THE ART OF DIGITAL PEDAGOGY

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Summary:

Pedagogical art is faced with another challenge with the introduction of the digital environment and digital didactic resources. The topic of value is put on the agenda provision of the new process and its relation to the rationality of learning. The purpose of this room is to present the subjective, value- based assessment of educators about the interest and work in a digital environment.

Key words:

education system, distance learning, didactic resources

The current situation in the education system is interesting with the fact of the introduction of artificial intelligence. The art of interaction between nature and technology poses all possible and impossible questions for educators. The main search consists of – does artificial intelligence in particular override rational cognition (and rational interaction) value cognition (and the value interaction) generated and realized in the art of pedagogy. According to the thesis of P. Ricoeur (1994) that the rational is recognition, identification , it may seem at first glance that the main question, from which we start , is hardly rhetorical, insofar as the answer seems clear. But in the place of apparent clarity, a problem arises: what is the pedagogical

relationship between rational knowledge (understood as recognition, identification) and valuable knowledge (understood as measurement and co-measurement). How does this commensuration take place in the relevant educational paradigm of the modern era . The educational paradigm itself is designed by a specific socio - economic development and at the same time projects ideas for the development of the next stage. When it comes to design, the question of value attitudes, tendencies and orientations undoubtedly arises. The question is what is happening today with digital technologies, digital literacy and the learning process.

At the end of the last century, the world's educational systems faced significant challenges. It argued strongly for a new society that is based on the knowledge economy, which will rely not on cheap labour and the processing of raw materials, but on the use of idea . In his report on education. Jacques Delors (1996) set out tasks for rethinking approaches that adolescent education and the goals that be achieved. The development of the knowledge economy: favourable economic environment; national innovation system; creative and well-prepared human capital; information and communication infrastructure.

In the last decade, there have been various discussions on the possibilities and application of electronic platforms in the education system. A number of opportunities and advantages for diversifying and developing social contacts and opportunities for changing the motivation and activity of students were highlighted.

„Web 3.0, termed as the semantic web or the web of data is the transformed version of Web 2.0 with technologies and functionalities such as intelligent collaborative filtering, cloud computing, big data, linked data, openness, interoperability and smart mobility. If Web 2.0 is about social networking and mass collaboration between the creator and user, then the Web 3.0 is referring to intelligent applications using natural language processing, machine-based learning and reasoning. From the perspective of advancements in e-Learning, the Web 2.0 technologies have transformed the classroom and converted a passive learner into an active participant in the learning process. This paper posits that the way both previous generations of e-Learning (1.0 and 2.0) have emerged with the prevalent technologies in their kind Web versions (1.0 and 2.0, respectively), it can be argued

that e-Learning 3.0 will provide all earlier generations‘ capabilities enhanced with the Web 3.0 technologies. Furthermore, in this paper, reviewing all the theories of learning and examining closely the theory of connectivism (considered to be the theory of learning for the digital age), it is argued that since most of the technologies that are to be a part of e-Learning 3.0 are addressed by these principles, a call for a new learning theory for e-Learning 3.0 is not justified . Finally, a review of the secondary literature shows that there will be various challenges and issues related to prevalence and adoption of e-Learning 3.0“ (Hussain, Fehmida, 2012) The question is also raised about the various forms of training that can be applied - E-learning, M-learning and D-learning „In the 21st century, the information and communication technology explosion increases the uses of digital devices for many purposes in the world of work and in formal an . Despite the controversial perception of e-learning, it is gaining momentum. According to... “However, E-Learning does have several defects and limits. Some studies are focused on improving the learning efficiency of E-Learning. The approach in proposes a multi-agent system to improve the learning process and provide more efficient knowledge acquisition. The approach in uses a gamification method in their E-Learning environment. By implementing elements from gaming, eg, points, competition, and levels, this system can increase students’ motivation to learn. The studies of and show that some E-Learning platforms, eg, VOD streaming or open online courses, may cause students to experience feelings of isolation and detachment. These feelings often occur due to lack of interaction with other students or educators. the user interface (UI) of these platforms is only designed with learning functionality in mind and is not sensitive to student responses. These feelings may reduce the motivation to learn, which we will discuss in Related Work” (Eric Hsiao-Kuang Wu , 202)

