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On Perspectives Of Teacher Training And Understanding Of Their Digital Competencies As Determinants Of Digital Education

ABSTRACT

Currently, in the context of an introduction of digital ICT in education, we are facing a problem of determinants in successful digital education that are compatible with the primary educational goals. Under the term significant determinants we understand digital competencies of teachers that necessarily become a subject of development. These competencies are pragmatically reflected in the frames or documents that describe the pedagogical training of future teachers. The author's intention is to outline an alternative holistic perspective of understanding pedagogical training in future teachers and their digital competencies that are based more on phenomenology and hermeneutics. This perspective reflects a psychagogic approach to education. The author believes that future student training is expressed in „ars docendi" also in digital education and this „ars docendi" cannot be achieved without student's self-reflection of their relationship with ICT, but especially not without self-understanding in terms of values and meaning. This self-understanding leads to moral self-awareness and responsibility. The author points out that it is necessary to accommodate the future teacher's personal self-reflection and self-projection and incorporate also those psychagogically relevant elements that would be complementary in the process of developing digital competencies. This will allow overcoming challenges of future teacher education, considering the psychagogic needs in education.

KEY WORDS

Digital information and communication technology (Digital ICT). Digital education. Teacher. Determinants of digital education. Pedagogical training. Digital competencies and literacy. Digital wellbeing. Psychagogical right. Self-reflection. „Ars docendi".

1. Introduction

We can state that the traditional process of education is being gradually replaced by new technology – digital ICT. This includes means, tools, environment and practices used in teaching and learning, as well as collaboration, presenting, outputs and so on in the complex process of the development of children/pupils/students.[1] Implementation and usage of the new digital ICT have had a great influence on the field of education.

Digital ICT have proven to offer positive potential. For example we can see, that they „*create more complex configurations that result in new multifunction devices. Image, sound and text carriers, which in the past were usually separate, are integrated into the same devices. When information is digitized (image, sound or text), no special device or special medium is needed*.“[2] However, practical implementation also shows some accompanying risks and negatives, so they cannot automatically guarantee efficiency and success. Keeping primary educational goals in mind, we can ask what determines successful digital education. One such determinant can be seen in teachers, with their own personality, knowledge, abilities, skills and digital competence that is extremely important in the concept of digital education and therefore specifically addressed in the course of their professional training.

The approach to teacher's professional training and digital competence is certainly evolving, with dominating pragmatical prerequisites. In the following we will try to determine and analyse those aspects of professional teacher education and training that are important for digital competence, keeping in mind the holistic perspective that also incorporates the psychagogic[3] aspect in the process of education. This holistic perspective can be described in terms of phenomenology and hermeneutics, rather than the pragmatic approach.

2. Digital competence and literacy as determinants of digital education and perspectives of pedagogical training of teachers

We can state that there have been a lot of expectations regarding technological development in education that promises to satisfy the new needs of society.[4] Many universities and private companies invest a significant amount of money in developing electronic education systems. It is generally expected that incorporating ICT in study programmes will increase the quality of teaching and learning.[5] However, it is necessary to say that along with the voices that expect

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[1] Find more for example: KOSTRUB, D., SEVERINI, E., REHÚŠ, M.: *Proces výučby a digitálne technológie.* Bratislava/Martin : Alfa print, s. r. o., 2012, p. 8. [online]. [2020-09-30]. Available at: <https://www.fedu. uniba.sk/fileadmin/pdf/Sucasti/Katedry/KPPE/PRE_DOCENTA/Kostrub_2012_knizka.pdf>.

[2] MINÁRIKOVÁ, J., BLAHÚT, D., VIŠŇOVSKÝ, J.: Hi-Tech And Eye-Catching Alike: Information In The Multiplatform Era. In *European Journal of Media, Art and Photography,* 2020, Vol. 8, No. 2, p. 118.

[3] More on this in the third part. See also more: GÁLIKOVÁ TOLNAIOVÁ, S.: *Idea psychagógie v holistickej perspektíve.* Bratislava : Iris, 2014, p. 156.

[4] European universities are becoming third-generation universities. Their reforms are taking place in the perspective of knowledge-based economic development. The education system at university level is an important factor in the creation, development and innovation of this knowledge in every European society. See more for example in Poland: MROZOWSKA, S., RYŁKO-KURPIEWSKA, A.: Polish Media about Act 2.0 (the Constitution for Science). In *Communication Today*, 2020, Vol. 11, No. 1, p. 22-34.

[5] See and compare: GOYAL, E., PUROHIT, S., BHAGAT, M.: Factors that Affect Information and Communication Technology Usage: A Case Study in Management Education. In *Journal of Information Technology Management,* 2010, Vol. XXI, No. 4, p. 38-39. [online]. [2020-09-30]. Available at: <http://jitm.ubalt.edu/ XXI-4/article4.pdf>.; BHAKTA, K., DUTTA, N.: Impact of Information Technology on Teaching-Learning Proces. In *International Research Journal of Interdisciplinary & Multidisciplinary Studies.* 2016, Vol. II, No. XI, p. 131-138. [online]. [2020-09-30]. Available at: <http://oaji.net/articles/2017/1707-1483695373.pdf>.

ICT to improve the quality of education, we hear also sceptical voices and objections that do not approve of the increasing implementation of ICT in education.[6] Still, we cannot deny that various kinds of ICT, especially the Internet, have encouraged certain aspects that can hardly contribute to quality education.[7] We can identify not only positives and advantages, but also negatives and disadvantages in the implementation of ICT in education.[8] It is also clearly visible that quite many of the realised projects that concern electronic (or digital) education have failed, not meeting the originally planned results. This all leads to the increasing number of voices questioning the quality and even viability of this form of education.[9]

We believe this depends on what determinants we see in digital education and their efficiency. Education that incorporates the implementation and usage of digital ICT has certain determinants or conditions that secure success especially from the perspective of the primary educational goal. It is obvious however that technology alone is not enough, it will not automatically increase effectiveness and ensure good school results.[10] In order to efficiently use the positive aspects of ICT in education, we need to use it correctly, in a way that respects the primary educational goals.[11] In this perspective, it is digital literacy and competences that are important co-determinants of digital education, its effectiveness and success. It is therefore necessary to form and enhance the competent usage of ICT.

We can see that teaching with the help of digital ICT is dependent not only on the quality of technical equipment in schools, but also on computer (or digital) literacy in both teachers and students.[12] For example, Cornali and Tirocchi mention the influence of teachers' approach – this determines how they use digital technology in classes; they point out that the situation requires

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6   SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika − kontexty a perspektívy. Acta facultatic Philosophicae Universitatis Šafarikianae 6*. Košice : UPJŠ, 2010, p. 326-327. See, for example, about the risks of the impact of ICT in education: HLADÍKOVÁ, V.: Transformation of thinking and education under the influence of internet communication. In *Ad Alta: Journal of interdisciplinary research,* 2018, Vol. 8, No. 1, p. 99-103.

7   CORNALI, F., TIROCCHI, S.: Globalization, education, information and communication technologies: what relationships and reciprocal influences? In *Procedia - Social and Behavioral Sciences,* 2012, Vol. 47, p. 2064. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/275541968_Globalization_Education_Information_and_Communication_Technologies_What_Relationships_and_Reciprocal_Influences>.

