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TEACHERS' READINESS TO USE E-PORTFOLIOS

Abstract. An e-portfolio is one of the tools for monitoring and evaluating the professional activity of school teachers and their achievements. An e-portfolio can be used for teachers' professional development. It provides openness and transparency of both teachers' and educational institutions' work. The purpose of the study is to analyze teachers' readiness to use e-portfolios for both self-evaluation of their own professional experience and continuous professional development. The article analyzes various approaches to the structure of e-portfolios based on the analysis of international experience, the legislation of Ukraine and the survey of teachers. The purpose, tasks, requirements of normative documents on the use of e-portfolios are generalized.The multi-level structure of an e-portfolio is defined and the requirements for its dynamic content are substantiated. Teachers' needs for advanced training in using a variety of IT tools for creating e-portfolios have been systematized. It has been determined that the use of e-portfolio can satisfy both the needs of evaluating the effectiveness of teachers' work and the formation of self-esteem and reflection skills, facilitate teachers' continuous professional development, dissemination of advanced pedagogical experience and teaching practices. Different types of e-portfolios have been analyzed. IT tools for creating an e-portfolio have been identified. The content of the corresponding educational module for teachers in the system of postgraduate pedagogical education has been substantiated. The content of a portfolio is defined by the goals of its creation. For teachers, the emphasis in e-portfolio creation is not on learning, as it is for students, but on professional activity, self-assessment, and marketing. The results can be teachers' understanding of why and how they have learned throughout their careers, the importance of reflection for future professional development.

Keywords: e-portfolio; teacher; ICT.

1. INTRODUCTION

Learning is becoming more flexible, interactive and personalized. Modern teachers must go ahead of their time. The education of the future should have an open structure and practice-oriented content. The trend of modern education is e-learning, networking of educational institutions [1, p.158].

The development of e-learning facilitates the development of the educational services market and requires that teachers continue learning in a competitive environment.Creating the necessary ICT-enabled educational environment will allow teachers to be competitive in the labor market and ensure their continuous professional development. Digitalization of education is a prerequisite for creating e-resources by teachers and requires teachers' readiness to use information and communication technologies and to initiate new knowledge in the digital form.

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Statement of the problem. An e-portfolio is becoming an important part of evaluating a teacher's professional activity. Each teacher has their own philosophy of teaching, in which he or she selects technologies and techniques and succeeds in their professional activity. An e-portfolio is a collection of artifacts of a teacher's learning and achievement that over time demonstrates his or her professional growth, acquisition of attainments, knowledge, pedagogical skills and creativity, and promotes continuous reflection on experience and professional growth.

The research on the use of e-portfolios, for the most part, opens up opportunities for co-operation between university professors and students in its completion and focuses on collecting learning outcomes.

Analysis of recent research and publications. Artifacts can be presented in different formats: texts, graphics, multimedia, web pages, and hyperlinks. An e-portfolio is a demonstration of a teacher's capabilities through state-of-the-art IT tools that provide instant expertise and collaboration with colleagues on the global web.

An e-portfolio can help satisfy both the need to evaluate the performance of teachers who are already working and students seeking to work in school [2].

The development of ICT has made it possible to cover almost all aspects of life and this has also made a valuable contribution to teacher education. The research experience of teachers and students at the University of Saudi Arabia has found that an e-portfolio is very useful and indispensable in the field of education, and its content is necessary for the development of professional standards. Besides, research findings show that the use of an e-portfolio enhances the capabilities, skills and knowledge of both learners and teachers [3].

Electronic portfolios are more often created to educate students and are the result of their achievements, but teachers who teach, support and motivate children play an important role. Students can also choose courses and teachers. Attempts have been made to identify the subject competences of e-learning tutors and to provide this information to students. As a result, information about tutors, their personal success stories and competencies has been presented as areas that make up a teacher's portfolio and complement e-learning as a whole. The competencies that e-learning tutors should possess are defined as knowledge (e.g., e-learning, training and learning, etc.), skills (e.g., ICT literacy, working with LMS, etc.) and characteristics (e.g., responsibility, positive attitude, etc.) [4].

One of the challenges of e-learning is the self-regulation of learning, which requires the use of technological tools, one of which is an e-portfolio. The use of semantic tools helps to create a more user-friendly e-portfolio. For the generation of study routes, the system takes into account the different levels of learning that a student needs to achieve and the indicators that measure his or her success. Thus, it offers an educational route in which the learner will reach the highest possible level [5].

Self-regulated learning (SRL) has a positive impact on students' success at and outside the school, and this can help improve the learning environment of higher education, especially the e-Portfolio platform. However, to ensure the quality of education it is necessary to provide the use of an integrated model consisting of an electronic portfolio, competence, and SRL [6].

An e-portfolio can also be used as a model for educational documentation. For example, Malaysia has been conducting a school-based assessment (SBA) since 2012. Its main goals were to improve the teaching system and automate student assessment. The proposed system is implemented in a learning environment that uses the fundamental elements of a knowledge management model and an e-portfolio as a model of educational documentation. The evaluation process under this training system focuses on learning evaluation and helps overcome documentation issues: missing data, human negligence and ensuring that the latest updates and assessment information are properly disseminated [7].