Regardless of the fact that learning on an electronic platform is already a fact, a number of problems with it remain unsolved. “there is also great uncertainty among decision-makers and managers as well as among developers, trainers and learners: instructors find themselves confronted with a new role in which they are tutors and facilitators for learning processes. Software developers more and more have to go beyond the paradigms of their own discipline when designing and im-

plementing learning software; they are in need to seek interdisciplinary exchange with teachers, authors and learners. Authors are required to think in a new way: no longer the instructional material is built in a series of straight consecutive units where each presentation is based on the preceding one, but learning modules that are decontextualized and therefore easier to reuse are to be created. On the learner's side, the question arises which characteristics are most important for good e-learning environments and which providers offer the best performance at a reasonable price in a market that is continuously differentiating further. Learning Management System (LMS) providers, for their part, find themselves confronted with the continually progressing didactization of the technological "delivery structure" of e-learning and are thus faced with an increasing learner orientation (cf. Ehlers et al. 2004).

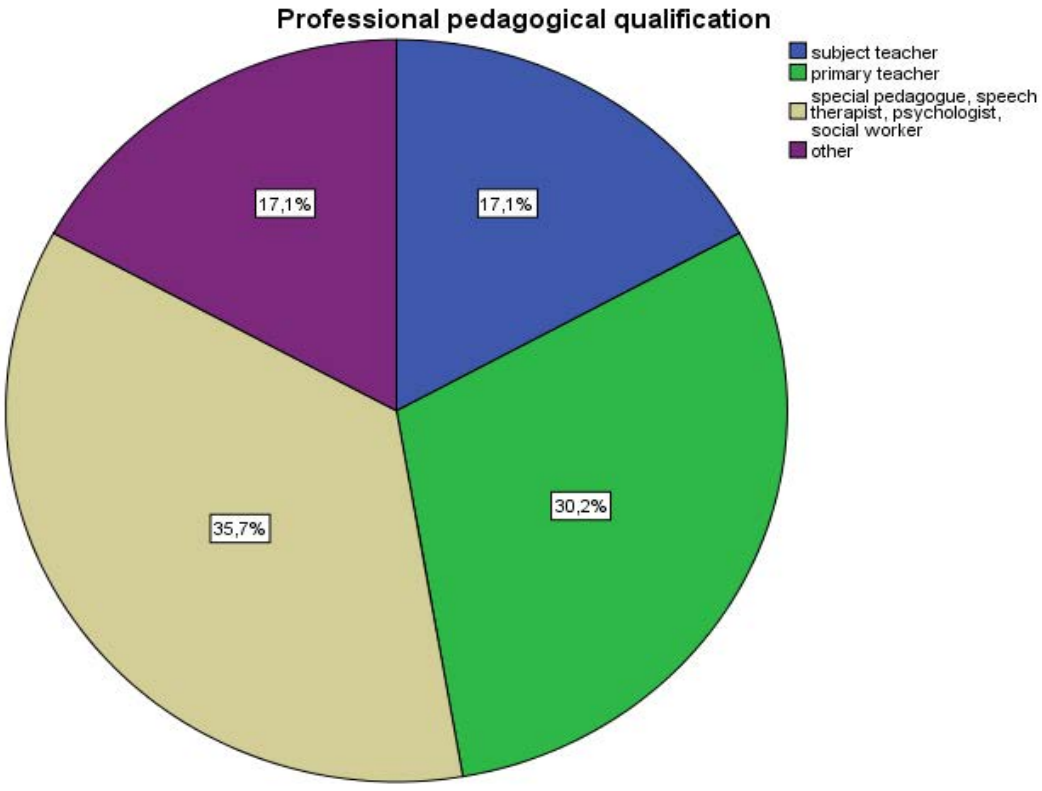

Fig. 1. Professional pedagogical qualification.

In this environment of learning change and on the threshold of the development of the new philosophy of distance learning, we explored what is happening in practice. What are the digital modules that teachers are already making part of the learning process. Moreover, the world and we have gone through a situation of distance learning.

The study was conducted a year after the end of the lockdown in the education system.

The purpose of the study is to find out what digital didactic tools teachers use.

The assumption is that they are related to pedagogical activities requiring individual interaction with students.

The research method is a structured response survey.

Analysis of received.