8   See and compare: BHAKTA, K., DUTTA, N.: Impact of Information Technology on Teaching-Learning Proces. In *International Research Journal of Interdisciplinary & Multidisciplinary Studies,* 2016, Vol. II, No. XI, p. 131-138. [online]. [2020-09-30]. Available at: <http://oaji.net/articles/2017/1707-1483695373.pdf>.; GOYAL, E., PUROHIT, S., BHAGAT, M.: Factors that Affect Information and Communication Technology Usage: A Case Study in Management Education. In *Journal of Information Technology Management,* 2010, Vol. XXI, No. 4, p. 38-57. [online]. [2020-09-30]. Available at: <http://jitm.ubalt.edu/XXI-4/article4.pdf>.; LEWIN, D., LUNDIE, D.: Philosophies of Digital Pedagogy. In *Studies in Philosophy and Education*, 2016, Vol. 35, No. 3, p. 235−240. [online]. [2020-09-30]. Available at: <https://e4-0.ipn.mx/wp-content/uploads/2019/10/07-philosophies-of-digital-pedagogy.pdf>.; CORNALI, F., TIROCCHI, S.: Globalization, education, information and communication technologies: what relationships and reciprocal influences? In *Procedia - Social and Behavioral Sciences,* 2012, Vol. 47, p. 2060-2069. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/275541968_Globalization_Education_Information_and_Communication_Technologies_What_Relationships_and_Reciprocal_Influences>.

9   GOYAL, E., PUROHIT, S., BHAGAT, M.: Factors that Affect Information and Communication Technology Usage: A Case Study in Management Education. In *Journal of Information Technology Management,* 2010, Vol. XXI, No. 4, p. 39. [online]. [2020-09-30]. Available at: <http://jitm.ubalt.edu/XXI-4/article4.pdf>.

10   MISHRA, P., KOEHLER, J. M.: Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. In *Teachers College Record,* 2006, Vol. 108, No. 6, p. 1017−1018. [online]. [2020-09-30]. Available at: <https://punyamishra.com/wp-content/uploads/2008/01/mishra-koehler-tcr2006.pdf>.

11   JOHNSON, G. D.: Information Technology and the Goals of Education: Making Nails for the Hammer. In JOHNSON, G. D. et al.: *Ethical, Psychological and Societal Problems of the Application of ICTs in Education. Analytical Survey.* Moscow : UNESCO Institute for Information Technologies in Education, 2004, p. 40. [online]. [2020-09-30]. Available at: <https://iite.unesco.org/pics/publications/en/files/3214629.pdf>.

12   SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika − kontexty a perspektívy. Acta facultatic Philosophicae Universitatis Šafarikianae 6*. Košice : UPJŠ, 2010, p. 325.

well-prepared teachers who are ready to take control.[13] However specific competence is important not only in the case of teachers. Also for students, who use ICT the way that is defined by a set of skills and other aspects such as self-control, media literacy and parent's intervention.[14]

According to V. Kačinová, media education is becoming more important in schools today as it prepares students for life in a world of media that is greatly determined by digital ICT.[15] We may say here that digital literacy in general is becoming a teaching tool and purpose of (media) education – the goal is to build up the ability to think and create and go beyond the limits of an exclusively intuitive (and often passive) approach to digital ICT, which is typically seen in its recreational usage.[16] However, we also have to say that understanding the new (digital) literacy has called for a revision and change of the concept[17] regarding the development of both digital ICT and presently also our new social practices that come with it.

As G. Faloon points out, the traditional approach has been changed[18] also in the training of future teachers, so more emphasis is put on promoting „digital literacy" in students now. Terms such as „information literacy," „Internet literacy," „media literacy" and recently also „multimodal literacy" are connected with the efficient usage of digital sources for teaching and learning and are meant to be a part of an inclusive view of digital literacy.[19] We believe we can speak similarly of „transmedia literacy," which describes the approach that signalises a turn towards a new concept in the view of the latest development in media ecology, triggered by a relevant move to the analysis of the practice of participative cultures and the content they create (practices, approach, content analysis and content creation, as well as Internet discourses).[20]

13 CORNALI, F., TIROCCHI, S.: Globalization, education, information and communication technologies: what relationships and reciprocal influences? In *Procedia - Social and Behavioral Sciences,* 2012, Vol. 47, p. 2064. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/275541968_Globalization_Education_Information_and_Communication_Technologies_What_Relationships_and_Reciprocal_Influences>.

14 See: REINECKE, L., OLIVER, M. B.: Media use and well-being: Status quo and open questions. In REINECKE, L., OLIVER, M. B. (eds.): *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects*. New York : Routledge, 2016, p. 11-18. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/314205416_Media_Use_and_WellBeing_Status_Quo_and_Open_Questions>.

15 KAČINOVÁ, V.: *Teória a prax mediálnej výchovy. Mediálna výchova ako súčasť všeobecného školského vzdelávania.* Trnava : FMK UCM, 2015, p. 67.; An example of a universal synthetizing model of media education see: FEDOROV, A., LEVITSKAYA, A.: Synthetic Media Education Model Used in Commonwealth of Independent States (CIS). In *Media Education*, 2019, Vol. 59, No. 1, p. 30-36. [online]. [2019-01-25]. Available at: <https://cyberleninka.ru/article/n/synthetic-media-education-model-used-in-commonwealth-of-independent-states-cis>.

16 CORNALI, F., TIROCCHI, S.: Globalization, education, information and communication technologies: what relationships and reciprocal influences? In *Procedia - Social and Behavioral Sciences,* 2012, Vol. 47, p. 2064. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/275541968_Globalization_Education_Information_and_Communication_Technologies_What_Relationships_and_Reciprocal_Influences>.

17 On terms, concepts and characteristics see also and compare: GALLARDO-ECHENIQUE, E. E. et al.: Digital Competence in the Knowledge Society. In *MERLOT Journal of Online Learning and Teaching,* 2015, Vol. 11, No. 1, p. 3-5. [online]. [2020-09-30]. Available at: <https://jolt.merlot.org/vol11no1/Gallardo-Echenique_0315.pdf>.; McGARR, O., McDONAGH, A.: Digital Competence in Teacher Education. *Output 1 of the Erasmus+ funded Developing Student Teachers' Digital Competence (DICTE) project*, 2019. [online]. [2020-09-30]. Available at: <https://dicte.oslomet.no/>.

18 For example, new forms of language and social patterns of interactions on social media have created potent paradigm shift. See more: GENNARO, S., MILLER, B.: Critical Media Literacy in the Googleburg Galaxy. In *Media Literacy and Academic Research*, 2020, Vol. 3, No. 2, p. 6-21.

19 FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework. In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449–2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

20 SCOLARI, C. A., MASANET, M. J., GUERRERO PICO, M., ESTABLÉS, M. J.: Transmedia literacy in the new media ecology: Teens´ transmedia skills and informal learning strategies. In *El profesional de la información,* 2018, Vol. 27, No. 4, p. 801-812. [online]. [2020-09-30]. Available at: <https://pdfs.semanticscholar.org/94f7/ac9024b82207115cd54e0e2876ebad2b9033.pdf>.