The results of the study, which analyzes the formation of common competencies through the e-portfolio platform and didactic planning, confirmed that the most useful functions for students are a schedule, study assignments, a teacher's portfolio and a dialogue with the teacher [8].

Many universities around the world use e-portfolios at universities, for example, personal development planning briefs and e-portfolios in UK higher education institutions (https://rapid.lboro.ac.uk, https://www.pebblepad.co.uk, https://www.iwebfolio.com) [9].

N. Morze, L. Varchenko-Trotsenko note that a university professor's e-portfolio is a component of the quality assurance system of the educational activity of the institution as a whole, and describe the model of their e-portfolios as a possible tool for measuring the results of their activity and automated formation of the internal rating of the university. An e-portfolio is created on the basis of electronic resources and contains data on various aspects of teacher's educational activity: personal data; research activities; teaching activity; professional development [10].

The teacher's e-portfolio is a personal digital document, where with the help of creativity and innovative technologies it is possible to demonstrate professional competencies and learning style. To build an e-portfolio, it is advisable to use modern CMS systems (in particular, Google sites with links to materials hosted on Google Drive) [11].

For the development of teachers' information and communication competencies, O. Spirin and T. Vakalyuk offer to conduct training sessions on the course "Cloud technologies in education", the syllabus of which includes the topic of creating sites, among them those which can be used for building a teacher's portfolio [12].

N. Myronchuk draws attention to the fact that in their professional activity teachers can use methodological (organizational-methodological) portfolio, which contains information of educational and methodological nature: didactic materials, diagnostic tools, assessment tools, control of students' learning activities, student work samples and more [13].

Yu. Bogachkov, V. Milashenko, P. Wuhan, O. Sagadina reveal the potential of using ICT tools to maintain students' electronic portfolios for the implementation of individual and group educational programs, demonstration of students' personal educational products and results of their collective discussion, visualization of students' learning outcomes. Portfolio management systems allow students to record the learning outcomes achieved, to determine the "positions" of the student on their own map of development and personal progress, to understand and evaluate the achievement of individual and general goals, learned ways of working [14].

Educators' willingness to use e-portfolios for self-evaluation of their own professional experience and continuous professional development remain beyond the researchers' attention.

The purpose of the article. The purpose of the study is to analyze teachers' readiness to use e-portfolios for both self-evaluation of their own professional experience and continuous professional development.

2. THE THEORETICAL BACKGROUNDS

The researchers outlined the vision of digital development stories or online personal learning environments, the prospects of using e-portfolios over a lifetime. Based on the concept of "personal web space", this online archive of a collection of life reflections, memories, digital artefacts and memorabilia, both personal and professional, can change the paradigm of e-portfolio institutions and instead focus on the individual or family as a centre for creating a digital archive that can be used in a variety of contexts throughout life, from schools to universities and the workplace [15].

E-portfolios can be used to develop personal stories and reflexive stories to save for future generations. Researchers [16] encourage people as well as institutions to explore new ways to build e-portfolios in the cloud so that their owners have access to them throughout their lives. The IT tools used to build e-portfolios should be useful and accessible to different categories of people. In their opinion, it is important to use the potential of cloud computing to preserve digital memos, as well as the broader adoption of an electronic portfolio that accompanies a person throughout his or her lifetime.

Teacher's e-portfolio concept. The content of a portfolio is defined by the goals of its creation. For teachers, the emphasis in e-portfolio creation is not on learning, as it is for students, but on professional activity, self-assessment, and marketing. The results can be teachers' understanding of why and how they have learned throughout their careers, the importance of reflection for future professional development.

3. METHOD

The research methods are theoretical: systematization and comparison of scientific regulations, legal instruments of Ukraine, the experience of using e-portfolios, analysis of IT tools for creating e-portfolios, and empirical: observations, questionnaires for determining the structure of e-portfolios, teachers' readiness to use e-portfolios.

Participants. In total, 103 teachers from two regions of Ukraine (the city of Kyiv and Mykolaiv region) participated in the study, observations and questionnaires aimed at determining the structure of e-portfolios and teachers' readiness to use e-portfolios. 12 experts (the representatives of the Department of Education, school leaders, coordinators responsible for informatization of education in schools, IT teachers) were involved in the definition of e-portfolio structure.

Participants were provided with a questionnaire on the Internet, answers were given anonymously, indicating only the name of the school in which the teacher is working. Analysis of documents, school reports, conversations with teachers was used to determine the possibilities of using the e-portfolio by teachers.

4. FINDINGS

Regulatory documents on the use of e-portfolio in Ukraine

Portfolio as a component of the process of control and evaluation of students' academic achievements has been officially used in the system of general secondary education in Ukraine since 2013, in particular as a means of accumulation and storage of students' educational projects and creative pieces of work [17]. With the adoption by the Cabinet of Ministers of Ukraine in 2016 of the Concept of the new Ukrainian school [18] began the development of new approaches to the assessment of learning outcomes, including formative assessment, which takes into account the individual progress of the student.

