

RESEARCH REPORT I

*The effective using of ICT in intergenerational learning
as a tool to decrease drop-out rates in general education*

Editors

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Executive Summary

This summary of the review of literature on effective using of ICT in intergenerational learning as a tool to decrease drop-out rates in general education, aims to act as a stimulus for discussion and debate and to potentially link themes such as ICT, learning and intergenerational learning and early school leaving.

The overall purpose of this report is to serve the theoretical framework of the ICT-Guides project. It addresses specifically the context within which the project takes place in terms of the current situation related to effective use of ICT in intergenerational learning as a device to decrease drop-out rates in general education across Europe. It also identifies current policies and the best practice models across EU countries to reduce ESL among young immigrant pupils. It reviews scope of ICT and intergenerational learning as measure to reduce ESL. Finally it shows how ICT can contribute towards breaking polarisation between young and older citizens across Europe.

In the recent years, education has gone through many transformations in order to meet the requirements of the contemporary economic reality and social problems. Among these changes, the dominant tendency is focussing on learning process, understood as a more favourable and convenient for the individual. As a result, the rank of informal learning and constant learning grows constantly. Nowadays, the indications of the end of supremacy of teaching over learning have appeared, due to low effectiveness of teaching compared to high potential of learning. Learning is perceived as the approach for solving individual and social problems, for instance early school leaving (ESL), unemployment or social exclusion. Learning process can be effectively supported by information and communication technologies (ICT).

Early school leaving have had a high profile within European education policies since Europe 2020 Agenda. Strategies among European countries to reduce ESL should be comprehensive and include prevention, intervention and compensation measures. They need to be taken both at the school level and outside of schools. There is no one definition of Early School Leaving in Europe as there are no unified best practice models to reduce early school leaving among European countries. While the reasons for early school leaving are highly individual, ESL as social phenomenon follows certain patterns. Early school leavers in general are coming from poor, socially disadvantaged and or low education backgrounds, disadvantaged minorities migrant backgrounds, belong to vulnerable groups.

The effects of early school leaving at the individual and social level are multiple and widely studied. Leaving the educational and training system without reaching a certain level of qualification strongly limits an individual's range of life chances. In terms of professional career, it leads to integration in less-qualified employment segments characterized by low pay, a disproportional high risk of precariousness and unemployment and weak perspectives of mobility. Early school leaving also inhibits full participation in community life, either directly – due to deficits in

interpretation and expression skills, speech organization, critical capacity, etc. – or indirectly, through the effects of the self-image of precariousness and low incomes in a society in which employment and consumption are central identity elements. In sum, leaving school early implies disproportionately higher risks of poverty and social exclusion throughout an individual's life.

Inclusion of seniors into the digital society becomes more popular among EU member states, however the inclusion the use of ICT is a challenge for older citizens. ICT can provide support and create better conditions in which older people are able to participate fully in their communities.

From ICT tools benefit not only older generations but as well young immigrants. Vital is in this regard to smooth the access into general education system of young immigrants that easier reintegrate them into societies, makes them more independent in a digital world and can built their high level of self-confidence and self-esteem. Essential is the teachers readiness, preparation to work with and proper approach to teaching of immigrant pupils. That means pupils support and creation of the best conditions to let them actively learn (constructing knowledge). In addition to formal education, needed for young immigrants are informal education opportunities. It is important to develop among young immigrants key competences, such as language competence, communication competence, digital competence, social and civic competence.

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Introduction

The overall purpose of this paper is the review of literature on effective using of ICT in intergenerational learning as a tool to decrease drop-out rates in general education. The report is based on a review of literature on learning and intergenerational learning, early school leaving and ICT. The approach taken in this paper with regard to the review of the literature is to look not only at academic material, books, articles in journals or research papers, but also practice based materials found in reports, websites or information articles in relevant educational or development publications.

Staff and researchers at the University of Lodz conducted the review of literature in order to answer following research questions:

- What is the current situation related to effective use of ICT in intergenerational learning as a device to decrease drop-out rates in general education?
- What are the best practice models in the European countries to reduce early school leaving and presents the opportunities of ICT and intergenerational learning as measure to reduce early school leaving?
- What is the role of ICT as tools for breaking polarisation between young and older citizens?
- What recommendations concerning the ICT, ESL and intergenerational learning can be formulate for the project?

The paper is structured into four main themes that are (1) the current situation related to effective use of ICT in intergenerational learning as a device to decrease drop-out rates in general education, (2) best practice models in the European countries to reduce Early School Leaving among immigrant pupils, (3) the scope of ICT and intergenerational learning as measure to reduce ESL, (4) ICT as tool for breaking polarisation between young & older citizens. In the beginning of the report there is an explanation of the main terminology used in the study. After each section of the report, alongside a summary, some key learning points are identified and suggested as relevant to the needs of the project. A concluding chapter makes specific recommendations for the ICT-Guides project in general and wider for schools, organisations supporting immigrant pupils and education authorities in particular, to support schools to tackle early school leaving among young immigrants.

Chapter 1

The main terminology (Joanna Leek, Marcin Rojek)

Learning and intergenerational learning

Learning is a phenomenon in which people are interested from ancient times. As history shows, almost always in the general thinking of the man there was involved the problem of his learning and the sources of his knowledge. The first attempts to analyze learning were taken in a philosophical background and were related to knowledge, which was treated as a result of learning. Plato in the dialogue *Teaitet* argued that knowledge is a true belief, or conviction justified by the earlier experiences and reflections.

Cartesian concept of the mind as an autonomous individual and the concept of John Locke's *tabula rasa* put opposition in the scientific thinking of the individual and society. Thus, it was introduced a strict division between human – being the individual and the society – being collective. Quickly, was noted that environment creates the basis for the formation of human qualities and ways to survive. Therefore, it was occurred the need to create synergies between the body and its habitat, as a mechanism for integrating, which would explain how the individual and what and how to regulate its behaviour. The answer to this need was the phenomenon of learning. A prominent researcher and expert on learning of adults – Peter Jarvis (2006, p. 13-17) argues that learning occurs by stimulating the human senses by the external environment, both natural, physical, social and cultural, which contributes to the integration of the individual with the world.

Over the centuries different understanding of learning have showed. They fit in two perspectives: psychological and pedagogical.

The psychological perspective, learning is the emergence of a relatively permanent change in behaviour of the individual (*behaviourism*), or assimilation of some messages indicating the process and the adaptive nature of learning (*cognitive approach*). From a psychological point of view, even if learning occurs in the relationship with the surroundings, and so it has a character of an internal mental process occurring in the mind of the individual learner, resulting in changes in behaviour or the acquisition of new knowledge, skills and habits.

Pedagogical perspective, points to more humanistic nature of learning or its relationship with the school. In this perspective, learning is associated with a specific type of attitude to knowledge and to life, which requires personal commitment and initiative. Pedagogical learning is more powerful figures in relation to its original psychological counterpart. Frequently accompanied by the intention of achieving a particular purpose, for example, associated with contemporary educational problems: behavioural problems, lack of motivation for learning, lack of desire for self-development, addiction prevention and early school leaving. Such learning is accompanied by the use of various symbolic systems, such as language, concepts and theories.

Learning is not the only activity undertaken deliberately by man to assimilate any knowledge or acquire some skills. According to the world's leading educational researchers, learning is a mechanism of general human development, a kind of continuous unit to reply to the events in order to achieve a sense of control over various aspects of life (Biesta and others, 2010, p. 6).

Today, there are many epithets, definitions and concepts of learning. Each new theory or concept of learning in the intention of its creators aimed to overcome the limitations of theories that were used previously. Two British learning researchers – Sarah-Jayne Blackemore and Uta Frith, postulate that the multiplicity of the concept of learning and great interest in the research should lead to the establishment of a new interdisciplinary science dedicated to learning, drawing on the achievements of neurophysiology, psychology and pedagogy. In their views, such instructions must take into account the fact that learning lasts a lifetime (Blackemore, Frith, 2008, p. 190).

Nowadays, more and more often, intergenerational learning is undertaken. It is validity see both scientists, what is expressed in numerous publications (Bengtson, Biblarz, Roberts, 2002; Bengtson, Furlong, Lufer, 1974; Brannen, Moss, Mooney, 2004; Brown, Ohsako, 2003; Cappella, Heiner, 1990; Quiet, Smith, 2011; Davis Larkin, Graves, 2003; Dumas, Margolin, John, 1994; Jacker, 1992; McClusky, 1990; Mazor, Tal, 1996; Newman, Hatton-

Yeo, 2008; Noël, de Brouckère, 2001; Prettner, Praskawetz, 2010; Silverstain, 2004; Storm, Storm, 2001; Tapscott Frick, Wootton, Kruh, 1996; Thomas, 2009), as well as practitioners. The European Commission tread intergenerational learning and intergenerational transfer of knowledge and skills as the primary factor in achieving the objectives set in the Europe 2020 Strategy¹.