As states J. Goméz Galán, the really authentic digital (digital and media) literacy that we need to strive for should include a correct understanding of the languages of technical media, it is impossible to restrict our attention just to the construction of a technical and instrumental process.[21] Regarding the understanding and development of digital literacy, it is necessary to say that we are fighting with traditional and risky attitudes that actually impair the whole process. A. Gutiérrez and K. Tyner, for example, mention strategies to implement digital literacy in curricula, these are however restricted to only a technical dimension of digital ICT – in other words – to mastering the technical aspect and expertise that is necessary to utilise ICT. It simply means elementary training, primarily meant to deal with the „operating" level. However, this way we actually worsen the situation.[22]

Considering the pedagogical training of future teachers, it seems that it traditionally aims at building attitude and confidence when using digital resources in education, as well as developing a skill set useful chiefly for work with hardware and software. We can notice here that pedagogical training generally (and also formally) puts an emphasis on development of the skills that are related to the technical and practical aspect of ICT, e.g. those that instruct how to use devices and software. It is procedural skills that are important here, possibly combined with the ability to work with information technology, information and information assessment, as well as thinking that includes information (for example critical analysis, assessment) – „information literacy". However, a growing number of research studies reveal that this approach is ineffective when we keep in mind the much-needed broader understanding of skills and knowledge that future teachers will find necessary if we speak about their personal and professional lives. This approach is criticised because it concentrates solely on the technical aspects.[23]

There are several perspectives in the building of digital skills or competences in students – future teachers during their pedagogical training. We can for example mention that the TPACK model (Technological Pedagogical Content Knowledge) introduces a pragmatic approach. Mishra and Koehler, the authors of this model, implement the ability to combine technological, pedagogical and content knowledge that aims at using digital resources to improve knowledge about a given subject.[24] They present a pedagogical content framework that also uses information about technology and describes a link between knowledge of technology and stages of its efficient usage when concentrating on educational goals. This framework exceeds both disciplinary knowledge and technical knowledge. Its authors emphasise the fact that in order to use digital ICT in education efficiently, teachers shall realise and fully understand the fact that there is a connection between technology and pedagogical practice and they shall also respect any relationships here.[25]

[21] GOMÉZ GALÁN, J.: Media Education as Theoretical and Practical Paradigm for Digital Literacy: An Interdisciplinary Analysis. In *European Journal of Science and Theology*, 2015, Vol. 11, No. 3, p. 31. [online]. [2020-09-30]. Available at: <https://arxiv.org/ftp/arxiv/papers/1803/1803.01677.pdf>.

[22] See and compare: GUTIÉRREZ, A., TYNER, K.: Media Education, Media Literacy and Digital Competence. In *Comunicar*, 2012, Vol. 19, No. 38, p. 31-37. [online]. [2020-09-30]. Available at: <https://www.academia.edu/9239011/Media_Education_Media_Literacy_and_Digital_Competence>.; GOMÉZ GALÁN, J.: Media Education as Theoretical and Practical Paradigm for Digital Literacy: An Interdisciplinary Analysis. In *European Journal of Science and Theology*, 2015, Vol. 11, No. 3, p. 31-32. [online]. [2020-09-30]. Available at: <https://arxiv.org/ftp/arxiv/papers/1803/1803.01677.pdf>.

[23] FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework. In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449−2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

[24] MISHRA, P., KOEHLER, J. M.: Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. In *Teachers College Record,* 2006, Vol. 108, No. 6, p. 1017−1054. [online]. [2020-09-30]. Available at: <https://www.punyamishra.com/wp-content/uploads/2008/01/mishra-koehler-tcr2006.pdf>.; See also and compare: FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework. In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449−2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

[25] MISHRA, P., KOEHLER, J. M.: Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. In *Teachers College Record,* 2006, Vol. 108, No. 6, p. 1017−1018. [online]. [2020-09-30]. Available at: <https://www.punyamishra.com/wp-content/uploads/2008/01/mishra-koehler-tcr2006.pdf>.

According to Faloon, further discussion about development of models of pedagogical training that utilise digital technology signalises a more frequent implementation of components such as personal „digital dispositions" and behaviour, and consideration of the impact that digital technology has on people, society and the environment. Faloon notices that the situation in education and technology has changed dramatically since the introduction of TPACK (in 2006), reflecting especially new digital innovation and the fast-changing and often unstable social, political and economic background. Back then, there were no obvious and visible signs of circumstances that would bring changes to our lives. This exactly determines what it means to be „digitally competent". Without doubt, digital competence (not only) in teachers probably means, or has to mean, definitely more than just the usage of technical equipment and computer software, or applications.[26]

Faloon notes that it is necessary today to expand teachers' ability to understand the complex set of skills needed to utilise ICT and manage the information flow. We need to support digital competencies that respect constantly growing demands in students preparing for pedagogical practice. Faloon explains that it is a broad, holistic conceptual framework[27] of digital competence that respects the future teacher's task – to educate, help to shape young people's capacities so that they can not only exist and work safely, productively, sustainably and ethically in an environment that is influenced by digital technology, but also use the advantages that digital resources offer. We may say here that presently, there is a holistic framework that accepts the broad concept of digital competencies in teachers and states that a cautious and safe usage of ICT requires also certain knowledge and attitude that also concerns the legal and ethical aspects (for example privacy and safety). It is a holistic framework elaborated by Faloon[28] and called the TDC framework (Teacher Digital Competence).

As E. E. Gallardo-Echenique et al. state, proper digital competence, or digital literacy acquisition, as seen from the holistic and emancipatory perspective, is the key to active and functional participation in our modern society. A society that is based on information and knowledge emphasizes the needs of a citizen who is able to access information, process it, interpret it, but also organise and spread it further on digital platforms. It is necessary that people acquire a feeling of confidence when they deal with digital technology and services. Educators and researchers should support people in gaining skills, self-confidence and knowledge and employing ethical standards that are necessary in this field.[29] There is a general consensus about the need to elaborate and implement an alternative attitude in teacher preparation, an attitude that reflects a more integrated and complex approach, but the problem with better teacher preparation for effective and productive usage of digital technology in schools still remains. There is some debate as exactly what to do and which programs should be used in this preparation.[30]

[26] FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework. In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449–2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

[27] More on the need of holistic models of digital competence in the context of media education (competence) see also: KAČINOVÁ, V.: From a reductionist to a holistic model of digital competence and media education. In *Communication Today*, 2019, Vol. 10, No. 2, p. 17-26.

[28] FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework. In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449–2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

[29] GALLARDO-ECHENIQUE, E. E. et al.: Digital Competence in the Knowledge Society. In *MERLOT Journal of Online Learning and Teaching,* 2015, Vol. 11, No. 1, p. 12-20. [online]. [2020-09-30]. Available at: <https://jolt.merlot.org/vol11no1/Gallardo-Echenique_0315.pdf>.; We can see, that the current situation for example in Slovak primary and secondary schools in the teaching of axiocentric media education is favourable because schools include value-oriented topics in their curriculums. BULGANOVÁ, D., KAČINOVÁ,V.: Axiocentric Teaching And Learning About Media In The Context Of School Practice. In *Media Literacy and Academic Research*, 2019, Vol. 2, No. 2, p. 88.

