ICT Guides Project

Summary Report

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Content

Background

    "ICT Guides" (acronym TIDES) is a project under the Erasmus+ programme. The project partners are several city halls of large European cities: Gothenburg, Berlin, Madrid, and University of Lodz. These cities have a high percentage of people, especially immigrants, at risk of early school leaving, which results in social and personal problems such as poverty, unemployment, and social exclusion. And there are also seniors vulnerable to loneliness and social exclusion because of their age.

Faced with this problem, we have identified a target group particularly vulnerable to ESL: young immigrants. As will become clear below, young immigrants are over-represented in terms of unemployment, which is one of the main factors behind social exclusion. Employment is a strong protective factor against the risk of social exclusion (and poverty), and – as identified in the EU 2020 strategy – one of the most important targets for a smart, sustainable and inclusive Europe. In this project, we are looking into:

- The use of ICT tools,
- Intergenerational learning (older citizens over 65 and young immigrants aged 12-16 years),
- The theory of empowerment, and
- Early school leaving.

Schools encounter many obstacles, with teachers lacking tools and, in some cases, appropriate equipment, but also latest research findings are not regularly implemented in education, which leads to a situation where the ESL rate is not decreasing. In many parts of Europe, there is also a large inflow of young immigrants with incomplete education, which partly results from the severe economical crisis in Europe, and partly from the recent alarming situation in such countries as Syria and Afghanistan. Therefore, schools cannot handle students with many different needs as well as in a traditional school environment. In some of our most socially and economically challenged areas, teachers claim they are not only tutors and teachers, but primarily parents, friends, police officers and trauma psychologists. This, of course, imposes certain restraints on the teacher profession. New tools and methods are needed as well as different or increased cooperation between education and civil society.

Qualitative and quantitative research on the effective use of ICT in intergenerational learning in order to reduce early school leaving was conducted with immigrant pupils and seniors, including 320 people from Gothenburg, Berlin, Madrid and Sheffield. The partners, representing the cities mentioned above, were responsible for developing and piloting courses. For this purpose, the organizations involved in the project recruited immigrant pupils and elder people.

We recruited both youth and seniors through centres run by local education authorities. The selected course venues included: CEPI Chamartin – Madrid (Spain), Ryaskolan (school) and Monsunen (meeting place for the elderly) – Goethebourg (Sweden), Sheffield City Council premises (UK), Alfred Nobel Schule and Fritz-Karsen-Schule – Berlin (Germany).

Programme: **Erasmus+**
Duration: **07.12.2015 – 31.08.2018**
Coordinator: **SDFUTB – Sektor utbildning, SDF Västra Hisingen Göteborgs stad (Sweden)**
Partners:
Sheffield City Council (United Kingdom)
DGI-CM – Dirección General De Inmigración, Comunidad De Madrid (Spain)
SENBJF – Senatsverwaltung für Bildung, Jugend und Familie Berlin (Germany)
University of Lodz (Poland)

Methodology

Conducting the research as part of the ICT Guides project, we sought to answer the general question:

How can we use ICT (information & communication technologies)*, intergenerational learning (between young immigrants aged 12-16 years and older citizens over 65) and the theory of empowerment to reduce ESL* (early school leaving)*?*

Our specific research problems were:

• *How can ICT be used as an effective tool for overcoming the polarization between young and older citizens?*

• *How can ICT facilitate access to the general education system for newly arrived immigrant children aged 12-16 years?*

• *How can ICT be used as an effective tool for improving the access to lifelong learning for older persons?*

• *How can ICT increase the acquisition of EU key competencies, and in particular communication and language skills in immigrant pupils aged 12-16 years?*

• *How can ICT contribute to a better understanding and harmonious coexistence between young immigrants and older people, both living in big cities?*

• *In what ways and to what degree was each generational group empowered within intergenerational learning?*

To find answers to these questions, we adopted a mixed research approach, conducting qualitative and quantitative research simultaneously. We assumed that the social world was not empirically measurable and that the society was not the sum of physical individuals. Therefore, social processes and behaviour of individuals can be understood and described only when embedded in culture, which is the axionormative matrix of behaviour of individuals. The theoretical foundations for this assumption come from phenomenology, hermeneutics and symbolic interactivity.

Within this approach, we used *case study* as a research method, which focuses on a concrete example of educational experience and seeks to obtain theoretical and in-depth knowledge based on its complete documentation and detailed description. This is possible because case study is a kind of inquiry in which practitioners (Madrid, Berlin, Sheffield, Goteborg city halls) and researchers (University of Lodz) can jointly reflect on specific cases of educational practice. Only through systematic and structured interactions between cognitive exploration and selected cases in the case study was it possible to attain both theoretical knowledge of the most general character and practical knowledge directly related to experience, offering better understanding of its complexity, uniqueness and conditions. Surveys were supported with semi-structured interviews with teachers, youth workers and other staff involved in supporting young immigrants in given countries.

The basic research technique was survey with closed and open questions. 267 respondents completed survey questionnaires:

City	Pupils' course-beginning surveys	Pupils' course-end surveys	Seniors' course-beginning surveys	Seniors' course-end surveys	Teachers' surveys	Authorities' surveys	*Total*
Berlin	14	3	12	3	2	3	**37**
Gothenburg	22	19	8	7	7	5	**68**
Madrid	17	15	10	14	1	8	**65**
Sheffield	40	22	23	17	1	0	**103**
Total	**93**	**59**	**53**	**41**	**11**	**16**	**273**

Figure 1. Respondents taking part in the survey.

The analysis focused on group experiences, aiming to examine the group as a whole. Thus, each survey questionnaire was carefully read, and then common strings of text were analysed and compared (Corbin, Strauss, 1990). This allowed to identify code segments, which were grouped by their focus group session. The code segments were used to develop one event category, classified as "intergenerational learning", and several other themes and subthemes (Creswell, 2012). The intergenerational learning incident was coded as any situation in which a pupil or a senior wrote about course activity in relation to ICT, learning, engagement, involvement, personal development, or harmonious coexistence. All answers given by pupils were considered, regardless of whether they fitted popular definitions of intergenerational learning provided by the literature. Intergenerational learning incidents included one-time and recurring events. Incidents were further coded as acts of intergenerational learning if they involved learning, personal development, teamwork, and relationships with others if they involved confidence, motivation, or personal relation. Once all data were coded, quotations were again examined and classified by immigrant youth, seniors, teachers and youth workers mix, and summarized in writing.

The second technique was qualitative analysis of photographs (visual data/material), which is more and more frequently used in the social sciences and results from the visualization of the transition and perception of the contemporary reality:

While society's use, production and transmission of visual forms of communication have grown, the application of visual research methods has also become increasingly widespread throughout the social sciences. From its early origins in the first half of the twentieth century within social anthropology, where novel technologies of register and reproduction of images were gradually incorporated into the sub-discipline of ethnographic film and, later, visual anthropology, research with visual technologies and on visual data has evolved into other fields in the social sciences (Knoblauch et. al., 2008, pp. 3-5).

The use of audio-visual material offeres the opportunity to look at the reality through the eyes of the participants and to see what can be invisible to the researcher. Cultural studies and ethnomethodology are mentioned as the theoretical foundations for visual research (Branks 2008, pp. 15-20). Using this approach, we attempted to answer the following questions:

▪ *What is the content of the photos?*
▪ *How was the content created and communicated?*
▪ *What is the meaning of this content?*

The photos were taken during intergenerational courses supported by ICT tools.

European Policy Context

At the end of 2010, the Arab Spring began, with numerous anti-government protests in many Arab countries. This led, among others, to the civil war in Syria, the conflict in Lebanon, and the civil war in Libya. Since 2011, the civil war in Syria has killed hundreds of thousands of people. Bloody fights forced 13 million Syrians to leave their homes, of which 4.8 million sought refuge outside Syria. The emergence of a radical Islamic State is another cause for the massive migration from Arab countries, mostly of religious minorities (Christians, Jews) migrating for fear of persecution. The overthrow of Muammar al-Qaddafi and the destabilization of the country led to increased migration from Libya. Every month, about 5 thousand people escape from Eritrea (Eurostat, 2015).

Migrants from Kosovo, Afghanistan, Albania, Iraq, Serbia, Pakistan, Ukraine, Bangladesh, and the Middle East also cause increased migration in many countries, contributing to the unstable political and economic situation. The European motto "unity of diversity" aims to defend such common values as peace, democracy, solidarity and freedom on a Continent made up of many languages and cultures. One of the fundamental rights – the free movement of persons – is the most controversial. From refugees coming from different parts of the world to the moving of the EU border at the Channel, migration is influencing politics and the social landscape of Europe. The European Commission promotes full participation of everyone living in Europe, introducing integration policies and trying to promote and protect cultural pluralism. Immigration policies are Europeanized through treaties obligatory for countries that sign the agreements, however, there remain national differences between integration policies and immigration rules. The selection of countries in this research project was warranted by a variety of dimensions based on which they can be discussed and compared.

Today, European Union is faced with the worsening social situation caused by the economic crisis, which is undermining the sustainability of social protection systems. 24% of the EU population is at risk of poverty or social exclusion, which includes 27% of all children in Europe[1]. Students dropping out of school are obstacles to smart and sustainable growth for everybody. If fewer youngsters dropped out and if the general educational output was increased, unemployment and poverty rates would fall. Among other things, it is necessary to take steps to reduce the phenomenon of early school leaving.

As highlighted in the document "Youth on the Move" (European Commission, 2017), which expresses one of the EU flagship initiatives, a significant decrease in the number of pupils dropping out of school is an investment not only for the youth, but also for the future EU, and especially for the social cohesion and wealth. For example, 100,000 youngsters start high school in Sweden every year. Approximately 25% of them drop out or leave school without graduating. 50% of them end up in social exclusion. The city of Gothenburg faces one of the most severe situations as regards youth unemployment and social exclusion for newly-arrived young people. Unemployment is sky-high in general, but in the case of people who are young and born outside Sweden the unemployment rate is 70% higher than for youth born in Sweden. In another city – Sheffield – the recent years have seen an increase in the number of newly-arrived young people from White Gypsy/Roma backgrounds (from here on referred to simply as "Roma"). These now

make up more than half of new arrivals in Sheffield, and tend to originate from Slovakia. Roma pupils are also less likely to progress into Employment, Education or Training post year 11 than the Sheffield average. In December 2014, around 20% of Sheffield's 16-18 Roma population was not in Education, Employment or Training (NEET), compared to the Sheffield average of 5.8% NEET. The situation in Berlin and Madrid shows similar problems. This alarming situation in the EU has also led to social unease. Older citizens feel insecure in their neighbourhoods although statistics show that they are not at greater risk of violence outside their home, but the contrary.

The ICT Guides Project organized a youth and senior programme in order to target some of the most vulnerable groups in Europe: newly immigrant children (0-5 years in the country of concern) aged 12-16 years, and native older citizens +65 years. We assumed that if the project was implemented in a quality manner, it would offer contexts promoting opportunities for some benefits to youth (Carnegie Council on Adolescent Development 1992; Durlak and Weissberg 2007). One of the advantages of programs such as "ICT Guides" is providing youth with opportunities for taking part in the decision-making process, getting involved in work that is relevant for youth, and performing challenging tasks connected with projects allowing them to share power and to collaborate with adult staff and volunteers (Benson et al. 2006; Zeldin et al. 2005) .

In order to work towards social cohesion, we want to investigate how ICT tools can be used as links between the newly-arrived youth at risk of early school leaving and older citizens. In this project, we want to test, both from the participatory as well as the research perspective, if it is possible to successfully link the newly-arrived youth (12-16 years old) with older citizens (+65) for the purposes of cooperation and learning. We aim our activities at the two groups that are, according to Eurostat, most excluded in Europe. The post-war welfare state has, as Espring-Andersen (2002, 3) argued, "succeeded in equalizing living conditions, but it has failed to support its premise of disconnecting opportunities from social origins. The social exclusion, inequalities according to ethnicity or gender are facts in Europe" (Fangen, et.al. 2012).

Relationships with non-parental adults in the community have been significantly and positively associated with life satisfaction among adolescents (Oberle, Schonert-Reichl, Zumbo, 2011). Relationships of this kind have also showed resilience and reduced problem behaviour in adolescents (Allen, Kuperminc, Philiber & Herre, 1994). According to the project's concept, the newly-arrived are provided with continuous support from established teachers and coaches, they plan ICT tools for training courses for not-related elderly, conduct these courses, and then evaluate and refine them. The idea of using young people's interests (ICT) and letting them teach the elderly is partly based on the theory of empowerment and an assumption that if educational settings create meaningful structures and content where all pupils feel empowered they are more likely to complete their education. The project partners also wanted to foster positive outcomes among youth, such as prevention of early school leaving as well as an increased understanding between marginalized groups. The youth are marginalized because of inefficient language skills and seniors because of their age and lack of ICT skills. "ICT-Guides" project facilitated open communication, understanding, and support between two marginalized groups. Thus, through our evaluation we hoped to draw attention to social dialogues that are necessary to promote intergroup harmony and understanding (Worthington & Arévalo Avalos, 2017).

Country Profiles

Sweden

Introduction

The ICT Guides project was conducted in Sweden, a country representing the "Scandinavian" welfare state model, described by Esping-Andersen (2002, 14). Like in other parts of Europe, Sweden is consistently resettling refugees including unaccompanied minors (United Nations High Commissioner for Refugees, 2015). Immigrants are resettled in Sweden in urban neighbourhoods and in government subsidized housing, and these neighbourhoods have turned into places of unrest due to the social and economic marginalization of their residents (Malmber, Anderson and Osth, 2013). Language minority students in Sweden have a smaller chance of graduating from secondary schools and have lower literacy levels than their native Swedish-speaking colleagues (Taguma, Kim, Brink and Teltemann, 2010).

The foreign-born population of Sweden represents 20 percent of its elementary and secondary school student population[2] (Skolverket, 2013; Statistiska Centralbyrån, 2015). In most cases, refugees and immigrants in Sweden resettle in cities, in urban neighbourhoods that have become sites of increasing unrest due to residents' social and economic marginalization (Malmberg, Andersson, & Osth, 2013, Thorstensson Davila, 2017). Pupils with immigrant backgrounds and language minority students have lower literacy levels than their native Swedish-speaking peers and are less likely to graduate from secondary school (Taguma, Kim, Brink, & Teltemann, 2010).

From October 2016 to June 2017, three courses were conducted in Sweden (Västra Hisingen District) in cooperation with two schools: Ryaskolan and Sjumilaskolan, a youth recreation centre Svartedalsskolan, and three places for the elderly: Monsunen, Svartedalens, and Vårvinden. 24 pupils and 19 seniors took part in the three courses. The data was also gathered from teachers' surveys and informal interviews with seven teachers from Ryaskolan 7-9 secondary school in the area of Biskopsgården, and five headmasters of secondary schools in the area of Biskopsgården, Västra Hisingen School District and of Student Health in the Västra Hisingen School District that work in the field of young immigrant support.

Course No. 1

Dates (beginning – finish)	October 2016 – November 2016
Place/Institution where the course took place	Ryaskolan (school) and Monsunen (meeting place for the elderly)
Number of pupils that took part in course no. 1	5
Number of seniors that took part in course no. 1	7

Course No. 2

Dates (beginning – finish)	January 2017 – March 2017
Place/Institution where the course took place	Svartedalens retirement home (seniors) and Svartedalsskolan (school)
Number of pupils that took part in course no. 2	8
Number of seniors that took part in course no. 2	8

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[2] In the year 2010.

Course No. 3

Dates (beginning – finish)	April 2017 – June 2017
Place/Institution where the course took place	Pupil from Sjumilaskolan 7-9 Vårvinden (youth recreation centre)
Number of pupils that took part in course no. 3	11
Number of seniors that took part in course no. 3	4 (3 of them only attended two meetings due to sickness and vacation)

The participants of the research in Sweden included 22 youth (8 females and 14 males) aged 12-16 years.
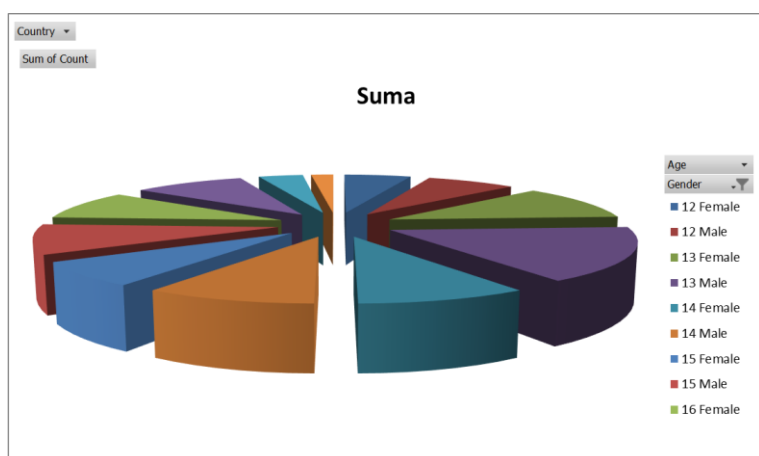

Figure 2. Respondents taking part in the research.

Photo: ICT – Guides course in Sweden.

ICT Tools

One of the issues we wanted to determine with the baseline and endline surveys was the role of ICT tools in the lives of youth and seniors. Before the courses started, we asked youth what type of ICT tools they used and what the role of ICT tools in their lives was. Youth said that they used notebooks (60%), mobile phones (59.09%), audio-visual systems (30%), tablets (29.41%), and storage in the cloud (18.18%) every day. The purposes of using mobile phones included communication (40.74%), learning (24.07%), and entertainment (16.67%). Tablets/iPads were mostly used for learning (40.43%), entertainment (29.79%), communication and cooperation (10.64%). Similarly to tablets/iPads, notebooks/laptops or PCs were used for learning (41.67%), entertainment (22.92%) and communication (8.33%).

| sum of Count		do not use	every day	few times a month	several times a week	different frequency	Suma końcowa
⊟ Pupils							
audio-visual systems (DVD player, TV, youtube		30,00%	30,00%	0,00%	40,00%	0,00%	100,00%
mobile telephone		4,55%	59,09%	0,00%	36,36%	0,00%	100,00%
notebook/laptop or PC		10,00%	60,00%	0,00%	30,00%	0,00%	100,00%
storage in the cloud		36,36%	18,18%	18,18%	22,73%	4,55%	100,00%
tablet/iPad		29,41%	29,41%	0,00%	41,18%	0,00%	100,00%
Suma końcowa		**23,47%**	**36,73%**	**4,08%**	**34,69%**	**1,02%**	**100,00%**
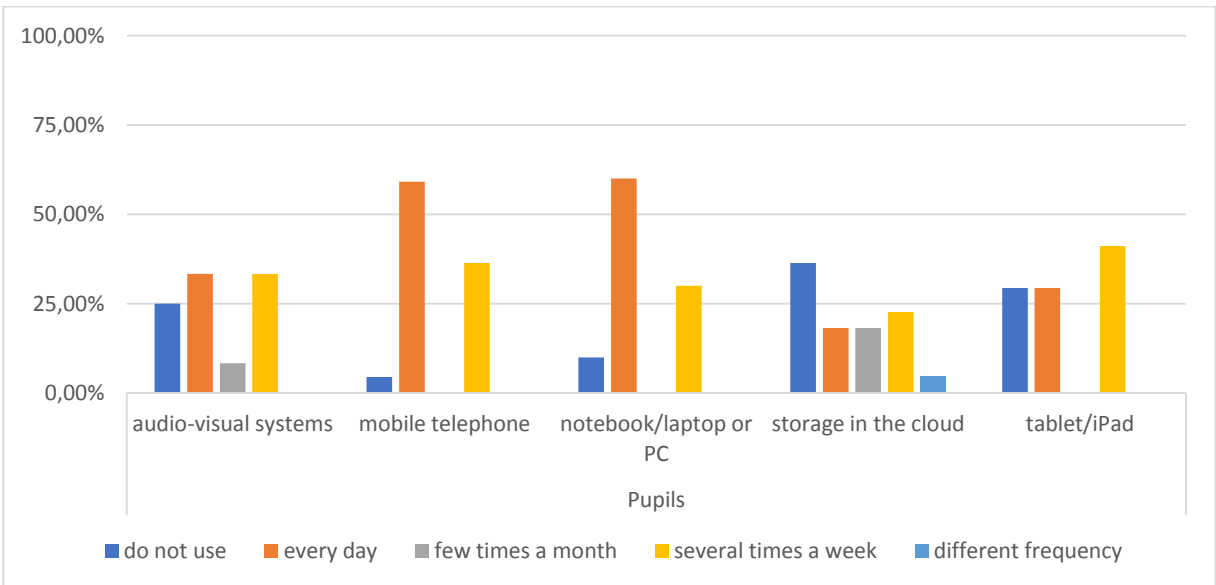
Figure 3. Frequency of ICT devices use among youth before the course.

| sum of count		communication	cooperation	different role	entertainment	learning	mental and emotional support	End sum
⊟ **Pupils**		**20,29%**	**9,66%**	**6,76%**	**21,26%**	**37,68%**	**4,35%**	**100,00%**
audio-visual systems		17,86%	0,00%	14,29%	28,57%	32,14%	7,14%	100,00%
mobile telephone		40,74%	12,96%	0,00%	16,67%	24,07%	5,56%	100,00%
notebook/laptop or PC		14,58%	8,33%	6,25%	22,92%	41,67%	6,25%	100,00%
storage in the cloud		10,00%	13,33%	13,33%	6,67%	56,67%	0,00%	100,00%
tablet/iPad		10,64%	10,64%	6,38%	29,79%	40,43%	2,13%	100,00%
End sum		**20,29%**	**9,66%**	**6,76%**	**21,26%**	**37,68%**	**4,35%**	**100,00%**
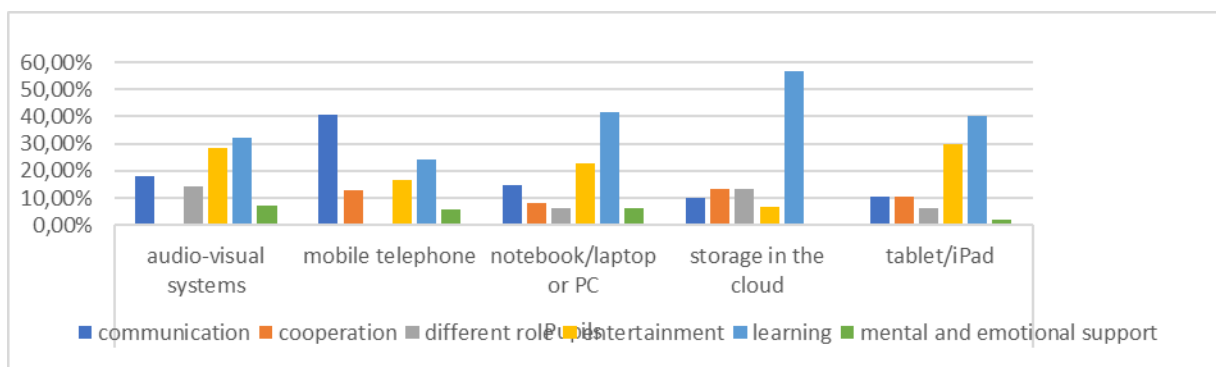
Figure 4. Purposes of using ICT devices by youth before the course.