Training materials to prepare teachers for the implementation of the draft State Standard of Primary General Education, in addition to describing the types, purposes of use and methods of compiling a student portfolio define the concept of teacher's portfolio.The purpose of such a portfolio is to obtain information on the student's progress, in particular, the forms of assessment and test results, and information from other professionals [19].

The introduction of formative assessment in the educational process requires not only adequate preparation of teachers to carry it out but also a change in approaches to assessing the professional activity of educators. Before the adoption in 2017 of the Law of Ukraine "On

Education" [20] the only mechanism for evaluating teachers' activity was attestation. The Law of Ukraine "On Education" has defined an alternative to attestation - certification.

In recent years, a number of normative documents have been adopted that signify new approaches to presenting the results of educators' professional activity.

In the Concept of teacher education development, the teacher's portfolio is defined as a description of the teacher's educational and professional achievements, which includes information about the main stages of training, professional development, including the achieved results, information about participation in projects, publications, methodological guidelines. The portfolio outlines the main directions and tasks of further professional development and may contain copies of relevant documents. Teachers' professional development outcomes can be accumulated in an e-portfolio, which can be posted publicly on the official website of the educational institution where they work [21].

In 2019, elementary school teachers underwent a certification process for the first time, a required component of which was having their own electronic portfolios. According to the Regulation on the certification of teaching staff, the electronic portfolio (e-portfolio) is a collection of materials that testifies to the pedagogical skill of the certification participant [22].

Obligatory elements of such a portfolio are the self-assessment questionnaire of the established form, the description of the training session, photo materials and videos of classes, other materials (hyperlinks to the teacher's website, blog, a social network page, photos, videos, texts or other materials) that may contain information about a teacher's professional achievements, students' educational achievements, creative achievements, etc. A teacher's e-portfolio is housed in a cloud repository. However, in December 2019, the Cabinet of Ministers of Ukraine abolished the requirement for teachers' electronic portfolios [23], leaving only independent testing of teachers, self-assessment and study of their practical experience (observation of teachers' work during one day) and returning to traditional assessment practice.The conducted analysis of the documents testifies not only to the instability and diversity of normative approaches to the concept of "e-portfolio", its structure, content, implementation in educational practice, but also to the need to introduce modern forms of monitoring and evaluation of teachers' professional activity.

Basic approaches to the pedagogical design of an e-portfolio

The existing literature on the subject suggests that portfolios may have several goals, such as evaluation tools for reporting on compliance with standards (a positivist model - the evaluation portfolio); digital deep learning stories (a constructivist model - a portfolio of learning or processes); and a digital resume to highlight competency (a demo model - best pieces of work/marketing/employment portfolio) [24].

An e-portfolio of digital deep learning (development) stories can show skills formation over a particular period. Its main purpose is to provide communication with students and colleagues, to promote reflection, goal setting, collaboration. The e-portfolio of evaluation and reporting demonstrates skills and competencies in a particular sphere. The digital resume emphasizes achievements in the educational field, as a rule, it is shown to potential employers. Most e-portfolios try to combine these different types and use the integration of IT tools and types of information for this. A teacher's portfolio also depends on his / her competence and experience.

The questionaries (see Fig. 1) showed teachers' interest in using e-portfolios to create a professional experience bank (69.9%), to build an individual professional development route (39.8%), and using them as a tool for assessing professionalism (38, 8%) and dissemination of best experience (37.9%). Only 2.9% of teachers indicated that e-portfolios could be used for professional expertise and advertising (16.5%) and for employers (13.6%).

Figure 1. Teachers' answers to the question "Why do I need an e-portfolio?"

Based on the analysis of different approaches and the survey of Ukrainian teachers, let us determine the structure of a teacher's e-portfolio. In our opinion, the structure of a teacher's e-portfolio should include components reflecting their professional development: general information, scientific and methodological activity, teaching methods, including teaching and methodological tools that the teacher uses and develops.

Teachers have different levels of professionalism depending on their professional experience. The teacher's level of professionalism is determined by their professional category and ranks. Therefore, for each category (specialist, second, first, highest) and in the presence of pedagogical ranks (senior teacher, teacher-methodologist), we can define different criteria and indicators in the components of the e-portfolio structure.

For example, a teacher who is just starting their professional career, may not yet have personal programs, manuals and articles. It is important for such a teacher to show in their portfolio their methods of teaching, participation in methodological seminars, workshops, etc. Such a teacher is advised to analyze the e-portfolios of mentor teachers.

E-portfolio design can be linked to the digital storytelling process. E-portfolios can be static, these are prepared in the form of a digital resume or presentation, and dynamic, which are constantly updated and make it possible to analyze the dynamics of a teacher's professional development over time. The technology that is increasingly being used to build e-portfolios is a blog or site that is constantly updated and collaborative. Such e-portfolios can be viewed, reviewed, discussed and disseminated.