[30] FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework. In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449–2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

Faloon also speaks about our wellbeing. He notices that the existing frameworks used in teacher preparation mention neither wellbeing nor other questions that concern personal dispositions, attitudes, or safety concerns.[31] We see discussions about digital literacy playing an important part in the relationship between media usage and wellbeing.[32] When we speak about the understanding of digital and media literacy in teachers, we must especially not forget future teacher preparation, in which it is highly desirable to also implement the aspect of wellbeing in the overall context of using digital media and our life in the digital universe of cyberspace. In our opinion, we should think of wellbeing as a component of digital competence in future teachers. In view of this, we appreciate the concept of digital welfare benefit, elaborated by M. Gui, M. Fasoli and R. Carradore (in 2017), considering its implementation also in the framework of future teacher education.

We notice here that features that make ICT useful (reliability, precision, user-friendly approach and fast processing) may have a negative impact not only on our productivity and innovation, but also on our wellbeing when we use this ICT.[33] We use ICT a certain way, and this makes it a key variable that determines our wellbeing. Mutual interaction between our usage of digital technology or media, and our wellbeing, results in potential benefits, but also in risks in our life. The present theoretical approaches and empiric findings clearly show a variety of ways in which media content and media usage influence our happiness, understanding of the meaning of life,[34] and naturally the same also applies in both the personal and professional lives of teachers.

Gui, Fasoli and Carradore point out that we should be able to cope with various effects and impacts of digital ICT that we are facing when enjoying the many advantages that this technology brings.[35] We believe that the same applies also in the case of the pedagogical workers who use this technology and the virtual education platforms that they introduce. These authors also speak about the need to maintain wellbeing in the digital dimension and see it as a condition in which subjective wellbeing is kept in an environment that is characterised by a redundancy of digital communication. Individuals are able to control their usage of ICT so that it meets their needs and does not disrupt their feeling of comfort and safety… They believe each of us needs to be able to control digital stimuli, so that they can be effectively filtered and directed towards our personal and professional goals and wellbeing. Sustaining digital wellbeing is relevant for our self-realisation, or for our wellbeing in life.[36]

As these authors mention, the complexity of today's media environment puts the problem of sustaining wellbeing within digital media above any issues with self-control, which has always been more about individual moral attitude than any form of competence. In order to secure this

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[31] FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework. In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449−2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

[32] REINECKE, L., OLIVER, M. B.: Media use and well-being: Status quo and open questions. In REINECKE, L., OLIVER, M. B. (eds.): *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects*. New York : Routledge, 2016, p. 11. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/314205416_Media_Use_and_WellBeing_Status_Quo_and_Open_Questions>.

[33] GUI, M., FASOLI, M., CARRADORE, R.: „Digital Well-Being." Developing a New Theoretical Tool For Media Literacy Research. In *Italian Journal of Sociology of Education,* 2017, Vol. 9, No. 1, p. 162. [online]. [2020-09-30]. Available at: <https://ijse.padovauniversitypress.it/system/files/papers/2017_1_8.pdf>.

[34] See about research: REINECKE, L., OLIVER, M. B.: Media use and well-being: Status quo and open questions. In REINECKE, L., OLIVER, M. B. (eds.): *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects*. New York : Routledge, 2016, p. 3-13. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/314205416_Media_Use_and_WellBeing_Status_Quo_and_Open_Questions>.

[35] GUI, M., FASOLI, M., CARRADORE, R.: „Digital Well-Being." Developing a New Theoretical Tool For Media Literacy Research. In *Italian Journal of Sociology of Education,* 2017, Vol. 9, No. 1. [online]. [2020-09-30]. Available at: <https://ijse.padovauniversitypress.it/system/files/papers/2017_1_8.pdf>.

[36] Ibid., p. 163 - 167.

sustaining, we need to develop a new body of knowledge, cognitive attitudes and operational skills. Strategic or metacognitive skills are those that apply to digital wellbeing; they are defined as a set of specific skills needed to cope with the side-effects of digital over-communication. These are skills that cover attention – they are useful for achieving and steering strategic attention that helps to prevent stress caused by a massive information flow and minimise the waste of time and attention by eliminating irrelevant activities in day-to-day life. We may state here that in Gui, Fasoli and Carradore's concept, these skills describe the new aspects of specific digital competence that serve to maintain wellbeing in the digital environment, thus influencing our overall wellbeing.[37]

In our opinion, it is necessary to actively develop the frameworks that both define teacher preparation and cover those educational challenges that emphasise the importance of specific digital competence and our own (digital) wellbeing. This competence is the core of the new media literacy. However, considering the fact that teachers, in principle, are individuals who actively work in the field of psychagogy,[38] even in the new era of digital technology, we believe that it is necessary to think about this profession and preparation for this profession in a way that exceeds the importance of this competence and literacy and to abandon the reductionistic approach, which is – to a certain degree – a result of defining the goals merely in the context of the need of social self-realisation in individuals, which describes „effective citizens of the 21st century".[39]

3. Digital competence and „ars docendi" in the context of psychagogy in digital education and preparation of teachers

As I. Semrádová states, in our effort to provide education we create „products" that have a cognitive value and follow a certain path either towards the intended or contextual usage. These are products such as textbooks, lecture notes and presently also e-learning courses combined with information and communication technology products and virtual environment based on this technology.[40] In the view of social and cultural expectation, these human constructs or artefacts are to agree with the humanising approach, which states that in terms of axiology, the value of these products (or the general good it promotes) should correspond with usefulness. Anything that we see as useful and that satisfies our needs is valuable, or anything that has qualities which make this entity useful and desirable.

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[37] GUI, M., FASOLI, M., CARRADORE, R.: „Digital Well-Being." Developing a New Theoretical Tool For Media Literacy Research. In *Italian Journal of Sociology of Education,* 2017, Vol. 9, No. 1. p. 163-166. [online]. [2020-09-30]. Available at: <https://ijse.padovauniversitypress.it/system/files/papers/2017_1_8.pdf>.

[38] Human being is a subject that seeks meaning and values in life. In other words – an authentic life that is in accord with its meaning and values. What is important is the quality of life – good life. In terms of axiology and ethics, it is life that is based on values and high moral standards – „good life" or „étos". We are speaking about „ars vivendi". More on this: GÁLIKOVÁ TOLNAIOVÁ, S.: *Idea psychagógie v holistickej perspektíve.* Bratislava : Iris, 2014. p. 156.

[39] KAČINOVÁ, V.: From a reductionist to a holistic model of digital competence and media education. In *Communication Today*, 2019, Vol. 10, No. 2, p. 23.

[40] SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika – kontexty a perspektívy. Acta Facultatis Philosophicae Universitatis Šafarikianae 6.* Košice : UPJŠ, 2010, p. 323.; As B. Kosová points out, all these products have long been results of human creativity of high ethical standards and moral attitude.; KOSOVÁ, B.: Výchova ako zodpovednosť. In KUDLÁČOVÁ, B., RAJSKÝ, A. (eds.): *Kontexty filozofie výchovy v novoveku a súčasnej perspektíve.* Trnava : PeF TU v Trnave, 2014, p. 83-93.

