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DIGITAL LITERACY OF FOREIGN LANGUAGE TEACHERS IN THE FRAMEWORK OF CONTINUOUS PROFESSIONAL DEVELOPMENT

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Technology has become an important part of our lives and nowadays is crucial for success in many spheres. Education is not an exception as it is constantly adapting to the needs of the society and growing impact of technology prompted the appearance of a new literacy, digital literacy, aimed at helping people find, create and communicate digital content. To assist the needs of new generation learners, who are digital natives, educators should know how to teach digital literacy and at the same time should be digitally literate themselves. Thus, acquiring digital literacy is one of the important directions of continuous professional development for teachers. In this article the authors discuss the pivotal role of digital literacy for the 21st century schools and reflect on a need for technology in initial training and continuous professional development of English teachers.

Key words: *digital competence, educational technology, digital pedagogic competence, 21st century skills, teacher training, continuous professional development of English teachers*

Constantly emerging technologies foster changes in different spheres of our lives and require regular re- or up-skilling of adults or helping them in gaining completely new skills and teaching skills necessary in technological age to young people and children. According to the UNESCO report 95 percent of global population use the Internet [1]. Governments invest in developing digital economies worldwide and Kazakhstan is not an exception. Although it is considered to be a developing country in 2017 the government introduced the program “Digital Kazakhstan” aiming at developing economy and improving life quality of Kazakhstani citizens through the use of technology. According to the data presented on the official site of the program 79 percent of the households in Kazakhstan already have broadband Internet connection, 64 percent of the citizens use smartphones and 77 percent of the population is said to have digital literacy [2]. However, one of the objectives of the program is to increase digital literacy of the population in the country up to 83 percent by 2022, because it is obvious that digital literacy is becoming one of the main skills for life in the 21st century all over the world together with basic skills such as reading, writing, and numeracy comprising traditional literacy, as it helps use new technologies for better and more productive life, and should be taught at schools like all the other types of literacy.

The term “educational technology” in education is used now to describe not a set of methods and techniques for teaching students particular subjects or skills, as it used to be a decade before in post soviet pedagogy, but mostly to refer to the use of technology in education including virtual and augmented reality, artificial intelligence and machine learning. Most well known publishers of English teaching materials are now working together with IT companies for the purpose of developing new content using technology, due to the fact that most of the teachers and students nowadays consider such materials attractive and effective in the process of teaching and learning in general, and teaching and learning English in particular. For example, 95 percent of 620 members of Oxford English Learning Exchange community who took part in the survey on 21st century skills “think it is important to teach 21st century skills to English students” and 75 percent of the participants of the survey classify digital literacy as the 21st century skill. At the same time 77 percent of the participants claimed they find activities to teach 21st century skills on the web [3]. Thus, it is apparent that technology is important for both teachers and students, so teachers need to know how to use technology themselves and how to teach students to use the technology for their benefit.

Among the factors affecting demand for digital skills Coward at al. list the following: demographic trends, technological changes, business trends, trade, industry policies and shift to a greener economy [4; 27]. The list of factors is constantly growing as more areas of life become digitalized and start using new trends like Big Data and artificial intellect. However, integrating ICT into teaching and learning process is important for 21st century schools not only because of the demands of the economy and worldwide innovations, but also because it supports flexibility, collaboration and personalization of learning due to breaking through the barriers of space and time, allowing to choose when, where, and how to learn through creating a range of learning environments, which empowers learner autonomy and enhance development of transferable and transversal skills. Such concepts in education as e-learning / online learning, blended learning and flipped learning appeared mostly due to the use of technologies and serve the abovementioned purposes. Blend of technology and pedagogy helps to create motivation to learn benefiting learners of the new generation who will get the functional knowledge for real life as educational technologies like virtual and augmented reality allow students to learn by doing through interacting and immersing. Furthermore, “ensuring that everyone has relevant digital skills helps promote inclusive and equitable education and lifelong learning for all.” [1]

Digital literacy is a comparatively new term, so when defining it different scholars speak about a range of skills or a number of literacies. For instance, American Library Association gives the following definition: “Digital literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills” [5]. Spires and Bartlett offer to think about digital literacy as including three main categories:

- 1) locating and consuming digital content,
- 2) creating digital content and
- 3) communicating digital content “while simultaneously employing a process of critical evaluation.” [6; 9-10]. UNESCO suggests that digital skills are “a range of abilities to use digital devices, communication applications, and networks to assess and manage information.” [1], whereas Broadband Commission for Sustainable Development defines digital skills as a “combination of behaviors, expertise, know-how, work habits, character traits, dispositions and critical understandings.” [7; 4].