For youth, the ICT course was an opportunity to change their values and attitudes in different areas of life. After the course, 73% of young people admitted that the participation in the course changed the role of ICT in their life. The change, however, was not that visible in their preferences in the application of mobile devices. After the course, just like before it, mobile phones (77.78%), notebooks (52.63%), audio-visual systems (27.59%), and storage in the cloud (5.26%) were still very popular in daily usage. Also the

preferences in purposes of using ICT devices did not change much. Mobile phones were still used by pupils, as it was before the course, for communication (35.19%), entertainment (27.78%), mental and emotional support (22.22%), and learning (11.11%). Notebooks, laptops and PCs were mostly used for learning (29.63%), communication and cooperation (25.93%), and entertainment (11.11%), while tablets/iPads were mainly used for entertainment (29.63%), cooperation (16.67%), and learning (13.95%).

| sum of Count	different frequency	do not use	every day	few times a month	less then a few times a month	several times a week	Suma końcowa
⊟ Pupils	6,32%	25,26%	27,37%	10,53%	2,11%	28,42%	100,00%
audio-visual systems	3,45%	20,69%	27,59%	10,34%	3,45%	34,48%	100,00%
mobile telephone	0,00%	0,00%	77,78%	0,00%	0,00%	22,22%	100,00%
notebook/laptop or PC	0,00%	0,00%	52,63%	0,00%	0,00%	47,37%	100,00%
storage in the cloud	5,26%	42,11%	5,26%	15,79%	0,00%	31,58%	100,00%
tablet/iPad	21,05%	52,63%	0,00%	21,05%	5,26%	0,00%	100,00%
Suma końcowa	6,32%	25,26%	27,37%	10,53%	2,11%	28,42%	100,00%
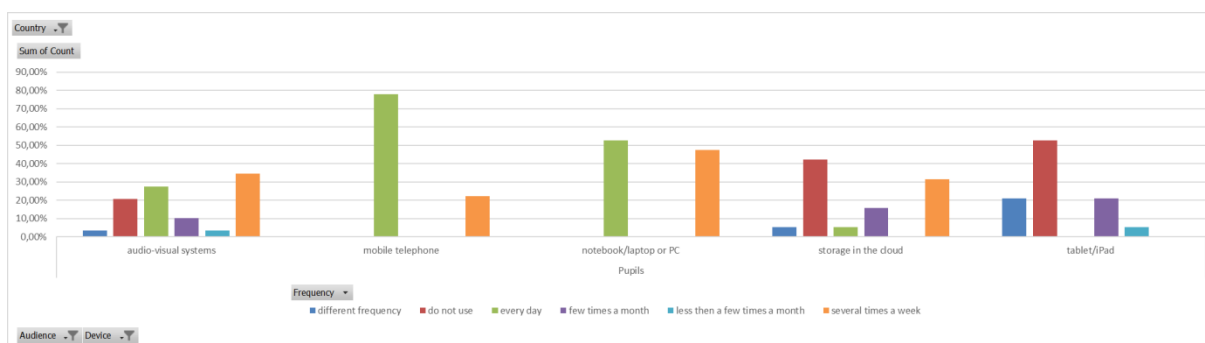
Figure 5. Frequency of ICT devices use among youth after the course.

| Sum of Count	communication	cooperation	entertainment	learning	mental and emotional support	other	Suma końcowa
⊟ Pupils	18,39%	14,94%	27,01%	17,24%	13,79%	8,62%	100,00%
audio-visual systems	0,00%	0,00%	43,33%	13,33%	23,33%	20,00%	100,00%
mobile telephone	35,19%	3,70%	27,78%	11,11%	22,22%	0,00%	100,00%
notebook/laptop or PC	25,93%	25,93%	11,11%	29,63%	7,41%	0,00%	100,00%
storage in the cloud	5,00%	40,00%	0,00%	30,00%	0,00%	25,00%	100,00%
tablet/iPad	11,63%	20,93%	37,21%	13,95%	6,98%	9,30%	100,00%
Suma końcowa	18,39%	14,94%	27,01%	17,24%	13,79%	8,62%	100,00%
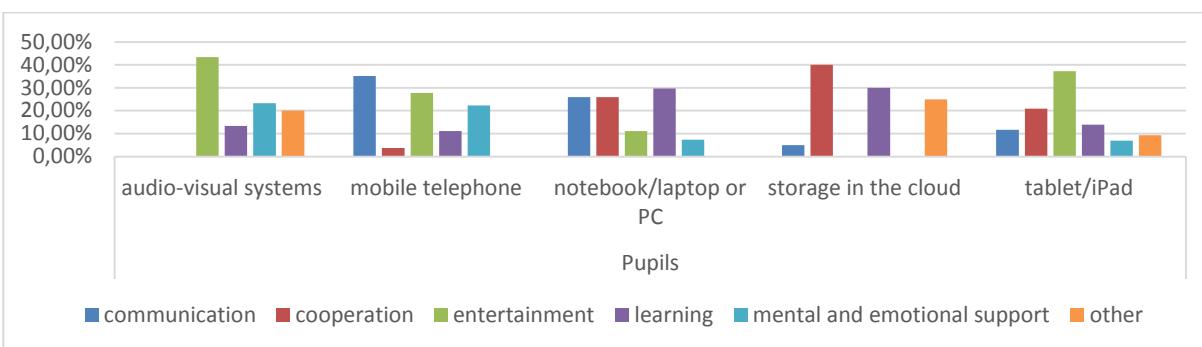
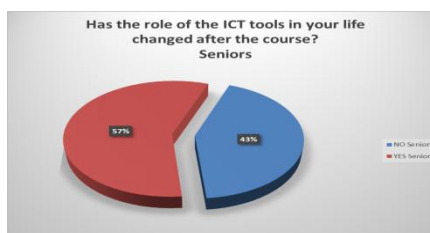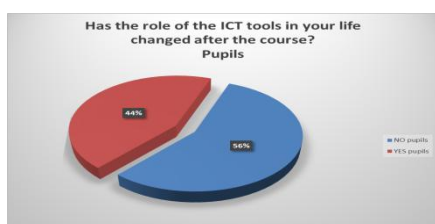**Figure 6.** Purposes of using ICT devices after the course.

Figure 6. Impact of the course on the lives of youth and senior citizens.

Just like in the case of youth, we wanted to determine the role of ICT tools in the lives of seniors. Before and after the course, we asked about the type of ICT tools they used and about the role ICT tools played in their life. Before the course started, seniors used mobile phones (87.5%), audio-visual systems (75%) and tablets, notebooks or PCs (12.5%) every day. They used their mobile phones for communication (53.85%), cooperation (23.08%) and mental or emotional support (15.38%). Similarly to mobile phones, tablets and iPads were used for communication (25%) and entertainment (16.67%). Notebooks or PCs were also popular among seniors, and they were used for entertainment and learning (25%) and communication (16.67%).

The course did not affect their preferences and frequency of ICT tools use, when compared with their preferences from before the course. As it was before the course, the most popular tools among seniors, which they used every day, were mobile phones and audio-visual systems (57.14%), followed by notebooks (28.57%) and tablets/iPads (14.29%).

After the course, the role of ICT tools did not change a lot. Mobile phones were still the most popular devices for communication (77.78%) and mental or emotional support (22.22%). Notebooks and PCs were still used by seniors for entertainment (11.11%), but also for learning, cooperation and mental and emotional support (11.11%). Tablets/iPads, however, became popular among seniors for entertainment and mental or emotional support (33.33%).

The difference in seniors' preferences is visible when looking at the frequency. After the course, all the course participants were using mobile phones (before the course 12.5% did not use mobile phone at all).

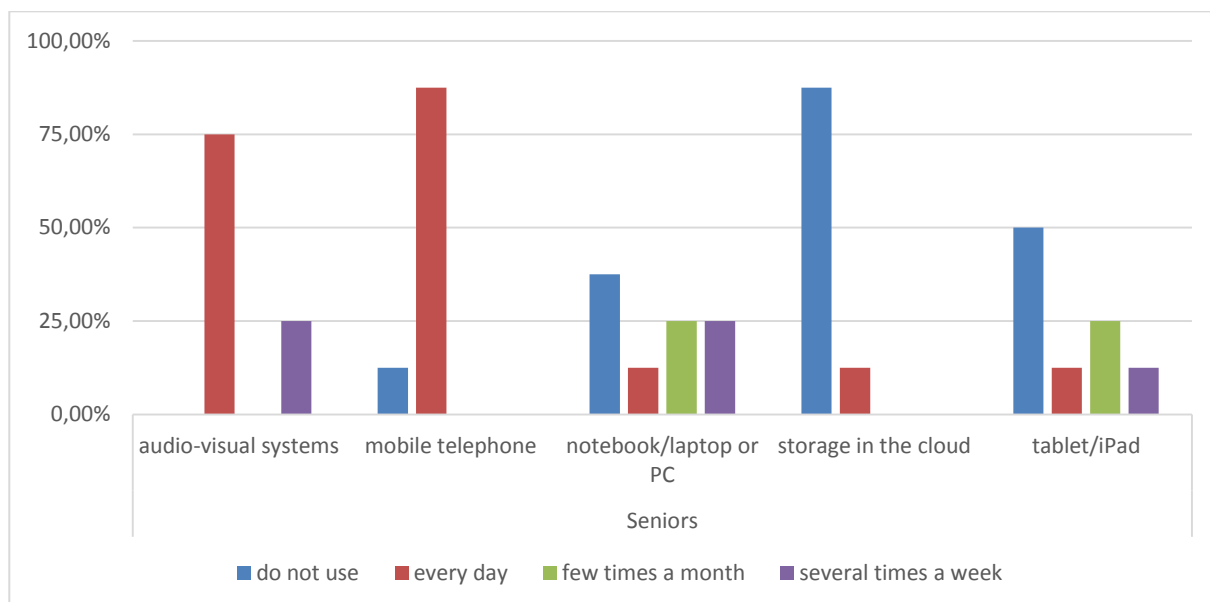| sum of count	communication	cooperation	different role	entertainment	learning	mental and emotional support	End sum
⊟ Seniors	26,39%	8,33%	29,17%	15,28%	15,28%	5,56%	100,00%
audio-visual systems	23,53%	11,76%	0,00%	29,41%	29,41%	5,88%	100,00%
mobile telephone	53,85%	23,08%	7,69%	0,00%	0,00%	15,38%	100,00%
notebook/laptop or PC	16,67%	0,00%	33,33%	25,00%	25,00%	0,00%	100,00%
Software	10,00%	0,00%	60,00%	10,00%	20,00%	0,00%	100,00%
storage in the cloud	25,00%	0,00%	75,00%	0,00%	0,00%	0,00%	100,00%
tablet/iPad	25,00%	8,33%	33,33%	16,67%	8,33%	8,33%	100,00%
End sum	26,39%	8,33%	29,17%	15,28%	15,28%	5,56%	100,00%

Figure 7. Preferences in the use of ICT devices among seniors before the course.

| Sum of Count	communication	cooperation	different role	entertainment	learning	mental and emotional support	Suma końcowa
⊟ Seniors	34,21%	2,63%	5,26%	21,05%	10,53%	26,32%	100,00%
audio-visual systems	10,00%	0,00%	0,00%	40,00%	10,00%	40,00%	100,00%
mobile telephone	77,78%	0,00%	0,00%	0,00%	0,00%	22,22%	100,00%
notebook/laptop or PC	44,44%	11,11%	11,11%	11,11%	11,11%	11,11%	100,00%
storage in the cloud	0,00%	0,00%	100,00%	0,00%	0,00%	0,00%	100,00%
tablet/iPad	11,11%	0,00%	0,00%	33,33%	22,22%	33,33%	100,00%
Suma końcowa	34,21%	2,63%	5,26%	21,05%	10,53%	26,32%	100,00%
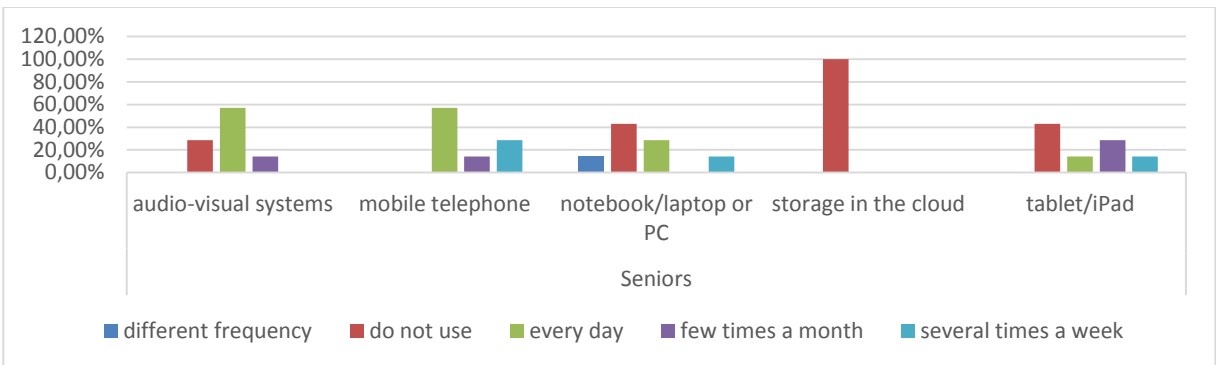
Figure 8. Preferences in the use of ICT devices among seniors after the course.

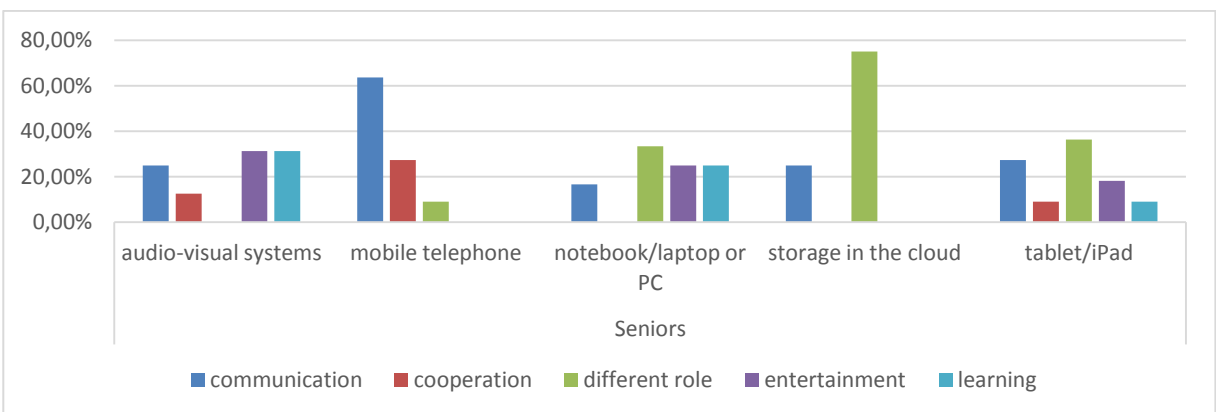| sum of Count	do not use	every day	few times a month	several times a week	Suma końcowa
⊟ Seniors					
audio-visual systems	0,00%	75,00%	0,00%	25,00%	100,00%
mobile telephone	12,50%	87,50%	0,00%	0,00%	100,00%
notebook/laptop or PC	37,50%	12,50%	25,00%	25,00%	100,00%
Other	100,00%	0,00%	0,00%	0,00%	100,00%
storage in the cloud	87,50%	12,50%	0,00%	0,00%	100,00%
tablet/iPad	50,00%	12,50%	25,00%	12,50%	100,00%
Suma końcowa	44,44%	35,56%	8,89%	11,11%	100,00%

Figure 9. Frequency of the use of ICT devices among seniors before the course.

| sum of Count	different frequency	do not use	every day	few times a month	several times a week	Suma końcowa
⊟ Seniors	2,38%	52,38%	26,19%	9,52%	9,52%	100,00%
audio-visual systems	0,00%	28,57%	57,14%	14,29%	0,00%	100,00%
mobile telephone	0,00%	0,00%	57,14%	14,29%	28,57%	100,00%
notebook/laptop or PC	14,29%	42,86%	28,57%	0,00%	14,29%	100,00%
Other	0,00%	100,00%	0,00%	0,00%	0,00%	100,00%
storage in the cloud	0,00%	100,00%	0,00%	0,00%	0,00%	100,00%
tablet/iPad	0,00%	42,86%	14,29%	28,57%	14,29%	100,00%
Suma końcowa	2,38%	52,38%	26,19%	9,52%	9,52%	100,00%
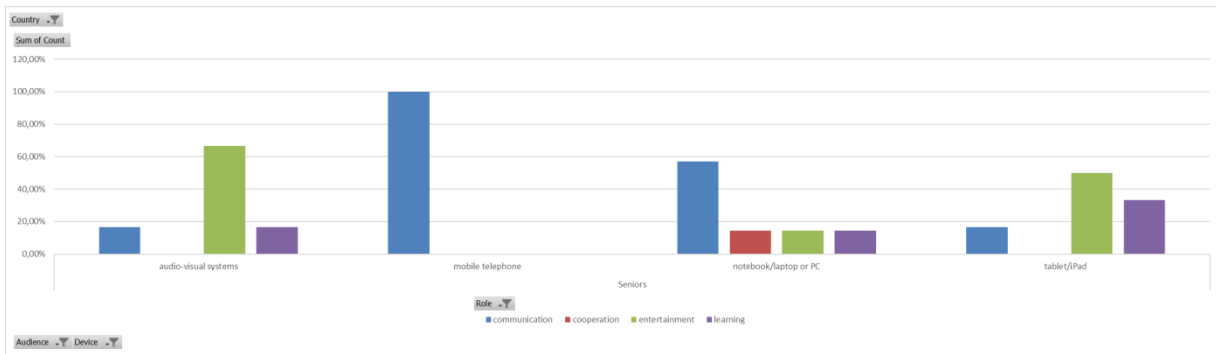
Figure 10. Frequency of the use of ICT devices among seniors after the course.

Intergenerational Learning

One of the aims of the endline survey was to find out what youth wanted to learn from seniors before the course and what they actually learned. Youth's expectations about intergenerational learning were connected with language and knowledge that would be useful to them when living in Sweden.

Youth:
"I wanted to speak Swedish" (7)
"For me was important to learn language and learn more about Sweden"
"about Swedish history" and learning learn about seniors and Swedish culture"
"I wanted to speak Swedish and learn about older people"
"to learn Swedish language and culture"
"I learn not to be shy when talking Swedish"
"Talk Swedish and learn more about Sweden."
"The language" (2)
"To speak Swedish and to learn about Sweden"
"Speak Swedish and learn about older people"

After the last meeting with the elderly, pupils were asked about the benefits of the course. They emphasized the language and practical information about Sweden. What was new, however, was that the pupils appreciated getting to know seniors and the life of the older generation of Swedes, which they had not expected before the course started:

Youth:
"I learned how the older Swedes live"
"I find out about life of older Swedish people"
"I learned how they live in Sweden"
"how it is to live in Sweden"
"Swedish culture and how the seniors live in Sweden"
"during the course I found out about everyday life of older generation in Sweden, their problems and concerns"
"Older generation of Swedes can be nice and it is interesting to talk with them"
"I learned how Swedes live in Sweden".
"Swedish and how the elderly lives in Sweden"
"How the older Swedes live here"

A recurrent topic of answers concerning intergenerational learning during the course was the exchange of knowledge of different cultures. Not only did seniors share information about Sweden with immigrant pupils, but also pupils provided some information about their countries of origin, for example:

Youth:
"Seniors learned a little about my homeland"
"they learned to search in internet and about Syria"
"pretty much about iPad and a little bit about my culture"

14

Our research under the project was aiming to determine the role of ICT in intergenerational learning. Pupils' perspective on intergenerational learning emphasises the significance of ICT tools for initial interactions and conversations. ICT tools gave both groups opportunities to get to know each other better despite language difficulties. In particular, apps like online translators facilitated interactions despite language problems. As youth told us:

Youth:
"iPad was important when I met the elderly. We had something to concentrate on"
"I could help older people with apps and we talked about iPad"
"iPad worked as a matter of talk"
"We had something to talk about, we leaded plenty conversations"

Both youth and seniors told us that ICT tools, apps and online resources had a clear effect on common understanding, offering an opportunity to introduce oneself, to learn about each other, and to exchange knowledge and skills. Our research shows that throughout the courses, ICT used as part of intergenerational learning changed its essence from serving as a catalyst, the trigger for intergenerational learning, towards facilitating intergenerational learning. Here are some opinions of youth:

Youth:
"The iPad was important in the beginning to have something to talk about"
"The iPads were important during meetings with the elderly"
"We had something in common to talk about during the courses"
"using apps like online translator, the conversations seem to be easier"
"internet offered opportunity to tell about own life, culture, customs, country"

Despite lack of good command of the Swedish language, thanks to the use of ICT devices and online resources youth were able to provide information about their home countries. ICT was an important tool for intercultural learning, exchanging information about one's own country, and using webpages with pictures and videos to share information.