Also M. Deuze[41] states that in the view of present cultural and social expectations, we can see a tendency to prefer a practical or instrumental role of new digital information and communication media, or simply media. In this perspective, we accept the pragmatic technological vision of the practical and functional potential that digital technology and its technological environment offers. We not only expect practical usefulness of this technology that can help satisfy our needs we have when we turn towards our educational goals, but also an increase in the quality of various educational processes. The value and importance of digital technology is therefore defined by this aspect. According to Semrádová, the technical and scientistic civilisation has found an optimal tool in this technology, a tool that offers the means for the effective and productive education needed for its further development.[42]

It is, however, necessary to say and emphasise that the human being is a „psychagogic subject,"[43] even „homo digitalis" (medialis, informaticus, interneticus....) in the new reality and technical rules of the digital universe. A solely pragmatic perspective does not constitute an adequate base to build up, or at worst derive, such development and education in human beings that does not aim primarily at productive cooperation, or at simply being an effective citizen. This development concentrates on the very „I" and the way of life in which the psychagogic dimension requires us to understand its meaning and values. This can be described as „étos". Education that follows this perspective should then have an inherent dimension that exceeds the framework of the pragmatic and utilitarian, but also practical and existential determination. It should cultivate the ability of the human mind to move freely between various discourses and update hermeneutics of human experience. It should encourage us to see various approaches to reality, distinguish the world of diversity and perceive plurality, but also exercise empathy towards the others.[44]

We are confronted today with a reductionist approach to education, where educational goals are understood or defined unilaterally in the context of a need for the social self-realisation of individuals. This approach also introduces the concept of competence in an individual's professional life in the society that concentrates on performance.[45] Many philosophers, pedagogical workers and psychologists, but also authors and students of e-learning courses ask what should be taught in today's diverse world, where inherent education is replaced by education useful for a technocratic and bureaucratic civilisation – for roles that we must accept and do accept to be successful in our society.[46]

Such refining of ideas for education suitable for the 21st century, education that embraces relations such as „I-you," „you-world" and „I-I" refers to „I" with relevant experience and knowledge, „I" that is not superior and egoistic, but more oriented, cleverer and richer in feelings. It is „I" that accepts values which are the result of responsibility, „I" that is active and capable of self-reflection and also reflection. This „I" is the starting point for the formulation of goals of education, or even the principal goal of education[47] that has an inherent or psychagogic dimension. Yet, what is the situation like with the potential of digital ICT that are present in education and what is the relationship to this inherent dimension, or psychagogy claim?

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41 DEUZE, M.: *Media life. Život v médiích.* Praha : Karolinum, 2015, p. 151.
42 SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika – kontexty a perspektívy. Acta Facultatis Philosophicae Universitatis Šafarikianae 6.* Košice : UPJŠ, 2010, p. 327.
43 GÁLIKOVÁ TOLNAIOVÁ, S.: *Idea psychagógie v holistickej perspektíve.* Bratislava : Iris, 2014. p. 156.
44 See and compare: GÁLIKOVÁ TOLNAIOVÁ, S.: *Idea psychagógie v holistickej perspektíve.* Bratislava : Iris, 2014, p. 119.; RUSNÁK, P.: Kirké, paideia a koncept prirodzeného sveta. In KUDLÁČOVÁ, B., SZTOBRYN, S. (eds.): *Kontexty filozofie výchovy v historickej a súčasnej perspektíve.* Trnava : PeF TU, 2011, p. 220.
45 KAČINOVÁ, V.: From a reductionist to a holistic model of digital competence and media education. In *Communication Today*, 2019, Vol. 10, No. 2, p. 23.
46 SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika – kontexty a perspektívy. Acta Facultatis Philosophicae Universitatis Šafarikianae 6.* Košice : UPJŠ, 2010, p. 327.
47 Ibid., p. 328.

As we have already pointed out, we hear opinions that take ICT and the digital or virtual dimension as an inappropriate platform to follow the primary goals of education, chiefly because of its inherent – psychagogic character. Sometimes these opinions express scepticism or objections that are based on purely neophobic attitudes. However, as Semrádová notes, ICT and the environment that comes with them do not necessarily mean an obstacle for education. This technology can help us fulfil the desired goals, as it may take account of the details that are based on values, emotions, ethics and aesthetics found in the cognitive content and thus contribute to personal development. If the ICT are incorporated into the educational process adequately, they may even assist us in the quest for the truth, good and beauty. E-learning courses offer space for explanation, but also for raising questions that concern meaning and meaningfulness. E-learning thus does not have to be merely an educational strategy, but also an important cultural phenomenon, this author points out.[48]

Digital ICT do not need to have to accompany education into the future, as symbols and tools of a technocratic dictatorship.[49] It seems that the future of education is not determined by modern ICT, but primarily by what position in education we assign for them.[50] We do have to be careful here all the time. As also Johnson points out, educational goals that require mutual interaction must be preserved. The aspects that require a physical body, i.e. meeting in person, should not be abandoned or re-defined as remote meetings.[51] What is, in this concept, the role of a teacher when we define cyberspace as „a place where we can learn something"?[52] It is necessary to secure that live communication in education is not replaced by parallel monologues. We also need to stamp out those modes of thinking that may build up barriers in understanding, or misinterpretation that is the product of „instant" knowledge, as well as information and technological reductionism.[53] We should also modify each and every media-based application so that it is not merely something that we use, but also something that we are free to challenge.[54]

We may say that the power and potential of digital ICT is exceeded only by the power and potential of humans.[55] A teacher, with his or her personality, knowledge, experience and skills, is a relevant partner and determinant in digital education. In this context, we can see that especially in terms of psychagogy, teacher training and competence that determine usage of digital ICT in education, is of great importance. What sort of preparation is therefore necessary for a future teacher? What about his or her digital literacy? How can we look at teachers' digital competence in terms of psychagogy?

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[48] SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika – kontexty a perspektívy. Acta Facultatis Philosophicae Universitatis Šafarikianae 6*. Košice : UPJŠ, 2010, p. 327-329

[49] Ibid., p. 327.

[50] BHAKTA, K., DUTTA, N.: Impact of Information Technology on Teaching-Learning Proces. In *International Research Journal of Interdisciplinary & Multidisciplinary Studies,* 2016, Vol. II, No. XI, p. 137. [online]. [2020-09-30]. Available at: <http://oaji.net/articles/2017/1707-1483695373.pdf>.

[51] JOHNSON, G. D.: Information Technology and the Goals of Education: Making Nails for the Hammer. In JOHNSON, G. D. et al.: *Ethical, Psychological and Societal Problems of the Application of ICTs in Education. Analytical Survey.* Moscow : UNESCO Institute for Information Technologies in Education, 2004, p. 40. [online]. [2020-09-30]. Available at: <https://iite.unesco.org/pics/publications/en/files/3214629.pdf>.

[52] KUKLOVÁ, J.: Kyberprostor jako prostor k výchově a poznání. In KUDLÁČOVÁ, B., SZTOBRYN, S. (eds.): *Kontexty filozofie výchovy v historickej a súčasnej perspektíve*. Trnava : PeF TU, 2011, p. 292.

[53] SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika – kontexty a perspektívy. Acta Facultatis Philosophicae Universitatis Šafarikianae 6*. Košice : UPJŠ, 2010, p. 324.