Experts (the representatives of the Department of Education, school leaders, coordinators responsible for informatization of education in schools, IT teachers) used SWOT-analysis for the definition of e-portfolio structure (see Fig. 2).

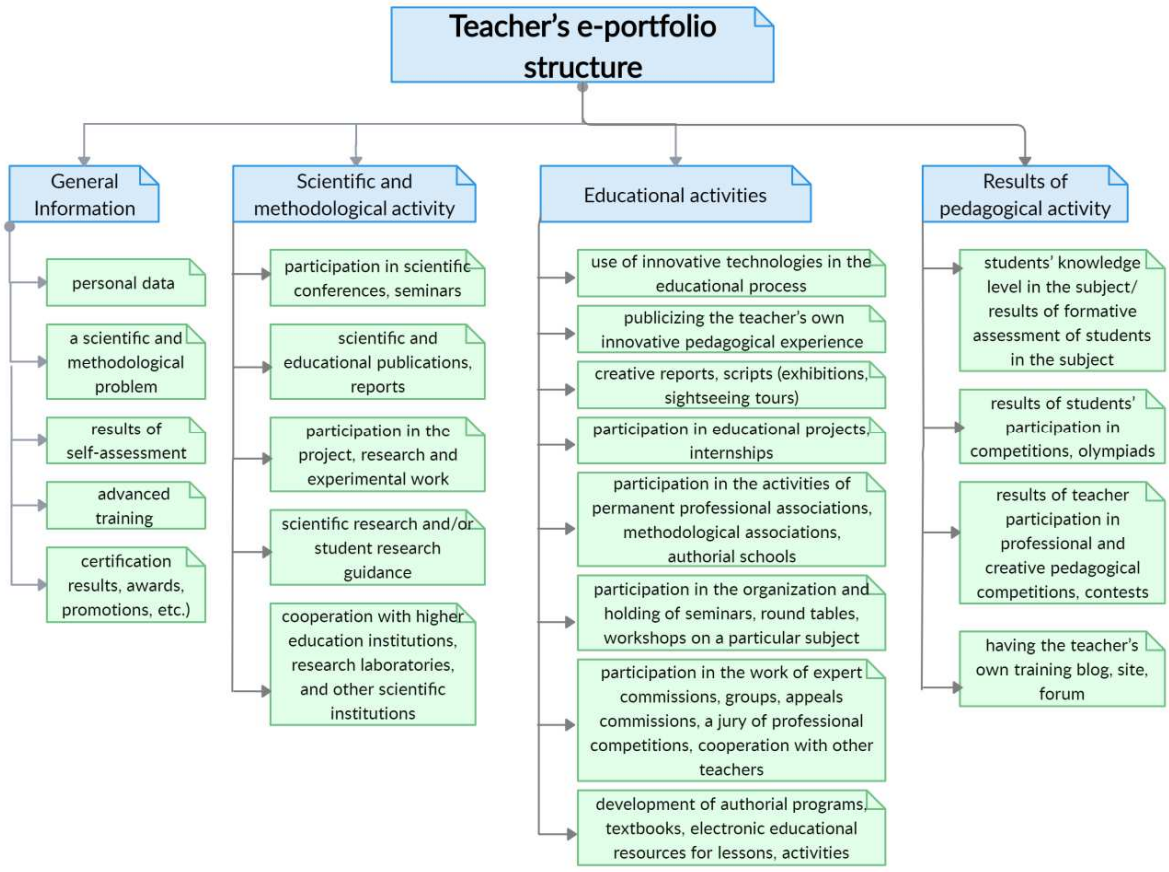

Figure 2. Teacher's e-portfolio structure (Source: Own work)

Teachers' readiness to build e-portfolios

To determine teachers' readiness to use e-portfolios, 103 teachers who teach mathematics, history, foreign languages and computer science were interviewed (the city of Kyiv and Mykolaiv region) (see Fig. 3).

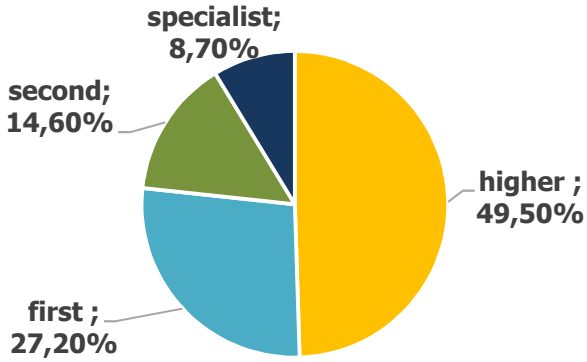

Figure 3. Professional categories of teachers who participated in the survey (Source: Own work)

Among the best teachers of the highest category, there are 70% having the rank of a senior teacher (19% of the total number of the respondents) and teacher-methodologist (16%). In addition, most of the interviewed teachers (72.8%) have more than 10 years of teaching experience (see Fig. 4).

