



ASIDE

DIGITAL TECHNOLOGY AND NEW RELATIONSHIP BETWEEN LEARNERS AND EDUCATION PROVIDERS

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DIGITAL TECHNOLOGY AND NEW RELATIONSHIP BETWEEN LEARNERS AND EDUCATION PROVIDERS

Introduction

Digital technology development has been emerging in the last couple of years. Moreover, the pandemic period has accelerated the implementation of various video conferencing systems. Nowadays, virtual collaboration has become imperial not only in the secondary, but in higher education as well. Wide variety of digital platforms have become common practice in adult education regardless of the age category of learners and educators. Furthermore, the digital disruption radically has changed how the educators and learners perceive the entire process of education. The digital technology considerably has affected the relationship between education providers and learners on the other side due to the different way of teaching and learning process in comparison to the pre-COVID era.

Technological advancements have changed the relationship between learners and educators. Also, it helped the education to become more accessible. This is especially true after the disruption of COVID-19 and the global switch to online learning. Teleconferencing software such as Adobe Connect, Skype, Google Meet, Microsoft Teams or ZOOM provide educators and learners with the opportunity to engage with counterparts across the globe. For example, Google Drive and other collaborative platforms enable virtual teamwork on international projects. Via email and other communication channels such as Viber App and Google Hangouts, both instructors and learners could interact effortlessly and without expense in real time.

The digitalization of communication has given way to global networked learning environments, where a reciprocal exchange of ideas between trainers, instructors and their counterparts could take place. Exceedingly more educators are utilizing the opportunities that online collaboration across borders offers them to link different virtual classrooms and conduct research. Digital Platforms Development offers educators more than the development of goodwill and mutual respect, which conventional exchange opportunities offer. Faculty compare and reassess their pedagogical practices, share individual as well as institutional perspectives and develop new approaches and research cultures (Craig, Poe & Rojas, 2010).

The collaboration between educators and learners through digitalization previously discussed began as a grassroots collaboration between instructors interested in joining their classrooms in virtual teams' projects. Many education providers carried the projects out in addition to their regular course load and administrative duties. Months in advance of the digital education projects, as well as during and after the projects, the instructors meet virtually and communicate regularly through email and the collaborative digital platforms.

They test out the software and platforms, which the learners are expected to use such as Prezi, Adobe Spark, Canva (a free software for creating storylines) and Big Blue Button as well as prepared demonstrations of the technology for the classroom.

This included showing recordings with glitches in order to illustrate the instructors' experiences and make the project more tangible for students. The obvious rapport and fun that the instructors have during the ZOOM recordings also appear to have a positive effect on learners anxious about working with unfamiliar teammates on a virtual project (Dean Corenelia, 2007).

Emil VELINOV
Editor

1. Digital technology and new relationship between learners and education providers: The Czech Republic case

Responsible: Emil VELINOV - ITC International

The current generation of learners is very familiar with new technologies and they use them instinctively. By integrating digital media and innovative technologies efficiently in a sustainable and more diverse curriculum, the students can experience a more bespoke learning and teaching environment (Adams Becker et al., 2018; Barbera et al., 2014; Bigatel et al., 2012; Gabel et al., 2018; Koehler et al., 2013). Current studies showed that so-called Digital thinking includes awareness, creativity, innovation, digital skills and intercultural skills are associated with current pedagogical developments (Adams Becker et al., 2018; Sohn et al., 2015). Within this context, innovative learning and teaching approaches, a well-developed infrastructure, and an appropriate usage of digital tools all serve to attract and motivate the current generation of learners.

Digital skills, a global team spirit, corporate social responsibility-awareness, international experience, and more flexibility are essential ingredients for efficient employees in the workforce of the 21st century (van Laar et al., 2017). Besides, for the current generation of learners, it is necessary to have the option of creating a start-up. Due to the accessibility of a variety of digital tools, starting a new business is easier than in the past. People who are invested in or convinced of specific topics, can more easily start a digital initiative and cooperate with existing initiatives worldwide, e.g., social or environmental initiatives. Mostly, those initiatives or start-ups are based on strong interests and convictions on the part of the initiators. Giving students the option of following up these interests, cooperating with peers internationally, and discussing CSR-related topics within an educational setting, are important factors in raising a new generation of more reasonable, social, and sustainable students as prior projects at different educational institutions across the Czech Republic.

Due to the current developments – amplified by the impact of the Covid-19 pandemic – there is a need for change to secure future competitive graduates as key figures during and after the crisis (Maritz et al., 2020). The learners' perspectives of the working world, as well as their expectations of higher education systems and how educators and learners prepare for these environments, must be taken into consideration. The integration of adaptive learning environments, digital and sustainable-related lecturing units, and self-regulated approaches are acknowledged as being preferred by the current learners' generation (Adams Becker et al., 2018; Pimmer et al., 2016; Velinov, 2020).