Pedagogical specialists covering the entire spectrum of modern pedagogical teams participated in the study. (Fig.1)

The teaching experience of the survey respondents is well balanced. General education pedagogical specialists are 47.3% (30.2% - primary teachers and 17.1% - subject teachers). They are almost half of the surveyed pedagogical specialists. This is an important fact, because exploring the possibilities of digital resources requires interaction and teamwork on the part of all pedagogical specialists. 35.7% are resource specialists (special pedagogues, speech therapists, rehabilitators) and 17.1% other pedagogical specialists.

The presented information (Fig. 2) about the pedagogical experience of the respondents is interestingly compared to the presented information about the age of the respondents. The data shows that 38% of teachers have more than 20 years of teaching experience. More than 20 years means that a greater part of professional experience has passed in the education system of all those over 50 years of age. Which shows sustainability in relation to the profession practiced. The other large group of teachers is the one with ten and twenty years of experience. It confirms the trend of sustainability, which is important for professions such as teaching.

Fig. 2 Pedagogical experience

Education is an important criteria for increasing the quality of education (Fig. 3).

Almost three-quarters of respondents have completed a master‘s degree. The remaining one quarter is divided between bachelor‘s, doctorate and further education. The presence of several doctors and several teachers with secondary education gives us reason to say that the education system is open and allows people with different educational qualifications to be teachers. It is a way of finding a balancing factor that allows for working with leading practitioners and also for the process to be supported by people who have the skills to organize and conduct research. This is a very broad topic in the education system, which for decades has been looking for ways to deal with the academicism of the learning content and follow the logic of student development and the needs of the labor market.

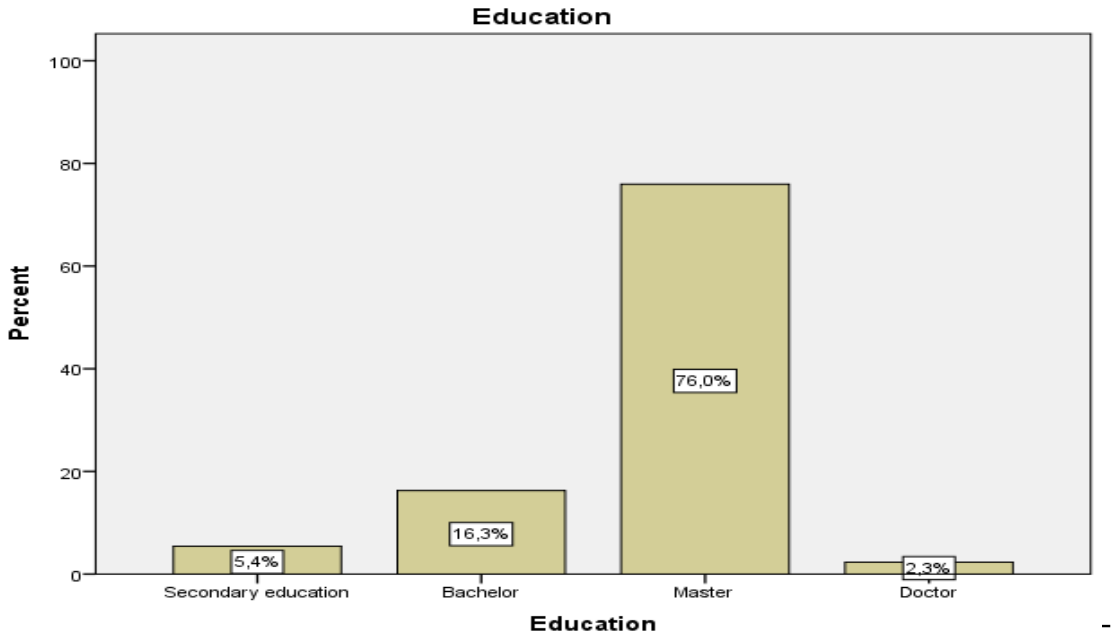

Fig. 3 . Distribution by educational profile

Here we will present only one question: What ICT resources are commonly used?

Table 1. What ICT resources are commonly used?

		Responses		Percent of Cases
	N	Percent		
What ICT resources are commonly used	interactive board	80	9.4%	62.0%
	computer	116	13.6%	89.9%
	projector	85	10.0%	65.9%
	virtual/augmented reality	3	.4%	2.3%
	electronic textbooks	57	6.7%	44.2%
	electronic aids	49	5.8%	38.0%
	specialized software	42	4.9%	32.6%
	study material sites	83	9.8%	64.3%
	didactic games	93	10.9%	72.1%
	adventure and strategy games	25	2.9%	19.4%
	social games	40	4.7%	31.0%
	games involving physical activity	50	5.9%	38.8%
	puzzles	65	7.6%	50.4%
	other educational games	62	7.3%	48.1%
	I do not use	1	.1%	.8%
Total		851	100.0%	659.7%

What are the popular digital resources among respondents?