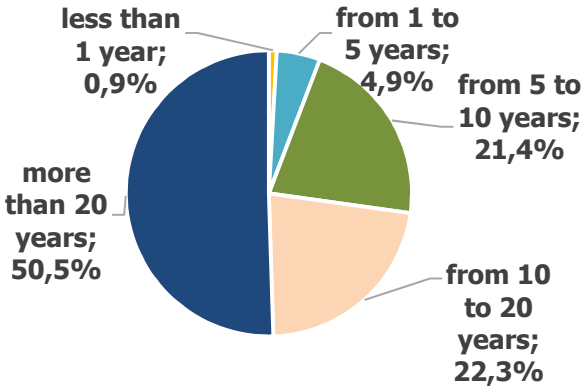

Figure 4. Teacher professional experience, in years

Most respondents said they did not have an e-portfolio (42.7%). Only 15.5% have created an e-portfolio and 1% have a paper portfolio. These results indicate that teachers prefer the electronic version of a portfolio. It should be noted that 40.8% of teachers have identified that they have certain e-developments but have not formed e-portfolios.

For most teachers, the topic of e-portfolio creation is interesting, and they find that they have viewed the portfolios of other teachers (60.2%) and the resources for their creation (see Fig. 5).

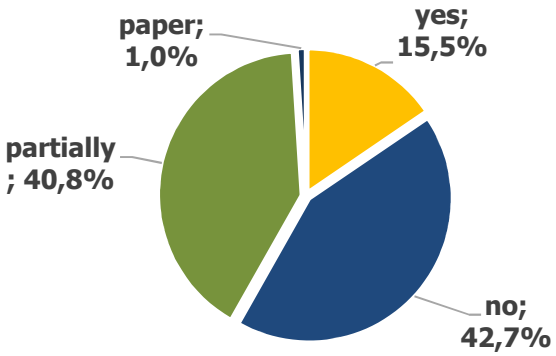

Figure 5. Teachers' answers to the question "Do you have an e-portfolio?"

92.3% of the teachers expressed a desire to learn how to create an e-portfolio, which confirmed the relevance of the proposed topic and the need to create appropriate training modules in the system of professional development.

Choosing the IT tools to build an e-portfolio.

The use of IT tools for creating e-portfolios is very diverse – from paid platforms that completely accompany the creation and storage of this tool for certain layouts (https://www.myshowcase.me, https: //www.pebblepad. co.uk, https://www.portfoliogen.com) to free services (https://mahara.org) that combine e-portfolios and social networks (https://www.linkedin.com, https: //www.researchgate.net, etc.). Social networks allow people to interact with their colleagues and friends and create their own online communities.

The choice of IT tools depends on the purpose of creating the e-portfolio and the digital competence of the teacher. The development of Web 2.0 and the presence of cross-platform solutions that can be used on phones, tablets, facilitate the choice of different tools or their

integration: Weebly, OpenSchool, G Suite For Education, book creator, Seesaw, Evernote, VoiceThread, Easy Portfolios, Myshowcase.me, www.threering.com.

Implementing e-portfolios based on Google Docs can support the best practices in special education [2]. The teachers have also determined the effectiveness of using Google Docs and Google disk to build e-portfolios and they prefer online services and video editors and social networks.

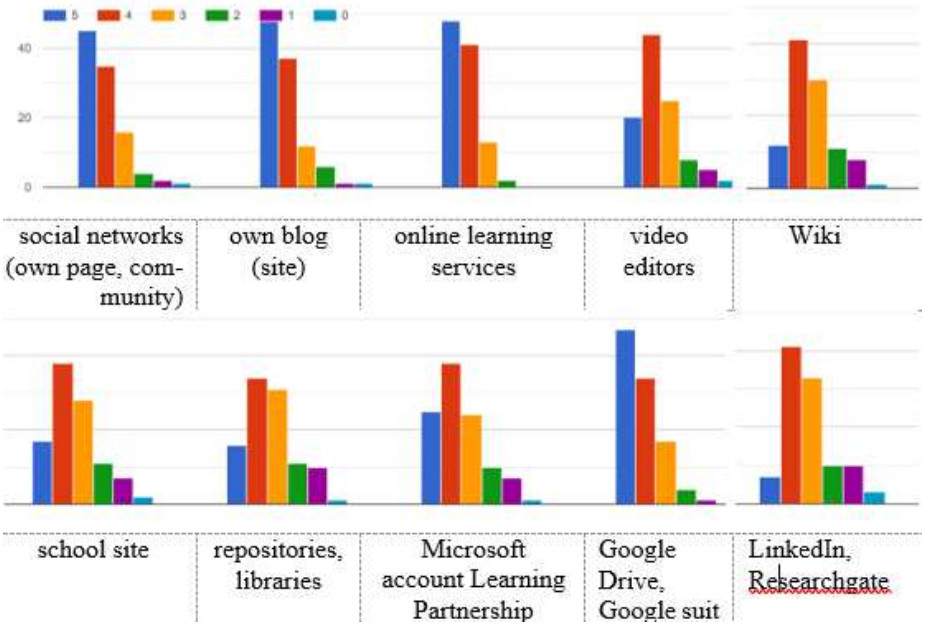

Figure 6. Which IT tools do you think are the most effective for building an e-portfolio? (5-max efficiency)

The teachers who have participated in the survey have identified a blog or site as a more effective e-portfolio submission and have determined that it is best to present online material to lessons created using a variety of Web 2.0 services and presentations, but do not exclude opportunities to use text documents and videos (see Fig. 6).