According to Gert J. Biesta, who is famous British researcher, professor of education at University of Stirling:

“most definition 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, p. 74-75).

Generally, in intergenerational learning, it can be assumed that:

“A generation consist of group of people born during the same time period and who are united by similar life experiences and a temporarily coherent cultural background. People belonging to the same generation have the same location in historical dimension of the social process” (Antikainen et al., 1996, 34).

G. Biesta draws attention that the relationships between learning and generations have long history in educational thinking, especially in terms of inter-generational transfers of knowledge and values. Recently, the role of this learning is more important, because of social and international changes:

“Particularly, migrant groups, inter-generational exchanges appear both to help maintain existing collective identities while simultaneously enabling adjustment to a new context. A recent qualitative sociocultural study of children/grandparent learning among Sylheti/Bengali-speaking families in east London explored ways in which grandparents served as “founds 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 (Kenner et al., 2007). 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).

The intergenerational learning is accepted assumption about the educational potential of intergenerational relations. It is a form of involvement two generations in an action in order to achieve benefits. In the course of this activity they are produced specific learning outcomes. Based on relations, which stimulate people to learn and develop different strategies of communication. The elderly, in contact with younger recall the ideals to which they aspired in the past. In addition, older people are stimulated intellectually by younger. In the case of young people, their often unrealistic view of the world, in contact with older is subjected to a strong correction (McClusky, 1990, p. 65-73). As part of the intergenerational learning stands out (Brow, Ohsako, 2003, p. 151-165):

- *Learning from each other* – different generations share their experiences, and the result is the knowledge, skills and competences.

- *Learning with each other* – this is common learning about the world, society, historical events, it is learning the facts rather than objective, which for some reason are important to the members of both generations.

- *Learning about each other* – this is exchange of experiences, sharing outlook, values and aspirations.

Now, in the field of intergenerational learning is considered that the voice of all the partners involved is equal, or even in a special way the role of young people is emphasized (Stom, Stom, 2011, p. 133-146). It is a kind of "rebound" after a time when young listening mainly elderly people, like parents, grandparents and teachers, because they had a monopoly on knowledge. The new technologies appearance and universal access to knowledge, caused profound changes in this regard. It turned out that young people are able to skilled workers and use a new technologies, and thus have greater access to knowledge. In the face of this, the elders can play a function as a consultants, advisers and facilitators. However, do not developed a coherent theory explaining the course of intergenerational learning so far. Thus, researchers and practitioners use general theories and concepts of learning. To ensure methodological correctness of the research project, it is necessary to choose one theory, which will be leading the project. K. Illeris proposed the theory of learning, which implies that learning involves three dimensions: cognitive, emotional and social. According to the researcher, learning should be analyzed from these three different perspectives.

In the first dimension – cognitive, learning is a process controlled by the central nervous system, which

¹ The Europe 2020 Strategy supports smart, sustainable and inclusive growth. Its aim is to improve the EU's competitiveness, while maintaining the EU model of social market economy and a significant increase the efficiency of utilization of its resources (http://ec.europa.eu/europe2020/index_en.htm).

consists in acquiring knowledge and developing new skills. Referring to the learning theory of Jean Piaget focused on the cognitive aspect of learning, K. Illeris adopts in his theory that learning is a feature of the human species that is being developed in phylogeny. This feature is the ability to adapt to environment through the adaptation in order to maintain a balance between the individual and the environmental, by assimilation, that is, up to and including cognitive structures impressions from the environment. Considering the cognitive dimension of learning K. Illeris also evokes learning theories developed by other researchers like David Kolb, Jack Mizerow, Lev Vygotsky, Alexander Luria, Thomas Nielsen, Gregory Bateson and Yriö Engeström. Based on the analysis of these theories, in the cognitive dimension of learning, K. Illeris distinguished *cumulative learning*, *assimilation* and *accommodation*.

Cumulative learning usually occurs in the earliest years of life, when a person has to learn “from the beginning”, something that is not connected with his prior knowledge. This is rote learning, also known as mechanical. Learning takes place in a strictly preset conditions, and its effects are unstable, appearing also in the conditions of "unnatural". Specific examples of learning is cumulative memorizing poems, formulas, skills acquisition cycling or skating.

While *assimilation*, the body absorbs impressions from the outside, which is expanding its existing experience and differentiates them. The results of this learning are knowledge and skills, which can be used in various natural conditions and not just in the classroom or in other designed circumstances, as in the case of cumulative learning. The assimilation much less reliant on existing cognitive structures and the creation of new structures. Its main effect is the growth of consciousness. Learning from this experience transformed into knowledge, which K. Illeris accepts as David Kolb. Therefore, any learning is learning by experience and it has four stages: *concrete experience*, *reflective observation*, *abstract conceptualization* and *active experimentation*.

The third type of learning – *accommodation*, involves the reconstruction of pre-established cognitive structures through their dissociation and reorganization. In accommodation, the internal world has to accommodate itself to the evidence with which it is confronted and adapted to it, which can be a more difficult and painful process, because it means learning information which does not fit the pre-existent fields and categories which people have. Therefore, developing new ones to accommodate the new information is needed.

Another of the highlighted by K. Illeris dimensions of learning is *the emotional dimension*. If the cognitive dimension of learning, the key question concerned the course of learning, while the emotional dimension concern is the impact of learning on the man. Learning is shaping mental structures, the structures are "marked" emotionally. Emotions related to the situation of learning determine its effectiveness and durability of knowledge. Basing on the scientific legacy of the American psychologist Hans Furth, whose proposal of understanding the learning is a kind of attempt to combine theory Sigmund Freud and Jean Piaget, and on the views of the German psychologist Ute Holzkamp-Osterkamp, K. Illeris comes to the following conclusions:

- people have a natural ability to learn, which is a source of energy to take this step,
- in childhood and youth, cognitive and emotional learning are integrated, but in school are usually separated,
- the cognitive and the emotional learning should be treated as two aspects of the same phenomenon of learning,
- every mental structures of man are emotionally marked and emotions influence on what people want to learn, what they actually learn, how effectively and how long it will be in our memory,
- the emotional dimension is created and developed relatively by stable patterns of emotional behaviour,
- cognitive learning is an element of emotional development for the individual and occurs through assimilation and accommodation.

Third, the last mentioned by K. Illeris dimensions of learning is *the social dimension*. Here, learning in cognitive and emotional dimension is the reference point. Cognitive and emotional learning are rooted primarily in the biological and genetic abilities of the individual, while social learning is rooted in social contexts and society. Learning in the social dimension is not biologically conditioned, but historically and the sociologically. The material objects also they have a social character, because they are manufactured and transformed by man. K. Illeris links here to the social learning theory Albert Bandura and the views of the British researcher Peter Jarvis. He evokes a critical theory developed by the Frankfurt School as well. Learning in the social dimension is associated with social interaction, the impact of socialization and interaction through the media, especially new media and ICT. It is

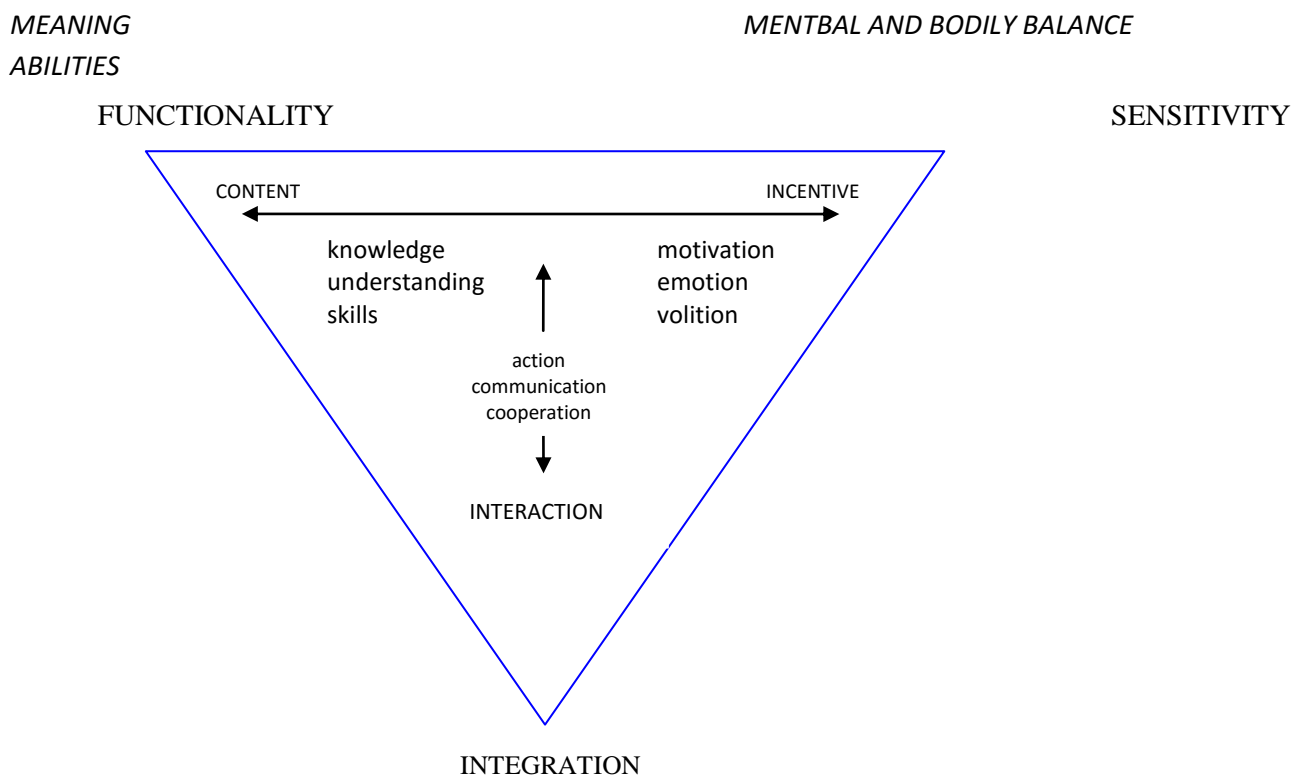
associated with the perception, transmission, experiences, imitation, active participation, independence, responsibility and reflexivity. Nowadays, in the post-modern societies, these processes and competences are just as important as reading and writing, or even more. Learning in the social dimension is primarily related to the participation in social practice, action in communities of practice and the development of meaning and feeling of social identity. With regard to the social dimension of learning author formulates the conclusion that generally contemporary post-modern society, characterized by openness to social interactions.