Youth:
"We could "travel" together using iPad in the online space"
"It was easier to show pictures of our home countries"
"It became easy to show how our homelands is"
"they could show images from their lives"
"The elderly learned about my culture and I learned more about Sweden thanks to the iPad"
"it was easier to show pictures of our home countries"
"Through the iPad I was able to show my culture and the seniors showed me Sweden"
"we googled together about my country and I showed some pictures"

When we consider cooperation between immigrant pupils and native seniors, pupils did not have problems with cultural differences during the courses. The most challenging issue mentioned was language.

This is how youth presented it:

Youth:
"The only thing that separates people is the language"
"I had language difficulties, you have to know some Swedish to start the conversation"
"the differences are mostly about language"
"there is not much that differs me from Swedish seniors, mostly it is the language"
"we are more alike than different"
"There is not much that is different, maybe only the language"

A significant change that we noticed after the course among youth concerned their understanding of education. Firstly, they told us that after meetings with the elderly they realized that education was a lifelong process. Secondly, the change was also visible in the pupils' attitudes towards learning.

Youth:
"You can learn new things when you are old"
"You learn new things all the time"
"I'm more active in my language learning"
"I learn more by doing"
"You learn new things all the time"
"It's always good to meet people when you want to learn things"
"I always want to learn new things"
"You need knowledge to survive in life"
"I want to keep learning new things"
"You need knowledge to succeed"

Before the course started, we asked seniors about their expectations about it. Seniors told us that ICT was a learning opportunity, for example:

Seniors:
"We have something in common to work with when we meet"
"The device could help us to share things"
"We can meet each other and talk about things that are "new" to the seniors"
"the course and iPad helps to understand each other easier"
"It is an easy way to learn a new language. Easier to understand each other through Google translator"

Another issue we asked seniors about before the course was their expectations about ICT. Seniors told us about their needs regarding the development of technical skills.

Seniors:
"skills development",
"technical skills like image editing"
" how to find out informational online language learning",
"about also as a bridge that helps to understand generations".
"we are looking for sources of information"
"we can learn how to use different application of smartphones"
"search information in internet"

ICT tools were perceived by seniors as an opportunity to learn about others, to get to know youth, and to establish relationships with newly-arrived immigrant pupils, and as a reason to meet and talk.

Seniors:
"opportunities for learning"
"to gain new knowledge"
"to meet others"
"We have something in common to work with when we meet"
"We can meet each other and talk about things that are "new" to the seniors"
"the course can help us to share things"
"it is easier to understand each other"
"I think the device helped us to start a conversation"
"Digital devices gave us something to meet and talk about"

Interestingly, in their answers to the question about the course content, seniors referred not only to their needs but also to the needs of immigrant pupils. In the opinion of seniors, youth can benefit from seniors' experience concerning the reality of life in Sweden and their knowledge of living in Sweden.

Seniors:
"youth can learn from us Swedish language"
"learning to understand two generations"
"I can share life experience with pupils to help them better integrate in the neighbourhood"
"The course is an opportunity to meet and to tell about the country where I grew up, talking about our history"
"I will share with young immigrants my everyday life, for me meets with them is a chance to talk"
"I tell them about how it was in the past, about school, way of life and lack of electronics"
"The need for respect for adults and each other"

After the course finished, we asked seniors whether the course had met their expectations regarding learning opportunities. We were told that the course had been an opportunity to learn from youth how to use mobile devices.

Seniors:
"I learnt more about internet/apps/Facebook"
"Facebook, shopping on Blocket"
"I know now how to search in internet"
"I use now different functions on the iPad"
"I know how to use an iPad, functions and communication"
"I can switch on the iPad and to use apps"
"It is easy to search in internet and read newspaper online"
"I handle the computer better"
"Now I know to use an iPad and watch online TV"," a little more about the internet"
"I learned all I wanted"
"I know how to install apps, to send pictures and messages"
"I realize that I can do a lot more things digitally than before"

As it was already mentioned, seniors from the beginning assumed that the course would not only benefit them but also the youth. Through the questionnaire we wanted to learn what, in the opinion of seniors, youth learned from them during the course. Seniors told us that ICT tools helped youth communicate despite language differences and difficulties, and thanks to online resources they made cultural differences easier to explain and understand. The recurrent issue in seniors' answers was an improvement in the youth's language and interpersonal skills when interacting with the older generation.

Seniors:
"the students learnt more Swedish and language was making learning easier"
"they learned how to communicate in Swedish"
"the course gave us things to discuss"
"it was a good starting point to make contact"
"we had something in common to talk about"
"ICT was a common topic for us to talk about".
"ICT tools helped youth to overcome language difficulties"
"I think the device helped us to start a conversation"
"iPad made the contact with the students pleasant and interesting"
"it is so easy to connect online and talk using iPad"
"you can be helped by Google translate if you can´t understand each other and look at digital maps to learn about other countries"

Another issue we asked seniors about referred to learning with persons from different cultures. First we asked if seniors had any previous experience with cultural differences and then, after the course, how their experience evolved. What was surprising was the fact that neither seniors nor immigrant youth perceived the issue of cultural differences as a problem. Seniors admitted they had some previous experience of interacting with people from countries all around the world, for example:

Seniors:
"I used to be a football coach and met a lot of people from different culture"
"I have travelled a lot in many poor countries and met many different cultures"
"I have lived in another culture for 20 years"

According to seniors, meetings with immigrant youth during the course did not change their views about cultural issues, for example:

Seniors:
"I have the same opinion about cultural differences as I have had before"
"Young people gave us a lot of nice experiences"
"I feel better with immigrants. I liked meetings immigrant students and talk to them much more"
"I meet them in my neighbourhood and I learned a lot from them pupils I met at the course"

Additionally, during the courses seniors noticed that interactions with young immigrants were much easier than they had thought before the course started. Another change, in the opinion of seniors, was the pupils' growing involvement in the course.

Seniors:
"I experienced an increased self confidence in the students"
"I believe the students felt needed and got some insights about us "old people""
"there is no doubt it was nice for them to teach us elderly".

Another group that was in our focus during our research, were teachers working with immigrant youth, having work experience with immigrant youth at risk of early school leaving. Teachers being asked about possibilities of intergenerational learning and ICT towards support of immigrant youth, shared with us their thoughts, how to integrate ICT and learning youth together with the elderly towards social cohesion.

Teachers:
"Intergenerational learning is opportunity to exchange experiences and meet together"
"I believe both generations can learn from each other. Many who are 65+ have extensive knowledge, both in ICT and on society at large. A lot of newly arrived young people have good knowledge of new technology. If they are able to meet, they can exchange experiences for sure"
"Through ICT, there are many ways of exchanging experiences and knowledge, such as communication pathways, and language and technology can be developed both by pupils and seniors".
"In Sweden, society is largely digitized. Media such as newspaper, TV, radio and weather is accessible with updates on the Internet. The option of podcast to listen to afterwards or get a directly update following Instagram or Twitter. Book a doctor's appointment, the dentist or getting prescriptions are made digitally. Authorities like the IRS expect us to use digital services. Train, bus, flight, car parking, everything is booked and payed for through mobile devices. Interest and leisure activities like cinemas, gyms, spa, bowling, restaurants is also booked through mobile devices". Thus the intergenerational learning with ICT should be used towards digital inclusion"
"Today's students use digital tools daily and can therefore transfer this to seniors who are not upset with it. The students feel strengthened and confirmed that they have knowledge that older generations do not have. Pupils can teach their skills and get help with the language learning of the seniors".
"The digital technology is familiar to our young people, however, not all seniors possess this knowledge. Our elderly speaks Swedish well, which naturally does not make our new arrivals young people. To meet like this means that the

young people learn Swedish and the seniors learn ICT, and that it is a great social situation where young and older exchange experiences and have a nice time together"
 "ICT can unite seniors and newly arrived students in many ways. The newly arrived students are given the opportunity to train the language and learn other things from the seniors. Seniors get the opportunity to learn more about ICT and meet students from other countries and learn more about them. It will be a win-win situation that creates meaningfulness and motivation for continued learning".

Another issue we asked our teachers, related to intergenerational learning and ICT, was aiming to find out, how to motivate youth to take part in intergenerational learning with seniors. Teachers told us about leaving youth the decision about the content and structure of the course, giving them opportunities to participate in intergenerational learning through letting youth take the leading role.

Teachers:
"It is important that the teacher does not take too much space when the young people meet the seniors. The relationship must grow between the young people and the elderly without too much involvement of the teacher"
"teachers role is rather being a tutor, iIf necessary, teachers might bring youth notice onto making the content as simple as possible"
"The course needs to develop basic computer skills. How to use the computer as a natural tool when it comes to keeping in touch with relatives and friends, how to search different services on the internet. The possibilities are endless regarding your own personal interest, the computer has everything. Most new arrivals have good knowledge of IT and they can show seniors how to start searching and testing everything that the computer offers"

As all young people that took part in the "ICT Guide" project came from disadvantaged areas, they had immigrant background and were at risk of early school leaving, we thought that their whole involvement in the project would serve as a measure preventing them from leaving school earlier than their peers. Surveys with teachers focused on the issue of early school leaving. According to teachers, school plays an important role in reducing the rate of early school leaving among immigrant youth in Sweden. The biggest obstacle for immigrant youth in school is language, thus, as one of the teachers explained:

Teacher:
"language must play a central role in school. In all subjects, the language must be emphasized. If you speak the language of the country you live in, there open possibilities for you"

One of the aims of our research was to investigate the role of ICT in reducing the school dropout rate. Our teachers saw ICT as an opportunity to keep pupils within the education system, as in certain situations ICT offers better support for their learning process. One of them explained:

"Regardless of time, space and place, students are given the opportunity to be part of, participate in a learning environment. There are several tools by us that support this, like communication, e.g. PIM (Pingpong instant message), chat with classmates and teachers, information obtaining e.g. bulletin board, weekly letter, school activities, knowledge component e.g. flipped classroom, digital classroom with lesson material like audio files, presentation files, etc., presentation components e.g. Digital devices provide the student with tools to report knowledge levels in a variety of ways, and the formative assessment is a process and through Google documents one can follow comment/support the learner through learning, accessibility adjustments e.g. reading in several languages through educational platform, font for text for dyslexics, translation text-based documents can easily be pasted into Google translate".

Another teacher said:

"ICT provide students and educators with equal opportunities for continuous learning, it is a way of learning one to one, meaning one pupil with one teacher". Another person gave different example: *"Teachers can share lesson material and ensure that they maintain high quality through co-planning. Pupils can get help by watching film material produced by different teachers explaining in different ways and creating more variety"*
"ICT can good complement different teaching methods".

Teachers gave us several examples of how they used ICT in their teaching activities. They mostly integrate language apps and language programmes that students use to improve their language skills.

Teachers:
"learning with ICT involves in education also parents and teacher can quicker communicate with parents, also without asking them to come to school, teacher can present on the platform the performers (e.g. tests) of the child"
"With ICT school can gather everything about pupils' learning in a place where all educators, principals, students and parents have access into. Regardless of socio-cultural, religious, disability, gender background, the school is equivale for all students".

Teachers also saw the pupil-teacher relationship as essential for keeping immigrant youth in school. In the opinion of our respondents, both school and out-of-school activities play an important role in reducing early school leaving.

Teachers:
"our role is engage the students in learning in the school"
"perceive any student as individual, in their learning"
"to see the needs on students in learning"
"local sport clubs can attract youth"
"sport associations libraries and youth establishments have an important linguistic role after the school has closed for the day"
"Practicing language outside the school is important".
"In the education system should be made links between primary and secondary school levels to make the transition from one level to another easier"
"it is needed to be developed the network of native language teachers, youth police, child and adolescent psychiatry, healthcare - everyone needs to be included in networking around our young people to create a meaningful everyday life for them".
"The schools should be a meaningful school that engages students and gives them a hope for the future is an important task for me and all school leader as I see it".

Empowerment

The target group of the "ICT Guides" project was one of the most vulnerable groups in Europe – newly immigrant children (0-5 years in the country of concern) in the age range of 12-16 years. One of the reasons young immigrant pupils took part in the course was their desire to improve their language skills. The research results showed improvement of communication skills (81.82% agreed and 18.18% strongly agreed with the statement "My communication skills improved"), particularly in speech (72.73% agreed and 27.27% strongly agreed with the statement "I am able to talk well with others"). Another area of improvement in the opinion of young immigrants covered their social skills, and in particular comfort level of cooperation with older generation adults (examples: "I feel I work better with others", "I like to talk with Swedish seniors", "This was my first meeting with older Swedes and that was very positive", "I found out we have the same interests").

In addition to communication and social skills, participation in the ICT course with seniors changed young immigrants' attitudes towards school education. 45.5% agreed and strongly agreed that after the course they believed that doing well at school was important for their future life. They admitted taking more responsibility for doing school work independently (54.55% agreed and 45.45% strongly agreed with the statement "I take responsibility for doing my school work independently without teachers always telling me what to do"), in order to be better students (45.45% agree and 36.36% strongly agreed with the statement "Most teachers and students at my school would agree I'm a better student than before I started the course"). They also felt more motivated to do better at school (72.73% strongly agreed that taking part in projects like "ICT Guides" motivates them to do better at school). Another added value of the youth's participation in the course was increased confidence (54.55% agreed and 45.45% strongly agreed with the statement "My self-confidence increased").

Nearly 73% of pupils from Sweden were satisfied with the course content. 54.55% of them said that the course fulfilled their expectations and was informative. 63.64% of pupils perceived the course as useful. The course helped 27.27% of pupils to develop positive relationships with seniors, and 45.45% will use the knowledge gained during the ICT course in their lives.

Our project assumed that young people in strong youth-adult partnerships with seniors take over the roles that – under different circumstances – are performed by adults, which results in raising the level of their personal empowerment and has a positive effect on the sense of connectedness with people and places in their neighbourhood. As the youth participating in the ICT Guides project came from disadvantaged areas and were at risk of early school leaving, we thought that their whole involvement in the project would serve as a measure preventing them from leaving school earlier than their peers.

The change in the involvement in the project was reported by youth, teachers and other supporting staff working on the courses. After the courses finished, we conducted informal interviews with teachers and headmasters involved in the courses, trying to gather information and learn about their experiences. Teachers told us that they initially saw seniors' scepticism, but it soon turned into openness towards the younger generation and appreciation for the pupils' teaching skills and patience in providing information. Throughout the course one could clearly see students' openness towards all technical questions and sharing information about their families and life experiences. "*I admire the courage of the newly arrived pupils who proudly stood up and gave a speech about themselves at the first occasion,*" said one teacher involved in the course. Another teacher, when telling about their experiences with one of the courses, mentioned the "*pride of the students to be listened to that increased throughout the course. The way they were talking changed, their posture became straighter, they smiled more and more from one course to another*".

During the courses, seniors' requests to let pupils develop and conduct the courses were taken into consideration. The teachers only served supporting roles as teaching advisors for the youth, offering consultations on the curriculum planned or carrying out course evaluation, when needed. The course was a very emotional experience for the pupils and it affected their well-being, for example:

Youth:
"Before the course I felt a bit happy, now it feels amazing. Before the course I was not sure about myself and now I'm very happy with myself"
"First I was nervous, now I feel proud"
"In the beginning I was not sure if I am doing everything correct, but now, I am pleased with the work I done for seniors in the course"
"I feel good and proud of myself"

Students told us they were satisfied with the content of the course (25% strongly agreed and 61.36% agreed with the statement "I am satisfied with the content of the course"). In their opinion, the course was informative (9.09% strongly agreed and 13.64% agreed with the statement "The ICT course was informative"), useful (9,09% strongly agreed and 15.91% agreed with the statement "The ICT course

was useful)", and it fulfilled their expectations (25% strongly agreed and 2.27% agreed with the statement "The ICT course fulfilled my expectations").

After the course, young immigrants felt that the activities helped them develop positive relationships with seniors (27.27% strongly agreed and 13.64% agreed with the statement "I feel the activities helped me develop positive relationships with seniors"). Moreover, 22.73% agreed and 18.18% strongly agreed with the statement "I will be able to use the knowledge I have gained during the ICT course in my life".

Sum of Count	agree	neither disagree nor agree	strongly agree	Suma końcowa
⊟ General Information about the Course	61,36%	13,64%	25,00%	100,00%
⊟ Pupils	61,36%	13,64%	25,00%	100,00%
I am satisfied with the content of the course	18,18%	2,27%	4,55%	25,00%
The ICT course fulfilled my expectations	13,64%	9,09%	2,27%	25,00%
The ICT course was informative	13,64%	2,27%	9,09%	25,00%
The ICT was useful	15,91%	0,00%	9,09%	25,00%
Suma końcowa	61,36%	13,64%	25,00%	100,00%

Figure 9. Youth's opinions about the course in the area of "General Information About the Course".

Sum of Count	agree	neither disagree nor ag	strongly agree	not agree	Suma końco
⊟ Knowledge	36,36%	9,09%	45,45%	9,09%	100,00%
⊟ Pupils	36,36%	9,09%	45,45%	9,09%	100,00%
I feel the activities helped me develop positive relationships with seniors	13,64%	4,55%	27,27%	4,55%	50,00%
I will be able to use the knowledge I have gained during the ICT course in my life	22,73%	4,55%	18,18%	4,55%	50,00%
Suma końcowa	36,36%	9,09%	45,45%	9,09%	100,00%

Figure 11. Youth's opinions about the course in the area of "Knowledge".

The course empowered youth with regard to school learning. After the course, 18.18% of them agreed and 45.45% strongly agreed that they believed that doing well at school was important for their future life. 36.36% agreed and 45.45% strongly agreed that teachers and peers at their school would agree they were better students than before the course. Additionally, 45.45% agreed and 54.55% strongly agreed to take responsibility for doing their schoolwork independently, without teachers.

Youth felt empowered by intergenerational learning in their communication skills. 18.18% agreed and 81.82% strongly agreed that their communication skills had improved. 27.27% agreed and 72.73% strongly agreed with the statement "I am able to talk and communicate well with others", while 54,54% agreed and 45.45% strongly agreed with the statement "My self-confidence increased". It needs to be noted that none of the pupils that took part in the survey neither disagreed nor strongly disagreed with this particular statement. Apart from communication skills, another area of empowerment noticed by youth within intergenerational learning covered interactions with seniors. 45.45% agreed and 45.45% strongly agreed with the statement "I would like to collaborate in some way with seniors I met during the course". An important area of intergenerational learning throughout the course was connected with intercultural competencies. 45.45% agreed and strongly agreed with the statement "The participation in the course improved my comfort level with cultural differences". The course had an effect on the youth's sense of belonging to the community. 18.18% agreed and 72.73% strongly agreed with the statement "In the neighbourhood where I live, I feel that I belong to the group of friends". Another added value of the course was, in the opinion of youth, preparation for adult life. 18.18% agreed and 45.45% strongly agreed with the statement "The course prepared me for adult life". 36.36% agreed and 54.55% strongly agreed to recommend the course to their peers. The course, however, did not affect reading or writing skills of young immigrant pupils (27.27% agreed, 54.55% neither disagreed nor agreed and 18.18% disagreed that it improved their reading skills, while 81.82% neither disagreed nor agreed and 18.18% disagreed with the statement "I improved my writing skills").

Sum of Count	agree	neither disagree nor	strongly a	not agree	Suma koń
Attitudes	**46,06%**	**16,36%**	**32,73%**	**4,85%**	**100,00%**
Pupils	**46,06%**	**16,36%**	**32,73%**	**4,85%**	**100,00%**
I believe that doing well at school is important for my future life	45,45%	27,27%	18,18%	9,09%	100,00%
In my neighborhood where I live, I feel that I belong to a group of friends	72,73%	9,09%	18,18%	0,00%	100,00%
Most teachers and students at my school would agree I'm a better student than before I started the course	45,45%	9,09%	36,36%	9,09%	100,00%
I would like to collaborate in some way with seniors I met during the course	45,45%	9,09%	45,45%	0,00%	100,00%
The participation in the ICT course improved my comfort level with cultural differences	45,45%	9,09%	45,45%	0,00%	100,00%
My communication skills improved	81,82%	0,00%	18,18%	0,00%	100,00%
My computer skills improved	36,36%	27,27%	36,36%	0,00%	100,00%
I believe that taking part in projects like "ICT Guides" motivates me to do better at school	9,09%	18,18%	72,73%	0,00%	100,00%
My reading skills improved	27,27%	54,55%	0,00%	18,18%	100,00%
I would recommend taking part in a ICT course to others in my age	54,55%	0,00%	36,36%	9,09%	100,00%
The course prepared my for adult life	45,45%	0,00%	45,45%	9,09%	100,00%
I take responsibility for doing my school work independently without teachers	54,55%	0,00%	45,45%	0,00%	100,00%
My self confidence increased	54,55%	0,00%	45,45%	0,00%	100,00%
I am able to talk and communicate well with others	72,73%	0,00%	27,27%	0,00%	100,00%
My writing skills improved	0,00%	81,82%	0,00%	18,18%	100,00%
Suma końcowa	**46,06%**	**16,36%**	**32,73%**	**4,85%**	**100,00%**

Figure 12. Youth's opinions about the course in the area of "Attitudes".