[54] DEUZE, M.: *Media life. Život v médiích.* Praha : Karolinum, 2015, p. 84.

[55] OLCOTT, D., CARRERA FARRAN, X., GALLARDO-ECHENIQUE, E. E., GONZÁLES MARTÍNEZ, J.: Ethics and Education in the Digital Age: Global Perspectives and Strategies for Local Transformation in Catalonia. In *RUSC. Universities and Knowledge Society Journal*, 2015, Vol. 12, No. 2, p. 68. [online]. [2020-09-30]. Available at: <https://rusc.uoc.edu/rusc/ca/index.php/rusc/article/view/v12n2-olcott-carrera-gallardo-gonzalez/2614.html>.

As already stated, pedagogical training should also concentrate on specific digital competencies that are in the centre of the new digital literacy. These competencies take into account comfort in both professional and personal life and also cover digital wellbeing that also contributes to general wellbeing in both the hedonic and eudaimonic sense. The competencies that we are speaking about do not only pursue satisfaction and minimalization of the side-effects of digital technology (hedonic approach,) but also use this technology in order to realise one's own potential in life (eudaimonic approach).[56] These competencies are also relevant for the quality of personal and professional life of each and every teacher, as seen in terms of psychagogy. However, we believe that not even they can fully provide it.

People can, or even have to communicate with the whole world and may succeed in this if they are internally integrated personalities,[57] which is certainly true also for teachers in digital education (more so if we speak in terms of psychagogy). It seems, in this context, that perspective in the form of literacy that P. Aroldi describes as less technical, or less linked to technology (or languages), but oriented more towards humanism and communication. Such literacy is not neutral regarding the culture of convergence and puts every teacher back in their role and their responsibility.[58] Does digital competence in a teacher then mean the ability to use digital information and communication technology when educating is a skill that can be improved, or is it the minimum that is necessary to achieve? O. McGarr and A. McDonagh ask.[59] As we see it, in order to follow the course that is set by psychagogy, mere understanding of digital competence in teachers, as we see it now, is absolutely unsatisfactory. In fact, this approach simply means a reductionist approach – an integrated set that comprises the knowledge, skills and attitudes that individuals need to adequately use digital ICT so that they can become „effective citizens of the 21st century".[60]

However, contrary to the usual understanding of digital competence in teachers (chiefly a group of specific skills), we can take a different look, McGarra a McDonagha declare – we can see it for example as a way of life. If we understand digital competence this way, then the frameworks that distinguish the individual levels of this competence may not be useful for its improvement.[61] We believe that we can speak of a way of „ars vivendi" in the context of using digital ICT based on our self-understanding in terms of meaning and values, which can be seen as „étos". Regarding education, we can similarly speak of „ars docendi" in teachers who use digital ICT, or digital virtual environment. As also M. Deuze notes,[62] similarly to our ethical life with digital ICT, or media („life in media"), which should be ethical and carry an aesthetic potential (or be a work of art), it is also the already mentioned „ars docendi" of a teacher that needs this potential. It does not comply with the idea of unilateral and comprehensive planning and assessment that is based on pre-given professional norms or standards that also cover digital competencies, in fact, it does not comply with any formulation of professional competencies whatsoever.

56 GUI, M., FASOLI, M., CARRADORE, R.: „Digital Well-Being." Developing a New Theoretical Tool For Media Literacy Research. In *Italian Journal of Sociology of Education,* 2017, Vol. 9, No. 1, p. 163-167. [online]. [2020-09-30]. Available at: <https://ijse.padovauniversitypress.it/system/files/papers/2017_1_8.pdf>.

57 KUSIN, V.: Filozoficko-etické aspekty globalizácie výchovy. In KUDLIČKA, J. (ed.): *Čas a dejiny II.* Liptovský Mikuláš : SFZ pri SAV a Vojenská akadémia, 1999, p. 115.

58 AROLDI, P.: *(New) challenges for a (new) media education.* In BLANCO, I., ROMER, M. (eds.): *Los niños frente a las pantallas.* Madrid : Editorial Universitas, 2007, p. 28 [online]. [2020-09-30]. Available at: <www.cost-transforming-audiences.eu/.../%20New%20challenges>.

59 McGARR, O., McDONAGH, A.: Digital Competence in Teacher Education. *Output 1 of the Erasmus+ funded Developing Student Teachers' Digital Competence (DICTE) project,* 2019, p. 40. [online]. [2020-09-30]. Available at: <https://dicte.oslomet.no/>.

60 KAČINOVÁ, V.: From a reductionist to a holistic model of digital competence and media education. In *Communication Today,* 2019, Vol. 10, No. 2, p. 23.

61 McGARR, O., McDONAGH, A.: Digital Competence in Teacher Education. *Output 1 of the Erasmus+ funded Developing Student Teachers' Digital Competence (DICTE) project,* 2019, p. 40. [online]. [2020-09-30]. Available at: <https://dicte.oslomet.no/>.

62 DEUZE, M.: *Media life. Život v médiích.* Praha : Karolinum, 2015, p. 200, 236.

As Deuze states in reference to R. Rorty's reflection, modern culture now seeks instrumental rationality that prefers guidance, technology and professionalism. The approach that prevents any soul vibes and awe and fortifies immunity against romantic enthusiasm in dealing with attitudes that would sort out „life in media" lacks an impulse, hope and beauty.[63] This is what the majority of frameworks and documents dealing with modern teacher education are like, quite openly preferring acquisition of skills, based on a timetable, and skills that can be assessed using professional standards.[64] We can agree here with Deuze that we need to get over this unilateral praise of media, or multimedia, literacy and also overrating of the meaning of any explicitly formulated and required digital competence in teachers.[65] Teacher's self-planning isimportant for „ars docendi," so it requires the needed attention in pedagogical training.

What principles, tools or methods are important in the future teacher's training in the context of psychagogy or „ars vivendi"? Basing on what has previously been said, it is obvious that it is important to overcome the purely normative principles and use those that employ the principles of playfulness, tools and abilities that Deuze also speaks about.[66] We believe it is necessary to also let in hope, dreams and ambitions, but also some scepticism towards what normally seems to be understood and indisputable. We should also admit the possibility to wonder, admire, and feel amazed and also the ability to seek the truth, good and beautiful. The opportunity also should not be taken from expressing such human qualities and experiences as slowness, waiting, silence, boredom or emptiness… These are features that oppose media, or virtual reality[67] and give us a chance to keep a healthy distance from digital ICT.

We can say that in relation to entering cyberspace as the „place where we can learn something",[68] the teacher prepares not only the material for a given topic, but also thinks about his or her personal attitude to it. This reflection and self-reflection constitute the condition that is necessary for a serious elaboration of the hermeneutic approach in the virtual platform for students.[69] Teacher's self-knowledge regarding meaning and values is more important than anything else in the technical environment.[70] This leads to self-realisation and thus responsibility and self-control, without which „ars vivendi," or „ars docendi" cannot be achieved. Here we should mention yet another relevant factor or component that helps in the process of future teacher training, which should come with teachers, who are also rational and creative – philosophy, as a method, but also as a discipline. Philosophy, along with the other (already mentioned) components, can serve as an element useful for shaping the very much needed rational thinking, self-reflection and self-projecting that co-create the „ars-vivendi" of a teacher.