The theory of the three dimensions of learning seems to be an interesting research proposal for the project related to intergenerational learning and ICT. The choice of this theory can be justified as follows:

- the broad view of the phenomenon of learning, allows close scientific look at the practice of learning including intergenerational relationships,
- recognized learning very wide, therefore minimize the risk of oversight something important,
- take into account the context of social relations, social openness and pay attention to new technologies, those mediate between members of sociality.

Schematic approach to this theory is illustrated as follows:

Figure 1. The three dimensions of learning and competence development



Source: Illeris, 2009, p. 10.

Featured by K. Illeris three dimensions of learning constitute the theoretical framework, which has potential to support practical work, idea and empowerment implementation. That is why how people behave is not so much of what they were taught in school, but that in which the community and the culture they live and work, what emotions in connection with this experience, what kind of technologies they use.

Early School Leaving (ELS)

According to the definition used by European Commission, Early School Leaving occurs when “young people leaving education and training with no more than lower secondary education” (Education and Training in Europe 2020, 2013, p. 17). For Eurostat, European ESL rates are measured as the percentage of 18-24 year olds with only lower secondary education or less and no longer in education or training (European Commission, 2013, p. 8).

There isn't one common definition of Early School Leaving among European countries. Early School Leaving definition used by B. Cullen (2000, p. 10) summarizes various positions in literature: "early school leaving can be understood as young people leaving school before the legal school leaving age and/or leaving school within limited or no formal qualifications". Early School Leaving can mean "leaving education and training systems before the end of compulsory schooling; before reaching a minimum qualification or before completing upper secondary education" (European Commission, 2013, p. 8). Apart from the term Early School Leaving that refers to all forms of leaving education and training prematurely, there is in use the term school drop-out that often refers to discontinuing an on-going course, that occurs any time and by any age groups (European Commission, 2013, p. 8). It is also argued that using the term "drop-out" suggest the responsibility of pupils for leaving the school prematurely and there are usually other factors that contribute to the ESL that may not be their own making (Conen & Rutten, 2003; Cassidy & Bates, 2005). Other approach to the definition of school drop-out suggest P. Esteavo and M. Alvares (2014). Both researchers pointing on the need to distinguish between formal and functional definition of school drop-out. Formal definitions based on the concept of compulsory education and includes the references to age or the number of years the individual spends in schools. It is associated with the legal definition of compulsory education. In opposite to formal definition, the functional definition considers the issue of how the drop out occurs and the consequences for each of the pupil. "The functional perspective of the concept thus emphasizes employability and professional performance by level of education and not so much the age limits defined by law for being at school" (Esteavo & Alvares, 2014, p. 26) .

In this study, the term Early School Leaving refers to definition of European Commission and describes "all forms of leaving education and training before completing upper secondary. It includes those who have never enrolled and those who have dropped-out of education and training. It also includes those who do not continue education and training after finishing lower secondary education or those who failed final exams at the end of upper secondary education" (European Commission, 2013, p. 8). The study refers also partly to functional definition of school drop-out, in particular when considering consequences for future of immigrant pupils, lack of vocational training and social exclusion.

Information and Communication Technology (ICT)

The term "Information and communication technologies" (abbrev. ICT) hiding family of technologies processing, gathering and transmitting information in electronic form. Narrower concept make information technologies (IT), connected with computers and software, but not connected with communication technologies and related networks. The development of both technologies becoming more consistent and is driving force behind the civilization, social and economic development. To the ICT belong: hardware, software, communications equipment, Internet, network equipment and equipment for data transmission, office accessorises, telecommunication services, IT services, Internet, mobile phones, electronic media: radio and satellite TV.

ICT play an important role in the life of modern man. More and more often determine everyday life, lifestyle and relationships between people. ICT are applied in many fields (economy, management, social work, education). They take into account the individual needs of users regardless of time and place.

ICT promote the dissemination of information and knowledge by separating content from a physical location. Geographical boundaries do not constitute an obstacle to the flow of information. They allow remote communities to integrate, making the information, knowledge and culture potentially available to everyone. According to UUNESCO (<http://www.unesco.org/new/en/unesco/themes/icts/>):

"Information and Communication Technology (ICT) can contribute to universal access to education, equity in education, the delivery of quality learning and teaching, teachers' professional development and more efficient education management, governance and administration. UNESCO takes a holistic and comprehensive approach to promoting ICT in education. Access, inclusion and quality are among the main challenges they can address. The Organization's Intersectoral Platform for ICT in education focuses on these issues through the joint work of three of its sectors: Communication & Information, Education and Science".

Digital and virtual nature of many ICT products enables zero or declining costs of educational activities. Thanks to ICT, information can be recovered, sort, filter and disseminate. ICT facilitate elimination of intermediaries, because they allow users to obtain and use the services directly from the original provider, reducing the role of middlemen, ICT are global. Through the creation and development of networks, ICT can overcome cultural and language barriers. Thanks to individuals and social groups can live and work in any part of the world and participate in the creation of the global or local educational activities, regardless of nationality or cultural and social background.

There was a qualitative change in the discussion of the technologies and their function in the development of key competencies. Today, we do not ask whether technology is changing our habits, lifestyle and way of learning, but how to develop the necessary skills, especially those related to the building of social capital.

Digital technologies are developing core competencies, but on one condition only. If people redefine the working time, place of learning, form, content and organization of classes, and also aids in the digital world, and finally, access to and function of educational resources. Therefore the new dimension of education has arisen.

ICT learning is a personalized process, creating conditions to enable each student to achieve the goals at their own pace, matching the pace and learning strategies to individual abilities and needs. We live in a time of multiple choice. ICT give people responsibility for their own learning. ICT based on the assumption that “one size fits all is ineffective” and are more tailored to the needs than traditional education (tools). Everyone should define the learning strategy independently and take responsibility for the process of achieving a goal. This is not instruction teacher: what, when, how much and how, should set student learning strategy but its independent decision in determining the process.

The learning process should be based just on personal strength, not deficits. ICT appearance raised now model of educational relationships between learners and teachers as well as new definition of learner and teacher.

The teachers regains his institutional authority and authority coming from monopoly on knowledge. They not transmit knowledge to the learners, but accompany them with learning. They are the experts in the field of learning, motivating, but also an advisers, tutors and coaches allows to reach the personal resources of the intellectual, emotional, physical and spiritual strength of every learners. At the same time the definition of learners and teachers has changed. As a learner can be treated every person, in every age, independently on his formal role. In turn, the role of teacher can play everybody, like friends, family, employees, neighbours or members of local society.

In this sense, ICT seem to be an invaluable tool for the implementation and realization of the idea of empowerment.

Empowerment

Empowerment (social strengthening) is present in thinking about social action and social work for over 30 years. In the face of cultural changes and the emigration the idea of empowerment has grown.

This is the direction of action in a social policy and social work. It consist of processes of knowledge, skills and confidence development. It builds up the social cooperation and discovers positive environmental factors as sources of changes and improvements.

The aim of this idea is to strength and support individuals and social groups which are in difficult situation or deprivation.