Sum of Count	agree	neither disagree nor	strongly a	not agree	Suma koń
Attitudes					
Pupils					

Introduction

Spain (the Kingdom of Spain) is a country located in south-western Europe on the Iberian Peninsula. This geographical location favoured the influx of immigrants, especially from the Middle East. There had always been immigrants in Spain, but in the last decade of the twentieth century immigration gained more significance in demographic, economic and social terms. According to INE (Instituto Nacional de Estadistica), Spain is inhabited by about 6 million foreigners, accounting for 12.1% of the country's population. Soeren Kern from the Gatestone Institute International Policy Council is of the opinion that:

Spain is on track to overtake Greece as the second-biggest gateway for migrants entering Europe by sea. The sudden surge in migration to Spain comes amid a crackdown on human smuggling along the Libya-Italy sea route, currently the main migrant point of entry to Europe. The westward shift in migration routes from Greece and Italy implies that Spain, situated only ten miles from Africa by sea, may soon find itself at the centre of Europe's migration crisis. More than 8,300 illegal migrants have reached Spanish shores during the first seven months of 2017 — three times as many as in all of 2016, according to the International Organization for Migration (IOM). Thousands more migrants have entered Spain by land, primarily at the Spanish enclaves of Ceuta and Melilla on the north coast of Morocco, the European Union's only land borders with Africa. Once there, migrants are housed in temporary shelters and then moved to the Spanish mainland, from where many continue on to other parts of Europe. In all, some 12,000 migrants have arrived in Spain so far this year, compared to 13,246 for all of 2016. By comparison, 14,156 migrants have arrived in Greece so far in 2017. Italy remains the main migrant gateway to Europe, with around 97,000 arrivals so far this year, compared to 181,436 for all of 2016. Italy has been the main point of entry to Europe since the EU-Turkey migrant deal, signed in March 2016, shut off the route from Turkey to Greece, at one time the preferred point of entry to Europe for migrants from Asia and the Middle East. Almost 600,000 migrants have arrived in Italy during the past four years (Kern, 2017).

Whereas in the opinion of Carmen González Enríquez from the Royal Institute ELCANO:

Spain can boast of having integrated a wave of migrants of singular size and intensity into its society, unaccompanied by social conflicts of any note or by the emergence of xenophobic movements. It is still, however, a long way from the countries where first-generation immigrants and their offspring have secured prominent roles in public life" (Enríquez, 2016).

The geographical location of Spain is conducive to the influx of illegal immigration by sea. This is the most difficult way to get into the "new homeland" chosen by the arrivals of North and West Africa mainly from Mauritania and Senegal. Many of them never reach their destination as they die during the journey, not able to endure such hardships. Those who succeed are often exhausted and dehydrated. Almost every day, the Spanish Guardia Civil stops people who have arrived or tried to enter the Peninsula or the Spanish enclave illegally. This means that Spain, similarly to other Western European countries, is struggling with the problem of social integration of immigrants. Therefore, it is worth looking for solutions and actions that will allow to integrate immigrants into Spanish society.


Photo: DGI-CM – Dirección General De Inmigración, Comunidad De Madrid (Spain)

ICT Tools

At the beginning of the courses, pupils were asked about their ideas of a perfect school. In their opinion, a perfect school should be well-equipped with ICT and it should ensure good interpersonal relationships and a friendly atmosphere. To the question: "How do you imagine a perfect school?" they replied (some answers):

With a computer for each student and uniform.
a school where they leave 15 minutes of free time
well without duties, because a level of perfection varies with respect to the different points of view of each person
with more free time
good teachers, few homework and more recess
without too much pressure
good communication and good atmosphere
A school in which you want to go to learn every day in a fun and innovative way.
With the best students and teachers
a perfect school would be a school in which learning would be easy to understand and there would not be so many hours of study
No, there is no perfect school because in the world there is nothing perfect.
Carrying the tablet, so as not to carry so many books
computer instead of books

Pupils were asked about the role ICT tools play in their lives. Their answers were as follows:
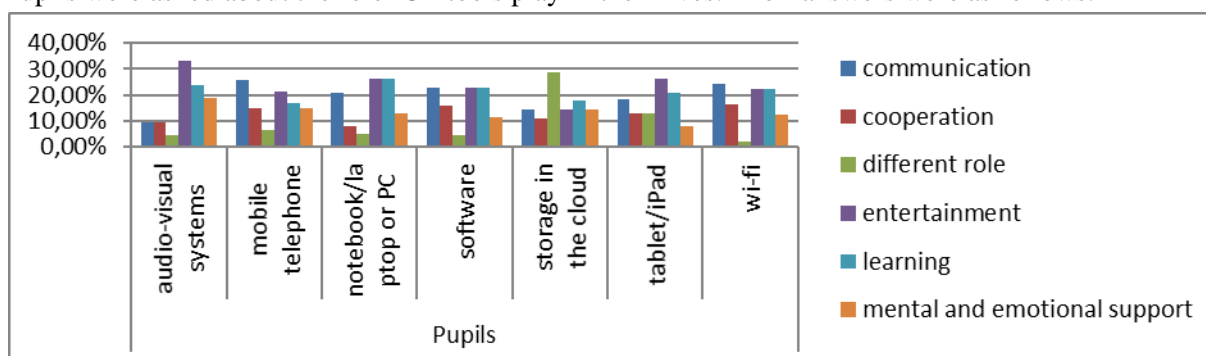

	communication	cooperation	different role	entertainment	learning	m. & e. support
Pupils	**19.93%**	**12.94%**	**8.04%**	**24.13%**	**21.68%**	**13.29%**
audio-visual systems	9.52%	9.52%	4.76%	33.33%	23.81%	19.05%
mobile telephone	25.53%	14.89%	6.38%	21.28%	17.02%	14.89%
notebook/laptop or PC	21.05%	7.89%	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%**

Figure 13. The role of ICT tools in pupils' lives.

These opinions say something important about the students' idea of school and about their learning styles and preferences. A relatively large group of pupils use ICT tools to learn, communicate and as a mental and emotional support. Based on these answers, it can be concluded that the use of ICT tools in intergenerational learning seems to be a good solution from the pupils' point of view.

Answers given by the pupils to the question about the frequency of ICT tools use were as follows:
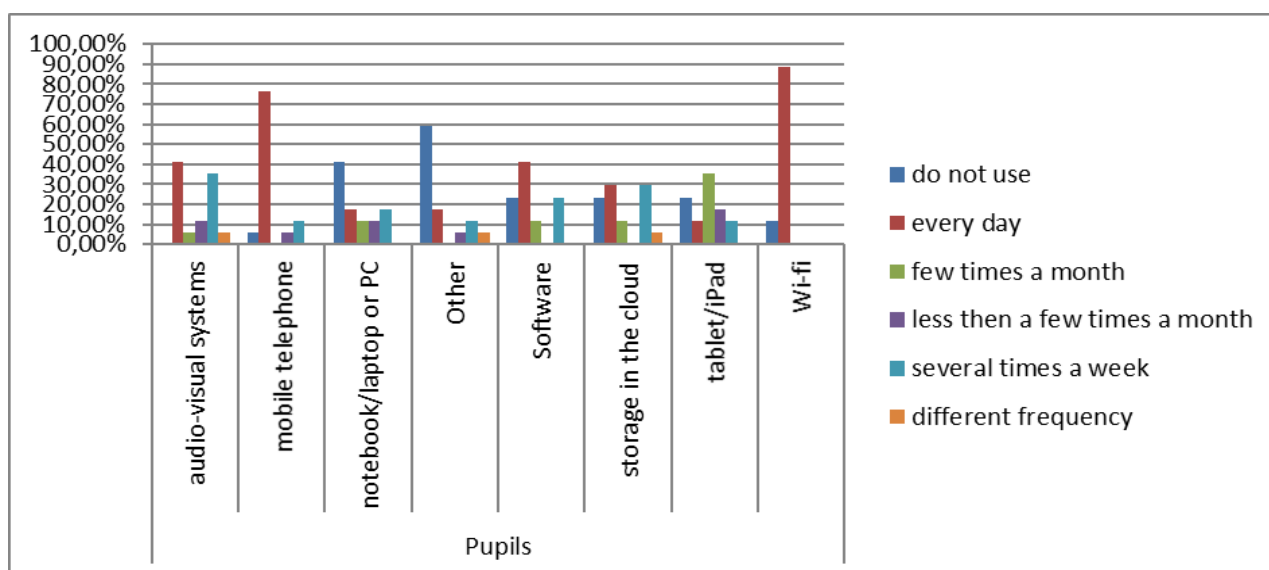
	do not use	every day	a few times a month	less than a few times a month	several times a week	different frequency
Pupils						
audio-visual systems	0.00%	41.18%	5.88%	11.76%	35.29%	5.88%
mobile telephone	5.88%	76.47%	0.00%	5.88%	11.76%	0.00%
notebook/laptop or PC	41.18%	17.65%	11.76%	11.76%	17.65%	0.00%
Other	58.82%	17.65%	0.00%	5.88%	11.76%	5.88%
Software	23.53%	41.18%	11.76%	0.00%	23.53%	0.00%
storage in the cloud	23.53%	29.41%	11.76%	0.00%	29.41%	5.88%
tablet/iPad	23.53%	11.76%	35.29%	17.65%	11.76%	0.00%
Wi-fi	11.76%	88.24%	0.00%	0.00%	0.00%	0.00%
Total	**23.53%**	**40.44%**	**9.56%**	**6.62%**	**17.65%**	**2.21%**

Figure 14. Pupils' frequency of ICT tools use.

Seniors were also asked the question about frequency of ICT use.
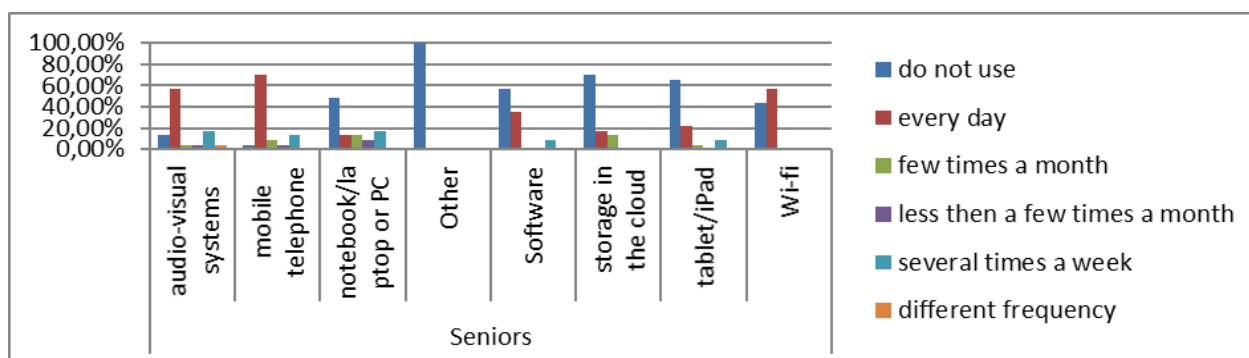
	do not use	every day	a few times a month	less than a few times a month	several times a week	different frequency
Seniors						
audio-visual systems	20.00%	40.00%	0.00%	0.00%	30.00%	10.00%
mobile telephone	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%
notebook/laptop or PC	60.00%	30.00%	10.00%	0.00%	0.00%	0.00%
Other	90.00%	10.00%	0.00%	0.00%	0.00%	0.00%
Software	50.00%	30.00%	0.00%	10.00%	10.00%	0.00%
storage in the cloud	30.00%	50.00%	0.00%	0.00%	10.00%	10.00%
tablet/iPad	40.00%	30.00%	20.00%	10.00%	0.00%	0.00%
Wi-fi	0.00%	80.00%	10.00%	0.00%	0.00%	10.00%
Total	**36.25%**	**46.25%**	**5.00%**	**2.50%**	**6.25%**	**3.75%**

Figure 15. Seniors' frequency of ICT tools use.

Assuming that the pupils' opinions expressed their true experience, it can be concluded that ICT tools can accumulate, facilitate and intensify intergenerational learning. There was little variety in the role of ICT tools in the pupils' lives, which means that different types of ICT tools play similar roles in their lives. However, there was a large variety in the frequency of ICT tools use, both among children and seniors. Some ICT tools are used every day, but other only a few times a month. Pupils often use mobile telephones, Wi-Fi and software, whereas seniors predominantly use "other" (DAB – Digital audio broadcasting), which does not happen in the case of pupils at all.

Generally, the participation of pupils and seniors in ICT courses had a significant effect on the role ICT tools played in their lives.
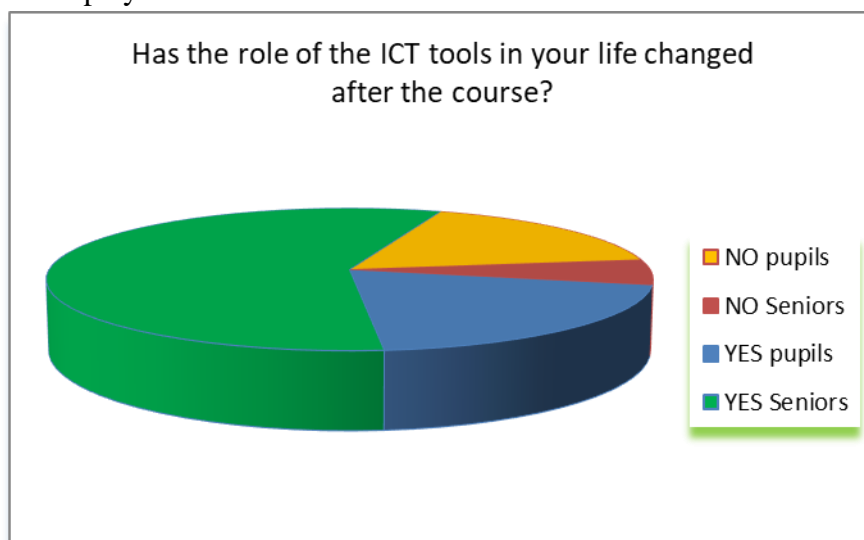
NO	22.86%
pupils	17.14%
seniors	5.71%
YES	**77.14%**
pupils	20.00%
seniors	57.14%

Figure 16. The role of the ICT tolls

Why "yes":

he increased his self-confidence
they were happy
I've seen them very nice
has met other people
better understanding
because they stay busy and away from being in the streets
because they relate more
Because it is a medium where they can connect with their family and friends

Why "no":
no much

Finally, to the question *What is the role of ICT tools in intergenerational cooperation (learning) in your opinion?*, they answered:

important (3)
it is useful (2)
practice
good so you learn to understand people
a good option
It's been a bit difficult because the woman we taught spoke English
I think it's a great idea because you can learn a lot in this type of activities.
What would be better if there were more ICT tools for learning, and not just applications? Within these tools, which are useful for many other things, such as mobile
Very useful for those people who are not well integrated in new technologies
I think it's a good way to make both generations (adults and teenagers) cooperate and learn from each other
very good I would open up that more often and with some prize to motivate young people.
The truth is that it has not been very difficult because some things I know but I want to learn more

Based on the quantitative and qualitative analysis of data from the courses conducted in Spain, the following ICT functions in inter-generational learning can be indicated:

- *The educational function* is based on the fact that ICT extends the cognitive field of learners through the wide-spread reality available to them, while at the same time developing their perceptual, intellectual and executive processes. Young immigrants learned what they would not otherwise be able to reach (history, customs, behaviour, mentality);

- *The emotional function* is strongly associated with the cognitive-educational function. ICT not only provokes strong intellectual experiences, but also emotions, emotional and expressive experiences, thus stimulating commitment, curiosity and interest in the teaching material. There is a close relationship between emotions and motivation. This is why ICT, affecting the emotional sphere of a human being, triggers specific motivational processes. Learning without proper emotions and motivation is ineffective (theory of three dimensions of learning developed by Knud Illeris);

- *The communication function* consists in the fact that ICT tools, like no other media (e.g. a radio receiver), not only transmit messages, but also enable mutual communication and dialogue that stimulates intellectual development and language learning.

Intergenerational Learning

The intergenerational learning courses were conducted in the capital of the country – Madrid. The age and sex of pupils taking part in the courses were as follows:
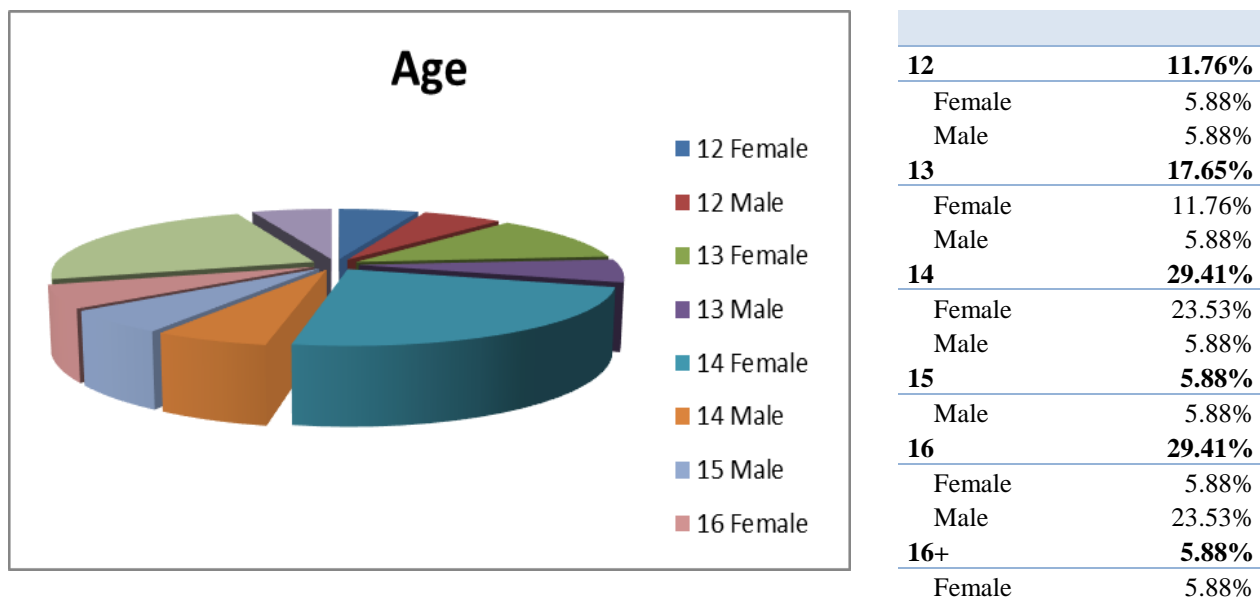

12	**11.76%**
Female	5.88%
Male	5.88%
13	**17.65%**
Female	11.76%
Male	5.88%
14	**29.41%**
Female	23.53%
Male	5.88%
15	**5.88%**
Male	5.88%
16	**29.41%**
Female	5.88%
Male	23.53%
16+	**5.88%**
Female	5.88%

Figure 17. Pupils' age

The biggest groups were girls at the age of 14 and boys at the age of 16. Pupils cooperated with seniors aged 60-89 (14 persons).

Firstly, the students were asked to express their expectations about the courses, and then to express their opinion after the courses finished. According to the pupils' answers, the intergenerational learning courses met their expectations.

What did you want to learn from seniors during the ICT course?	What did you really learn?
know them better *Cook* *History of Spain* *nothing special* *to be nice* *relate better* *how things were done before to entertain themselves* *new experiences* *I don't know* *Not because I have already learned everything I wanted to know about them.* *The truth I have only learned that this generation of young people is more advanced* *Experience of the elderly* *I would have liked to learn things or to share with me more knowledge* *give advice* *your learning and your knowledge*	*communicate better (2)* *new app* *new programs* *improve relationships* *Spanish* *to help the elderly* *life advice* *Computing* *His way of thinking when technology was not so advanced.* *My ability to teach others* *To see life in another way as they lived it* *I wanted to learn to have more patience and to explain things in a simple way, so that, in the future, it would be even easier for me to express myself* *communication with the elderly* *I like IT because I love computers and I would like to learn more than I know*

The students felt well both as learners and as teachers. This experience could help them feel important to the local community and build up their self-esteem. At the same time, it could be perceived as a kind of obligation to respond in a lasting way to the past and to take co-responsibility for the future.

What seniors wanted to learn from you?	What seniors really learned from you?
manage on the internet	*use Skype*
use the Internet	*to understand the technology*
work on computer	*more information about ICT*
search information on the internet	*What was on the sheet*
use computer	*They have learned how to use and how to take*
Internet	*advantage of new technologies.*
how to use interne, make accounts and understand the	*How advanced we are and what we can get to teach*
new generation	*them today*
how to manage ICT	*More experience of new technologies*
Share images	*within what can be used or coped with better*
I believe that older people wanted to learn from me	*new formations of tic.*
the use of new technologies and their use in everyday	*my wisdom*
life	
My knowledge about new technologies	
to better use ICT	
to use the tic tools correctly	
my knowledge about the new technologies.	
my good to be	

Seniors were asked the same questions.

What do you want to teach pupils during the ICT course?	What did you learn from pupils?
something about how we are in Madrid	*More things (2)*
good manners,	*connect me on skype*
what I learned in my life course and also share what	*use internet*
my experience was like	*use some tools*
I am not a teacher	*look for documents, addresses of institutions ....*
my way of communicating when the technology was	*better manage the computer*
not so advanced	*has made better use of new technologies*
	I learned to handle the 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 easier

Considering these answers, it seems that intergenerational learning is relative in the sense that it depends on the point of view, life experiences and expectations. It the same situation, the subject of learning can be different. This means that intergenerational learning is a process that is socially constituted and developed by people. Intergenerational learning helps overcome the isolation of elders and the youth's sense of being misunderstood, helps one find oneself in a comprehensive way and change family and social relations.