[63] DEUZE, M.: *Media life. Život v médiích.* Praha : Karolinum, 2015, p. 151.

[64] More on frames, or official documents FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework, In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449–2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

[65] DEUZE, M.: *Media life. Život v médiích.* Praha : Karolinum, 2015, p. 152.

[66] Ibid.

[67] WELSCH, W.: *Umelé rajské záhrady? Skúmanie sveta elektronických médií a iných svetov.* Bratislava : Soros Center for Contemporary Arts, 1995, p. 7.

[68] KUKLOVÁ, J.: Kyberprostor jako prostor k výchově a poznání. In KUDLÁČOVÁ, B., SZTOBRYN, S. (eds.): *Kontexty filozofie výchovy v historickej a súčasnej perspektíve.* Trnava : PeF TU, 2011, p. 292.

[69] SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika – kontexty a perspektívy. Acta Facultatis Philosophicae Universitatis Šafarikianae 6.* Košice : UPJŠ, 2010, p. 328.

[70] KUKLOVÁ, J.: Kyberprostor jako prostor k výchově a poznání. In KUDLÁČOVÁ, B., SZTOBRYN, S. (eds.): *Kontexty filozofie výchovy v historickej a súčasnej perspektíve.* Trnava : PeF TU, 2011, p. 292-293.

4. Conclusion

Teachers, with their personalities, knowledge and skills, constitute a relevant factor, or determinant in digital education. Future teacher training is therefore relevant for digital education too. We can state that the majority of frameworks that deal with this aspect understand digital competence as operational, technical and information skills. However, along with the recent change of situation regarding the development and usage of ICT in education came a need for broader consideration. Presently, we can see more complex approaches and frameworks that employ more digital competence (not only) in teachers. This competence greatly exceeds the ability to use technical equipment.

We can state that the desired and more complex frameworks that integrate pedagogical training responding to the challenges of the modern world also incorporate an ethical, psychological and legal context that we can find in our socio-cultural communication practice. Some of these approaches reflect the importance of a teacher's wellbeing and work with it when they shape their digital competencies and literacy. We see this as a relevant psychagogic practice in terms of values, reflecting the need for a desired and meaningful professional and personal performance. It is, however, also necessary to say that there are certain limits here, considering psychagogic needs in education, which implies the need to cope with them. A perspective that is based more on phenomenological and hermeneutical opinions rather than pragmatical opinions constitutes an alternative view of future teacher training and digital competencies and respects the fact that a teacher remains to be a psychagogic subject. This holistic perspective, which does not see digital competencies solely as a means for effective performance in teachers, concentrates more on the teacher's „ars docendi" – the „virtue of teaching" that is understood to be the most important quality of a teacher and that has also a moral and value-based standpoint. This exceeds the solely norm-based frameworks that define the set of skills and knowledge of a teacher and that also define the usage of new ICT in education – teacher's digital competence.

From this perspective, pedagogical training should take into account elements (principles, methods or means) that help break new ground for such self-projection in teachers that are bound to self-reflection in terms of their disposition to teach or explain a topic or problem using information and communication technology. However, it should also be bound to self-understanding, in terms of meaning and values, self-understanding that leads to moral self-awareness as an undisputable determinant of „ars docendi" in the digital learning environment. We believe that the psychagogic element in future teacher training should be an element that serves as a complement to the formation and development of digital competence, or digital literacy. Therefore, it should also be implemented into the theoretical frameworks of future teacher training. This is exactly the place where we should go beyond the limitations that are set by these frameworks now.

Bibliography and sources

AROLDI, P.: *(New) challenges for a (new) media education.* In BLANCO, I., ROMER, M. (eds.): *Los niños frente a las pantallas.* Madrid : Editorial Universitas, 2007, p. 19-30. [online]. [2020-09-30]. Available at: <www.cost-transforming-audiences.eu/.../%20New%20challenges>.

BHAKTA, K., DUTTA, N.: Impact of Information Technology on Teaching-Learning Proces. In *International Research Journal of Interdisciplinary & Multidisciplinary Studies,* 2016, Vol. II, No. XI, p. 131-138. ISSN 2394-7950. [online]. [2020-09-30]. Available at: <http://oaji.net/articles/2017/1707-1483695373.pdf>.

BULGANOVÁ, D., KAČINOVÁ,V.: Axiocentric Teaching And Learning About Media In The Context Of School Practice. In *Media Literacy and Academic Research*, 2019, Vol. 2, No. 2, p. 85-93. ISSN 2585-8726.

CORNALI, F., TIROCCHI, S.: Globalization, education, information and communication technologies: what relationships and reciprocal influences? In *Procedia - Social and Behavioral Sciences,* 2012, Vol. 47, p. 2060-2069. ISSN 1877-0428. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/275541968_Globalization_Education_Information_and_Communication_Technologies_What_Relationships_and_Reciprocal_Influences>.

DEUZE, M.: *Media life. Život v médiích.* Praha : Karolinum, 2015.

FALOON, G.: From digital literacy to digital competence: the teacher digital competency (TDC) framework. In *Education Technology Research Development,* 2020, Vol. 68, No. 5, p. 2449–2472. [online]. [2020-09-30]. Available at: <https://link.springer.com/article/10.1007/s11423-020-09767-4>.

FEDOROV, A., LEVITSKAYA, A.: Synthetic Media Education Model Used in Commonwealth of Independent States (CIS). In *Media Education*, 2019, Vol. 59, No. 1, p. 30-36. ISSN 1994-4195. [online]. [2019-01-25]. Available at: <https://cyberleninka.ru/article/n/synthetic-media-education-model-used-in-commonwealth-of-independent-states-cis>.

GÁLIKOVÁ TOLNAIOVÁ, S.: *Idea psychagógie v holistickej perspektíve.* Bratislava : Iris, 2014.

GALLARDO-ECHENIQUE, E. E. et al.: Digital Competence in the Knowledge Society. In *MERLOT Journal of Online Learning and Teaching*, 2015, Vol. 11, No. 1, p. 1-16. [online]. [2020-09-30]. Available at: <https://jolt.merlot.org/vol11no1/Gallardo-Echenique_0315.pdf.>.

GENNARO, S., MILLER, B.: Critical Media Literacy in the Googleburg Galaxy. In *Media Literacy and Academic Research,* Vol. 3, No. 2, p. 6-21. ISSN 2585-8726.

GOYAL, E., PUROHIT, S., BHAGAT, M.: Factors that Affect Information and Communication Technology Usage: A Case Study in Management Education. In *Journal of Information Technology Management,* 2010, Vol. XXI, No. 4, p. 38-57. ISSN 1042-1319. [online]. [2020-09-30]. Available at: <http://jitm.ubalt.edu/XXI-4/article4.pdf>.

GOMÉZ GALÁN, J.: Media Education as Theoretical and Practical Paradigm for Digital Literacy: An Interdisciplinary Analysis. In *European Journal of Science and Theology*, 2015, Vol. 11, No. 3, p. 31-44. ISSN 1842–8517. [online]. [2020-09-30]. Available at: <https://arxiv.org/ftp/arxiv/papers/1803/1803.01677.pdf>.