Before looking at the numbers, we should clarify that some of the resources are sporadic for some of the respondent groups. For example, the e-textbooks for the resource teams - psychologists and speech therapists, for example. There are probably other specifics in their work that make some of the listed resources not use them.

What is important is that almost everyone uses a computer. This means that the basic tool that provides the digital didactic tools is available to all respondents. From there, we see that sites with educational materials and didactic games are the most widely represented. This directly testifies that most of the respondents use additional didactic resources that are outside the e-textbook.

It is not to be ignored that more than 60% of respondents use electronic whiteboard and projector. We comment on this due to the fact that didactic games can be imported with both a projector and an interactive whiteboard. With the interactive whiteboard, students have the opportunity to be much more active.

The games that are offered have a representation in the whole spectrum that we ask in the question. What confronts us as researchers is whether the list given in this question has sufficient scope for the actual practice of educators. Any research, when it takes a qualitative picture of the current picture, has the property of giving rise to additional perspectives as well as revealing an additional line of analysis.

What makes an impression?

Only one of the respondents did not use resources and technology. With this, we can safely conclude that ICT is integrated into the education system. This fulfills one of the tasks of the "knowledge economy" - in terms of the number of computers and the Internet in relation to the population. Parallel to this is the integration of innovations in education.

The data presented show that electronic textbooks and educational software are used by slightly more than half of the respondents. We have already made the stipulation that the percentage is such because it corresponds to the percentage of pre-service and elementary teachers who participate in the study. What is important

is that they also use other electronic resources such as didactic games, etc., which makes the picture for digital resources optimistic. Electronic textbooks are used by 65% of respondents. It's time to pay attention to the fact that augmented reality has only made its inroads in the school environment. Only 2% of respondents use it in educational and cognitive work.

The activity of educators in the use of digital resources was checked in relation to several factors - gender, age, education, professional experience.

Here we will present the influence of only the education factor. (Table 2)

Table 2. In which activities do you use electronic resources in the learning process for new knowledge

			education			
			Secondary education	Bachelor	Master and PhD	Total
In which activities do you use electronic resources in the learning process for new knowledge	during exercise	Count	2	10	51	63
		% within education	28.6%	47.6%	50.5%	48.8%
	for evaluation	Count	0	0	8	8
		% within education	0.0%	0.0%	7.9%	6.2%
	when solving informal tasks with the learning material	Count	0	3	21	24
		% within education	0.0%	14.3%	20.8%	18.6%
	when developing projects	Count	5	7	18	30
		% within education	71.4%	33.3%	17.8%	23.3%
	while doing homework	Count	0	0	3	3
		% within education	0.0%	0.0%	3.0%	2.3%
	something else	Count	0	1	0	1
		% within education	0.0%	4.8%	0.0%	.8%
Total		Count	7	21	101	129
		% within education	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19,801 [a]	10	,031
Likelihood Ratio	19,534	10	,034
Linear-by-Linear Association	4,247	1	,039
N of Valid Cases	129		

a. 13 cells (72.2%) have expected count less than 5. The minimum expected count is .05.