Intergenerational courses conducted in Madrid offered some possibilities of mobilising talents, skills, energy and resources of older and younger people. The courses helped us view older people and students as potential, and not a burden. They connected generations, appreciating and using their unique capabilities. Intergenerational activities are part of the task of strengthening

(empowering) social capital and reducing the potential for conflict as a result of increasing segregation and age fragmentation in the contemporary society.

The most important achievements of the intergenerational learning courses in Madrid included:

- Strengthening harmony between members of two generations;
- Reinforcing self-esteem and satisfaction with life among participants;
- Building social capital;
- Opening a new approach in thinking about other generations and in working with them, and finding our (local governments', authorities', teachers', researchers') place in these processes;
- Empowering individuals and groups.

In conclusion, the courses were successful to the extent they were carried out. The experience from these courses is also valuable because it will help to conduct similar courses in the future and counteract the ESL phenomenon more effectively.

Empowerment

At the beginning of the courses, pupils and seniors expressed their willingness to share knowledge, skills and competencies with the other generation. Asked *What would you like to learn from the seniors?*, pupils gave the following answers:

Culture.
language and history
all
your culture
tell us things we do not know
His way of seeing things
nothing
mathematics
their point of view
life advices
Your point of view about things
Your knowledge
I would love to learn about what life was like in his time
your life experiences
Your way of seeing the world
The kitchen

These answers show that the pupils' expectations were mostly connected with culture. It results from the fact that they feel insecure in the sphere of culture, and this is the area they need support in. They can be supported by implementing the empowerment idea, represented in intergenerational cooperation by ICT tools. As the research results presented above show, intergenerational relations and intergenerational learning are favourable circumstances for empowerment. During the courses learning took place, but in many cases it was something more than learning; these were educational situations in which pupils and seniors were not only participants but also organisers. This is visible in quantitative data, but especially in the pictures taken during the courses. The experience of being a part of an educational community adds strength to overcome life problems and it is a source of positive emotions that can be missing from the lives of pupils and seniors. It is also a favourable situation for integration, not only generational but also social and cultural. The courses were too short and there was no possibility of following the students' further educational paths, therefore it is impossible to responsibly determine the actual impact of ICT tools and

intergenerational learning on ESL. However, it is highly probable that for most of the immigrant pupils participation in the courses was a chance to get to know the cultural context of the local community. This conclusion is confirmed by the comparison of students' statements from before and after the courses:

What experiences about cultural differences do you have at the beginning of the course?	What experiences about cultural differences do you have now, after the ICT tools course has finished?
good because I had fun *new experiences* *I learn more* *I have always had good experiences about other cultures since I have always liked people with other cultures because you learn many things about their culture and their way of thinking and seeing things.* *Any* *Friendship* *there are people who are not tolerant with people from different countries, cultures ...* *any.* *I learn more*	*good because I have learned more and to meet new people* *the coexistence* *I have learned more* *I have the same experience only with a little more contact with people from other deferent countries.* *The way he talks and especially writes* *I have lived understanding and they have helped me communication and maintenance* *that I have learned more than I know*

Based on these answers, it seems that participation in the courses was a positive educational experience for immigrant pupils, which can motivate them to learn and graduate.

Introduction

One of the countries where the ICT courses for seniors were organised was Germany. In the year 2016, 18.6 million people with migrant backgrounds lived in the country with the population of 82.6 million (as of 31.03.2017, source: Statistisches Bundesamt www.destatis.de). In the year 2016, there were 8.2 million foreigners in Germany (as of 2016, source: Statistisches Bundesamt www.destatis.de).

The Federal Statistical Office (Destatis) reports that from 2005 people with a migrant background has continued to clearly differ from those without a migrant background in terms of education, labour market and income. There are stable differences in a long-term comparison between early school leavers in Germany[3] with and without immigrant backgrounds. From 2005 to 2016, there were consistently around 4% of dropouts without a migration background. For youth with immigrant backgrounds, the number fell from 10.6% in 2005 to 8.3% in 2011, and then grew to 12.1% by 2016. The recent increase was caused by the increased immigration of low-educated people: between 2011 and 2016, the proportion of immigrants rose from 8.9% to 16.1%. By contrast, the proportion of people born in Germany with a migrant background remained largely constant over the entire period: in 2016 it was 6.7%.

Since 2015, Germany has been the focus of one of the largest migration movements in Europe. In last three years, up to 2018, more refugees have arrived in Germany than anywhere else in the EU. According to Eurostat[4], in the third quarter of 2017 Germany had the highest number of first-time asylum applicants registered (28% of all applicants in EU Member States), followed by Italy (20%), France (14%), Greece (9%) and Spain (5%). On account of a large number of those entering Germany, the receiving society faces challenges and changes in different areas, trying to help newcomers with accommodation, education and labour market systems.

One of the most important areas concerns school and education in general. Foreigners that drop out of school in Germany are four times less likely to find a job than Germans in the same situation. The influx of refugee children has exacerbated the problem[5]. Thus, the project "ICT-Guides" was developed as a prevention strategy and action, and a response to the challenge of incorporating refugee children into school life.

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[3] Following Destatis, early school leavers are youth between 18 and 24 years of age without a school-leaving certificate.

[4] http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_quarterly_report

[5] Webpage of Deutsche Welle http://www.dw.com/en/german-schools-face-the-challenge-of-integration/a-38610716 [date of access 14.03.2018].

Information About the Courses

From September 2016 to June 2017, four courses were conducted in Berlin in cooperation with two schools: *Alfred Nobel Schule* and *Fritz Karsten Schule*, and one meeting place for the elderly *Haus der Lebensfreude*. The survey covered 19 youth (9 females and 10 males) aged 14-15 years and 15 seniors aged 70-85 years.

Course No. 1

Dates (beginning – finish)	02.2017 - 07.2017
Place/Institution where the course took place	Alfred Nobel Schule
Number of pupils that took part in course no. 1	5 (+1 only few times)
Number of seniors that took part in course no. 1	5

Course No. 2

Dates (beginning – finish)	09.2017-02.2018
Place/Institution where the course took place	Alfred Nobel Schule
Number of pupils that took part in course no. 2	5
Number of seniors that took part in course no. 2	5

Course No. 3

Dates (beginning – finish)	November 2016 – June 2017
Place/Institution where the course took place	Fritz Karsten Schule
Number of pupils that took part in course no. 3	5
Number of seniors that took part in course no. 3	3

Course No. 4

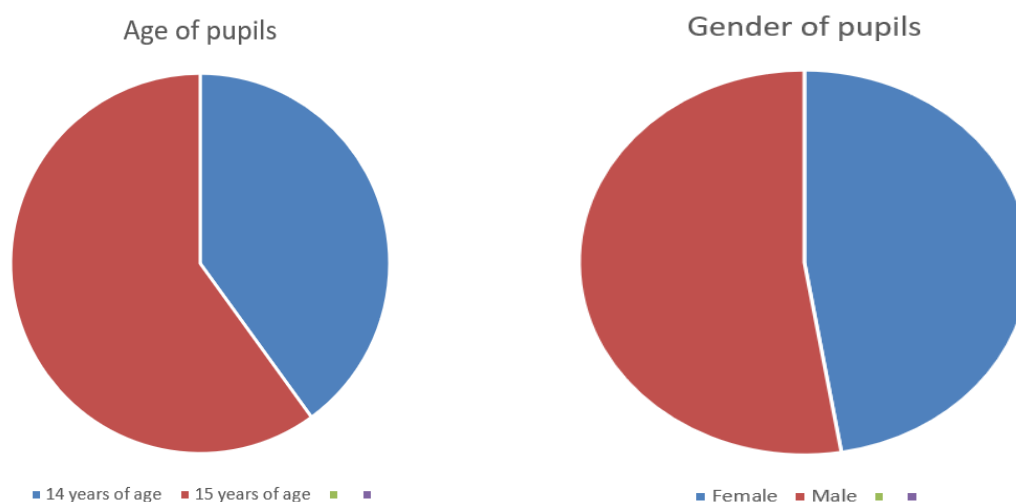| Dates (beginning – finish)	September 2017 – January 2018
Place/Institution where the course took place	Fritz Karsten Schule
Number of pupils that took part in course no. 4	3
Number of seniors that took part in course no. 4	2

Figure 18. Age and gender of pupils.

ICT Tools

One of the aims of the research was to identify and compare pupils' and seniors' preferences with regard to ICT tools. Based on the total of 19 baseline survey questionnaires submitted by youth and 15 baseline survey questionnaires submitted by seniors we learned that the most popular ICT tool among immigrant youth was a mobile phone (87.5% of pupils used it every day and 12.5% a few times a week). Also audio-visual systems (50%), storage in the cloud (18.75%), notebook/laptop or PC (12.5%) and tablet/iPads (6,25%) were used every day.

| sum of Count	do not use	every day	few times a month	less then a few times a month	several times a week	different frequency	Suma końcowa
⊟Pupils							
audio-visual systems	18,75%	50,00%	0,00%	6,25%	25,00%	0,00%	100,00%
mobile telephone	0,00%	87,50%	0,00%	0,00%	12,50%	0,00%	100,00%
notebook/laptop or PC	12,50%	12,50%	31,25%	18,75%	18,75%	6,25%	100,00%
storage in the cloud	25,00%	18,75%	6,25%	25,00%	18,75%	6,25%	100,00%
tablet/iPad	18,75%	6,25%	6,25%	37,50%	25,00%	6,25%	100,00%
Suma końcowa	15,00%	35,00%	8,75%	17,50%	20,00%	3,75%	100,00%
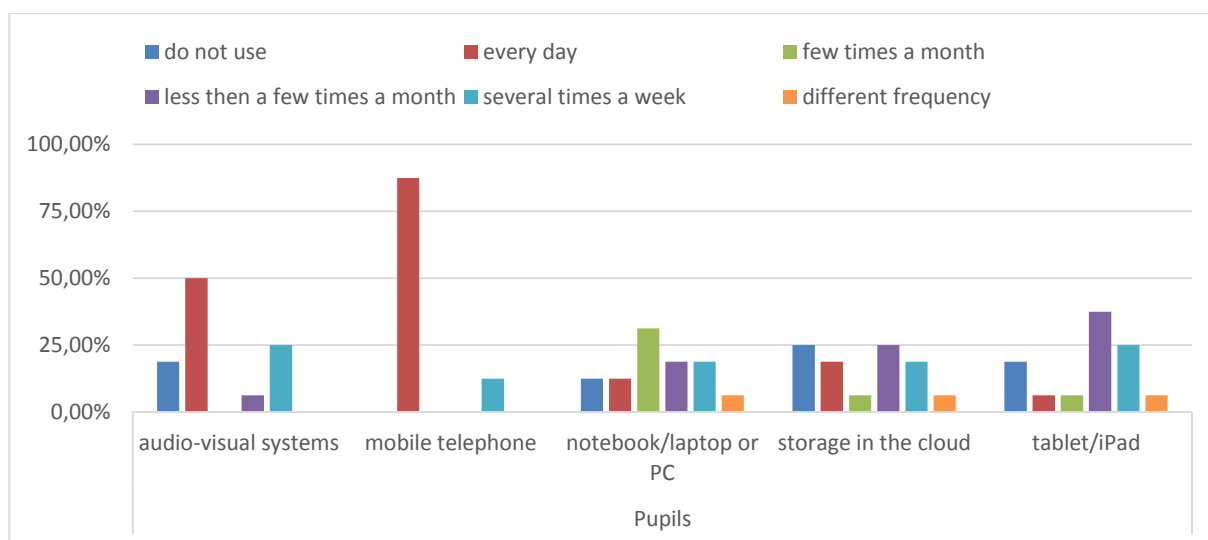
Figure 19. Frequency of ICT devices use among youth from Berlin before the course.

Before the course, mobile phones were used for communication (30.3%), entertainment (27.27%), learning (15.15%), emotional or emotional support and entertainment (12.12%). Tablets/iPads were mainly used for entertainment (32%), learning (28%), communication and cooperation (12%), while notebooks, laptops or PCs were used for entertainment (32.35%), learning (26.47%), and communication and cooperation (14.71%).

| sum of count	communication	cooperation	different role	entertainment	learning	mental and emotional support	End sum
⊟Pupils	16,77%	13,17%	8,38%	29,94%	20,96%	10,78%	100,00%
audio-visual systems	3,85%	7,69%	15,38%	38,46%	19,23%	15,38%	100,00%
mobile telephone	30,30%	12,12%	3,03%	27,27%	15,15%	12,12%	100,00%
notebook/laptop or PC	14,71%	14,71%	0,00%	32,35%	26,47%	11,76%	100,00%
Software	16,67%	10,00%	10,00%	23,33%	26,67%	13,33%	100,00%
storage in the cloud	15,79%	21,05%	26,32%	26,32%	5,26%	5,26%	100,00%
tablet/iPad	16,00%	16,00%	4,00%	32,00%	28,00%	4,00%	100,00%
End sum	16,77%	13,17%	8,38%	29,94%	20,96%	10,78%	100,00%
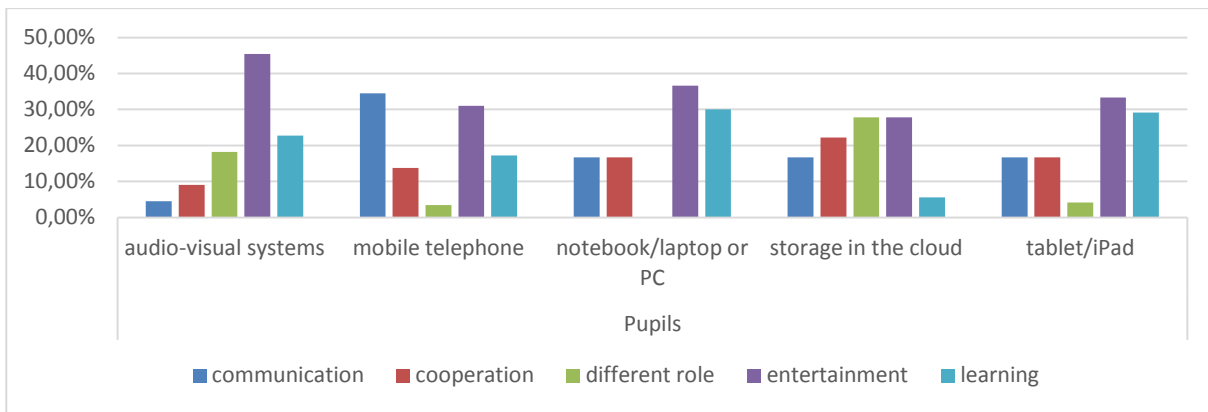
Figure 20. Preferences as to the application of ICT devices among youth from Berlin before the course.

Before the course started, we asked seniors about their preferences with regard to using ICT devices. Seniors told us they used mobile phones and audio-visual systems (25%) every day. Tablets and iPads were not used at all (83.33%) or were used a few times a month (16.67%). Notebooks and PCs were not used by 58.33% of seniors, while those that had notebooks used them several times a week (25%). Those seniors that had mobile phones used them for communication (76.92%) and entertainment (15.38%). Notebooks were used for communication, learning and entertainment (18.75%), and tablets mainly for entertainment (30.77%) and communication (7.69%).

sum of Count	do not use	every day	few times a month	less then a few times a month	several times a week	Suma końcowa
⊟Seniors						
audio-visual systems	50,00%	25,00%	8,33%	16,67%	0,00%	100,00%
mobile telephone	16,67%	25,00%	8,33%	25,00%	25,00%	100,00%
notebook/laptop or PC	58,33%	0,00%	0,00%	16,67%	25,00%	100,00%
storage in the cloud	91,67%	0,00%	0,00%	0,00%	8,33%	100,00%
tablet/iPad	83,33%	0,00%	16,67%	0,00%	0,00%	100,00%
Suma końcowa	**60,00%**	**10,00%**	**6,67%**	**11,67%**	**11,67%**	**100,00%**

Figure 21. Frequency of ICT devices use among seniors before the course.

sum of count	communication	cooperation	different role	entertainment	learning	End sum
⊟Seniors	**20,00%**	**5,00%**	**38,75%**	**27,50%**	**8,75%**	**100,00%**
audio-visual systems	0,00%	0,00%	28,57%	57,14%	14,29%	100,00%
mobile telephone	76,92%	0,00%	7,69%	15,38%	0,00%	100,00%
notebook/laptop or PC	18,75%	12,50%	31,25%	18,75%	18,75%	100,00%
Software	16,67%	8,33%	33,33%	25,00%	16,67%	100,00%
storage in the cloud	0,00%	8,33%	75,00%	16,67%	0,00%	100,00%
tablet/iPad	7,69%	0,00%	61,54%	30,77%	0,00%	100,00%
End sum	**20,00%**	**5,00%**	**38,75%**	**27,50%**	**8,75%**	**100,00%**

Figure 22. Preferences as to the application of ICT devices among seniors after the course.

Using ICT in school education was a very significant and recurrent topic of discussions throughout the interviews with teachers and youth. We asked pupils how ICT tools might make learning in school more attractive. Youth related ICT tools to school subjects and types of activities, for example:

Youth:
"It would be more fun to learn"
"I can learn better with a tablet"
"I could do everything faster"
"It's more fun with tablet"
"In Math tables are useful"
"In English"
"in all teaching subjects"
"useful for homework"

"tablet would be good to incorporate videos from youtube in to the classroom learning"
"I wish to use apps like google translator, calculator of google search engine for learning and gathering all sort of information"

In our research concept, we included in addition to seniors and youth also teachers from schools where the project has been carried out. When asked about the use of ICT in school, teachers saw distance learning as an opportunity for youth at risk of early school leaving, for example:

Teachers:
"Even if students are not in the school, they can still be reached by teachers through ICT and be more self-confident in their competences"
"ICT offers opportunities for individual learning for those immigrant pupils that have got specific educational needs"
"for sure attract young people to stay in school, in particular tablets would give joy and pleasure with learning"
"ICT tools would help immigrants feel more connected to school and so to participate more regularly in school activities"

ICT is perceived by teachers as a tool of integration. In the opinion of youth workers, positive effects of using ICT in intergenerational learning include knowledge sharing and communication between generations. From the teachers' perspective, joint activities of pupils and seniors might affect interest in education among those at risk of early school leaving, for example:

Teachers:
"ICT as connecting link can be a starting point for a long-lasting transgenerational cooperation. The possibility to teach seniors something of interest with ICT, students could become more motivated and participate more regularly at school. Students might feel being inspired to start an apprenticeship for social work professions, where a high school diploma is required"
"ICT brings youth and older adults to work together, to develop personal relationships between two groups
"ICT can be a starting point of building empathy for each other. Students would learn to understand the needs of the seniors.".

Teachers mentioned immigrant pupils' confidence in using ICT and advantages of ICT-supported learning as advantage that can be used when supporting immigrant youth. Also, in teachers opinion, ICT-supported learning is a method of self-learning, which offers independence when obtaining information online, and a means of self-training outside school for professional purposes.

Teachers:
"Their self-esteem can rise by showing their competences with ICT",
"visible is increased motivation of students who are intensively involved in ICT, in situations where they are able to gain positive experiences with their abilities and competences, leads to a strengthening of the self-esteem and a greater confidence in their own abilities, what I believe prevents school dropouts"
"ICT is an easy way to get into IT science"
"I see potential for ICT tools to be a starting point for internships"
"Learning platforms in different languages are helpful"

During informal interviews with teachers, and other staff involved in the organisation of ICT courses as part of the project, we were given some useful tips for next editions. First of all, it would be best if seniors had their own devices or devices that they could take home for practicing. Practicing at home would also enable contact with youth after the course. Second of all, the courses could take place in schools, so that pupils could take part in them directly after classes, without losing time for traveling to the course venue.

During the courses in Berlin, mobile devices were seen by the older generation as an opportunity to communicate, and an important tool for establishing the first contact, otherwise, as one person said, "*youth wouldn't talk to me at all*". Using ICT in interactions with youth is a "*good way to build contact*", "*to know each other*", and "*to get in touch for the first time*".

The role of ICT in intergenerational learning was perceived by seniors as a good starting point for the first contact, cooperation, and joint activities.

Seniors:
"ICT is a reason for a meeting and conversation during I can help young people in life telling about my life and experiences"
"ICT is a great way to show that we can all learn from each other"
"maybe I can convince the young people in the cooperation that the school is important"
"ICT gives us the opportunity to get in touch and get to know each other. This would help young people to find meaning in their work and I could share my experience with them"
"Through ICT, young people can see that they can do something and teach someone. So maybe they see that it is worth to do something with someone like me"

Internet was seen by seniors as an important source of information about "*different cultures, religions*", but also about the "*suburb where we seniors live*", and a tool that allows to "*start conversation in real life*". From the beginning, the course was perceived by seniors as profitable not only for them but also for youth. Expectations about the course, before the first meeting, were connected with joint activities and opportunities to talk about culture or tradition, local areas, and the skills needed to use ICT devices, and to get to know each other.