New approaches, providing students with the opportunity of virtual experience exchange, are especially noteworthy in this context. These learning environments can be enriching in respect of skills and experience for both students and educators (Bartel-Radic et al., 2015; Honal et al., 2017). All participants will become accustomed to new media and virtual communication as a result of this learning experience (Bigatel et al., 2012; Barbera et al., 2014; Dahlstrom et al., 2015). A study by Deloitte showed that most millennials regard business as a force for positive change in society and global issues. Business involvement in social issues and good causes goes beyond the tangible impact or the reputational benefits created. Being part of

sustainable initiatives helps to provide a sense of empowerment among the students and raises CRS-awareness (Deloitte, 2017; Sohn et al., 2015).

Aguinis & Glavas (2012) also highlight the major role educational institutions fulfil in shaping the students' values throughout their educational development. implementing CSR in educational curricula must take place on a flexible basis and possess an appropriate balance of theoretical input and hands-on tasks for the relevant industry. Regardless of which topic, tool, or format is recommended by the faculty or university, all educators must be trained, prepared, and informed about ongoing developments and trends on a global level (Gosler & Ifenthaler, 2014; Ostler et al., 2016).

Modern and blended learning environments, in which students can independently acquire new information, but also have face-to-face exchange with their instructor, have proven to be highly effective for the new generation of students, regardless of whether digital education related subjects or entrepreneurship are taught in the classroom (Dahlstrom et al., 2015; Thai et al., 2016).

STEM education in the Czech Republic

In recent years across a wide variety of high schools, colleges, universities, training centres and other educational providers in the Czech Republic has grown the importance and applicability of so-called Science, Technology, Engineering and Mathematics (STEM). This phenomenon was accelerated particularly by the pandemic period, when the education providers were closed and the entire teaching and learning processes had to go online, which has opened the door for STEM education not only in the capital of Prague, but regionally as well. STEM has created new challenges and opportunities for learners and educators not only from the perspective of new technologies utilization but from curricula development and changed relationship between those, who teach and coach and the learners. Imminently, the educational institutions across the Czech Republic have introduced virtual reality, 3D visualizations and modelling, utilizations of platforms allowing the learners to get engaged and committed in their online activities and the teachers to become better prepared for tomorrow's challenges from stand point of virtual teaching and digital enhancement.

2. Digital technology and new relationship between learners and education providers: The Polish case

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E-learning is a concept that emerged with the development of modern technologies and is still taking shape, and during the COVID-19 pandemic it is the basis of remote education. Each definition describes a specific evolutionary state of this form of learning and characterizes the model of contemporary learning: distance learning, e-learning, mobile learning, social learning. An analysis of the literature and solutions offered by tool providers shows the continuous development in the development of distance learning tools and its impact on what education will look like in the future. It should be noted that according to various definitions, e-learning is a form of distance education in which (Żołędziewski, 2011):

- teaching takes place over a computer network (Internet or intranet);
- users use both stationary and mobile electronic devices (multimedia are used);
- an IT education system is used, a so-called e-learning platform for knowledge distribution, communication and teaching process management (in formal education);
- unlimited access to knowledge and communication between all users is possible (in informal learning).

By paying attention to the social aspect of education with the use of tools based on intranet or internet networks, new terminology has appeared in the literature. The terms social learning or network learning can be translated as the process of developing and maintaining relationships between people via the internet by distributing information and complementing it. Collaboration in combination with innovative technology and teaching models creates added value by acquiring new skills and enriching the knowledge base (Moeng, 2004).

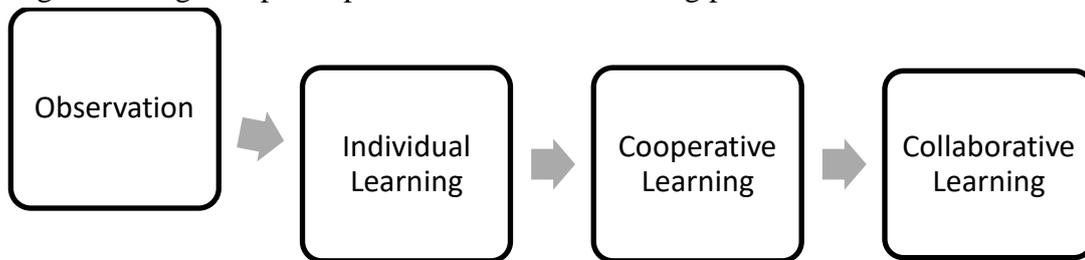
The research conducted by Bersin (2009) shows that since 2009, there has been a huge increase in demand for informal teaching and learning - for social learning and social media. A new era of social or informal learning is based on sharing and using the knowledge and experiences of all employees of the organization without a specific time frame, and learning takes place in real time. One of the faster developing trends of electronic learning and teaching is e-learning, i.e. informal collaborative learning (Bersin 2009). E-learning is also called social learning. The term "social learning" refers to the theory of social learning and to the place where education processes are carried out, i.e. to social media (Laskowska, 2013).