According to Digital Skills Toolkit developed by International Telecommunication Union there is an array of digital skills at three levels: basic, intermediate and advanced. Basic skills include word processing, using keyboards and touch screens, managing privacy settings, using email, creating professional online profiles. Intermediate skills are such skills as desktop publishing, digital graphic design and digital marketing; and advanced skills are artificial intelligence, digital entrepreneurship, Big Data, virtual reality and others, requiring special training or qualifications [4; 5-7]. In our opinion, all the definitions given above are reflected in the Digital Competence Framework for Citizens (DigComp 2.0) developed by the European Commission, which “identifies the key components of digital competence in five areas”:

- 1) Information and data literacy (searching, evaluating and managing data);
 - 2) Communication and collaboration (interacting, sharing and collaborating through digital technologies, engaging in citizenship through digital technologies, netiquette, managing digital identity);
 - 3) Digital content creation (developing, creating and re-elaborating digital content, copyright and licenses and programming);
 - 4) Safety (protecting devices, personal data and privacy, health and well-being and environment);
- and
- 5) Problem-solving (solving technical problems, identifying needs and technological responses, creatively using digital technologies, identifying digital competence gaps) [8].

Digital skills are included in the group of skills called 21st century skills and according to a World Economic Forum report digital skills (or ICT literacy) belong to foundational literacies, which together with two other types of 21st century skills (competences and character qualities) serve as a foundation for the system of lifelong learning [4; 9-10], which in turn is closely connected with continuous professional development.

Teachers are responsible for developing students’ skills for life, however they first should know what these skills are and how to develop them. When we speak about teaching digital competence to students we first should think about what it is for teachers, if teachers are confident about the sets of digital skills they have and what particularly teachers should know themselves to be able to help their

students. In the report of the UNESCO Mobile Learning Week 2018 teacher training is recognized as the key to mainstreaming digital skills. The report also suggests that “challenges and issues faced by teachers” and a gap between initial teacher training, schools’ and students’ needs, and continuous professional development should be identified and addressed by communities and governments [9; 15-16].

In 2015 British Council developed Continuing Professional Development Framework for Teachers in which among all the other professional practices for the quality in the classroom they list “Integrating ICT”, which involves the following activities:

- 1) “Developing effective strategies for locating appropriate digital content”;
- 2) Keeping up to e-safety rules;
- 3) Evaluating effectiveness and appropriacy of digital content and tools for achieving planned learning outcomes;
- 4) Using technology to create teaching and learning materials;
- 5) “Setting up activities that support learning by exploiting appropriate digital content and tools”;
- 6) “Developing effective strategies for resolving technical issues”;
- 7) Using technology for performing administrative tasks;
- 8) Promoting autonomous learning using technology in the classroom as well as out of the classroom;
- 9) Promoting collaboration and participatory learning;
- 10) Reflecting on the effectiveness of ones own integration of ICT into the teaching and learning processes [10; 13]

Two years later, in 2017, European Commission developed very detailed European Framework for the Digital Competence of Educators, including all the aspects of the abovementioned framework, which defines educators’ professional activities and their aspects in connection with digital literacy. The framework defines six areas of “digital pedagogic competence, the competence educators need to foster efficient, inclusive and innovative teaching and learning strategies”:

- 1) professional engagement,
 - 2) digital resources,
 - 3) teaching and learning,
 - 4) assessment,
 - 5) empowering learners and
 - 6) facilitating learners’ digital competence, where areas 2 to 5 make the core of the framework and area 1 describing “broader professional environment” and area 6 including “specific pedagogic competences required to facilitate students’ digital competence” complement the framework [11; 16-17].
- Using the framework educators can find out at what competence stage they are in different areas (from A1 to C2, like in CEFR, with the only difference that levels are called Newcomer, Explorer, Integrator, Expert, Leader, Pioneer to “motivate educators at all levels to positively appreciate their achievements” [11; 28]), thus defining the gap they have in their digital literacy, which will help them choose the aims and paths of their professional development with the focus on the digital pedagogical literacy. Teacher educators and trainers as well can use the framework to reflect on a need for technology in initial and continuous training of teachers and develop courses for universities and continuous professional development programs.