Seniors:
"I want to get to know new things" (2)
"That you get to know each other better and understand each other"
"I expect to learn more about computers and to learn more about other cultures and religions"
That I get to know new people, other languages, etc. and help the young people to get used to it"
"To Learn to use my phone a little better and build a nice contact"
"Build contact with nice young people and learn something"
"I hope to get to know immigrants and their culture a bit better"
"I expect something new to learn and hope for interesting conversations"
"To understand smartphone"
"I hope to get to know you and young immigrants culture a bit better"
"to get to know new people, other languages"
"I expect to learn more about computers and to learn more about other cultures and religions"
"to build contact with nice young people and learn something"
"to get to know each other better and understand each other"

Before the course started, we asked seniors about their needs regarding technical skills, using smartphones and tablets, operating computer and fixing problems that occur when using the computer or software-related problems. Seniors saw the course as a platform for common understanding rather than an opportunity to acquire ICT skills. They told us the course might be a chance to learn from each other, for example:

Seniors:
"common activities that will be shared with youth"
"opportunity to talk about Berlin, and life in Germany"
"to get to know each other, to help ourselves"
"chance to talk about culture and religion"

Intergenerational Learning

According to OECD, migrants who engage and succeed in education are more quickly integrated into both the social and economic spheres of the country. There is a greater risk of becoming alienated from the host country, if the process of engagement and integration takes long (OECD Germany Policy Brief). According to OECD, the educational, social and emotional success of immigrant students differs widely across countries, including for students from the same country of origin and of the same socio-economic status. As the ICT Guides project was a intervention measure aimed at the prevention of early school leaving, we wanted to find out how youth perceived school, and how school could attract and support them towards successful graduation. One of the initial questions we asked immigrant youth referred to the meaning of the term "perfect school".

Young people associated perfect school with youth-friendly environment, which was linked with school work organization and teachers, for example:

Youth:
"I would like to have beds in the classroom"
"clean place with food", "friendly people"
"perfect schools is a quiet, interesting and friendly school"
"clean and big building"."
"No full-time school"
"school should do not start too early, do not close too late"
"the school starts at 7:30 pm and ends at 1:30 pm, and you only have subjects that you want to do".
"No grades, just nice students and teachers"
"Nice teacher and student"

Early school leavers in Europe are much more likely to come from families with migration backgrounds (OECD, 2012; European Parliament, 2011; Eurydice and Cedefop Report; European Commission, 2011b). Young immigrants do not get enough attention in terms of their specific educational needs, such as teaching methods. Young immigrants also face ethnic discrimination that in some educational institutions may further reduce students' chances of success (Luciak, 2004). In consequence, lack of educational support for pupils with migrant or minority backgrounds can translate into educational disadvantages and a potential risk of early school leaving. Thus, in our research we wanted to focus on issues related to school, trying to find out how school could create a friendly environment for immigrant pupils, and how school could attract young immigrants so that early school leaving rates were reduced.

In our research, we also looked closer at the issue of early school leaving during informal interviews with teachers, youth workers and representatives of authorities responsible for young immigrant support. We asked teachers about the reasons why immigrant youth dropped out of school. According to them, early school leaving is a process and not a one-off event. High absenteeism rate, poor results, lack of confidence in one's own abilities, and lack of motivation for taking part in classroom activities are elements most frequently connected with early school leaving.

Teachers:
"not efficient parental support of young people"
"lack of perspectives for immigrants"
"not enough quick action of school with intervention measurements"

"School could organize compensation activities for those with poor language competencies"
"school didn't timely undertake a contact or stay in cooperation with families, when first sighs of school leaving appears"
"frequent school absence"
"lack of active participation in the classroom activities"
"lack of language skills",
"poor performance and bad results in a lot of subjects",
"parents who do not care about their children"
"poverty in the family"
"lack of confidence in own abilities"
"lack of confidence in learning"
"fear of school"
"low self-esteem in own capacities"

We also asked immigrant pupils about the reasons for early school leaving. They told us that the reasons why they or their peers do not go to school are connected with interpersonal relations and lack of motivation, for example:

Youth:
"unfriendly peers"
"because I was tired"
"to much stress that brings nothing good"
"there are days without any reasons when I simply do not want school at all"
"Because they have problems with school or have problems with people at school"
"they are lazy and think that they are cool with it but not all are like that"
"Fear of classmates, or fear of parents with bad grades"
"situation, problems at home keep them away from school"

The issue of early school leaving was further explored in the question about possible prevention strategies of early school leaving. Teachers saw the school's potential for attracting youth. As one of the teachers explained it: "*We need to present regularly advantages of staying at school, learning and getting a high school diploma*".

According to the responses of youth immigrants, education should be made attractive through school activities, for example:

Youth:
"huge area for sport activities"
"the teaching method"
"when there is more exercise in the classroom"
"by watching movie"
"when there is friendly atmosphere in the school"

Another significant issue our research focused on was intergenerational learning between young immigrants and non-related seniors. We asked pupils what they would like to learn from the elderly during the course. In their responses, they mentioned the life of seniors in the past and now, and life experience, for example:

"nothing" (6)
"like living in a retirement home"
"their age"
"what gave her life in the past"
"what experiences they have with living in Germany"
"what experiences they gained throughout the life"
"how was it when they were young"

"Experiences and advices for life
 "Dealing with the elderly"
"about retirement home"

Older adults' use of ICT has consistently lagged behind that of the younger generation (Czaja et al., 2006; Zickuhr & Madden, 2012). As youth are becoming increasingly proficient at different applications of ICT, seniors remain at the opposite end of the digital divide (Barnard, Bradley, Hodsgon, & Lloyd, 2013; Charness & Boot, 2009; Czaja et al., 2006). In our research, we combined intergenerational learning with learning how to use ICT. We asked youth how they imagined the content of an ICT course for seniors. Learning issues listed by the youth were connected with opportunities for seniors to interact with the younger generation. When youth were asked what seniors could learn from them about ICT, they referred to skills, handling mobile devices and using apps:

Youth:
"how to handle technical equipment"
"how to use apps"
"Handling the technology" (2)
"A lot with IT"
"how to handle technical equipment"
"newest IT technology"
"The technology of today" (3)
"How to handle the computer."
"Handling tablets, mobile cellphone, PC, etc."
"How to handle new technologies or use apps"
"Much with technology"
"What you can do with a smartphone"
"How to use apps in tablets"

Having gained some experience in intergenerational learning, after the courses pupils gave recommendations regarding the best ways of interacting with seniors when explaining how to use mobile devices, for example:

Youth:
"explain slowly and cheerfully"
"With cheerfulness and slowly explain"
"In which we make the difficult things before it"
"That you get to know the future"
"Have someone around it"
"That I fool them and show how great it is"
""Maybe the seniors would like to learn something from us"
 "She could contact family members again"
"A good explanation or show them"
"Communicate with the family over the Internet"
"Contact with younger people"

Strong motivation of seniors was a recurrent issue for youth when learning with seniors, for example:

Youth:
"Don't care how difficult it is but think about advantages how great it is to use ICT tools"
"when you know how to use smart phone you can contact family using apps"
"with ICT you can always contact others"

When considering intergenerational learning, teachers mentioned the need to support cooperation between schools and local authorities towards facilitating mutual contacts through such activities as community-based projects. Schools could also organise additional meetings between pupils and seniors on a regular basis, during which they could cook together, read or watch films, for example:

Teachers:
"strengthen the trust of young people and bind them into the local area and create the feeling of inclusion"
"youth clubs or after school activities, developed by school, are a way of working with local organizations"

We also asked a question about how seniors perceived the role of ICT in intergenerational collaboration with pupils. In the opinion of seniors, intergenerational learning meant learning with each other and about each other, with both groups supporting each other in the learning process, for example:

Seniors:
"ICT is a good link to start a contact where both groups benefit from learning with each other"
"Youth can share their technical skills with the elderly and the elderly their experiences"
"We can support young people with what we know"
"ICT is to get to know with immigrant youth"
"websites give opportunity for a conversation during we can learn about our countries".

Intergenerational learning between immigrant youth and seniors was seen by the elderly as a way of sharing knowledge of one's life, for example:

Seniors:
"Youth could explain to me how the new technology works. I could tell you something about the things of life"
"Explaining how to use a device we can get to know each other better"
"To talk about life in Germany and to discover Berlin", "talk about culture and religion"
"to get to know each other", "learn about history and culture with the support of ICT"
"So the conversation goes both ways, you get to know each other better and we both learn to appear regularly at appointments and meetings"

Seniors offered young immigrants inclusion in the community through sharing their life experience connected with living in the local area or through introducing young immigrants to neighbours and facilitating contacts with others, for example:

Seniors:
"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 the others"
"I can tell the teenagers a lot about the district and the people"

What was surprising was that to seniors, regular meetings during the course were opportunities to show the youth the meaning of commitment and to help them succeed in life, for example:

Seniors:
"By getting to know each other in the course young people were learning to appear regularly at appointments and meetings"
"I can explain how important it is to graduate from school for life. Maybe I will be able to convince the young people in the cooperation that the school is important"
"I hope I can show experienced person like me, can help the adolescents with problems in life"

"ICT course gives us the opportunity to get in touch and get to know each other. This would allow the young people to find meaning in their job and I could share my experience with them"
"ICT is a great way to show that we can all learn from each other. Through the course, young people can see that they can do something for others by teaching. So you might see that it brings something to learn"

When asked about what pupils would need to be able to learn with seniors. They mentioned *"patience"*, *"interest"*, *"open-mindedness"*, *"ability to speak a little bit German"*, *"interest in adult life"*. When we asked what seniors might require to learn with pupils, we got similar answers: *"patience"*, *"open-mindedness"*, *"interest"*, but also *"willingness to learn"*, *"understanding for young people and enthusiasm"*, *"experience"* also *"language"* (example: *"they need be able to speak a little German"*), *"willingness for conversation"* (example: *"important is that they want to talk to me"*).

Before the courses started, seniors had different expectations about it. They admitted they used smartphones mainly for communication and entertainment but they knew from younger generations (e.g. their grandchildren) that smartphones offered other functions and they wanted to try them out.

Seniors:
"I want to get to know new options with mobile phone"
"I expect to be able to deal with technical problems and to know how to solve problems"
"I want to learn to understand my phone a little better and build a nice contact"
"smartphone understand"

Describing the details of the course, seniors talked about activities that fostered cooperation and technical skills of the elderly:

Seniors:
"common activities"
"we want help from youth"
"understanding and interest in activities conducted together"
"conversations leading"
"to compare how the world, people but also technical issues or ICT changed over years"
"Discuss everyday technical things and new technology"
"How to properly operate your phone or computer and fix small errors yourself"
"show what possibilities exist and how to cope with small problems"

During the courses we noticed that seniors wanted to share their knowledge with the younger generation as a way of "learning with each other" about different cultures and customs, and as a way of sharing knowledge and skills. When thinking about their own resources, seniors wanted to share their knowledge in order to help youth adapt to the new country by telling them about Berlin and German culture. They also considered their skills when explaining what older generations needed to know in order to interact with immigrant youth, for example:

Seniors:
"patient when working with youth"
"to have willingness and interest to teach others",
"to have "understanding for young people"
"some experience with young people"
"I can explain to youth how important it is to graduate from school for life"

Empowerment

Complementary experience of supportive adult relationships involving shared learning was highlighted in both school and community settings (Hamilton 1980 ; National Task Force on Citizen Education 1977). There is a body of research indicating that youth voice in decision making within youth-adults relationships promotes a sense of agency, confidence, and empowerment (Blanchet-Cohen and Brunson 2014; Chinman and Linney 1998; Dworkin et al. 2003; Morsillo and Prilleltensky 2007; Christens and Dolan 2011; Kirshner 2007; White and Wyn 1998).

After the courses, we interviewed teachers and staff involved in the courses for feedback. In the opinion of teachers, at the beginning of the courses pupils had the "*feeling of seniors prejudices,*" as one of the teachers put it. "*For the next course edition it seems useful to talk with immigrant youth about possible interactive social distance that occurs in the intensity of reciprocal actions in a multicultural environment,*" said one of the teachers. In the opinion of teachers and youth workers involved in the courses, the seniors' scepticism from the beginning of the courses turned into cooperation and willingness to share their knowledge and skills with youth (e.g. how to live in Berlin). By the end of the courses and during the interviews conducted we noticed seniors' openness, empathy and curiosity.

Introduction

The United Kingdom consists of England, Wales and Scotland, which together form the United Kingdom, and Northern Ireland. The United Kingdom, a leading financial and commercial centre, is one of the five countries in Western Europe with a GDP of more than a trillion dollars. In the last twenty years, the government has significantly reduced public property and stopped the increase in social care spending. At present, British society is a multinational mix, ethnic, religious and cultural. Most of the residents are English, Welsh, Scots and Irish, but there are a lot of Jews, Indians, Pakistanis, Hong Kong residents, Africans and more and more Slavic nations, including Poles. Nearly 4/5 of the UK population lives in cities where they find employment in all types of services and industry.

Immigration to the United Kingdom in the 21st century is greater than ever. This country is seen as a destination by the number of people who are moving in the port of Calais waiting for a chance to get to Europe. Although UK has been immigrants' destination for centuries, it has only been an immigration state[6] for half of the 20th century (Somerville, Sriskandarajah, Latorre 2009). There are currently 34 communities in London Foreigners with more than 10,000 members. In London's children's schools they speak more than 300 languages. In the nine districts of Birmingham the population of the minority ethnicity exceeds the number born in the country. Some researchers believe that the United Kingdom has the most liberal immigration policy, especially when it comes to family reunion policy (Buonfino, 2007). In 2000, the Minister for Immigration Barbara Roche confirmed the study, which showed that economic sectors, such as IT, health, education and financial services, in order to be competitive, will have to be based on migration. Total migration and refugees became the key themes of the 2005 election, when the conservatives declared that in the event of their victory, they would withdraw The United Kingdom form the Geneva Convention.

Therefore, since the beginning of the 21st century, Britain has seen a significant increase in immigrants. This was mainly due to the opening of borders for new Member States of the European Union, and then the so-called "emigration crisis". The migration policy again became the subject of public debate, while being the most contested. The United Kingdom, like other EU countries, is experiencing educational difficulties in integrating immigrant children with society, especially:

- Language barriers – ignorance or poor knowledge of the English language;
- Poor school performance related to language ignorance, limited ability to communicate with peers and teachers;
- Unfamiliarity with regulations concerning compulsory schooling;
- Unfamiliarity with the language and culture of the country where the pupils come from;
- Differences in or ambiguity of mutual expectations;
- Inadequate preparation of teachers and schools for working with children from other cultures;
- Difficulty in establishing emotional contact with these children;
- Difficulties in communicating with parents of immigrants;
- Difficulties in developing educational materials.

In this context, ICT tools, intergenerational learning and empowerment appear as activities supporting the social integration process. Three intergenerational learning courses have been conducted in Sheffield City. Intergenerational cooperation and intergenerational learning were supported by ICT tools. 40 respondents completed the questionnaire before the courses started. After the courses, questionnaires were completed by 15 respondents.


Photo: Sheffield City Council (UK)

ICT Tools

Mass media and ICT tools affect people from the first months of their life, and they are gradually becoming more important as the child develops. Children and youth live in the world of mass media and multimedia, completely different to the world of previous generations. They are surrounded by ICT tools such as computers, modern telephones, smartphones, tablets, consoles, cable and satellite TV, Internet, which all "break into" the everyday life of children and youth. They are undoubtedly sources of knowledge and interests, allowing people to communicate, explore and experience the world. Therefore, ICT tolls are becoming increasingly present in education.

As the research results show, ICT tools occupy an important place in the lives of people taking part in the research. 80% of pupils and nearly 70% of seniors use mobile phones every day. They use them not only to make phone calls but for other purposes as well. Our respondents use audio-visual systems and Wi-Fi equally often, and the details look as follows. For the pupils:
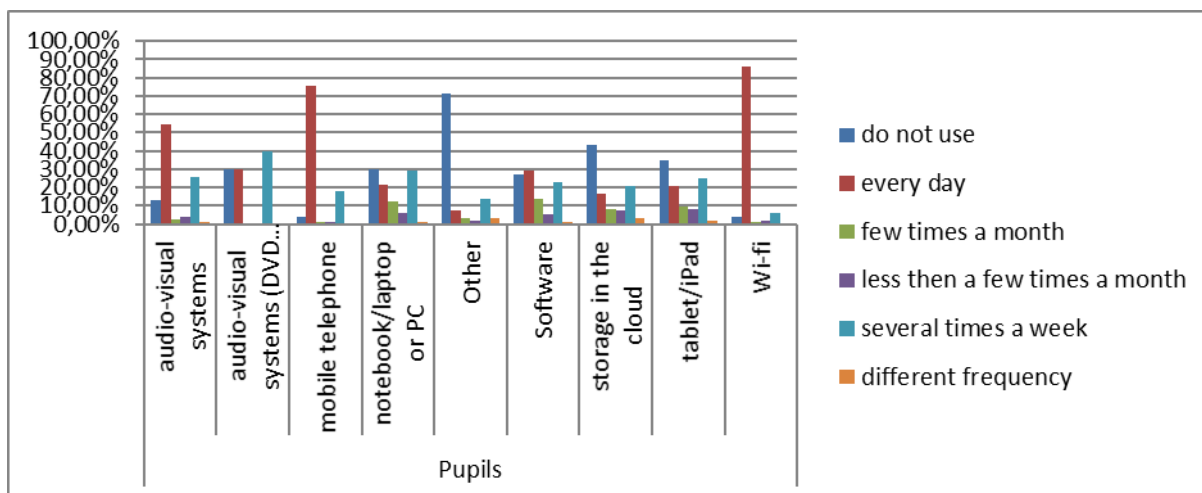
	do not use	every day	a few times a month	less than a few times a month	several times a week	different frequency
Pupils						
audio-visual systems	12.50%	67.50%	0.00%	0.00%	20.00%	0.00%
mobile telephone	5.00%	80.00%	2.50%	0.00%	12.50%	0.00%
notebook/laptop or PC	37.50%	17.50%	7.50%	0.00%	37.50%	0.00%
Other (Ps4, Xbox)	85.00%	5.00%	0.00%	0.00%	7.50%	2.50%
Software	40.00%	22.50%	12.50%	0.00%	22.50%	2.50%
storage in the cloud	62.50%	10.00%	2.50%	7.50%	17.50%	0.00%
tablet/iPad	50.00%	22.50%	7.50%	0.00%	17.50%	2.50%
Wi-fi	5.00%	87.50%	0.00%	2.50%	5.00%	0.00%
Total	**37.19%**	**39.06%**	**4.06%**	**1.25%**	**17.50%**	**0.94%**

Figure 23. Pupils' frequency of ICT tools use.

And for the seniors:
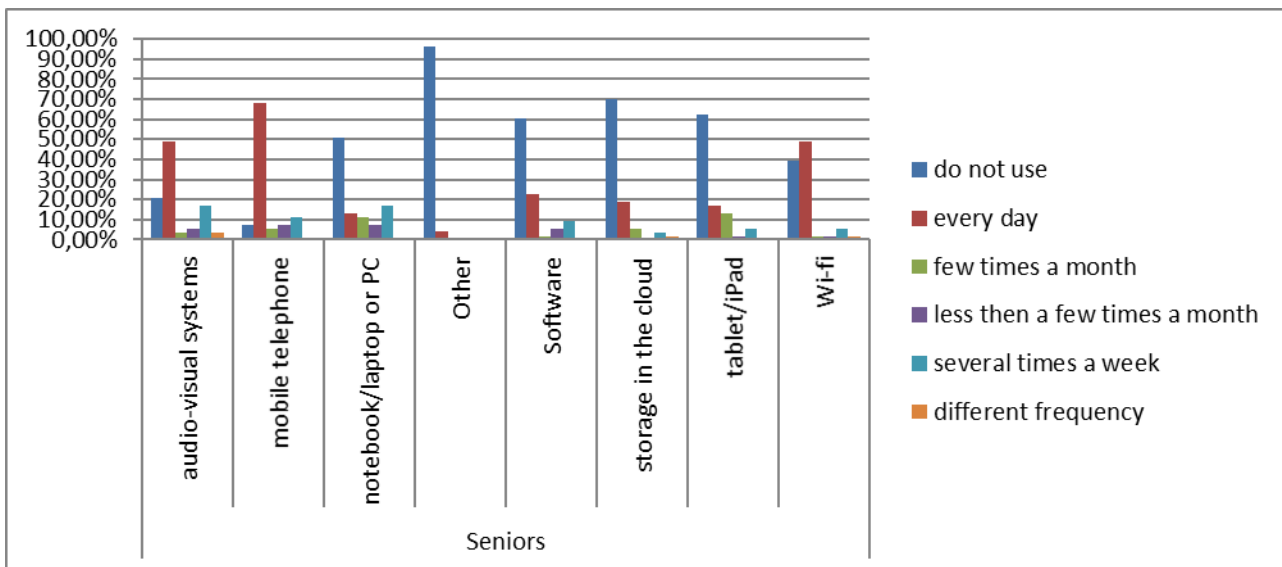
	do not use	every day	a few times a month	less than a few times a month	several times a week	different frequency
Seniors						
audio-visual systems	13.04%	56.52%	4.35%	4.35%	17.39%	4.35%
mobile telephone	4.35%	69.57%	8.70%	4.35%	13.04%	0.00%
notebook/laptop or PC	47.83%	13.04%	13.04%	8.70%	17.39%	0.00%
Other (I pod, Dab radio)	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Software	56.52%	34.78%	0.00%	0.00%	8.70%	0.00%
storage in the cloud	69.57%	17.39%	13.04%	0.00%	0.00%	0.00%
tablet/iPad	65.22%	21.74%	4.35%	0.00%	8.70%	0.00%
Wi-fi	43.48%	56.52%	0.00%	0.00%	0.00%	0.00%
Total	**46.20%**	**36.26%**	**5.85%**	**2.34%**	**8.77%**	**0.58%**

Figure 24. Seniors' frequency of ICT tools use.