According to the concept of social learning by A. Bandura, "almost all manifestations of learning resulting from direct experience come to an effect in a surrogate way, thanks to observing other people's behaviour and the consequences they have for others. The ability to learn by observation enables people to acquire [...] patterns of behaviour without having to shape them gradually, through tedious trial and error " (Bandura, 2007).

Social learning is learning with and from others, in which online communication is the dominant form of activity (Bingham, Conner (2010). It has the same features as any other type of non-formal education (Kutzepa, 2005). First of all, development through social media does not result in formal recognition of acquired competences. Social learning is also distinguished by multidirectional interactions, with a clear changeability of roles. This means that in social learning there is no clear distinction between students and teachers. The same person who is once the inspirer may act as a learner in a different situation. In the online learning community, horizontal relationships (as opposed to formal education based on a hierarchical structure) dominate. In addition, social learning is often of the so-called peer education (Fatyga, 2005). It is possible thanks to participation in groups with similar experiences, achievements and interests. In the formula of peer education, communication is based on the principle of "equal to equals" and - due to its informal character - fosters the exchange of views and opinions.

It is worth adding that social learning is a very heterogeneous activity. People learn from the community through observation, independent search for information, exchange of knowledge or co-creation of resources. It measures the compensatory process of becoming an active social learner (Fig. 1), the first step is watching the actions of others, and the last - full involvement not only in the sharing of resources but also their creation.

Figure 1. Stages of participation in the social learning process



Source: Wankel Ch. (ed.) (2010), *Cutting-Edge Social Media Approaches to Business Education. Teaching with LinkedIn, Facebook, Twitter, Second Life, and Blogs*, Information Age Publishing, USA.

Each of the stages of participation in social learning requires the so-called social presence. This concept is not about being physically present, but about the individual's sense of being with others, not necessarily as a formal group member (Bani-Salameh, Jeffery, 2011).

Strategic conditions for the development of digital education in Poland

The importance of digitization in all areas of life is constantly growing, as the technologies used are constantly changing and improving (EU, 2019).

In Poland, the key document in the field of digital education development is the Strategy for Responsible Development (SRD) in force from 2017 to 2020 (with the possibility of extension until 2030). It concerns education at ISCED 1-3, ISCED 6-7 and lifelong learning. The SRD is a binding, key document of the Polish state in the area of economic policy.

The assumed objectives include the provision of broadband internet, in particular to rural areas. All schools should have access to new technologies, including high-speed connectivity and internet services. The strategy also talks about the development of digital competences, including support in the area of education, science, lifelong learning, flexible adaptation to the individual needs of citizens, support addressed to groups with different levels of digital competences, with particular emphasis on activities for digital inclusion (PARP, 2020). Students should be able to find, modify and use information on their own. Digitization of education should support not only formal learning, but also non-formal learning and self-education.

One of the projects is the creation of the National Educational Network (OSE) - a dedicated network connecting all schools in Poland, which will provide access to the internet, educational services and content, and ensure network security. The government's OSE project aims to reach almost 31 thousand schools and over 5 million potential users (students and teachers) to overcome the digital divide and ensure equal educational opportunities for all students, especially those living in rural areas. More than EUR 372 million has been allocated to the implementation of OSE and EUR 38 million annually for the maintenance of the project for the next 10 years (Ministry of Development, 2017).

Example of good practices in Poland

"**Dobre Pomoc**" can help improve the system of care services. The "Good Support" program is a comprehensive and innovative solution that uses many years of experience of employees of the social welfare system and local governments, based on the latest technologies. The system was created as part of a partnership project of the Science for the Environment Foundation, the Regional Centre for Social Policy and Caritas Koszalin and Szczecin. The value of the project co-financed by the European Union under the Regional Operational Program of the West Pomeranian Voivodeship for 2014-2020 is over PLN 10 million. The "Good Support" program was also the winner of the prestigious European Commission competition as the best project of 2019, setting the direction of activities in the cohesion policy.