Taking into account the fact that digital technology nowadays is inevitable part of our lives higher education institutions should consider the impact of digital competence in teacher education and develop future teachers’ both digital and digital pedagogic competences. For this purpose, educational programs for teachers should include such subject as, for example, “Digital literacy for teachers”, which will include sessions on technical knowledge of how to use different digital devices (computers, tablets, interactive whiteboards, projectors); programs, software, and applications (Excel – for counting and storing students’ results; Word, PowerPoint, Photoshop, Moviemaker / iMovie, Veer, Scratch, Prezi – to create teaching materials such as educational videos and cartoons, or games); tools, platforms and virtual learning environments (Google classroom combined with other Google products such as Google forms, Google Docs, Google Slides, and Google Sheets; Kahoot, Padlet, Adobe Spark Video, Khan Academy, Quizlet, Moodle - for formative and summative assessment, active involvement of students in the

learning process, supplementing the teaching with extra activities for personalized learning and for sharing information and publishing digital resources) and search engines (for finding necessary information quickly and effectively and evaluating its reliability) or create blogs, vlogs (video blogs) or sites for different educational purposes, for which students should know about copyright, licenses, protecting sensitive data, digital security and restricting access to inappropriate resources and sites. Although currently ICT course is a compulsory component of many teacher education programs, it mostly includes the knowledge on programming (zero-one system) and only basic (for the most part Windows Office) programs' use.

In addition to the special course covering technical knowledge of know-how of computers, digital devices and programs' use each course should contain a module, some lectures or workshops developing future teachers' digital literacy or learning activities and assignments requiring students to use and develop their digital skills. For instance, the course "Assessment in ELT", if we speak about training English teachers, should have a module on digital assessment where students would learn how and what digital tools to use for formative and summative assessment, how to assess the benefits and drawbacks of the digital assessment tools, how to analyze the evidence on learner progress and performance collected with the help of digital tools, how to give effective and appropriate feedback using digital technology, and how to be more productive using digital tools for assessment and planning. Any "Teaching methodology" course should also include a module, unit or sessions on the use of digital technology for different purposes. For instance, when speaking about differentiation and personalization or inclusion of students (with the special needs as well) into learning process the lecturer should draw students' attention to the existing digital tools or digital teaching strategies (e.g. hyperdocs in flipped learning approach) that can be used for these purposes. The other example can be the issues of engaging students in active learning using games, quizzes or creative tasks (digital story telling, making info graphics) using digital tools, which can be done in the form of workshops or hands-on activities to enable future teachers to understand the teaching concept and be able to use digital tools in their teaching practice for the purpose of actively engaging learners.

All the courses of any educational program for teachers in our opinion should include activities that encourage and require students to

- 1) communicate and collaborate using digital technologies, which means they should learn netiquette (how to behave in digital environment and be polite and respectful), referencing (know about copyrights and scientific integrity), creating and managing digital identity (security, reputation);

- 2) store data and information in digital environments - compiling e-portfolios or teacher portfolios to showcase the achievements or to store the information which might be useful for future teaching practice, compiling annotated and well organized lists of links and digital resources for different aspects of future professional practice;

- 3) create digital content in the form of quizzes, games, presentations and videos and share the content through different platforms and social networks;

- 4) reflect on learning process and learning activities through keeping online reflective journals, especially during teaching practicums (Penzu, Seesaw), and / or writing blogs;

- 5) find opportunities for self-development through digital courses or content and keeping up-to date with technology.

Speaking particularly about educational programs for English teachers it is also useful to consider professional development and certification available through the use of technologies. There is a vast variety of massive open online courses (MOOCs) and teaching and learning communities whose language of instruction and communication is English, which makes it quite accessible for English teachers. Moreover, using online learning platforms, podcasts and participating in webinars is a great opportunity to enhance language competence together with getting new ideas about teaching and current developments in ELT. Getting professional certificates, diplomas and degrees from the top universities also became available online as well as participating in conferences as listener or presenter.