More specific and detailed data allow to specify the reasons for using ICT tools by pupils and seniors.
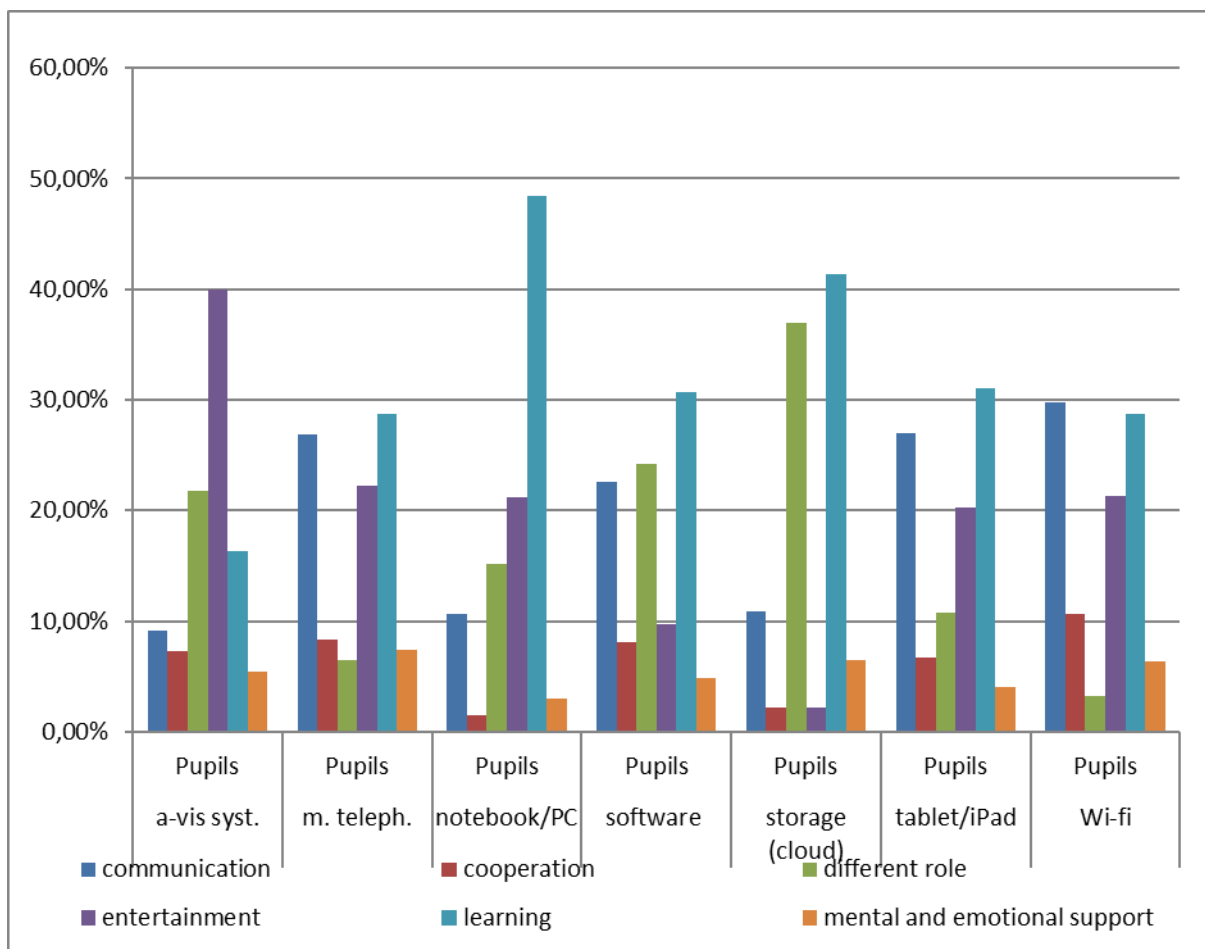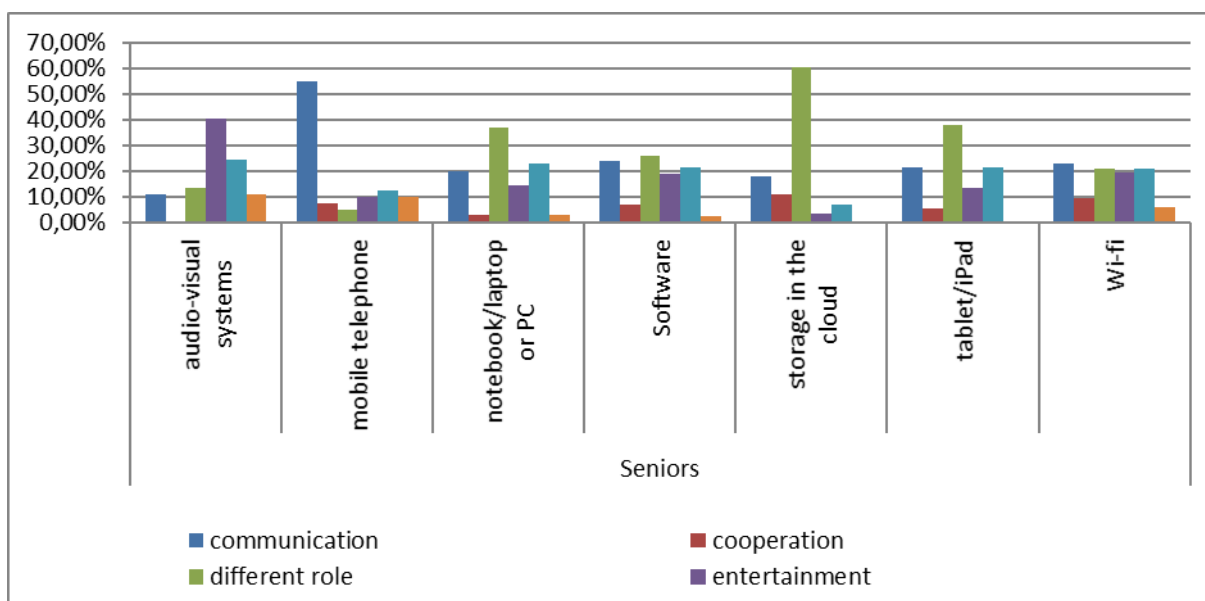

Figure 25. Pupils' reasons for using ICT tools.

Figure 26. Seniors' reasons for using ICT tools.

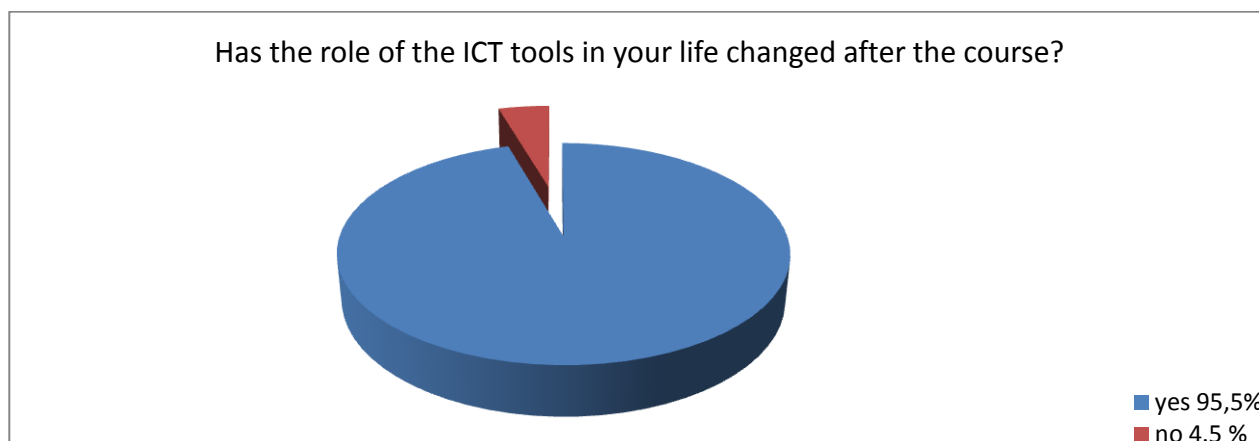The role of ICT tools changed after the course in the case of 95% of pupils and seniors.

Has the role of the ICT tools in your life changed after the course?

yes 95,5%
no 4.5 %

Figure 27. Change in the role of ICT tools.

Asked "why?", they responded that:

We have a better understanding of IT (3)
It has in many ways (2)
I am more confident to speak to people (2)
I learn how to teach people to use ict (2)
Yes because we've been writing
Because we are learning more about ICT
we have better understanding of IT
yes we have a better understanding of ICT
we have better understanding of ICT
yes we have better understanding of it
Because I found out lots of different stuff and learnt something as well
No
Learnt new stuff and skills
It has in many ways.
Now I'm more careful in how I use internet and wifi
It has given me more confidence
Because I learned how to teach seniors, how to use computer

Asked *What is your opinion about the role of ICT in intercultural cooperation (learning)?* they answered: "very important" (7), "marvellous and I enjoyed it" (2), "because I'm shy the ICT helped me to talk to the seniors" (2), "it helps because I can use apps like the translator", "help me to learn English", "it's helped me to talk to people from a different culture". Whereas the seniors asked "How can ICT help you to establish relationships with pupils to share with them your life experiences and wisdom?" gave the following answers:

Sharing knowledge of apps and games. Exploring information about their culture, pastimes, experience. Helping them with things they can't do and them helping us with things we have difficulty with.
The pupils will have more experience with ICT and will be able to share their knowledge with us.
It gives me an opportunity to communicate with pupils by asking for their advice. (2)
To get them to help us
We would need time
Have opportunities to share
It could help me but it's all over my head. My eyesight doesn't help but its good for young people
It's all new to me - but text messages would help
I would like to use a computer and it's great that young people can help - it's good for everyone even older people

By learning from their experience
Communicate with family face to face on skype
Not answered
Talking with them
I wouldn't use it, never had access to the tools
Pupils can teach older people how to use technology
Helps to share experience
Photos, short pieces of narrative
Share life experiences and about my life in comparison to theirs
It's a necessary common method of communication for all age groups
Learning about each other as we work though ICTA

According to the data presented above, Information and Communication Technologies accompany us in everyday life and can be used as tools supporting teaching. Their educational potential is great, but in too many cases educators, teachers and local authorities fail to use it effectively. Therefore, the initiative taken under the ICT Guides project seems to be valuable and innovative. And even if all goals are not achieved, the experience gained as part of the project implementation will certainly be useful in the future.

Intergenerational Learning

Intergenerational learning is a relatively young phenomenon both in practice and in science as its theoretical and empirical foundations are only being developed. The first research on intergenerational learning carried out in the 1980s and 1990s was dominated by researchers from the United States, who focused on intergenerational learning and knowledge transfer within the family. They formulated a "genealogical concept of generations" based on learning processes among parents, grandparents and children and, in accordance with that line of research, educational programmes were conceptualized to prepare grandparents for their learning and teaching duties within the family. Learning within the family constitutes the first important research field, and there are still many questions that remain unanswered and need to be further investigated. However, there are many opportunities for intergenerational learning and it takes place also outside the family, for example, in groups of friends, employees and even society (Schmidt-Hertha, 2014, pp. 145-154). Intuitively, we can say that any joint undertaking of people representing two different generations, consisting in sharing skills and knowledge and achieving goals, can be considered intergenerational learning. Potentially, every benefit may be perceived as a benefit of intergenerational learning, and so some clear understanding of the "intergenerational learning" process should be presented.

In the United Kingdom, the history of research on intergenerational learning is relatively long and rich (Gert Biesta, Peter Jarvis). According to Gert J. Biesta, who is a famous British researcher and Professor of Education at the University of Stirling, "most definitions of generation tend to follow Mannheim, but even so most generational categories tend to be rather broad, and their boundaries are fuzzy" (Biesta et al., 2010, pp. 74-75). G. Biesta draws attention to the fact that the relationships between learning and generations have a long history in educational thinking, especially in terms of intergenerational transfers of knowledge and values.

Recently, the role of this learning has gained significance because of social and international changes:

"Particularly among migrant groups, inter-generational exchanges appear both to help maintain existing collective identities while simultaneously enabling adjustment to a new context. A recent qualitative socio-cultural study of children/grandparent learning among Sylheti/Bengali-speaking families in east London explored ways in which grandparents served as "founts of knowledge" that had been passed on in the past, including key social and communicative competences that older adults had not previously accessed, such as familiarity with new technologies. This study also noted the important caring role carried out by many grandparents, in a context where mothers are increasingly engaged directly in the labour market" (Biesta et al., 2010, p. 83).

Intergenerational learning is an accepted assumption about the educational potential of intergenerational relations. It is a form of involving two generations in an action with the aim to achieve benefits. In the course of this activity, specific learning outcomes are produced based on relations that stimulate people to learn and develop different communication strategies. The elderly, in contact with youth, recall the ideals to which they aspired in the past. In addition, they are stimulated by youth intellectually. In the case of young people, in contact with older citizens their often unrealistic view of the world gets strongly modified (McClusky, 1990, pp. 65-73).

The intergenerational learning during the ICT Guides courses conducted in Sheffield was based on two age cohorts: pupils (age 12-16) and seniors (age 60-89).
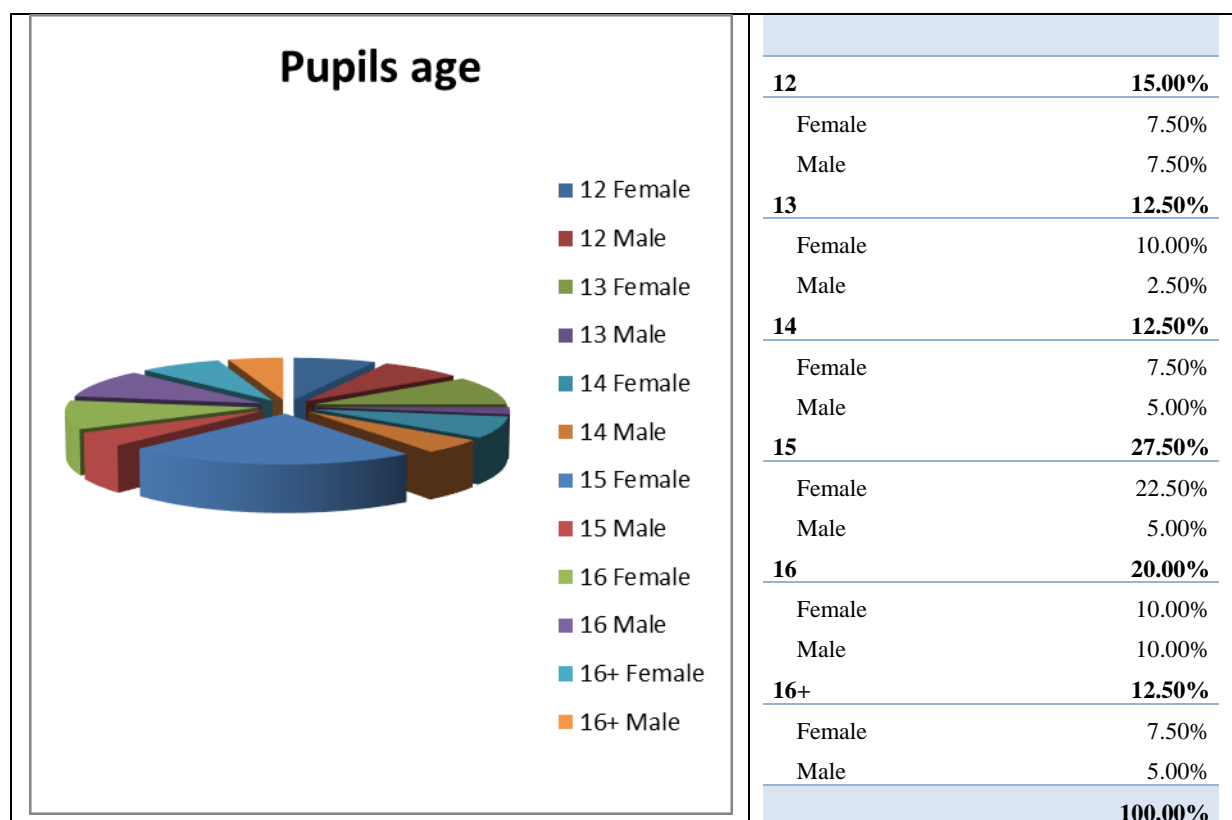

12		**15.00%**
	Female	7.50%
	Male	7.50%
13		**12.50%**
	Female	10.00%
	Male	2.50%
14		**12.50%**
	Female	7.50%
	Male	5.00%
15		**27.50%**
	Female	22.50%
	Male	5.00%
16		**20.00%**
	Female	10.00%
	Male	10.00%
16+		**12.50%**
	Female	7.50%
	Male	5.00%
		100.00%

Figure 28. The age of pupils.

Among pupils, most were girls aged 14-15 years, whereas among seniors, the largest group were people aged 60-69 years.
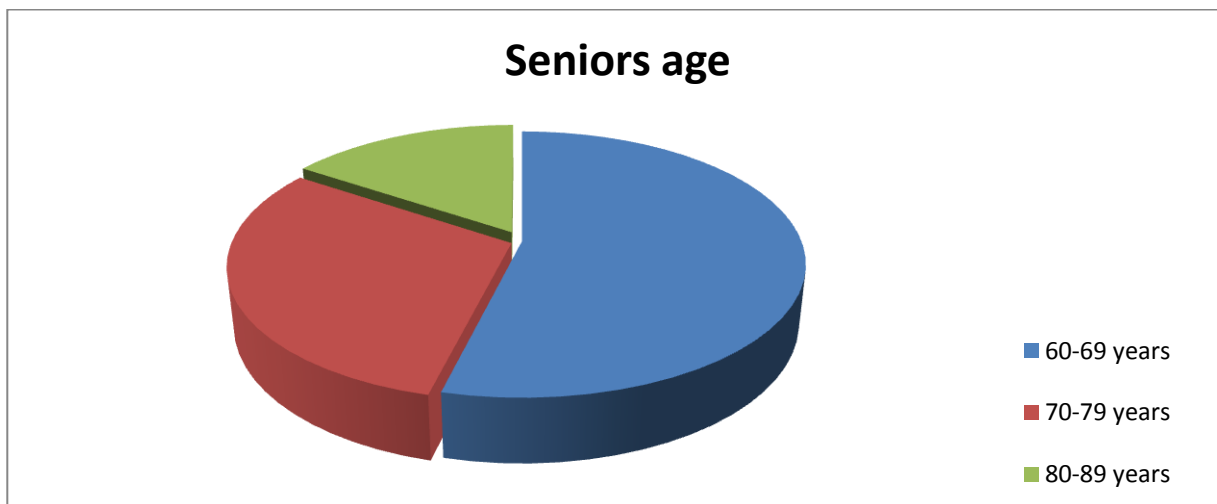

Figure 29. The age of seniors.

At the beginning of the courses, young immigrants were asked what they would like to learn from elders. They declared that they would like to be fluent in English, to learn how to communicate with older people, and to learn something about the history of the United Kingdom. At the end of the courses, each of these aims was achieved to some extent, but the dominant effect of intergenerational corporation and intergenerational learning was intergenerational integration in the form of overcoming barriers to communication and finding a common, intergenerational language, which is underlined in the following answers:

What did you want to learn from seniors during the ICT course?	What did you really learn?
how to communicate, talk English properly (3) *Lots of things around me. And how to work with the internet safety. (3)* *English language (2)* *The language (2)* *How to talk to old people* *How to talk with an old person* *How to communicate and talk English properly* *I can learn to make a game* *English Language* *English* *The past* *No* *The past* *I wanted to learn how to be good with older people* *I want learn English* *I wanted to learn how to speak English better*	*I learnt how to talk to old people (2)* *Be sure of who and when u need to use wifi or the internet to search for words vocabulary. (2)* *Some English words (2)* *Some things it's good for a future (2)* *How to talk to old people* *I learnt that old people don't use Wifi* *I learnt to make a game* *Not answered* *How to talk to people* *I learnt how to talk* *how to talk to old people* *I learnt that when you are old you can retire and live in a retirement home* *No* *I learnt old people live in a retirement home (who have retired from their jobs)* *Be sure of who and when u need to use wifi or the internet to search for words vocabulary.* *I like to know about history and I learnt how the schools were when Barrie went to school* *I learnt every thing* *I practised my conversation*

On the other hand, asked what they would like to teach elders, young immigrants declared that mostly how to use ICT tools and how to change their attitude to new technologies.

What do you think seniors want to learn from you?	What do you think seniors learned from you?
how to use their phones (5)	*how to use their devices (5)*
How to use the internet safety and how to use the internet on how to use search where to go find what they want. (2)	*How to use their devices (2)*
How to use the technology (2)	*How to use thier phones while searching or calling someone and even sending messages from someone who is far from them (2)*
The technology (2)	*How to use Whats App (2)*
How to use their phones	*F (2)*
He's older than me	*more games*
How to use an iPad	*Not answered*
How to use a phone	*How to take a picture, how to downloading stuff.*
How technology works right now	*No*
No	*How to download stuff*
How technology works now	*How to use their phones while searching or calling someone and even sending messages from someone who is far from them.*
How to use the internet safety and how to use the internet on how to search where to go and to find what they want.	*I think he did learn that*
How to use his phone better	*They learn how to use and practised*
How to video call in messenger	*About Facebook*
How to use modern technology	

According to these responses, intergenerational cooperation to a large extent fulfilled the pupils' hopes. In order to understand the essence of intergenerational learning, it is important to examine answers given by seniors, because they offer a different perspective.

