/09/Access-to-education-europe-19.pdf

van Deth, J., Maraffi, J., Newton, K., & Whiteley, P. (1999). *Social capital and European democracy.* Routledge.

Veldhuis, R. (1997). *Education for democratic citizenship: Dimensions of citizenship, core competencies, variables and international activities.* Council of Europe.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, & S. Scribner, Trans.). Harvard University Press.

Vygotsky, L. S. (1986). *Thought and language* (A. Kozulin, Trans.). MIT Press.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity.* Cambridge University Press.

Youngman, M. (2018). Building 'terrorism studies' as an interdisciplinary space: Addressing recurring issues in the study of terrorism. *Terrorism and Political Violence, 32*(5), 1091–1105. doi:10.1080/09546553.2018.1520702