Their deprived situation stems on the one hand from the fact of being migrants or refugees. For instance, an asylum seekers, who have to wait for some years for the decision, regarding their request and during this waiting period are not allowed to work and to earn a decent living. On the other hand, marginalization and deprivation can be the result of the effectiveness of certain features of social aid and counselling.

Migrants and refugees could possess character traits, which are valuable for the host society. These features of character make it easy to enter into an integration process. This strategy aim is to build or restore social integration. People can learn resourcefulness and skills to improve their economic and social situation. Therefore, some experts suggest empowerment can be treated as human resources of waking-up in order to be independent in taking care of human needs (Szamgalski, 1994, p. 122).

The empowerment is a subject of interest various sciences like economics, sociology, management, social work, law, psychology, pedagogy. Moreover, experts pay attention to the fact that empowerment is rather the idea, orientation, concept, strategy, effect of influence, or social construct, rather problematic to understand and to think about it. It is presented that this idea has not any application procedures. These circumstances make it difficult for practitioners to work according to it (Adams, 1996, p. 10-13).

Therefore the mechanism of empowerment is needed in idea of implementation. This mechanism could be learning, especially intergenerational learning as a type of social activity in which older generation can help overcome the deficiencies and limitations occurring among young immigrants generations. It can be a mechanism which activates and uses social resources of younger and older communities.

Chapter 2

The current situation related to effective use of ICT in intergenerational learning as a device to decrease drop-out rates in general education. The short presentation of drop-outs (Arleta Suwalska)

This literature review has presented that drop-outs and study success are studied in some European countries (Denmark, Norway, England, The Netherlands (*Dropout and Completion in Higher Education in Europe*, 2015, p. 66-69). In the Europe 2020 strategy, one of the goals is to have at least 40% of 30-34-year olds complete higher education. Reducing drop-outs and increasing completion rates in higher education is one of the key strategies for achieving this goal. It is crucial for creating the high level skills that Europe's knowledge intensive economic sectors need as well as for Europe's capacity to innovate and foster productivity and social justice.

Across Europe there are over 170 national related to study success and institutional policy instruments which have been identified in 35 countries (*Dropout and Completion in Higher Education in Europe*, 2015, p. 7).

They are grouped into 22 typical policies falling under three main policy headings. Firstly, there are Funding and financial incentives. The main rules are financial rewards or sanctions to change the behaviour of students or institutions towards study success. There are offices *Information and support for students*. Their work includes counseling, career guidance related to study and future job opportunities, tutoring, etc (*Dropout and Completion in Higher Education in Europe*, 2015, p. 8).

There are individual level factors impacting on study success: Socio-economic (family) background, gender, ethnic origin, cognitive competencies, motivational disposition of student and student's educational pathway.

Many children do not drop out of school voluntarily, but are pushed out of schools. There are numerous procedures and factors responsible for this phenomenon, like: pedagogical practices, routines and administrative procedures. There is a failure between the expectations of parents and the system's capacity to respond with equal seriousness. As a result, children lose the battle to gain a formal education. These children then return to a routine of drudgery, exploitation and suffering.

The literature has a tendency to focus on the individual student which almost always associated with lower rates of study success. The socioeconomic and demographic background (age and gender) of pupils and their academic skills play a significant role in their study success. Research on the cognitive competencies and motivational dispositions of students has shown that study success is highest when there is congruence between the students' expectations and their self estimation of their own capabilities, the reality of the study programme, its requirements and student effort.

At the institutional level, the creation of a culture of commitment between the group of students, well-prepared teachers and appropriate management are crucial. Teaching and learning policies, support the services to the student are important, too. The institutional context also considers the composition of the student body. It pays attention to the size and selectivity of the institution as well as its resources, which set up the study success.

Other different aspects of the system are influential, too. They include access and selectivity; flexibility and opportunities for movement within the system and financial support.

Personal background characteristics like gender, ethnicity, parental education and family wealth are often related to different forms of capital (cultural, social and economic capital) that help construct students' perceptions of the value of education and as such influences their study behaviour. Sociological approaches stress the influence of socioeconomic family background on the motivation, aspirations and expectations with relation to education.

The effective use of ICT in intergenerational learning

The young people acted as personal ICT trainers – teaching older people skills they often needed to participate fully in modern life. The older people acted as mentors – passing on their experience and guidance to young people struggling to start their careers.

There was a project about the use of transnational exchange around strategies for increasing both generation and implementation of innovative healthcare technologies to promote healthy ageing. It helped to promote the use of

self-monitoring technologies for patients with chronic illnesses to provide better prevention of loss of independence and good health (*ICT for Health*, 2012).

Another project (*How to promote active ageing in Europe, EU support to local and regional actors*, 2011, *CIB Cities in Balance – Active Cities for all Ages*) was based on improving the general well-being of seniors, moving away from the traditional reliance on reactionary health and social-care services. CIB focused on services that improve the quality of life of seniors and help to enable them to live independently longer in social, financial, digital and community inclusion. There weren't exact projects about breaking polarization between two generations, but there were about enhancing solidarity between generations.

The other project (HEAR ME – Highly educated retirees mentoring early school leavers) took into consideration retirees 55 + with the potential to become mentors to early school leavers (15-25). *Computeria – (Computeria – Intergenerational solutions*, 2012) – intergenerational solutions brought socially disadvantaged older and younger people together to help each other develop.

Summary with recommendations

Economic approaches show that access to sufficient financial resources such as tuition fees and living costs can positively affect the decision to continue and complete studies. Effort and ability includes needed factors like: academic preparedness, cognitive abilities, difficulty of study programmes. The number of hours students invest in studying is also really significant for success. It is widely believed that students from lower socioeconomic backgrounds are less likely to complete a school and then the degree. Academic preparedness refers to the qualifications and grades students obtained before, while cognitive abilities indicate students' talents, intelligence and skills. 'Better prepared students' generally achieve higher study success, although abilities of students should match with what is required in a particular study programme (*Dropout and Completion in Higher Education in Europe*, 2015, p. 25).

It is obvious that in the contemporary immigration policy for Europe there is the strong need for better intergenerational integration between ethnicities. There is observable in European societies the inclusion of seniors into the digital society. The use of ICT is a challenge for 65+. In this context students becoming the tutors of older citizens in teaching them ICT may help both groups. Older generation (65+) had in the past lack of opportunities to keep up to date with technological changes. It negatively influenced on social inclusion and lack of information about changing world and reduced their social networks. ICT according to previous projects can provide support and create better conditions in which older people are able to participate fully in their communities. ICT tools can be helpful tools for older younger generations. ICT tools can smooth the access into general education system for newly arrived immigrant children in the age span of 12-16 years. They easier reintegrate into societies and are more independent in a digital world. Moreover, they can built their high level of self-confidence and self-esteem.

The recommendations for breaking polarization between young and older citizens are following:

- It is hoped that the intergenerational dialogue, with the usage of ICT tools, will foster inclusion of intellectual and cultural heritage. It will become an integrated practice in the participating ICT polarization between young and older citizens.
- Additionally there will be observed the gradual adaptability of different social behaviors and acquisition of knowledge about technical changes.
- There is also a chance for intergenerational dialogue, for understanding the differences between generations in the common situations.
- The constantly updated IT software and equipment will help to build up a highly positive effect on students' grades and as a result for their future achievements.
- It encourages 65+ to increase their sense of empowerment in life which is based on the usage of app and ICT tools in real life.
- It increases 65+ key competencies related to language and communication skills what significantly raises their level of life satisfaction.

The recommendations for cultural integration of newly arrived immigrant children in the age span of 12-16 years old are following:

- It is believed that 12-16 years old involve older citizens into networks.
- The newly arrived acquire the new language in different contexts (social, situational, generation gap).
- The ICT tools and networks around them significantly help to overcome societal obstacles, they get to know the new customs, behaviors and real life.
- It is essential that ICT strengthens the students' feeling of being the tutors, as a result they the step by step are becoming parts of future networks.
- Additionally, on the cooperation level both groups (12-16 years old- 65+) should have the responsibility of choosing materials and implementing ICT tools in accordance with their styles and strategies of learning.

And the recommendations for educational policy are following:

- It is believed that an effective use of ICT in intergenerational learning will influenced on set up such educational paths at different levels of education, too.
- The successful usage of mentioned techniques enable incorporation of ICT into intergenerational learning to state schools. It is advised to start with extra-curriculum activities and find out the connection between drop-outs, schools and 65+.
- The project creates new initiatives in education policy and contributes to the establishment of the new types of schools.
- It shows the directions in XXI education policy in all European countries. It is obvious not only to pay attention to all major achievements of students in the education system. It is needed to include them in this wide discussion about drop-outs. The national and institutional policies should explicitly and directly influence on study success of drop-outs.
- To achieve goals there should be clarified the relationships between policies and study success. It is essential to find out policy approaches and instruments which appear to be effective in reducing rates of drop-outs at international and European levels.