Babcioterapia (not only information brochure) "Babcioterapia" is an information brochure, which is the result of the implementation of the project "Babciotherapy". The project was implemented in 2017 thanks to funding from the Government Program for Social Activity of the Elderly for 2014-2020. The brochure includes, among others information, recipes and tips on how to use herbs to reduce our negative impact on the environment. Developed on the basis of herbal workshops. The brochure is divided into 12 months containing the "herbal" block, which has been enriched with information about the changes taking place in the body and psyche over time.

Government programs for seniors for 2016-2019:

- Government Program for Social Activity of Elderly People for 2014-2020;
- "Senior +" multi-annual program for 2015-2020.

Despite the steady increase in the number of operating institutions, research indicates that municipalities have problems with providing adequate infrastructure for the creation of a day house "Senior +" and with meeting the requirements for employment. It can also be the reason why a project is withdrawn after it has been awarded. It is proposed to announce competitions in advance and to support the employment of specialist staff (e.g. by extending the possibility of employing interns).

Day homes and seniors' clubs respond to slightly different groups of needs. Day houses support local government authorities in providing basic social assistance services for the oldest residents, while seniors' clubs are institutions of a more activating character. At the same time, due to the easier-to-meet requirements regarding infrastructure, staff and number of hours as well as lower maintenance costs, clubs are more popular among local decision-makers than Senior + day homes. It is also favoured by favourable conditions regarding the relationship between the work input (classes 2-3 times a week) and the funds obtained. When planning the program for the following years, one should consider changing the amount of the subsidy to a level appropriate to the actual contribution and commitment of the organizers.

Professional activation of people 50+ - The nationwide information and promotion campaign begins. Since 2008, the number of employed people over 50 has been steadily increasing. A nationwide information and promotion campaign organized by the Ministry of Labour and Social Policy and the Centre for Human Resource Development has just joined the government's activities aimed at further professional activation of people aged 50+.

New programs and forgotten concepts - It is worth noting that the problem of insufficient development of care services has been noticed and has received public interventions in the form of launched programs "Opieka75 +" and "Care services for people with disabilities", which from the ministerial level are to be used to invest (in competition mode) in selected municipalities developing this type of service. The budget of both programs, however, is modest ("Care 75+" - 56 million in 2020, and Nursing services - 40 million), and own contribution is required from those applying for local government funds. The impact of the program can therefore be considered positive, but limited in its scale.

The Zaczyn Foundation and the Foundation for Social Dialogue are partner non-governmental organizations operating for the benefit of the elderly, implementing projects for social activation of seniors and testing new social solutions beneficial to the growing group of the oldest Polish inhabitants. Their organizations jointly publish the "Polityka Senioralna" magazine, and independently implement numerous point programs implemented in Warsaw and Mazovia, but also in other provinces of Poland. They run community clubs, build Seniors' Councils, organize the National Parade of Seniors, develop digital competences, and support local governments in social consultations. They are proven, award-winning partners for local government projects and projects undertaken by other non-governmental organizations.

Institutions of permanent residence for the elderly. Social welfare homes - Social welfare homes (DPS), depending on who they are intended for, are divided into 7 basic types: for the elderly; for chronically somatically ill people; for chronically mentally ill people; for adults

with intellectual disabilities; for children and young people with intellectual disabilities; for people with physical disabilities; for people addicted to alcohol.

Long-term care institutions in the health care system - As mentioned earlier, in Poland, stationary facilities for elderly people operate not only as social welfare institutions, but also in the health-care system. These facilities are: care and treatment facilities and nursing and care facilities. In both cases, these facilities may have a general or psychiatric profile.

Short-term care centre in Opole - There are many challenges ahead for people who intend to take care of an existing patient. This often leads to a thorough reorganization of the work and life system. The challenge for the social policy in the field of care for seniors is to meet the needs of providing them with transitional care - between hospital stay and return home.

Poznań - an Age-Friendly City - Poznań is one of the fastest aging agglomerations in Poland. Currently, there is the highest increase in post-working age people compared to 1990. The city authorities have undertaken a number of activities aimed at preparing Poznań for demographic changes.

Centre of Senior Initiatives (CIS) - Another example of activities carried out for the elderly is the establishment of the Centre for Senior Citizens Initiative (CIS). CIS is a municipal organizational unit, established in 2010 by a resolution of the Poznań City Council on the initiative of the Ministry of Justice. Importantly, it is one of the first entities of this type in Poland. CIS activities are mainly the organization of projects aimed at people aged 50+ and seniors. The main goal of CIS is to improve the quality of life of seniors, including increasing their participation in social life, especially in the area of education, health, culture and art. These goals are implemented, among others by involving seniors in the creation and implementation of city (district / housing estate) development programs, counteracting negative stereotypes about old age, using the experience and potential of seniors in projects aimed at building intergenerational dialogue, organizing a health promotion system, disease prevention and education to old age based on an active program aging. These are the projects organized by CIS and other local entities for the 50+ environment in Poznań.

