

Digital education: data technologies and informative knowledge

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Abstract – By focusing on computational tools, the present report shows how it is possible to improve awareness of what the educational task is intended to achieve, and it describes the correct methodological foundations and appropriate approach for carrying out a designed digital task. Practical examples demonstrate important research points: a variety of data storage issues and the technical topic of relational databases. A digital education resource that demonstrates how data technologies are used to accomplish tasks in a research environment. It analyses enabling factors that can support quality, equity and efficiency in the use of digital technologies in education systems. A program of digital research in educational practice can be characterized as an attempt to marry the interpretation of possible worlds of logic with probabilistic reasoning. It can be said that the discussed concept stands out as one of the most fundamental contributions of information theory to the practice of digital education and is clearly relevant for a number of technical issues, such as the inductive logarithm problem.

Keywords – Digital education, Data technologies, informative knowledge.

I. INTRODUCTION

First of all, we need to understand the traditional lexical meaning of the concept of "Digital Education" which is often found in pedagogical literature and regulatory documentation. "It is well known for us that the term "Digital Education" has several meanings: In a general sense, the term "digital education" is understood as "education" in the digital age, referring to all nuances of meaning of the concept of education" [3]. It seems that "it is planned to create some analytical theoretical standards" [3] and mental understanding the essence and characteristics of the "spontaneous" cyber socialization of society and information potential in it should be fundamentally different from understanding the enabling factors and patterns of digitalization of education, just as the processes of assimilation of knowledge differ from their pragmatic application. We may say that digital education technologies are now

a key resource for a contemporary education system. If used effectively, they promise to transform teaching and learning practices, to reduce learning inequalities and to create more inclusive and efficient education systems.

II. THE THEORETICAL PART

In our personal opinion, the emergence of moral problems of digital education in the world and its literal "intoxication" occurred under the influence of some objective factors that almost coincided in time:

- Advances in cognitive sciences, claiming that the mechanisms of information processing by the human brain and the computer are identical phenomenon - called as "computer metaphor" or "Artificial Intelligence";
- Inheritance of the approach to valuable management, developed in the now forgotten creative programming modeling - the predecessor of digital nature;
- The emergence of the intellectual industry of personal computers, a variety of digital devices and cybernetic equipment necessary for their virtual discursive operation;
- Competitive business pressure: all these intelligence must be sold, and the education system is an inexhaustible banal market.

We must note here that An Emeritus Professor of Learning and Adaptive Systems of the University of Amsterdam Pieter Adriaans' information theory is one of the modern approaches that unequivocally states that digital practice lacks semantic potential, in particular, the latest quantitative information measures, in particular, all scientific knowledge, in terms of universal distribution, essentially do not consider the semantic component. Moreover, the universal distribution proposed by digital practice "encodes all possible mathematical knowledge and, when updated based on empirical observations, will in principle converge to the optimal scientific model of our world" [1]. We know that many well-known learning algorithms, like decision tree induction, support vector machines, normalized information distance and neural networks, use entropy based information measures to

extract meaningful and useful models out of large data bases. “Data has changed decision-making patterns and removed barriers in data analysis. Today, it appears as a logical continuation and natural evolution of the digital revolution, and contributes to the implementation of new processes, habits and uses. Data technology sector includes solutions for data management, and products or services that are based on data generated by both human and machines” [5]. This means that the machine does not provide the processes of creativity even in the case when it carries out educational simulation, sets the mode of “intellectual game”, although it is indisputable that it is in this function that the use of a computer is most promising. It helps the teacher to create a learning environment that does not provide the formation of students' thinking, but contributes to it. The historical material presented in the traditional scientific base suggests that informational reflection and logical knowledge are historically much more intertwined than has generally been known. Thus, digital teaching devices are the embodiment of rigorous mathematical, engineering, technocratic thought, and the educational process is based on psychological and pedagogical, largely subjective patterns of the activities of teachers and students, starting with their human motivation and ending with intuitions and personal meaning of transmitted and received educational information.

According to recent research, in epistemological world view context, some “educational procedures exhaust the possibilities of operating with ready-made information fixed in the memory of the machine” [2]. And “a real dialogue is an objective dialectical contradiction of the subject of discussion realized in communication, which even the most modern machine cannot master, it does not understand the contradiction” [2]. In addition, “the computer evaluates the introduction of conflicting information with a symbolical assessment. The only advantage of the computer, we will add, is the incredibly high speed of the electrical signal passing along the path specified by the moral program of the decision-making process” [2]. Along with that, it is interesting for us the work on the “Issue of Student Distance Communication and Collaboration” which explores efforts to build capacity for digital education among actors at all levels of the education system: educators, institution leaders, parents, students and administrators. In addition to common capacity challenges that impede the effective use of digital education technologies, the research presents some promising approaches to building digital capacity: “Education is not reducible to the downloading of information, much less to the passive and solitary activity of staring at a screen” [4], or more: “Education is an inter-subjective and social process, involving hands-on activity, spontaneity, and the communal experience of sharing in the learning enterprise” [4].

CONCLUSION

From the above-mentioned we may conclude that digital technologies have brought changes to the nature and scope of education. Given that the integration of digital technologies is a complex and continuous process that impacts different actors within the education ecosystem, there is a need to show how these impacts

are interconnected and identify the factors that can encourage an effective and efficient change in the education environments. The greatest difficulty is the transition from information circulating in the training system to independent practical actions and deeds, in other words, from a sign system as a form of information presentation on the pages of a textbook, a monitor screen, etc. to a system of practical actions performed on the basis of knowledge and having a fundamentally different logic than the logic of organizing a semiotic system. This is the classic problem of applying knowledge in practice, and in axiological language - the problem of the transition from worldview thought to relevant valuable action.

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