Chapter 3

Best practice models in the European countries to reduce Early School Leaving among immigrant pupils (Joanna Leek)

Early School Leaving (ESL) has been recognized 2010 by European Commission (European Commission, 2010a) as one of the main challenges faced by European societies, mostly because of the recognition of the role of education on social and economic growth. In the Europe 2020 strategy European Commission (EC) made to a target for achieving reducing ESL to less than 10 % by the year 2020 (Commission Communication Europe 2020, 2009).

The profile of early school leaver

The profile of early school leaver varies considerably within the European Union (EU) according to the highest education level achieved, to their status on the labor market and to their ethnic origin. While the reasons for early school leaving are highly individual, ESL as social phenomenon follows certain patterns. Becoming Early School Leaver is a process and not a one-off event.

Early School Leavers in general are coming from (1) poor, socially disadvantaged and or low education backgrounds, (2) disadvantaged minorities migrant backgrounds, (3) belong to vulnerable groups, such as youth from a public care background, teenage mothers and persons with physical and mental disabilities or other special educational needs (European Commission, 2010, p. 9). Potential common reasons why young people leave school early, Marie Lally has been divided into four groups (Lally, 2012, Chapter 10A). The first group refers to personal reasons. M. Lally mentions low self-esteem, substance misuse/abuse, undiagnosed or not effectively unsupported learning difficulties, lack of motivation. The second group are social reasons such as anti-social behavior, poverty – pupils leaving school early leaving in areas of lower socio-economic standing and may opt out of school due to high participation costs. Family reasons are the third group listed by M. Lally. Early school leaving reasons are conflicts in the family, changes in the family such as death or separation, family poverty that accusing the need financially support of the family. Family reasons are connected with the economic reasons resulting in the pressure on young people leaving school earlier and achieve wealth within an affluent society. Last group of potential common reasons that accusing early school leaving are related to school. These are low level of literacy and numeracy leading to poor performance and in consequence to low self-esteem or behavioral problems, age differences for example in situation when pupil is older or younger than their classmates, negative relations with teachers leading to bad behavior or suspension on a regular basis, poor achievement leading to lack of motivation.

Measures against Early School Leaving often fulfill preventative functions, intervene in processes at the same time and compensate for missed learning being also relevant for pupils in compulsory education (European Commission, 2010, p.13). There are clear overlaps between the different measures. Strategies for combating early school leaving to be effective, needs to have a coordinated strategy across levels of government and different policy areas, such as social, support, youth or integration policies. School needs to be involved in creating such strategy through cooperation between teachers, parents, school management. The quality of school education has a big impact on incidence of early school leaving. Improving the quality of education in individual schools and at system level helps all students at the same time as reducing the risk of dropping-out (European Commission, 2010, p.15).

As mentioned above, early school leaving is a social phenomenon and its causes are not purely educational. There are different factors for early school leaving ranging from the immediate sphere of the pupil to the wider society, from country to country and also within regions. There is no single reason for it and no single solution. Common for them is the fact that employability depends strongly on the level of qualification achieved at all educational levels, in formal and informal environments.

In the years 2013-2014 has been conducted a education project Early School Leaving and Second Chance Education (The ESSE project), financed from Lifelong Learning Programme. The research undertaken within the project aimed to identify good practice examples for tackling early school leaving, whilst also highlighting the best practice methodologies and philosophies adopted through this work. An important element of the approach taken

through ESSE project was focusing on three specific categories within the area of early school leaving and second chance education, namely prevention, intervention and compensation.

Preventative strategies seek to tackle the problem before the first symptoms of it are visible. They look at pre-conditions for successful schooling and the design of education and training systems. Preventive good practice examples, identified in the ESSE project, are set up locally, in the communities, schools. In a lot of cases projects involve cooperation of school with education authorities, social services and parents or families of early school leavers. Prevention of early school leaving applies to all age groups of learners, not only children in primary schools but in a lot of cases adults. Apart from early school leavers or their parents, target groups of projects identified good practice examples for prevention can be teachers and trainers, working with youth at risk of ESL.

Intervention aims to avoid ESL by improving the quality of education and training and providing targeted support to pupils or groups of pupils at risk. Two group of intervention measures recipients are early school leavers with immigrant backgrounds in economically and socially deprived areas and pupils with different disabilities or disorders. Methodology used in the most of projects aiming prevention of ESL are project based on a transition plan between primary school and secondary school to ensure school continuity. Some intervention strategies are built on early detection of support needed for learning. Project ideas are aiming in most of the cases to identify the difficulties of young people facing and devise supportive strategies that enable learners to re-engage with their education and improve their academic performance.

Compensatory strategies are focusing on creation of opportunities for those who left education and training prematurely, but want to gain the qualifications they missed at a later stage in their life. Their aim is to reintegrate young adults within formal and informal education. The methodology of those projects are based on the ideas of re-integration to formal education. Similar to prevention measurements there are compensation good practice examples that involve cooperation between schools and municipal social services institutions.

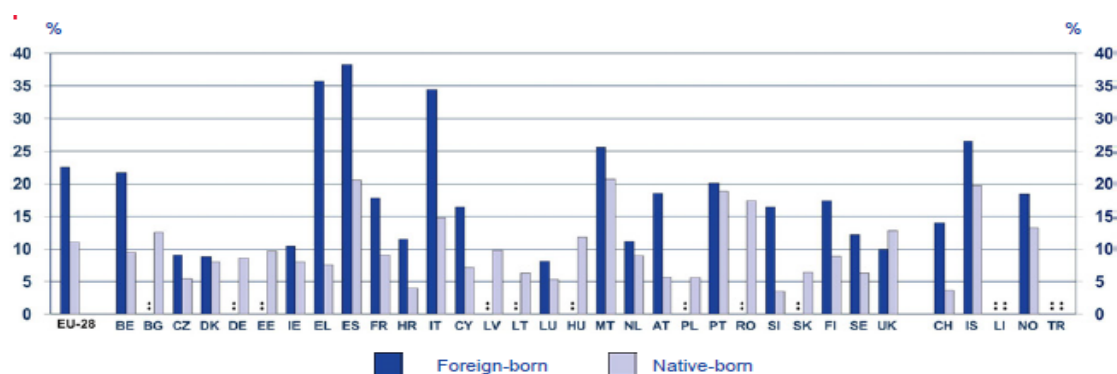
Pupils with immigrant backgrounds as early school leavers

Early school leavers are much more likely to come from families with a low socio-economic status and low household income. In particular unemployed parents, low level of parental education and parental involvement in children's education are increasing giving up education prematurely (OECD, 2012; European Parliament, 2011; Eurydice and Cedefop Report; European Commission, 2011b). Low socio-economic status refers to the families living in 'disadvantaged areas' with high unemployment or in remote areas and small cities (as compared to living in medium-sized or large cities) increases the chance of becoming an early leaver (Eurofound, 2012). Another factor contributing to early school leaving is gender. Male students are over-represented amongst early leavers in general education. International and national research confirms that male students are more likely to be early leavers than female students (Eurydice and Cedefop Report, 2014).

Apart from low socio-economic status or gender, migration is another factor that contributes to early school leaving. Due to the fact that there are different definitions of immigrant pupils between European countries, it is difficult to present reliable figures. However only for the purpose of giving general overview, figures presented in Eurydice and Cedefop Report (2014) show evident how serious the migrant or minorities background contributes to early school leaving in Europe and how early school leavers born abroad are largely over-represented among the early leavers from education and training in many European countries. The data in Figure 1 relate to the country of birth of early school leavers: those born abroad (defined as *foreign-born*) and those born in the country of residence (defined as *native-born*). However, much of the literature discussed here refers to students' ethnic origin, rather than country of birth (Eurydice and Cedefop Report, 2014, p. 38-39).

The main impact on the attainment of migrants have low socio-economic status, lack of parental support and insufficient skills in the language of instruction (European Commission, 2013a). Another issue are not sufficient attention to the needs of migrant pupils, such as teaching methods, followed by ethnic discrimination that in some educational institutions may further impede students' chances of success in school (Luciak, 2004). In consequence, lack of educational support for pupils with migrant or minority backgrounds can lead to educational disadvantage and potential risk of early leaving.

Figure 2. Percentage of early leavers from education and training by origin (foreign-born and native), 2013.



%	EU-28	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU
Foreign-born	22.6	21.7	:	9.1	8.8	:	:	10.4	35.7	38.3	17.8	11.5	34.4	16.4	:	:	8.1
Native-born	11.0	9.5	12.6	5.4	8.0	8.6	9.7	8.0	7.5	20.6	9.1	4.0	14.8	7.2	9.8	6.3	5.3
	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	CH	IS	LI	NO	TR
Foreign-born	:	25.6	11.2	18.5	:	20.1	:	16.4	:	17.4	12.2	9.9	14.0	26.5	:	18.4	:
Native-born	11.8	20.7	9.0	5.7	5.6	18.8	17.4	3.5	6.4	8.9	6.3	12.8	3.7	19.7	:	13.2	:

Source: Eurostat, EU-LFS according to Eurydice and Cedefop Report: Tackling Early Leaving from Education and Training in Europe. Strategies, Policies and Measures. Education, Audiovisual and Culture Executive Agency, Brussels 2014, p. 39.