Poznań Volunteering 50+ - It is information, competence (e.g. computer skills), artistic, counseling (psychological, legal), and action volunteering. It is difficult to estimate the specific number of people participating in this project. The group of volunteers active in CIS is about 40 people. In addition, CIS cooperates with younger volunteers as part of Fairs and Senior Events.

Senior-Friendly Place - The main objective of the campaign is to promote places operating in Poznań (e.g. cafes, shops, cultural institutions, public utilities and others) that respond to the needs of older residents by offering attractive products and services, applying discounts or adapting their architecture.

"Senior Tytka" - A handy envelope containing a packet of monthly information for seniors: leaflets, invitations, excursion programs, lectures, workshops, information about promotions and new initiatives. The Senior Tytka is also available in electronic form on the CIS website. It is difficult to determine the number of people involved in this project. So far, about 1,000

copies have been prepared in the printed version - excluding the Senior's Tytka available in electronic version on the CIS website.

Against the digital exclusion of seniors - The latest research proves that people aged 60+ who use new technologies are happier and more satisfied with their lives. The ZACZYN Foundation actively counteracts the digital exclusion of people 60+. This year, with the support of the ASOS program, Metlife and several dozen partner organizations, they have developed digital competences of over 4,000 people.

Economical Senior and the National Senior Card - The MANKO - Senior Voice Association, which has been dealing with social education and organizing social campaigns for many years, has also decided to take care of people 60+. For the sake of the seniors' wallet and their economic awareness, Manko has been implementing the National Senior Card (OKS) program for over 2 years, which already has 60,000 seniors throughout Poland. Thanks to this card, they can take advantage of discounts in over 400 institutions all over Poland. These are spas, sanatoriums, holiday homes, clinics, cinemas, theaters, cafes and travel agencies.

The Leki 75+ program is a key element and the first step in the senior policy pursued by the present government. It is certainly an important change in the lives of many sick elderly people who experience difficulties in obtaining medications on a daily basis. On the other hand, detailed rules for access to and prescribing drugs may be discussed. It is worth taking a critical look at the main points of contention in the debate on the program.

Świdnica Senior Card - In September this year, seniors from Świdnica will receive the first copies of the "Świdnica Senior Card" entitling them to take advantage of discounts and rebates when purchasing services or participating in cultural events. This is the implementation of the postulates of, among others Senior Council. The Świdnica card is addressed to people over 60 years of age who are residents of Świdnica, regardless of the amount of their income. The program was adopted by a resolution of the Świdnica City Council on June 24 this year. Its producer is the "Senior-WIGOR" Day Home in Świdnica.

3. Digital technology and new relationship between learners and education providers: The Spanish case

Responsible: Javier SANCHEZ GARCIA - EuroFUE-UJI

In Spain, it is considered that in order to improve the relationship between learners and education providers within the ICT field, it is essential to get students to improve their learnings with the use of information technologies. But this means setting up a new scenario in the relationships between teachers, students and the contents of teaching, and also in evaluating the entire teaching and learning process.

From the current perspective of education in Spain, ICT is a fundamental element in the mediation of the relationships between the three elements of the interactive triangle – students, teacher, content – and contributes to shaping the context in which these relationships take place. The typology of ICT uses in Spain are grouped into five main categories listed below, along with some representative examples of each.

1. ICTs as instruments mediating the relationships between students and the content (and tasks) of learning. Typical and relatively common examples of this category are the use of ICTs by students to:
 - search and select learning content;
 - access content repositories with more or less complex forms of organization;
 - access content repositories that use different forms and rendering systems (multimedia and hypermedia materials, simulations, etc.);
 - explore, deepen, analyze and value learning content (using databases, visualization tools, dynamic models, simulations, etc.);
 - access repositories of tasks and activities with a higher or lesser degree of interactivity;
 - performing learning tasks and activities or certain aspects or parts of them (preparing presentations, writing reports, organizing data, etc.).
2. ICTs as instruments that mediate the relationships between teachers and the content (and tasks) of teaching and learning. Typical and relatively common examples of this category are teachers' use of ICTs to:
 - search, select and organize information related to the contents of the teaching;
 - access repositories of learning objects;
 - access databases and proposal banks for teaching and learning activities;
 - develop and maintain records of the teaching and learning activities carried out, their development, the participation that students have had in them and their products or results;
 - plan and prepare teaching and learning activities for further development in classrooms (develop calendars, schedule, schedule, prepare classes, prepare presentations, etc.).
3. ICTs as instruments that mediate the relationships between teachers and students or between students. Typical and relatively common examples of this category are the use of ICTs to:

- carry out communicative exchanges between teachers and students not directly related to the contents or teaching and learning tasks and activities (personal presentation, request for personal or general information, greetings, farewells, expression of feelings and emotions, etc.);
 - carry out communicative exchanges between students not directly related to the contents or tasks and activities of teaching and learning (personal presentation, request for personal or general information, greetings, farewells, expression of feelings and emotions, information or assessments related to extracurricular topics or issues, etc.).
4. ICTs as instruments mediating the joint activity deployed by teachers and students during the realization of learning teaching tasks or activities. Typical and relatively common examples of this category are the use of ICTs:
- as assistants or amplifiers of certain teacher performances (explain, illustrate, relate, synthesize, provide feedback, communicate critical ratings, etc., by using presentations, simulations, visualizations, modeling, etc.);
 - as assistants or amplifiers of certain student performances (make contributions, exchange information and proposals, show the progress and results of learning tasks, etc.);
 - to track the student's progress and difficulties by the teacher;
 - to track students' own learning process;
 - to request or offer feedback, guidance and assistance related to the development of the activity and its products or results.
5. ICTs as instruments for the environment or workspace and learning environments. Typical and relatively common examples of this category are the use of ICTs to:
- set up individual online learning environments or spaces (e.g. self-sufficient materials for autonomous and independent learning);
 - set up online collaborative environments or workspaces (for example, Computer-Supported Collaborative Learning tools and environments);
 - set up online environments or activity spaces that develop in parallel and that participants can join, or can exit, at their own discretion.

In the five categories it is possible to find uses that introduce changes and transformations in educational practices that it is impossible to imagine in the absence of ICT.

4. Digital technology and new relationship between learners and education providers: The Turkish case

Responsible: Yeliz NUR AKARÇAY, SHEM

With its broadest meaning, digital learning refers to learning performed using electronic devices. In traditional learning, the teacher imparts information to the students who are physically present in the same place at the same time to be taught the same thing; however, things could be more complicated in digital learning environments. In a digital learning environment, students and teachers access courses from anywhere they have an electronic device.

Using digital tools and technologies during teaching and learning is called digital education, which is also referred as Technology - Enhanced Learning (TEL) or e-Learning. Digital education could involve the use of fully online or blended courses and programs. The needs for distance education through digital sources include the following factors: providing education to large groups of people, ensuring equal opportunity to all learners accessing education, involving experts from various fields in the education process, and providing students who cannot go to school for various readings with opportunities to fulfil their educational needs. Although the issue of distance learning is not a new concept, the conditions caused by the pandemic have put it in a completely different position. For many parts of the world, while learning through digital tools were considered only supplementary, it has become a real necessity due to the restrictions regarding the pandemic.

Digital learning and teaching could be made more effective by taking a number of factors into consideration. The context of adult learning environments is not new to distant education. Various education materials were provided online through digital sources to adult learners before the pandemic as well. Hence, it is possible to say that such instruction is mainly designed for adult learners as they need to take the responsibility of their own learning. However, this is not something easy to implement in all groups of adult learners. In many cases, there is a need for individual tutoring with real time interaction, or lack of peer learning might be a weakness.

The dominating role of the internet in people's lives has significant effects on their psychological and social development. While millions of people spend hours on the net doing things in line with their interests, some others invest this time to improve their education. This new condition should be well acknowledged by learners and educators to encourage people to participate in self-improvement and career development. Planning and implementation of any digital education content should take these factors into account.

Advantages and Disadvantages of Digital Learning

Online learning performed through various digital tools offers some benefits, which could be listed as the flexibility in terms of time and place of learning and the opportunity to learn one's own pace. The digital tools used to access the education opportunities enable students to

access the education programs from anywhere in the world. In addition to these benefits, the contribution of distance education to lifelong learning is also reported (Akmeşe, Demir & Dünder, 2016).

On the other hand, distance learning through digital sources has some disadvantages as well. The sudden shift to distance education has brought new demands and challenges for both teachers and students. Negative attitudes towards technology and willingness to continue face-to-face education can be considered among the disadvantages as well. The technical issues experienced during this unknown process have caused many difficulties and even lack of motivation for teachers and students (Daggol & Akcayoglu, 2021). According to Gok (2015), limited interaction among teachers and students as well as students themselves is a disadvantage in distance education through digital tools. Various studies conducted in different countries also reported problems in accessing and using information-communication technologies.