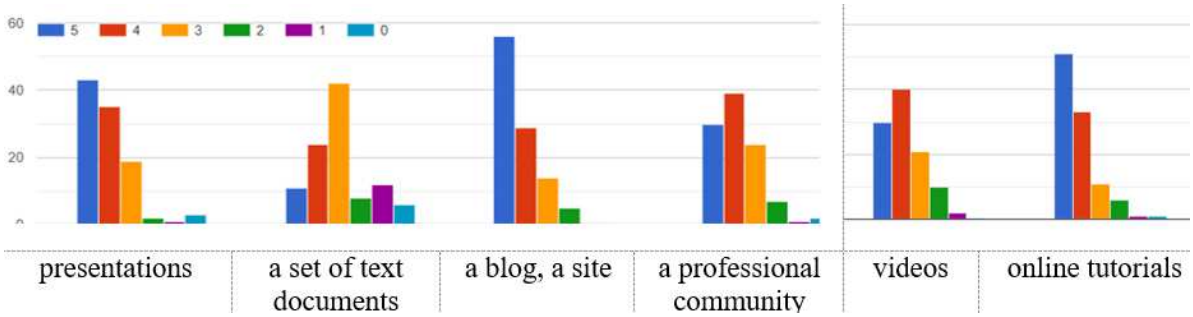

Figure 7. Teachers' answers to the question "What types of e-portfolios do you consider to be the most effective for submitting information?" (0- Not effective, 5 - the most effective)

Preparing teachers for creating e-portfolios in postgraduate education

Based on the analysis of the results of the questionnaire, the module "Creation and the use of e-portfolio for self-assessment and professional development" was created in the system of postgraduate pedagogical education. The development of information and

communication technologies is changing forms and methods of teachers' professional development, introducing e-coaching and e-mentoring [25, p.215].

The content of the training module includes topics on common approaches to e-portfolio creation and includes techniques for implementing IT tools to create different types of portfolios to meet teachers' needs:

- Analysis of approaches to the creation and use of e-portfolios.
- Analysis of examples of teachers' e-portfolios.
- E-portfolio structure depending on the level of a teacher's professional activity.
- IT tools for creating e-portfolios (Weebly, OpenSchool, G Suite for Education, book creator, Seesaw, Evernote, VoiceThread, Easy Portfolios, Mahara)
- IT tools for creating e-resources (e-posters, online boards, interactive videos, interactive presentations, knowledge maps, virtual labs, tests, quizzes).

78.4% of the teachers created a dynamic electronic portfolio (blog and website), which confirmed the relevance of the proposed topic and the need to use appropriate training modules in the system of professional development.

5. CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

The teacher's portfolio can be static (in the form of a business card, assessment) and dynamic (developmental) and reflect the main achievements and professional path of the teacher: the ability to continue learning and evaluation of their activities and students' achievements, professional knowledge of the subject and pedagogy, the ability to organize training using innovative technologies, the ability to learn from experience, participation in professional communities, the use of ICT to enhance personal and professional productivity, personal information, expertise and the experience of classroom and extracurricular activities [25], publications, awards, the results of students' work, involvement in national and international educational projects, etc.

An e-portfolio can be not only a tool for learning about a teacher's professional experience, demonstrating his or her self-assessment skills but also a means of educating future teachers and colleagues.

The choice of IT tools for creating an e-portfolio depends on many factors: the purpose of the creation, the digital competence of a teacher, the state educational policy or educational policy of the educational institution on the use of certain templates and platforms, the personal preferences of the teacher and his/her level of professional competence.

Surveys of the teachers revealed the need and interest of teachers in preparing for the creation of e-portfolios in the system of postgraduate teacher education. 92.3% of the teachers expressed a desire to learn how to create e-portfolios, which confirmed the relevance of our research and the need to create appropriate training modules in the system of advanced training. The teachers preferred dynamic e-portfolios that are posted on blogs or websites and allow creating a bank of professional experience (69.9%), building an individual route of professional development (39.8%), and can be used as a tool for assessing professionalism (38.8%) and disseminating their experience (37.9%).

The prospect of further research is to analyze the effectiveness of using different e-portfolio models for teachers' professional development and integrating them into the informational and educational environment of each institution and into the education system as a whole to train students who wish to pursue a teaching career.

REFERENCES (TRANSLATED AND TRANSLITERATED)

[1]. E. Galimullina, E. Ljubimova, L.Sharafeeva, and R. Ibatullin, "Foresight requirements to the teacher on the verge of cognitive revolution", *Man in India*, vol. 97, no.22, 2017, pp. 157-166. (in English).

[2]. J. Gugino, "Using Google Docs to Enhance the Teacher Work Sample: Building e-Portfolios for Learning and Practice", *Journal of Special Education Technology*, vol. 33, no.1, 2018, pp. 54-65, doi:10.1177/0162643417729135 (in English).