In the study on educational support to newly arrived migrant children (European Commission, 2013b) has been emphasized the need to improve on European level the possibility to monitor the European education support policies for native and different groups of immigrant students, prioritizing of immigrants inclusion policies recommendations. On national level it is essential to ensure equal opportunities that is vital for immigrants integration into formal education. Initial language barriers and the lack of prior schooling prevent immigrants from succeeding at school and leads to early school leaving. Another recommendation is giving schools and municipalities a reasonable level of autonomy so that they can better address the specificities of local needs. In that way schools can quickly and effectively adopt to local challenges and conditions. Crucial factor for immigrant students to participate and perform well in school is host language proficiency. Therefore, language support should take an important place in migrant education policy. Beyond language support, it is important to highlight several other pedagogical and organizational strategies as particularly relevant to improving teaching and learning in socially, culturally and linguistically diverse schools. Finally it is important for governments to develop a comprehensive system of monitoring and evaluation of implemented policies and achievements of migrant children (European Commission, 2013b, s. 118).

Early school leaving and social exclusion

European reports on early school leaving mentioned above in this chapter are directly indicating on the connection between early school leaving and social exclusion. There are different definitions of social exclusion. It can be understood as isolation and alienation from economic, social political and cultural life, including isolation from even informal networks of support (Oppenheim, 1998). Another definition emphasizes the length of time that individuals and groups spend in poverty, in relation to the decrease in social resources and mutually supportive local networks (Gregg, 1998; Walker & Park, 1998). Ruth Levitas (2007) describes social exclusion as a complex and multi-dimensional process. "It involves the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole". Despite different understandings of social exclusion there are common determinates of youth exclusion in Europe: discrimination, lack of citizenship or residence, poor education, and poverty. All of the determinates affect all youth lining in Europe, but in particular immigrant youth when considering discrimination based on nationality, ethnic background, or language. Preconditions for enjoying basic economic and social rights in European countries such as a permanent address, a residency permit, and a legal status in the host-country, are often

missing by immigrants or those born in an EU country into immigrant families. Important determinates of social exclusion are bad experiences in education that leads in a lot of cases to early school leaving. Lack of vocational training or barriers to accessing affordable, quality education are leading to poverty and unemployment.

The use of ICT is widely recognized to have an impact on different aspects of society, including education, training and employment, contributing to universal access to education and equity in education. There are some research findings that emphasizing positive influence of ICT onto pupils motivation, engaging low achievers (Balanskat, 2006), better pupil performance, and more efficient learning process often quoted as benefits (Kennisset, 2013), confidence and engagement (Blamire, 2009). In UNESCO report (UNESCO, 2013) has been provided extensive evidence that ICT improves affordability, accessibility and adaptability in education. Using ICT in education allows students to access digital information efficiently and effectively, supports student-centered and self-directed learning, produce a creative learning environment, promotes collaborative learning in a distance-learning environment, offers more opportunities to develop critical thinking skills, improves teaching and learning quality and supports teaching by facilitating access to course content (Fu Jo Shan, 2013).

The research conducted within the project ELFE-ESL (Teacher Unions Preventing Early School Leaving through the Use of ICT in Education) was aiming to identify ways of how innovative pedagogic use of ICT can help especially to motivate/(re-)attract potential drop-outs back to school and to learning. Research findings has been presented in the form of recommendations, addressed to teachers, teachers unions and other stakeholders on European level. Recommendations that referred to immigrant pupils emphasized the need to take into account the cultural and social background of pupils when discussing re-integration of drop-outs and those at risk of early school leaving. Significant is to take into account the cultural and social background of pupils and adjust teaching material in that way to the needs of pupils so they motivate early school leavers to start new any form of education. Other recommendations from project are emphasizing the need to regularly updated of IT equipment to be sufficient to use as tool to set for early school leavers. Additionally on the school level teachers having training on how to use ICT when working with early school leavers should have the responsibility of choosing methods and implementing ICT according to their vision and needs.

In generally it is believed that ICT can empower both teachers and learners. However, there are currently very limited data to support this belief and the positive impact of ICT use in education as well as ICT as tool for prevention of social inclusion has not been proven. The impact of ICT use on pupils achievement remains difficult to measure and open to much reasonable debate.

Summary with recommendations

There is no one definition of *Early School Leaving* in Europe as there are no unified best practice models to reduce early school leaving among European countries. At EU level ESL rates are defined by the proportion of the population aged 18-24 with only lower secondary education or less and no longer in education or training. EU member states define ESL in different ways. While the reasons for early school leaving are highly individual, ESL as social phenomenon follows certain patterns. Early school leavers in general are coming from poor, socially disadvantaged and or low education backgrounds, disadvantaged minorities migrant backgrounds, belong to vulnerable groups.

The effects of school dropout at the individual and social level are multiple and widely studied. Leaving the educational and training system without reaching a certain level of qualification strongly limits an individual's range of life chances. In terms of professional career, it leads to integration in less-qualified employment segments characterized by low pay, a disproportional high risk of precariousness and unemployment and weak perspectives of mobility. School dropout also inhibits full participation in community life, either directly – due to deficits in interpretation and expression skills, speech organization, critical capacity, etc. – or indirectly, through the effects of the self-image of precariousness and low incomes in a society in which employment and consumption are central identity elements. In sum, leaving school early implies disproportionately higher risks of poverty and social exclusion throughout an individual's life.

Strategies to reduce ESL should be comprehensive and include prevention, intervention and compensation measures. They need to be taken both at the level of schools and outside of schools. That is why two-level recommendations can be drawn based on the findings from above chapter and apply at the school level (teachers and other didactics staff, school headmasters) and at the educational authorities (staff from immigrant offices and employee from other authorities that can support young immigrants). It is important to stress the universal character of

recommendations – their implementation would improve the general design education situation which would benefit not only early school leavers, but the whole young population of Europe.

The recommendations at the school level:

- It is essential to find out the needs of early school leavers in the school. Mapping the needs, measures should reflect to possible ways of developing and support of motivation and engagement in education of early school leavers.
- School should make sure that pupils feel their individual strengths, abilities are recognized.
- Measures needs to support not only pupils at risk of ESL but their teachers or school principals. Education staff should be informed about the scope of ESL, and ways of prevention, intervention and compensation measures. Teachers should be equipped in skills to provide pupils required assistance and schools need to get resources that support pupils at risk of ESL. School headmasters needs to envision a whole school approach and be open for supporting non-curricular activities.
- It is essential to cooperate with parents (family) of early school leavers. Recommended are training sessions how encourage and motivate young people at home to aim high educational aspirations.
- Youth immigrants are over-represented among early school leavers in Europe and are recognized as a main target group regarding ESL. Essential is ensuring equal opportunities for pupils at risk of ESL. Crucial factor for immigrant students to participate and perform well in school is host language proficiency. Important is assuring of different forms of language support in school. Beyond language support, it is important to highlight several other pedagogical and organizational strategies as particularly relevant to improving teaching and learning in socially, culturally and linguistically diverse schools.
- It is believed that specific uses of ICT can have positive effects on student achievement when ICTs are used appropriately to complement a teacher's existing pedagogical philosophies. The IT equipment needs to be regularly updated and sufficient to use as tool to set for early school leavers.
- Additionally on the school level teachers having training on how to use ICT when working with early school leavers should have the responsibility of choosing methods and implementing ICT according to their vision and needs.

The recommendations for educational authorities:

- Measures outside of school should be taken at local, regional and national level to enrich the learning offer.
- Extra-curricular activities might be opportunity for many early school leaver to develop a sense of identity with education or connection with school.
- Second chance education should offer an alternative way of re-engage with education and gain qualifications recognised on the labour market. Ideally if they would provide access to other education pathways.
- Consequences of early school leaving are very often social exclusion, deep and long-term damage to the living conditions, health, social and economic participation. If early school leavers have got immigrant backgrounds, it is important to give municipalities a level of autonomy to better addressing the specificities of pupils needs.
- Using ICT, developing curricula, pedagogical frameworks and guidelines to prevent ESL needs to become main field in European and national (local) education policy.
- Prevention, intervention and compensation measures regarding ESL needs to be included in national social dialogue with education authorities.