What did you want to teach pupils during the ICT course?	What did you really teach?
Not answered (5)	*Not answered (9)*
We can learn	*Wisdom and life skills*
My experience	*I listened to them*
to understand my needs	*I thought them to embrace your childhood*
How things used to be	*I helped to a certain extent with language skills and vocabulary.. I introduced them to a collage app and used it to identify local places, which led to conversation about Sheffield and some building of vocabulary. When we did an internet safety quiz I was able to help them recognise some dangers that they had though were safe, e.g. fake profiles.*
How to look for job	
They teach me	
Tell you story of my life	
I wanted to help them with their language skills.	
I wanted to encourage the young people to interact with me to complete a task.	*They were interested in my school background so indirectly I taught them social history. I was able to empathise with the young people as I grew in the war years, experienced bombing as well at a similar age.*
I wanted to help to communicate with someone who was not from their culture	*I think their was a mutual appreciation of each other*
Improve language skills	*Confidence in using English language*
I wanted to have the opportunity to interact with them so that they were more confident with their social skills particularly with my generation	*I feel that we did interact well and they encouraged each other to speak in English when they were tempted to revert to their home tongue*

What do you think pupils wanted to learn from you?	What did they really learn?
Not answered (9)	*Not answered (9)*
Respect	*How to speak English*
How to listen carefully	*To listen pay attention*
Things that we experience in life and they can as well	*Life is short enjoy it while you can*
Some pronunciation, some vocabulary, some internet safety issues.	*As above.*
If we had worked with the same young person each week I feel that social engagement would have flowed more smoothly and their confidence would have grown quicker.	*I was surprised that I was able to engage with the young person and help them with the Pic Collage app. I think they appreciated that I had an understanding of their situation due to my life experience.*
To be more comfortable social and to give them more confidence with interpersonal skills.	*Being able to demonstrate to seniors how to improve ICT skills*
More about life in UK	*As above*
I think they learned not to be nervous around the older generation and to feel that they could talk freely.	

From the seniors' point of view, the main goal of this intergenerational cooperation was to share some knowledge with pupils and to teach them skills needed in life, "life wisdom" and not "school wisdom". This means that intergenerational learning does not replace school, but can support schools in their educational activities.

In the case of seniors, a large number of people did not answer open questions. This may indicate that they found it difficult to comment on intergenerational learning or that learning outcomes are postponed.

When asked the question "Who else could make your education at school more attractive, interesting, valuable?", pupils claimed that first of all their friends, parents and family, and only then teachers and computers.

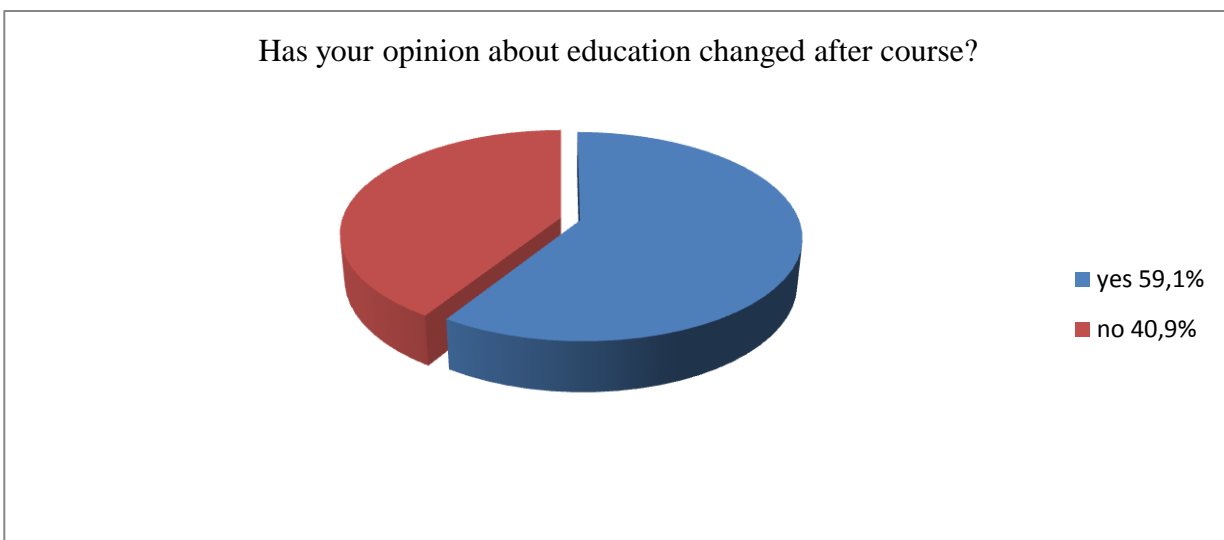Asked if their opinion changed after the course, pupils said that it rather did:

Figure 30. Pupils' opinion about education.

Why?

Not answered (6)
I have learnt alot (2)
I still believe you need school to have a better future (2)
Becouseit helped me to be more convenient and be responsible for myself (2)
I have always thought education was important (2)
Its easy now after we learn more
Because it helped me to be more convinient and be responsible for myself.
I've always thought education is important as I want to be a pilot so I've got to work very very hard
I have always thought that school is important so that I can do the job that I want to do
Education has always been important to me

In the case of seniors, the rate of those on whom the course had an impact was even greater:
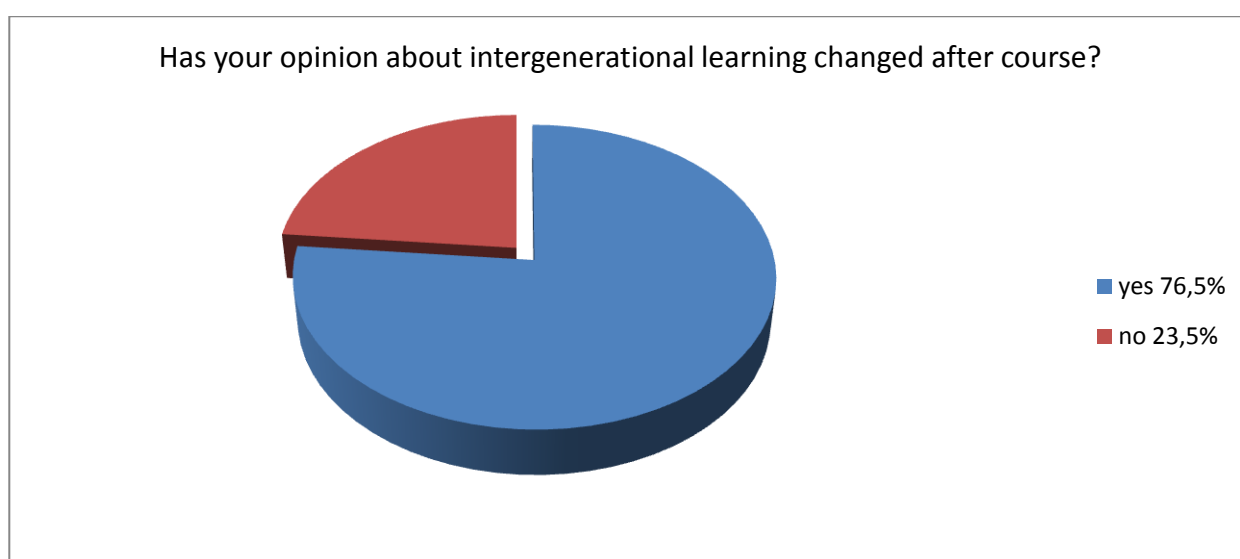

Figure 31. Seniors' opinion about education.

Why?

Not answered (9)
We should more
Very useful to talk to different generations
I already knew that it is a very good thing to happen and that there should be a lot more intergenerational activities available to young and older people.
I've always been positive
Because I have always thought it was good that generations should mix and integrate
I was able to experience intergenerational learning first hand.
It was refreshing to work with the young people would had time to help me with ICT. Whereas younger family members do not always make the time.

Moreover, 60% of youth expressed the opinion that intergenerational courses were very informative, 66% said that they were useful, and 53.3 % claimed that they were satisfied with their participation in the courses.

In conclusion, it can be said that intergenerational learning courses in Sheffield were conducted as recommended by the Research Report I and the outcomes provided for the experience of pupils and seniors. As it is impossible to follow the pupils' future education and life

course, it is difficult to demonstrate the effect of ESL. However, it is certain that the pupils' experience gained as part of this project helped them find their place in the new reality and look at other people's lives from the perspective of older people, for whom education is one of the most important values.

Empowerment

Empowerment is the idea of providing marginalized groups of the society with basic opportunities, either directly or through the help of those who share their own access to these opportunities. It also involves the active thwarting of attempts to deny those opportunities. Empowerment is based on encouraging and developing skills for self-sufficiency, with a focus on eliminating the need for charity or welfare among the individuals of the group in the future.

The ICT Guides project recognised young immigrants and seniors as marginalized groups. The empowerment process was developed in cooperation with them. The purpose of their participation in the ICT Guides project was helping them find access to their internal strength (motivation) that would allow them to influence their lives, as well as helping them find their place in the social, political and economic environment. Empowerment is related to access to information because it is understood as "making choices based on enlarged ones resources of knowledge, information and analysis possibilities information" (Rowlands 1997, pp. 89). The link between empowerment and access to information indicates that access to information determines the possibilities of self-realization. In this case, pupils and seniors who are, for example, digitally excluded (have no access to the Internet or cannot use ICT tools), lose their ability to access information, which could be crucial for their development as part of human and social capital.

In this context, ICT and intergenerational learning can be seen as mechanisms for implementing the empowerment idea. In the case of courses organized in Sheffield, it was vital that there were changes related to the "broadening of the life awareness". Asked about the role of the courses in their intercultural experience, pupils said:

very important (7)
N/A (2)
Marvellous and the enjoyed it. (2)
Because I'm shy the ICT helped me to talk to the seniors (2)
Very important
Marvellous and enjoyed it.
It helps because I can use apps like the translator.
Help me to learn English
It's helped me to talk to people from a different culture

To the question: "What experiences regarding cultural differences have you had until the ICT course started, with people coming from the country you are now living?" they answered:

integrating (6)
Happy to meet people (2)
I found it very hard because I don't have the language. (2)
Integrating
Not answered
In Sheffield and different food
N/A
No

Experience something new with other people
A it shy and nervous.
The first day I went to school I couldn't speak and I was shy. People would laugh at me, but now I am more confident and can speak English and I'm doing well with my school work.
In school
Yes at school

The seniors were asked the same questions. To the question: "What is your opinion about the role of ICT in intercultural cooperation (learning)?" their answers were:

Not answered (9)
We should learn to communicate without technology. Better to speak face to face
Very useful
Fun
It's a good way to get talking and to explore things together. It's good to learn what apps others are using and to get ideas from them.
With more time we could have achieved more. ICT is a universal language so is a good starting point.
ICT is a common denominator across the cultures and barriers
An excellent learning and communication tool.
I think because we all use technology to varying degrees it helped to remove barriers

And, to the question "What experiences have you had up until the ICT course started, with cultural difference?", they answered:

Not answered (5)
Living in my community
community group work
Not much
Exercising their rights in safe environment and learning about one another
Varied
How to booking
I've worked with people from different cultures, but usually adults.
Years ago I worked with Asian families.
I have had lots of experience working across cultures e.g. Within my work space and also within voluntary youth work
I volunteer every week at an adult ladies ESOL.
A lifetime of experience

Only these two questions show that intergenerational learning using ICT tools stimulated the development of students and seniors, improved their self-esteem, increased their self-reliance, and motivated their self-determination. Intergenerational relations led to a change in the perception of one's own limitations and raising expectations. The experience of participating in the courses will allow pupils and seniors to influence their lives as well as their place in the environment in the social, economic and political context. Thus, it should be pointed out that in this case the project assumptions have been achieved.

General Conclusions

Based on the above cases, this chapter provides answers to the key research questions put forth in the ICT Guides project.

• *How can ICT be used as an effective tool for overcoming the polarization between young and older citizens?*

Broadly understood, the term "information and communication technologies" (ICT) includes all tools and sources used to communicate, search, create, disseminate and manage information, and so it covers computers and their software, the Internet as well as radio, television and telephony. A narrower understanding of the term, adopted in the described research, is usually limited to computers and internet networks.

The research carried out indicates that ICT tools are used intuitively and usually in the most optimal way in order to achieve specific purposes. According to the findings of the ICT Guides project, ICT tools, due to their functionality, are willingly used by young people and the elderly. Both these age groups are interested in using ICT because they realize that the ability to use ICT tools is one of the key skills of contemporary times and that their significance will increase in the future. However, ICT tools play different roles for these two cohorts: in the case of pupils, they are only tools for achieving relevant, specific goals, but in the case of seniors, ICT tools are also objects of learning. Paradoxically, this difference fosters the potential for intergenerational learning as it intrigues people and makes them interested in others.

Research also shows that inability to speak the dominant language fluently, unfamiliarity with cultural codes or uncertainty as to how to cope with different social groups might be sometimes challenging for young immigrants (Fekjaer, 2007). Intergenerational learning with ICT is also seen by the elderly as a way of sharing information about life and personal matters. In the case of intergenerational learning, ICT makes up for the lack of good command of language in situations where communication problems occur, by using texts, pictures, movies, and music available online. The course offered both generations an opportunity to get to know each other better despite language difficulties, with ICT as a facilitator of interactions and learning using online translators.

In opinion of our respondents, and particularly the elderly, the internet supports and fosters the first contact and knowledge exchange in intergenerational learning despite language difficulties, allowing participants to get to know each other. Other elements helpful in learning about one other include pictures, maps, and music from online sources. They can sometimes replace language when introducing information about one's own country.

Therefore, ICT tools reduce intergenerational distance and allow to overcome the polarization between young and older citizens. They should be used spontaneously in intergenerational cooperation, depending on the needs and possibilities of the participants. In order to intensify intergenerational cooperation and to give it the desirable direction, it is recommended to set clear goals. This solution allows to intensify cooperation and even more efficiently overcomes the polarization between young and older citizens.

• How can ICT facilitate access to the general education system for newly arrived immigrant children aged 12-16 years?

ICT tools are increasingly used in schools and the ability to use them is a key competence of youth. Research results are important for understanding the pupils' perspective on the use of ICT tools and the reasons for their early school leaving.

It turns out that while pupils are proficient at ICT, they are usually not prepared for independent and effective functioning in the information society (knowledge). This is evidenced by the fact that they treat ICT as a tool of entertainment and they mainly use it for pleasure or because of boredom. This means that immigrant pupils, despite their proficiency in using ICT tools, show low technological maturity, which can be defined as readiness for an independent, effective and responsible use of information and communication technologies – also in an innovative way – and for formulating expectations about technology in terms of one's current and future needs. This determines satisfactory and constructive functioning of an individual in the information society, while lack of competences in this area puts them at risk of social exclusion. Competences related to ICT are important in the context of access to the broadly understood education and labour market, and they are mentioned among the most important human competences of the 21st century, the so-called key competences[7] (Valentine, Marsh, Pattie 2005, pp. 5-7; A Report of the International ICT Literacy Panel, 2007, pp. 2-4).

As a result of low technological maturity, the use of ICT tools plays an important role in the pupils' life and consumes time that should be dedicated to learning. During the courses conducted as part of the project, young immigrants learned that such tools can be used not only for entertainment, but also for education and development. ICT enables access to almost unlimited sources of knowledge and communication. Therefore, ICT tools are very useful during the first days, weeks and months of school education in a new country or a new social environment, when young people face new challenges. Moreover, by using ICT, both age groups reduced social and personal barriers and learned many things about each other. It turned out that most immigrant pupils are fluent in ICT and that this proficiency is their strength, which should be used by teachers in school.

Youth programmes organised should provide youth with opportunities to get involved in work that is relevant to them (Benson et al. 2006; Zeldin et al. 2005). One of the recurrent topics was the pupils' growing involvement in the course. Youth told us that the main reason for their participation in the ICT course was hope of improving their language competencies. Teachers, seniors, youth workers involved in the courses mentioned the immigrant students' increased confidence in using the language and in explaining issues related to use of ICT devices.
Many newly arrived immigrant students cannot yet read or speak well – if at all – the predominant language of their host countries. On average, 63% of first-generation immigrant students and 38% of second-generation immigrant students at home speak a language that is different from the language of the PISA test (PISA, 2015). Our research shows that participation in the ICT courses in all four countries changed the youth's perception of their communication skills and their ability to talk with others. Secondly, youth's involvement supports the establishment of meaningful relationship with seniors and making inquiries, as students interact with places in ways they think relevant to their life experiences (e.g. language). Integration of ICT tools into school education of

immigrants gives them the possibility of demonstrating their competences, raises their self-esteem and motivates them to become more involved in the learning process. It is important, however, that ICT tools are only instruments or "teaching resources" for learning and development, and not objects of learning. Development of pupils' sense of competence in this area empowers them.

• *How can ICT be used as an effective tool for improving the access to lifelong learning for older persons?*

The current increased interest in education of the elderly is to a large extent related to the progressing changes in the age structure of the European Union society, but it can also be linked with the evolution of the meaning of education, especially with focus shifting from teaching to learning.

As a consequence of these changes, educational practices have become characteristics of everyday life. Learning is integrated with the everyday experience of individuals, which is neither always planned nor realized. In the case of elderly people, education is rarely associated with teaching as it mostly concerns learning in informal contexts. Implementation of the lifelong learning idea is fostered by the development of ICT tools. New technologies are increasingly often determining our activity, communication, perception and organization of the social world, which also includes educational processes. Telecommunications, computer systems, Internet and modern software change our approach to life, work and education.

As the research results show, ICT tools are spontaneously and intuitively used by both young and old people, but often only to achieve instrumental goals or in a useless and chaotic way, which has little to do with education. Therefore, local authorities responsible for education should support, promote and organize activities for older people showing them how to use ICT for educational purposes.

• *How can ICT increase the acquisition of EU key competencies, and in particular communication and language skills in immigrant pupils aged 12-16 years?*

The courses conducted as part of the project supported the development of EU key competences, and especially communication and language skills. According to the respondents, improvement of communication and language skills mainly resulted from the use of ICT tools in intergenerational cooperation. The main mechanism for competence development was intergenerational learning.

Therefore, in order to increase the acquisition of EU key competencies, and in particular communication and language skills, by immigrant pupils aged 12-16 years, actions taken should involve cooperation with the use of ICT tools. ICT tools only make educational sense when they are used for cooperation. Otherwise, the tools themselves become the purpose and effect of learning, and change nothing in the lives of immigrant pupils.

• *How can ICT contribute to a better understanding and harmonious coexistence between young immigrants and older people, both living in big cities?*

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 people living in big cities.

They makes it possible to:

• *Learn from each other* – different generations share their experiences, which results in knowledge, skills and competences;

• *Learn with each other* – this means joint learning about the world, society, historical events; this is about learning facts rather than objectives, which for some reason are important to the members of both generations;

• *Learn about each other* – this means an exchange of experiences, sharing outlooks, valuesand aspirations.

ICT-supported learning eliminates intergenerational and cultural distance. It helps to work for the common good, creating a sense of belonging and ensuring mutual support. There are two main fields of research into intergenerational learning. The first perspective focuses on intergenerational learning within related generations, with studies emphasizing the transfer of family knowledge and traditions (Büchner&Brake, 2000; Brassett-Grundy, 2004; Franz, Scheunpflug 2016). The second field explores intergenerational learning beyond family connections, among non-related generations (Hatton-Yeo, 2006). Studies are conducted within communities such as schools and focus on measuring the attitude of one generation towards the other (McBain, 1996; Couper et al., 1991; Gorelik et al., 2000; Granville, 2002). Both youth and seniors told us that the courses definitely had an impact on common understanding and offered an opportunity to introduce themselves, learn about each other, and share knowledge and skills. Our research shows that during the courses ICT changed its essence from serving as a catalyst, the trigger for intergenerational learning, towards facilitating intergenerational learning. Secondly, the research shows the tendency to understand intergenerational learning as "learning about each other". This was underlined by seniors who listed knowledge of ICT as secondary to interaction and understanding the immigrant youth. According to the immigrant youth, their ICT knowledge gave them the confidence necessary to interact with seniors on equal terms. ICT facilitated better interaction and understanding between immigrant youth and seniors by overcoming stereotypes and eliminating cultural differences.

• *How can ICT and intergenerational learning be used in order to reduce ESL?*

There is an emerging consensus among researchers that when youth, as part of different programmes, 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 (Flanagan et al. 2010; Kasumagic 2008; Rogoff 2003). Our results showed that ICT-supported intergenerational learning empowered immigrant youth towards doing better at school and working independently, without teachers. After the courses the youth were also much more motivated to go to school. Seniors tried to instil in them the belief that learning is a way of succeeding in life.

• *In what ways and to what degree was each generational group empowered within intergenerational learning?*

The notion of empowerment can be understood in different ways, depending on the intentions expressed or implied by users. Weber (1947) as well as French and Raven (1959) argued that one can distinguish different types of influence within the term "social power", based on different relational factors. Power can be defined as the ability to determine, influence, or

manage the behaviour of those with whom one enjoys a relationship. Power can come from (1) expertise and means "power to" do something, (2) reward and coercive power, which refers to the "power on" or "power over" someone as a reward or punishment, and (3) legitimate and referent power, which refers to "power with" or a source of power relating to the ability to influence others and the resulting impact on others. When considering personal capacities, empowerment reflects the development of the sense of agency, self-confidence, and self-esteem, which means that one has "power to", self-confidence and sufficient expertise to act. To have "power on" or "power over" something refers to the nature of the relationship and decisions made within this relationship as influencing the development of strategic know-how in human relations. Collective capacities are defined as activities performed by individuals, considered collectively, in order to achieve a greater impact than they would on their own, developing "power with" a group, and thus constructing a group identity and a sense of collective agency.

Our findings highlight the fact that intergenerational learning is a significant sociocultural platform for knowledge exchange and empowerment. Both young immigrant pupils and older adults described their interactions as "a power to change" their life situation and "exchange of knowledge" that might help them. Seniors attributed their empowerment to the desire to influence the immigrant youth so that young people improved their language skills and started their life in a new country (empowered by their belief they could change external circumstances). Pupils attributed their empowerment to their existing knowledge and the willingness to share their technical knowledge and skills (i.e. how to use tablets, smartphones) with the older generation (empowered by an internal belief).

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