Shift to Digital Learning in Turkey

During the Covid-19 pandemic, many institutions experienced a shift from traditional face-to-face education to distance learning and teaching through digital sources in Turkey. Depending on their socio-economic conditions, students' profile and socio-economic background, the institutions offered various online learning opportunities to their students. Therefore, considering universities as adult learning environments, it should be noted that implementations and the rules in relation to digital learning and teaching demonstrated differences among public universities, foundation universities and private schools. While the rules were strict in some institutions, even participation had to be optional in some other institutions that had students who did not have access to digital sources and lacked necessary equipment to provide such instruction online.

This sudden shift experienced under extraordinary pandemic conditions initially caused a great chaos in many institutions. Although the flexibility of learning and teaching in terms of time and place were regarded as an advantage, the technical issues experienced and lack of interaction and real communication were indicated as disadvantages (Daggol & Akcayoglu, 2021). This process of transition to distance learning firstly reflected a kind of resistance to online teaching and learning as both students and teachers thought that such learning experience could never replace face-to-face learning.

Following this sudden shift, which is referred to as "Emergency Distance Education", efforts were made in all institutions to make distance education through digital sources more organized, more interactive, and more effective with the beginning of the new academic year. Millions of students in Turkey started to have access to education materials through digital sources. While the Ministry of National Education (MoNE) provided education through TV channels and actively used the official web site EBA to cater for students' needs, the Council of Higher Education (CoHE) prepared guidelines to offer a framework for the courses to be given online. The implementations of these two institutions paved the way for a more structured and organized distance learning and teaching experiences. Things done at

institutions with more advanced opportunities had more varied and different kinds of practices.

Teachers and Students in The Era of Digital Learning and Teaching

The changes in the delivery of education through digital sources have caused significant changes in the lives of teachers, students, and families. Teachers who had classroom-bound roles and who are assumed to have the traditional image in front of the classroom and at the centre of the teaching and learning process have gone through important changes. The roles of teachers have become different than before. Instead of being the only source of knowledge, teachers had to consider the instructional technology as a source of learning for their students. Hence, acting like an intermediary between their learners and the sources available, teachers had to be familiar with the technology to facilitate their students' learning and enhance the effectiveness of learning. In addition, they needed to be aware of the role of technological applications in creating greater access to education and meeting diverse learning needs by enabling access to educational materials in various formats. As education through digital sources offers creative and qualified ideas and information to motivate students from diverse backgrounds, the new teacher role has become to recognize these opportunities and use them effectively in instruction. The new conditions brought by the new digital learning and teaching require teachers to provide their learners with guidance, encouragement, constructive feedback, objective grading, and timely response to be received and provided from many different digital sources and applications.

One of the notions of distance education is providing mass-education to large groups of people. Although the education is provided collectively, people exposed to this education are expected to learn individually as the nature of digital learning shifts the responsibility to learners themselves. While learners have the flexibility to access the educational content materials any time or place, they are also expected to use computer assisted programs, interactive multimedia, and internet discussion rather than the methods learning limited to delivery of information from teachers to students. As a result, the traditional roles of teachers and students have changed in important ways with the conditions brought by the digital learning and teaching practices.

Digitalization and Social Inclusion

The rapid digitalization of the world has enabled the development of new platforms for adult learners to use. Various applications offer people with opportunities to create and share digital materials. These tools have become an inseparable part of our lives and required an advanced mastery of them in the world of employment. Therefore, lack of knowledge about digital tools and digital platforms may put adult learners in a difficult position in terms of social inclusion. While the digital sources available have the potential to increase social inclusion, lack of access to them, lack of knowledge about them, or lack of motivation to learn them could lead to social exclusion. Reduced or partial digital literacy could thus have many negative consequences in adult people's psychological, social, and education life. The digital sources should therefore favour interaction, participation, and management of learning content on the internet.

Today, Information and Communication Technologies dominate our lives through the services they provide through various mobile devices such as smartphones, tablets, laptops, etc. The access to information and services anytime, anywhere also requires people from all ages to use them for various purposes including health information, finance, shopping, navigation, etc. Although adult learners show interest in the technologies that make their life easier, it is also important to note that their digital skills are minimal. They were not exposed to the current technological breakthrough, and the differences in the use of digital tools have caused an increasing gap between the younger and older adult groups. This digital divide could be more significant in people with some specific demographic and socioeconomic characteristics, which makes them “digitally excluded”. Therefore, increasing older adults’ digital competences is of great importance for social inclusion.

In Turkey, education is public and centralized. Although the education provided in the adult education centres through the Ministry of National Education (MoNE), the Council of Higher Education (CoHE) and Public Education Centres (PEC) access large numbers of people to enable an access to quality inclusive education, other large groups of people have disadvantages in accessing and using the digital sources available.