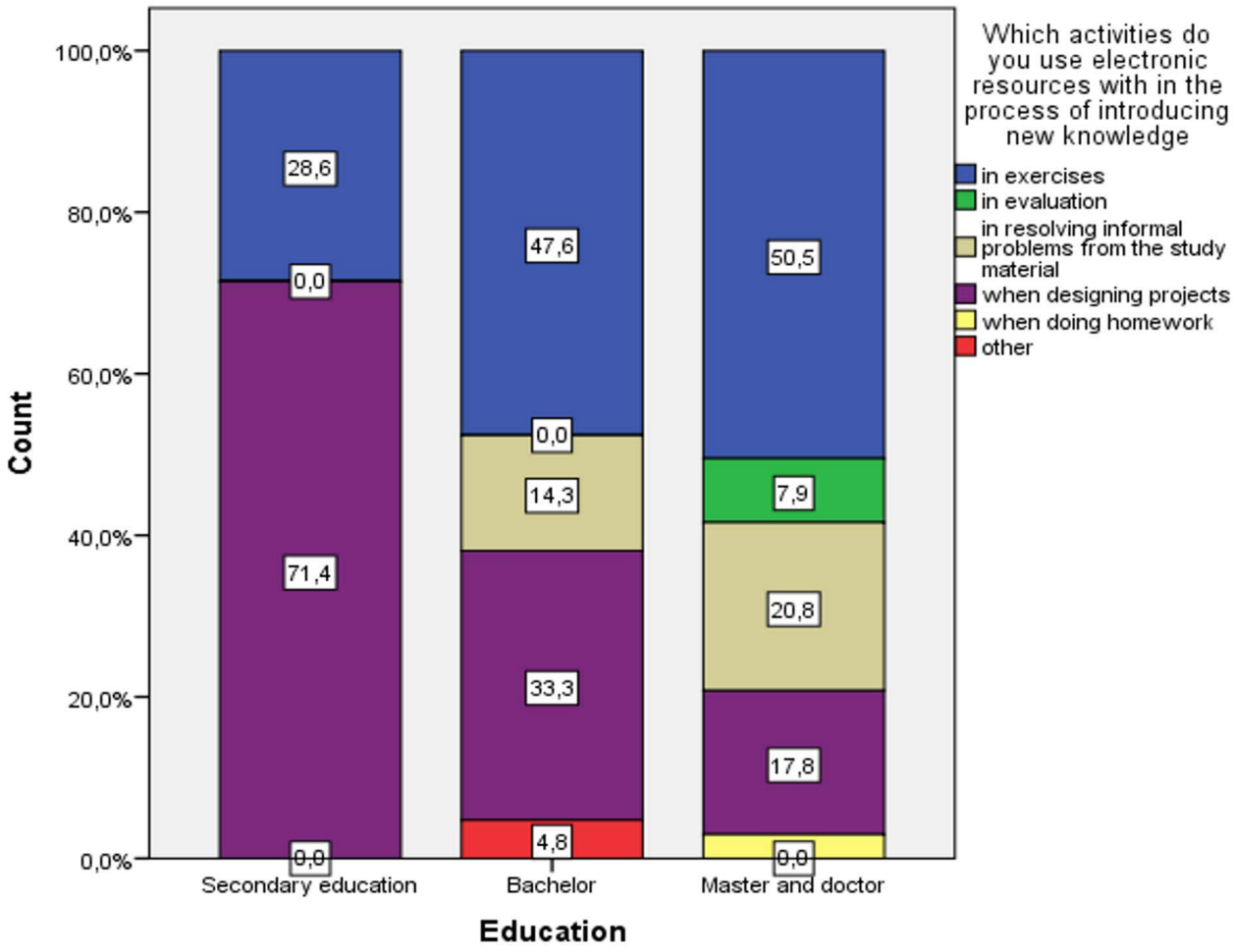

Fig.24 Which activities do you use electronic resources within the process of introducing new knowledge

In terms of learning activities in which electronic resources are used, education has an impact. There is a statistically significant difference in whether it is used in exercises, projects or other informal learning activities. In this sense, the opinion is confirmed that electronic resources have their specific place in the learning process, which implies sustainable integration in the learning process.

In summary

The modern educational paradigm has the resource to actively and expediently incorporate modern digital resources. Moreover, this is directly dependent on the level of education of the pedagogical specialists. This in itself guarantees the quality of integration of the digital environment in the learning process. At the beginning, we raised the question of the value measurement of rational decisions in the educational system. During remote work and even today, it is still debated whether this was a rational decision, whether the children studying in this environment were correctly introduced to the cognitive units of the educational content. Questions that will be active regardless of the results obtained. Currently, what we see from the data presented is that the introduction of innovations is correlated with the level of education of educators. This could be taken as a guarantee that a value model of pedagogical interaction will be set. Critics of the new age would not accept this as an argument, but it is in the essence of the subjectivism of pedagogical mastery and art. It is irrational in nature, but with the accumulations it makes through subjective decisions and activities, there is an accumulation resulting in rational changes. Such rational changes have been realized regarding the use of digital environment for the learning process.

ЕЛЕКТРОННО ИЗДАНИЕ НА ФАКУЛТЕТА ПО НАУКИ ЗА ОБРАЗОВАНИЕТО И ИЗКУСТВАТА

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