Chapter 4

The scope of ICT and intergenerational learning as measure to reduce ESL (Marcin Rojek)

The role of ICT in education is well recognized and is still investigated. It is believed that properly ICT usage encourage students to think, create and solve problems in new, unconventional and innovative ways. In this sense, ICT should be seen as modern aid and support of teaching and learning. It is inextricably linked with the school as a social institution. According to the British Educational Supplier's Association's (BESA):

“ICT in UK State Schools research, over half of UK schools anticipated that more than 53 per cent of teaching time would incorporate ICT by this year, and this growth is expected to increase to 57 per cent by 2017. The Learning through Technology Zone has been developed to address the importance of technology in education, with a series of free-to-attend seminars and an opportunity to try and test the latest and most innovative classroom technologies. In the Learning through Technology theatre, Microsoft and Tablet Academy will be hosting a programme of workshops, designed to help teachers develop their skills and keep up with tech-savvy students! For teachers seeking guidance on the BBC micro: bit, and ideas on how it can be used in the classroom, the BBC micro: bit session will provide an introduction to the handheld, programmable computers that are being given free to every Year 7 (or equivalent) child across the UK. Another practical, hands-on session, will teach delegates the fundamentals of Minecraft and explore ways in which it can be used in the classroom. Participants will become familiar with the Minecraft Edu environment and receive hands-on training on everything from building objects and creating a new world to setting up a secure classroom server. In other sessions, teachers can also find out how FlashSticks help increase engagement and retention for students learning new languages (including EAL), or discover the benefits of LEGO Education's solutions, WeDo and Mindstorms, which can be used to empower learning across the whole curriculum” (<http://www.ictineducation.org/home-page/learning-through-technology-at-the-education-show>).

ICT issues related to both the formal learning at school and informal learning outside the school:

“Spaces learning, physical and virtual, together they form a structured environment in which he is learning. But learning in the twenty-first century requires a new space, which will connect learning in school, home and in the community, which will increase flexibility and will support learning beyond the physical dimensions of school buildings and outside of traditional school hours in the school day” (Learning Spaces Framework: Learning in an online world, MCEETYA, 2008, p. 4).

Taking into account the presented examples, ICT can be used as a space and tools for intergenerational learning. ICT seems to meet young and elders expectations, concerning time, style and content. They provide a new, outstanding learning space.

In the case of young immigrants ICT tools enable them to have a first contact with the local society. It can be a groundwork for future collaboration and gives them feeling of being a part of local community. They can reduce the sense of being lost in a new place. It helps them to meet somebody who wants to have a conversation and to help them. If young people know the past and the elders' biographies can recognize the correctness of the path of human lives. It is especially significant to know the social and cultural conditions, which can be different. Intergenerational learning it is a type of learning about other biographies and from other people lives:

“Generational relationships (...) provide one element in the complex ecology of narratives and narration by which people tell the story of their lives. It can also be seen as comprising part of the varied web of relationships that constitute position and shape dispositions. (...) Narrated generations often, then, possess a clear educational dimension. It is not just that people feel bound together by shared experiences of particular periods of schooling; they also highlight differences from other generations' experiences” (Biesta et al., 2010, p. 73).

For young immigrants, intergenerational learning using ICT can be a mechanism of acquisition the values shared in local society, for example educational aspirations, personal and professional development, tolerance, respect for others, diligence or honesty. In this sense, intergenerational learning makes a way to encourage pupils to education. It supports them in overcoming some of the barriers and limitations.

In the case of local older people, ICT let them to feel important for somebody and to play an important role to the country. Collaboration using ICT can support them with active and successful aging. According to some research results, contact with young people supply the elders with energy and motivation to overcome the limitations of old age.

Summary with recommendations

- Without the doubt the ICT can arouse and strengthen intergenerational cooperation.
- Cooperation by ICT is not learning, but cooperation is an ability to learn. It can stimulate learning process and learning outcomes achievements.
- ICT tools are only instruments for learning. In presented aspect of ICT tools meaningful seems to be the role of coordinators and coordination.
- It seems obligatory to create a common learning environment. Moreover, it is suggested in intergenerational learning community to take into account the common awareness of learning results.
- ICT tools can play an indispensable role of bonding generations together in the learning process.
- Using ICT for intergenerational learning seems to be a valuable alternative for conventional ICT goals connected with pleasure and entertainment.
- It should be assumed, that the positive association of ICT will be an incentive to intergenerational learning.
- Intergenerational learning has advantages for empowerment idea implantation. It supports overcoming difficulties which come from the new places of life (in case of young immigrants) and the age (in case of the elders).

Chapter 5

The contribution of ICT towards breaking polarisation between young and older citizens (Renata Góralaska)

To find an answer for question: ‘How can ICT help dealing with polarisation between young generation and older generation?’ we have to take into consideration lifelong learning. It shows not only the ways of today’s theoretical researches, but practical forms of activities in education, too.

Lifelong education as a theoretical frame breaking polarization between young and older citizens

Term “lifelong learning ” is not new but in XX century people discovered its special meaning again. In the document ‘The 1919 Report’ its authors Albert Mansfield, R.H. Tawley and B. Yeaxlee claim that education cannot be understood only as a luxury for poor social classes. It cannot take place just during short period of childhood. Everyone, needs lifelong learning regardless nationality. In this context education should be perceived as universal and lasting for life.

In 1966 R.J. Kidd published ‘The Implications of Continuous Learning’ where he realised the idea of lifelong learning throughout history. Nowadays it is easy to notice that it is really necessary to introduce it in everyday life. Presented type of education gives chances for deeper and larger development of preschool, adults and also elderly education. It is worth to remind that this education is now highly neglected.

In author’s opinion implementation of lifelong learning causes integration of each types of schooling and helps to overcome differences between vocational education and general learning. Moreover, it also guarantees the right ways for spending students’ spare time. It can also force people to think about the role of a teacher, who helps gain knowledge in the process of learning.

Robert J. Kidd described three different dimensions in lifelong learning. Firstly, he mentioned the vertical learning, the horizontal learning and in the end inside learning. The first one covers the school levels – from kindergarten to studies. This section is available to every social class.

The main task of the horizontal learning is to provide knowledge in each field of life, science and culture regardless of learners’ age. A better accomplishment in this dimension is related with the eradication of artificial barriers between different fields of life. Moreover, it can be achieved by self-activities and informal education activities. Self-study is connected to hobbies and own abilities in this area.

In 1917 Charles Hummel published his new work, in which he presented that lifelong learning is one of the major directions of contemporary education. In his opinion the principal aim of this educational system is to bring up a new type of a human with creative and dynamic attitude to life and culture.

This “new human” would analyse his self-improvement as well as self-learning. The author pays attention to complicated knowledge which we find out in books about cognitive learning. He pointed out the importance of being concentrated. ‘New Human” should learn himself how to make plans and how to realize them. He ought to be prepared for work and studies, know how to solve problems and deal with reality.

Ravindra H. Dave points out that lifelong learning is not only about adults’ education. It contains all forms of learning: formal, informal and incidental, which author connects to family upbringing. It presents human’s existence. R. H. Dave divides it into three sections. There is life, learning and continuity. In the author’s opinion the major aim of lifelong learning is to improve quality of life, which can be achieved by development and assimilation.

In the EU countries lifelong learning is the main assumption of education policy. EU authorities named year 1996 “the European Year of Lifelong Education”. Its main purpose was to show the significance of lifelong learning. In EU this term is the main rule for educational strategies and education policy. This policy includes the creation of knowledge society. Lifelong learning had an important place in UNESCO initiatives and works (in.e. Edgar Faure’s Report, J. Delors’ Report). Its concept constitutes the basis of EU documents, especially White and Blue Papers.

To sum up, presented works and documents helped develop the learning society. There are presented the most significant issues:

- Encourage to gain new knowledge,
- Schools' approach to companies,
- The fight against marginalisation,
- Learning foreign languages,
- The fight against poverty.

Lifelong learning is the most crucial foundation for the development of society. It is like a remedy for the social activities.

Key competences and their development

EU tries to support citizens of European countries and defines the most important and fundamental skills which should be developed by all people during their lives. EU aim is to equalize people's opportunities and choices which are called "key competences". There are eight key competences:

1. Communication in mother tongue,
2. Communication in foreign languages,
3. Mathematical competence and basic competences in science and technology,
4. Digital competence,
5. Learning to learn,
6. Interpersonal, intercultural and social competences,
7. Entrepreneurship,
8. Cultural expressions.

European Commission cooperates with Member States to strengthen "key competences", especially knowledge, skills and attitude. It can help students fulfill their personal plans and find a job. Moreover, it helps them participate in social life. These key competences covers traditional skills e.g.: digital competence, reading, writing and mathematical competence. It also covers "smooth" competences e.g.: learning to learn, social responsibility, taking initiatives, entrepreneurship, cultural awareness and creativity.

Development of key competences is provided by:

- Guarantee for high level of education,
- Limitation of premature finishing school,
- Early education,
- The Increase of the support directed for teachers, headmasters and people responsible for education.

ICT and approaches to teaching

To use ICT effectively it is obligatory to understand different ways of learning. Mayer claims that successful use of ICT is based on experts' opinion and depends on practice.