GUI, M., FASOLI, M., CARRADORE, R.: „Digital Well-Being." Developing a New Theoretical Tool For Media Literacy Research. In *Italian Journal of Sociology of Education,* 2017, Vol. 9, No. 1, p. 155-173. ISSN 2035-4983. [online]. [2020-09-30]. Available at: <https://ijse.padovauniversitypress.it/system/files/papers/2017_1_8.pdf>.

GUTIÉRREZ, A., TYNER, K.: Media Education, Media Literacy and Digital Competence. In *Comunicar,* 2012, Vol. 19, No. 38, p. 31-39. ISSN 1134-3478. [online]. [2020-09-30]. Available at: <https://www.academia.edu/9239011/Media_Education_Media_Literacy_and_Digital_Competence>.

HLADÍKOVÁ, V.: Transformation of thinking and education under the influence of internet communication. In *Ad Alta: Journal of interdisciplinary research,* 2018, Vol. 8, No. 1, p. 99-103. ISSN 1804-7890.

JOHNSON, G. D.: Information Technology and the Goals of Education: Making Nails for the Hammer. In JOHNSON, G. D. et al.: *Ethical, Psychological and Societal Problems of the Application of ICTs in Education. Analytical Survey.* Moscow : UNESCO Institute for Information Technologies in Education, 2004, p. 34-41. [online]. [2020-09-30]. Available at: <https://iite.unesco.org/pics/publications/en/files/3214629.pdf>.

JOHNSON, G. D.: Overwiew. In JOHNSON, G. D. et al.: *Ethical, Psychological and Societal Problems of the Application of ICTs in Education. Analytical Survey.* Moscow : UNESCO Institute for Information Technologies in Education, 2004, p. 6-9. [online]. [2020-09-30]. Available at: <https://iite.unesco.org/pics/publications/en/files/3214629.pdf*>.*

KAČINOVÁ, V.: *Teória a prax mediálnej výchovy. Mediálna výchova ako súčasť všeobecného školského vzdelávania.* Trnava : FMK UCM, 2015.

KAČINOVÁ, V.: From a reductionist to a holistic model of digital competence and media education. In *Communication Today*, 2019, Vol. 10, No. 2, p. 17-26. ISSN 1338-130X.

KOSTRUB, D., SEVERINI, E., REHÚŠ, M.: *Proces výučby a digitálne technológie.* 1. vyd. Bratislava/Martin : Alfa print, s. r. o., 2012. [online]. [2020-09-30]. Available at: <https://www.fedu.uniba.sk/fileadmin/pdf/Sucasti/Katedry/KPPE/PRE_DOCENTA/Kostrub_2012_knizka.pdf*>.*

KUKLOVÁ, J.: Kyberprostor jako prostor k výchově a poznání. In KUDLÁČOVÁ, B., SZTOBRYN, S. (eds.): *Kontexty filozofie výchovy v historickej a súčasnej perspektíve.* Trnava : PeF TU, 2011, p. 282-295.

KOSOVÁ, B.: Výchova ako zodpovednosť. In KUDLÁČOVÁ, B., RAJSKÝ, A. (eds.): *Kontexty filozofie výchovy v novoveku a súčasnej perspektíve.* Trnava : PeF TU v Trnave, 2014, p. 83-93.

KUSIN, V.: Filozoficko-etické aspekty globalizácie výchovy. In KUDLIČKA, J. (ed.): *Čas a dejiny II.* Liptovský Mikuláš : SFZ pri SAV a Vojenská akadémia, 1999, p. 109-116.

LEWIN, D., LUNDIE, D.: Philosophies of Digital Pedagogy. In *Studies in Philosophy and Education*, 2016, Vol. 35, No. 3, p. 235–240. [online]. [2020-09-30]. Available at: <https://e4-0.ipn.mx/wp-content/uploads/2019/10/07-philosophies-of-digital-pedagogy.pdf>.

McGARR, O., McDONAGH, A.: Digital Competence in Teacher Education. *Output 1 of the Erasmus+ funded Developing Student Teachers' Digital Competence (DICTE) project*, 2019. [online]. [2020-09-30]. Available at: <https://dicte.oslomet.no/>*.*

MINÁRIKOVÁ, J., BLAHÚT, D., VIŠŇOVSKÝ, J.: Hi-Tech And Eye-Catching Alike: Information In The Multiplatform Era. In *European Journal of Media, Art and Photography,* 2020, Vol. 8, No. 2, p. 118-126. ISSN 1339-4940.

MISHRA, P., KOEHLER, J. M.: Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. In *Teachers College Record,* 2006, Vol. 108, No. 6, p. 1017–1054. ISSN 0161-468. [online]. [2020-09-30]. Available at: <https://www.punyamishra.com/wp-content/uploads/2008/01/mishra-koehler-tcr2006.pdf*>.*

MROZOWSKA, S., RYŁKO-KURPIEWSKA, A.: Polish Media about Act 2.0 (the Constitution for Science). In *Communication Today*, 2020, Vol. 11, No. 1, p. 22-34. ISSN 1338-130X.

OLCOTT, D., CARRERA FARRAN, X., GALLARDO-ECHENIQUE, E. E., GONZÁLES MARTÍNEZ, J.: Ethics and Education in the Digital Age: Global Perspectives and Strategies for Local Transformation in Catalonia. In *RUSC. Universities and Knowledge Society Journal*, 2015, Vol. 12, No. 2, p. 59-72. ISSN 1698-580X. [online]. [2020-09-30]. Available at: <https://rusc.uoc.edu/rusc/ca/index.php/rusc/article/view/v12n2-olcott-carrera-gallardo-gonzalez/2614.html*>.*

REINECKE, L., OLIVER, M. B.: Media use and well-being: Status quo and open questions. In REINECKE, L., OLIVER, M. B. (eds.): *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects*. New York : Routledge, 2016, p. 3-13. [online]. [2020-09-30]. Available at: <https://www.researchgate.net/publication/314205416_Media_Use_and_Well-Being_Status_Quo_and_Open_Questions>*.*

RUSNÁK, P.: Kirké, paideia a koncept prirodzeného sveta. In KUDLÁČOVÁ, B., SZTOBRYN, S. (eds.): *Kontexty filozofie výchovy v historickej a súčasnej perspektíve.* Trnava : PeF TU, 2011, p. 213-221.

SCOLARI, C. A., MASANET, M. J., GUERRERO PICO, M., ESTABLÉS, M. J.: Transmedia literacy in the new media ecology: Teens´ transmedia skills and informal learning strategies. In *El profesional de la información,* 2018, Vol. 27, No. 4, p. 801-812. eISSN 1699-2407. [online]. [2020-09-30]. Available at: <https://pdfs.semanticscholar.org/94f7/ac9024b82207115cd54e0e2876ebad2b9033.pdf*>.*

SEMRÁDOVÁ, I.: Zamyšlení nad východisky profesní etiky učitele. In VLADYKOVÁ, Ľ. (ed.): *Aplikovaná etika – kontexty a perspektívy. Acta Facultatis Philosophicae Universitatis Šafarikianae 6*. Košice : UPJŠ, 2010, p. 321-333.
WELSCH, W.: *Umelé rajské záhrady? Skúmanie sveta elektronických médií a iných svetov.* Bratislava : Soros Center for Contemporary Arts, 1995.

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