As digital literacy is a multidimensional notion, its mainstreaming at schools and in society depends on many factors one of which is digital literacy of teachers. It is important to develop a "coherent and sustainable plan for teacher professional development" [6; 20], involving all the stakeholders in order to ensure that digital skills acquired by teachers will correspond to the needs of students and society. It is also necessary to pay attention to "digital divide related to socio-economic, gender and intergenerational

gaps” [9; 16] when making professional development programs for upgrading and scaling up teachers’ digital skills. Sustainable digital skills that teachers will gain through digital literacy programs will enhance teachers’ productivity and efficacy and will help to develop professionally in different aspects of teaching.

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ШЕТ ТІЛІ МҰҒАЛІМДЕРІНІҢ ҮЗДІКСІЗ КӘСІБИ ДАМУ НЕГІЗІНДЕ САНДЫҚ САУАТТЫЛЫҒЫ

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Технологиялар өміріміздің маңызды бөлігі ғана емес, сондай-ақ көптеген қызмет салаларында табысқа жетудің кілті болып табылады. Білім беру саласы ерекше болып табылмайды, өйткені білім беру қоғамның қажеттіліктеріне сәйкес келуі тиіс және технологиялардың біздің өмірімізге үнемі күшейіп келе жатқан әсері сауаттылықтың жаңа түрінің - сандық сауаттылықтың пайда болуына алып келді, ол сандық ақпаратты табу, жасау және беру үшін қызмет етеді. "Сандық аборигендер" болып табылатын оқушылар жаңа буынының талаптарына сәйкес болу үшін педагогтар тек қана сандық сауаттылықты меңгеріп қана қоймай, сонымен қатар оқушылардың сандық сауаттылығын дамыту мен оқытудың әдістері мен тәсілдерін білуі керек, демек, сандық сауаттылықты алу немесе арттыру мұғалімдердің үздіксіз кәсіби дамуының маңызды бағыттарының бірі болып табылады. Осы мақалада авторлар ХХІ ғасыр мектептері үшін сандық сауаттылықтың негізгі рөлін анықтайды және шет (ағылшын) тілі оқытушыларының үздіксіз кәсіби дамуы мен бастауыш дайындық үдерісінде технологияны ендіру жолдарын ұсынады.

Түйін сөздер: сандық сауаттылық, білім беру технологиясы, сандық педагогикалық сауаттылық, ХХІ ғасыр дағдылары мен іскерліктері, мұғалімдерді даярлау, ағылшын тілі мұғалімдерінің үздіксіз кәсіби дамуы

ЦИФРОВАЯ ГРАМОТНОСТЬ УЧИТЕЛЕЙ ИНОСТРАННОГО ЯЗЫКА В КОНТЕКСТЕ НЕПРЕРЫВНОГО ПРОФЕССИОНАЛЬНОГО РАЗВИТИЯ

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Технологии стали не только важной частью нашей жизни, но и являются залогом успеха во многих сферах деятельности. Сфера образования не является исключением, так как образование должно соответствовать нуждам общества, и постоянно усиливающееся влияние технологий на нашу жизнь привело к появлению нового вида грамотности - цифровой грамотности, которая служит для нахождения, создания и передачи цифровой информации. Для того, чтобы соответствовать требованиям нового поколения учащихся, которые являются «цифровыми аборигенами», педагоги должны не только сами владеть цифровой грамотностью, но и знать методы и приемы обучения и развития цифровой грамотности у учащихся, а следовательно, приобретение или повышение цифровой грамотности является одним из важных направлений непрерывного профессионального развития учителей. В данной статье авторы определяют ключевую роль цифровой грамотности для школ 21 века и предлагают пути внедрения технологий в процесс начальной подготовки и непрерывного профессионального развития учителей иностранного (английского) языка.

Ключевые слова: *цифровая грамотность, образовательные технологии, цифровая педагогическая грамотность, навыки и умения 21 века, подготовка учителей, непрерывное профессиональное развитие учителей английского языка*

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