[3]. M. M. Alajm, "The Impact of E-Portfolio use on the Development of Professional Standards and Life Skills of Students: A Case Study", *Entrepreneurship and Sustainability Issues*, vol. 6, no.4, pp. 1714-1735, doi:10.9770/jesi.2019.6.4(12) (2019) (in English).

[4]. H. J. Kim and Y.Kim, "Design of e-Teaching Portfolio System Framework for e-Tutor Competency Management", *International Journal on Advanced Science, Engineering and Information Technology*, vol. 8, no.1, 2018, pp. 192-198, doi:10.18517/ijaseit.8.1.2699 (in English).

[5]. L.Romero, C. Saucedo, M. L. Caliusco, and M. Gutiérrez, "Supporting Self-Regulated Learning and Personalization using ePortfolios: A Semantic Approach Based on Learning Paths*", International Journal of Educational Technology in Higher Education*, vol. 16, no.1, 2019, doi:10.1186/s41239-019-0146-1 (in English)..

[6]. L. T. Nguyën and M. Ikeda,"EPortfolio System Design Based on Ontological Model of Self-Regulated Learning", in *IIAI 3rd International Conference on Advanced Applied Informatics*, 2014, pp.301-306, doi:10.1109/IIAI-AAI.2014.69 (in English).

[7]. S. Hashim, A. Ismail and A. Masek, "The Characteristics of Collaborative Portfolio Assessment Learning System as a Tools in School Based Assessment Environment", in *7th IEEE International Conference on System Engineering and Technology (ICSET,* 2017, pp. 1-6,. IEEE, doi:10.1109/ICSEngT.2017.8123410 (2017) (in English).

[8]. C. Galván-Fernández, et al., "Can the Integration of a PLE in an e-Portfolio Platform Improve Generic Competences?", *Journal of New Approaches in Educational Research*, vol. 6, no.2, 2017, pp. 112-118, doi:10.7821/naer.2017.7.230. 2017 (in English).

[9]. J. Strivens, "A survey of e-pdp and e-portfolio practice in UK Higher Education", *Higher Education*, vol.2, 2007, pp. 1-24 (in English)..

[10]. N. Morze, L. Varchenko-Trotsenko, "Educator's e-Portfolio in the Modern University", in: *ICTERI*, 2016, pp. 231-240 (in English).

[11]. A.K. Kulichenko, T.V. Sotnik, K.V. Stadnichenko "Electronic portfolio for the development of creativity and economic development", *Information Technologies and Learning Tools,* 2018, no. 4 (66), pp. 286-304 [Online]. Sept. 2018. Available: https://journal.iitta.gov.ua/index.php/itlt/article/view/2178. (in Ukrainian).

[12]. O. Spirin, T.Vakaliuk "Formation of information and communication competence of bachelors of informatics on the use of cloud-oriented learning environment", *Information Technologies and Learning Tools*, 2019, no. 4 (72). pp. 226-245. [Online]. Sept. 2019. Available: https://journal.iitta.gov.ua/index.php/itlt/article/view/3262 (in Ukrainian).

[13]. N. Myronchuk "Information and communication technologies as a means for the educational process actors' self-organization", *Information Technologies and Learning Tools*, 2020, no. 1 (75). pp. 202-211. [Online]. Feb. 2020. Available:https://journal.iitta.gov.ua/index.php/itlt/article/view/2537 (in Ukrainian).

[14]. Y. Bogachkov, V. Mylashenko, P. Ukhan, O. Sagadina "ICT ınstruments for desıgnıng ındıvıdual educatıon path for hıgh school students", *Information Technologies and Learning Tools*, 2018, no. 2 (64), pp. 23-38. [Online]. Apr. 2018. Available: https://journal.iitta.gov.ua/index.php/itlt/article/view/2164 (in Ukrainian).

[15]. H. Barrett, Eportfolios "Digital stories of deep learning", *Work*, vol.1, no.11/9: 89 2001. (in English).

[16]. H. C. Barrett, N. Garrett, "Online Personal Learning Environments: Structuring Electronic Portfolios for Lifelong and Life-Wide Learning", *On the Horizon*, vol. 17, no 2, 2009, pp. 142-152, doi:10.1108/10748120910965511) (in English).

[17]. Order of the Ministry of Education and Science of Ukraine No. 1222 of 2013.08.21, http://www.osvita.ua/legislation/Ser_osv/36975/, last accessed 2020/02/20 (in Ukrainian).

[18]. Concept of the New Ukrainian School, *Order by the Cabinet of Ministers of Ukraine 988-r.* [Online]. Available: https://www.kmu.gov.ua/npas/249613934. (in Ukrainian)..

[19]. New Ukrainian School. What is Portfolio? [Online]. Available: https://nus.org.ua/wp-content/uploads/2017/08/portfolio-r.pdf (in Ukrainian)..

[20]. Law of Ukraine "On Education". *Information of the* Verkhovna Rada 2017, no. 38-39.[Online]. Available: https://zakon.rada.gov.ua/laws/show/2145-19. (in Ukrainian)..