Some factors that cause these disadvantages include high population rates, lack of adequate adult education opportunities, and migration from rural to urban areas. The low levels of education are also reflected in the low levels of digital literacy as well as limited sources to access them. Various PECs located in every city in different parts of the country aim to increase the digital skills of older adults who do not have the opportunity to attend formal institutions.

In the process of digital inclusion, older adults should be helped to see the relevance of the technologies for them and receive family support. When these are provided, they are believed to regularly use and adopt digital technologies Fausset et al. (2013). Many countries, including Turkey, need to facilitate the implementation of technological solutions for this population. If such model is to be implemented by any institution, the following important points need to be considered:

- a) Usefulness: The ICT education to be provided should be useful for them. It must respond to their personal and social needs.
- b) Collaboration: The ICT education should emphasize teamwork and support
- c) Social Inclusion: The education to be provided should include the possibility of expanding communication channels through the web. It may include relatives and friends.
- d) Autonomy: The education content should take learning styles, interests and expectations of the participating individuals into consideration.

In conclusion, digital learning and teaching have been at the centre of millions of people’s lives today. The changes in student roles, teacher roles, educational content and the way it is delivered have made many things challenging. To make teaching and learning more effective, adult learners should be taught how to make ICTs part of their life. The relevance of the technologies could be explained to them through a comprehensive training starting

from the very beginning aspect of digital inclusion; the digital devices available. Despite the relatively minimum levels of digital skills, interests of older people could help them gain the necessary knowledge and skills to comprehend and use technologies as a medium of social inclusion.

5. Conclusion

Based on the above four countries' case studies on digital technology and the new dimension of the relationship between education providers and learners, the report draws on the emerging role and high importance how the evolving modern digital technologies in education are affecting the relationship between the selected education institutions and their respective learners. The joint study outlines how the development of contemporary digital platforms in education are considerably affecting the way teachers, principals, instructors and learners are interacting among each other regardless of their geographical location. Overall, the report underlines that the future development of the latter relationship would be considerably affected by the application of artificial intelligence and digitalization such as virtual reality, hybrid teaching and learning models and remote connection within different settings across EU and non-EU countries. Therefore, the education providers should work constantly on increasing learners' awareness, skills and competencies in the areas of ICT and Social inclusion in order to sustain the bridge between education institutions and their respective learners.

To complete these conclusions, the results obtained by the researchers who are experts in digital technology and the new dimension of the relationship between education providers and learners are shown. First, the results obtained by Rebat Kumar Dhakal (Managing Editor - Journal of Education and Research) concludes that:

Changing the frame of reference of the conventional teachers and thereby instilling in their mind-set the simple thought of TL was like confronting the dragons. Nonetheless, their engagement in teacher education programmes have exposed how students and educators can co-create TL experiences. Their experiences and also my observation of their training programmes showed that Nepali teachers are in want of TL opportunities. The findings suggest that teacher education should foster Critical Consciousness in teachers so that they can develop the ability in their students to analyse, pose questions, and take action on the diverse social, political, cultural, and economic contexts that influence and shape their lives. Moreover, the community of practice among the emerging transformative education practitioners should grow in focus from critical self-reflection to include an emphasis on promoting a contemplative mode of teaching and learning, which will offer an effective pedagogic model to nurture transformative learning in teacher education

On the other hand, Anders Norberg concludes that:

For many vocational education providers, I think this is the general direction development, that such a new relationship is being developed. These education providers have to adapt to people's needs and the signals from the work market and employers.

Concerning universities - well, not yet - but they really should improve on this, that is my opinion. Adult learners are often "Learning through the back door" and "life-long learning" at many universities is only an expression. Conventional universities prioritise research, often see education as a by-product, and then adult education as an additional marginal possibility. They generally prioritise young traditional campus students who just have moved from their parents and try to find out their identity in a new environment. They want students without

complexities as their own families with kids, having to work for a living, distance from home to university, etc. Adult learners do not fit in well in the general youth-focused centre-periphery model, although the possibilities for universities to do a better job with adult learners is there already - and also the need.

Finally, the contribution made by Samy Azer (King Saud University) is collected:

The theories on adult learning define the relationships between the learner and modes of teaching. Hence the design of the curriculum. Therefore, in adult education, we aim to prepare graduates to join the workforce to acquire needed knowledge, skills, and professional values. The design of the curriculum may need to be flexible. It is usually based on student-centred learning and self-directed learning. We are also moving into blended learning and online/virtual classrooms to address the cultural/social complexity of adult learning and how we can use technology to maximize learning and add value to students' learning needs.

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