In presented context the process of learning should be based on professional researches. We do not take into account opinions or popularity.

During recent 100 years psychologist and teachers invented many different theories about ways of learning. These theories can be divided into three categories. It is significant that in each category ICT plays a different role.

- Reinforcement of reactions – this approach evolved at the beginning of XX century. It is based on the assumption that learning covers strengthening and weakening of associations. If we reward the reaction, we make it stronger. If we punish the reaction, we make it weaker. In this case ICT can be used to obtain reaction and reward or eventually to punish learners.
- Gaining knowledge – it was invented at the beginning of XX century. It assumes that learning means adding new information to student's memory. The role of ICT is to provide access to information.
- Constructing knowledge, which became popular in the late decades of XX century. It is based on the assumption that person can learn when he uses his experiences connected with knowledge and creates own "construction". The student tries to understand it and teacher's role is to be a guide who supports the

student in this process. In this case ICT use means not only to obtain information but also to work with the student.

- As Mayer claims all three approaches had a vital influence on ICT development. Especially significant seem to be Constructing knowledge, because in this approach student is treated like a real participant of the process of learning.

Table 1. Three metaphors of learning

<i>Metaphor</i>	<i>Student</i>	<i>Teacher</i>	<i>ICT role</i>
Reinforcement of reactions	Passively accepts rewards or punishments	Actively gives punishments or rewards	Obtains reactions and provides feedback
Gaining knowledge	Passively accepts information	The source of information	Provides access to information
Constructing knowledge	Actively searching for meaning and constructing knowledge	The cognitive guide	Supports cognitive processing of information during learning

Source: R. E. Mayer, 2013, *Learning with technology*. In Dumont, H., Instance, D. Benavides, F. (eds.). *The nature of learning. Using Research to Inspire Practice*. Warsaw, p. 287.

To sum up, it is really important to pay attention to the order of teaching how to use ICT. Moreover, we have to use skills which help us control the background. All these steps should be done in a supporting way.

Teaching and learning using ICT

ICT is about teaching with the use of technology. There are two approaches to ICT:

1. Concentrated on technology
2. Concentrated on the student

Table 2. Differences between approach concentrated on technology to the approach concentrated on the student

<i>Approach</i>	<i>Main aspect</i>	<i>The role of technology</i>	<i>Aim</i>
Concentrated on technology	What is technology capable of?	Teaching assurance	Use of technology in teaching
Concentrated on student	How does human mind work?	Teaching support	Make technology settled in teaching

Source: R. E. Mayer, 2013, *Learning with technology*. In Dumont, H., Instance, D. Benavides, F. (eds.). *The nature of learning. Using Research to Inspire Practice*. Warsaw, p. 283.

The first approach, which was very popular in XX century, insisted on the use of technology in education by providing access to it. Unfortunately, this approach, despite the development of ICT did not cause any significant educational changes. In Mayer's opinion the problem exist due to not taking students opinions into consideration. He claims that this approach presents that students and teachers should adapt to ICT. It is not good that ICT should be adapted to students and teachers.

The second presented approach is about the issue of concentration how people learn with technology and how technology can help them in teaching. It is presented technology which should be adapted to people, both to youngsters and elderly people. In this approach, concentrated on the student, it is crucial to get to know what are the differences between how we teach younger and older people.

Summary with recommendations

Nowadays it is crucial to start taking actions which would show the ways for contemporary education. EU is implementing such actions through education policy. Experts noticed that there is a problem with social exclusion. The authors of researches advise us to take up different actions which can cause inhibition of marginalization young immigrants.

Using the reports and analysis of contemporary literature (concerned with learning) the recommendations are:

- We have to propagate the idea of making new educational offers for young immigrants. It is crucial to support especially informal education.
- We ought to pay attention not to divide group during classes (into citizens and immigrants).
- We should care for employing the best teachers who can use proper skills, methods and teaching aids.
- During learning process we should use ICT skillfully. Teachers ought to be prepared for teaching and have proper approach to teaching. It means supporting students and making him the best conditions to let him actively learn (constructing knowledge).
- We suggest animation activities and to associate family with schools' activities in order to encourage youngsters to cooperate with elderly people.
- It is important to develop among young immigrants key competences, such as language, communication, digital, social and civic competences. In excluded youngsters' points of views, the most vital thing is to give them support and help them believe in themselves.

Chapter 6

The final conclusions and recommendations for the project (Joanna Leek, Marcin Rojek)

Early School Leaving is a phenomenon which exist from decades as an important educational and social problem. The importance of this issue has arisen recently. It was observed because of social and economical changes and due to the migration. Over the years there were many ideas how to reduce ESL. The implementation of them has revealed different outcomes. Despite strenuous efforts, we have not managed to eliminate or even to reduce this phenomenon. In this context, the high hopes should be associated with ICT tools and intergenerational learning.

ICT tolls and learning (including intergenerational learning) constitute two areas, which over the past few years have gained in importance. Their important role in education has been well recognized and well researched.

Learning is perceived as a one of the most important processes for people during their lives. Intergenerational learning means to be open for the educational possibilities which came from everyday intergenerational experiences. Intergenerational learning is one of the irreplaceable intellectual stimulants not only for the young people, but for the elders, too.

It is assumed that the main results of intergenerational learning will be reducing an early school leaving. However, it is too abstract and too prolonged aim for young people to be consciously taken and realized by them. Furthermore, its generality and abstraction may discourage learners to take part in the project. Therefore, learning content and detailed results should not be clearly recognized at the beginning, but should be identified spontaneously in intergeneration cooperation during learning process. It is recommended that in informal learning content, methods, styles, tempo, place or results should come from learners, because they know the best what and how to learn.

The results of foregoing theoretical and empirical studies show it through:

- *learning from each other* (different generations share their experiences, and the result is the knowledge, skills and competences),
- *learning with each other* (common learning about the world, society, historical events, it is learning the facts rather than objectives, which for some reasons are important to the members of both generations),
- *learning about each other* (exchange experiences, share outlook, values and aspirations).

In intergenerational learning process, supported by ICT tools, learners are able to:

- learn to speak, read and write with understanding,
- learn to understand and not ICT only to memorize,
- learn the effective communication in different situations, to present their own point of views,
- learn to search, sort and use information from different sources,
- learn the effective use of ICT tolls,
- learn to planning, organizing and evaluation of learning process,
- recognize the rules for the development of personal and social life,
- recognize national cultural heritage in the perspective of the European culture,
- recognize the rules of an effective team work and take into account the views of other people,
- develop a mental skills and personal interests,
- develop an inquisitiveness aimed at the search of truth, goodness and beauty of the world,
- develop the ability to see different kinds of social relations,
- develop the ability to distinguish the real world from the imagination and from virtual world,
- become more independent in the pursuit of the individual and common good,
- become more reliable and honest in the field of education and work in order to achieve life goals,
- prepare to recognize the moral force in the community,
- prepare to become a social community,
- create conditions for individual and group activities for the benefit of others,
- create conditions to develop self-reliance, sense of duty,

- making people responsible for the closest and furthest neighbourhood.

The achievement of the presented results may indirectly contribute to reducing of the ESL phenomenon.

Some results of learning, especially informal learning, can be deferred over the time, may occur and may be realized in the future. Therefore, not all of the results mentioned above will be visible currently and will not be able to be demonstrated in the project.

Intergenerational learning has educational potential, therefore can be used as a mechanism of implementation of the idea of empowerment and can cause reducing early school leaving, but this is no scientifically proven.

Intergenerational learning should be threat as an informal learning, undertaken on a voluntary basis. Therefore, indication of the benefits for learners is needed in order to encourage them to learn. Those benefits can be goods (telephones, IPods) as well as consultations and tips to give in order to resolve current problems. It helps to arouse positive emotions which are one of dimensions of learning (according to theory developed by K. Illeris).

ICT tools can play supportive role in intergenerational collaboration, learning and intergenerational learning as well, what is well researched, scientifically proven and has many practical implications.

To use the ICT tools effectively in intergenerational learning the following abilities of the learners such as capabilities and limitations, resulting from a lack of self-confidence, unfamiliarity with the language, age or health, has to be taken into account. For young immigrants, essential role plays sensually stimulating when considering ICT as tool for learning and for the elders the ICT tools should be functional and easy to use.

The coordinator of intergenerational learning as an individual person who provide learners with personal support or institution providing support is recommended to (1) provide a convenient place for meetings if necessary, (2) implementation of the project and its results (3) issuing a certificate of participation in this project, and finally (4) keep ongoing monitoring of the project implementation in order to adapt the educational offer to the spoken (conscious) and unspoken (unconscious) expectations of learners.

Projects realized heretofore and the results of this report allow us to hope that intergenerational learning supported by ICT will significantly contribute in the reduction of ESL. However, the full benefits of this project will be full realized after its implementation and evaluation.

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