[21]. The Concept of teacher education development, *Order of the Ministry of Education and Science of Ukraine No. 776.* [Online]. Available: https://mon.gov.ua/ua/npa/pro-zatverdzhennya-koncepciyi-rozvitku-pedagogichnoyi-osviti/ (in Ukrainian).

[22]. Provision on certification of pedagogical practitioners. *Resolution of the Cabinet of Ministers of Ukraine, December 27, 2018, no.1190.* [Online]. Available: https://zakon.rada.gov.ua/laws/show/1190-2018-%D0%BF (in Ukrainian).
[23]. Resolution of the Cabinet of Ministers of Ukraine, December 24, 2019, no. 1094. [Online]. Available: https://zakon.rada.gov.ua/laws/show/1094-2019-%D0%BF. (in Ukrainian)..
[24]. L.Stefani, R. Mason, and C. Pegler, , *The educational potential of e-portfolios: Supporting personal development and reflective learning*. Routledge, 2007. (in English)..
[25]. V. Kovalchuck and I. Vorotnykova, "E-coaching, e-mentoring for lifelong professional development of teachers within the system of post-graduate pedagogical education", *Turkish online journal of distance education*, vol. 18, no 3, 2017, pp. 214-227. (in English).

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ГОТОВНІСТЬ УЧИТЕЛІВ ДО ВИКОРИСТАННЯ Е-ПОРТФОЛІО

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Анотація. Електронне портфоліо вчителів школи є одним з інструментів моніторингу та оцінки їх професійної діяльності та їх досягнень. Електронне портфоліо можна використовувати для професійного розвитку вчителів. Це забезпечує відкритість та прозорість роботи як вчителів, так і навчальних закладів. Метою дослідження є аналіз готовності вчителів до використання е-портфоліо для самооцінювання власного професійного досвіду та неперервного професійного розвитку. У статті проаналізовано різні підходи до структури електронних портфоліо на основі аналізу міжнародного досвіду, законодавства України та опитування вчителів шкіл, узагальнено мету, завдання, вимоги нормативних документів щодо використання е-портфоліо. Визначено багаторівневу структуру електронного портфоліо та обґрунтовано вимоги до його динамічності. Систематизовано потреби вчителів у підвищенні кваліфікації щодо використання різноманітних засобів ІТ для створення електронних портфоліо. Визначено, що використання електронного портфоліо може задовольнити як потреби оцінювання ефективності роботи вчителів, так і формувати навички самооцінки та рефлексії, сприяти їх постійному професійному розвитку, розповсюдженню передового педагогічного досвіду та навчанню майбутнього вчителя. Проаналізовано різні типи електронного портфоліо та визначено ІТ-інструменти для його створення. Обґрунтовано зміст навчального модуля для викладачів у системі післядипломної педагогічної освіти. Зміст портфоліо визначають цілі його створення. Для вчителів акцент у створенні е-портфоліо є не на навчанні, як у учнів, а на професійній діяльності, самооцінці та маркетингу. Результатами можуть бути розуміння вчителями того, чому і як вони навчилися протягом своєї кар'єри, важливість рефлексії для подальшого професійного розвитку.

Ключові слова: е-портфоліо; учитель; ІКТ.

ГОТОВНОСТЬ УЧИТЕЛЕЙ К ИСПОЛЬЗОВАНИЮ ЭЛЕКТРОННОГО ПОРТФОЛИО

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Аннотация. Электронное портфолио учителя школы является одним из инструментов мониторинга и оценки его профессиональной деятельности и достижений. Электронное портфолио можно использовать для профессионального развития учителей. Это обеспечивает открытость и прозрачность оценивания деятельности учителей и учебных заведений. Целью исследования является анализ готовности учителей к использованию электронного портфолио для самооценки собственного профессионального опыта и непрерывного профессионального развития. В статье проанализированы различные подходы к структуре электронных портфолио на основе анализа международного опыта, законодательства Украины и опроса учителей, обобщены цели, задачи, требования нормативных документов по использованию электронных портфолио. Описана многоуровневая структура электронного портфолио и обоснованы требования к его динамичности. Систематизированы потребности учителей в повышении квалификации по использованию различных средств ИТ для создания электронных портфолио. Определено, что использование электронного портфолио может удовлетворить потребности оценки эффективности работы учителей. способствовать их постоянному профессиональному развитию, распространению передового педагогического опыта и обучению будущих учителей, формировать навыки самооценки и рефлексии. Представлено анализ различных типов электронного портфолио и определены ИТ-инструменты для его создания. Обосновано содержание учебного модуля для преподавателей в системе последипломного педагогического образования. Содержание портфолио определяют цели его создания. Для учителей акцент в создании электронного портфолио делается не на обучении, как у учащихся, а на профессиональной деятельности, самооценке и маркетинге. Результатами могут быть понимание учителями того, чему и как они научились в течение своей карьеры, важность рефлексии для дальнейшего профессионального развития.

Ключевые слова: е-портфолио; учитель; ИКТ.

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