What Does Digital Learning Teach?

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Abstract—Digital learning does not determine its strategic benchmarks independently since it always represents only a training system component. Consequently, its goals and objectives cannot be understood without a preliminary understanding of the purposes and objectives put forward by the training system a part of which it forms. The issue of identifying this purpose as a person being a cognitive activity subject or a person being a bearer of a certain number of skills requires clarification. The digital learning concept will always contain a positive ("correct") or negative ("incorrect") answer to this question in the "default" status, as prescribed by the training system. And it will serve as an auxiliary tool only in promoting (and approving) different concepts of human capacity as a "correct" one.

Keywords—person, training, computer technology, knower

1 Introduction

The relevance of the work lies in the need for a conceptual understanding of the essence of the "digital learning" process from the point of view of the evaluation of subject-object interaction, namely, a personality in the role of a learner and a computer in the role of a learning tool. The main problem the author identifies is the shift of the computer's function from the role of an auxiliary tool for learning to the role of an educator, which can have potentially negative consequences for the learning process as a human cognitive activity. The purpose of the research is to analyse the concept of digital learning, to reveal the essence of the "human-computer" connection, to determine the nature of the subject-object interaction of digital learning, to outline the potential threats of the wide implementation and dominance of "digital learning" for human cognitive activity.

The digital learning is usually understood as the use of computer technologies in the learning process as "the process of transferring and acquiring knowledge, skills, and abilities" [1], that is, technologies related to the use of a computer. In other words, digital learning involves working with a specific machine, which is a computer. And this specificity is not so much in the fact that a computer performs a well-defined sequence of operations (by and large, any machine does this), as in the fact that these operations are associated with the collection, processing, transmission, and storage of information presented in a "digit", a set of binary system symbols (1

and 0). A person can learn by working with a machine a certain number of movements, the execution of which is necessary to work with it. These are physical movements – "turn on", "turn off", "switch", and "click", which in the case of working with a computer are placed in a movement that "can be overcome with one little finger" [2]. It is quite easy to acquire these movements, recalling the words of S. Jobs, that: "The mouse makes it much more convenient to move around the monitor and achieve an exact goal" [3].

It is not so easy to acquire the mental movements necessary to work with a computer. A machine search for information can have an effect only if the search parameters are set correctly and the input data does not initially contain an inaccuracy. This is possible only if the required mental movements take the form of "fast, precise, and silent work" made by a person "performing correction after correction" considering "all previous data" [4]. And all because, again, according to S. Jobs, the computer "follows very clear instructions: "take this number, add to this, output the result there, display more or less value from the previous one"" [3]. Since "such a step in a computer happens 1 million times faster" [3], there is "instant" access to the information one is looking for, which, in turn, dictates the need for the same "instant" understanding of it, adjusted for the situation. An amendment that is impossible without firstly "investigating the nature of this situation" [5], which may "have different laws, speed of light, gravitational characteristics, and time scale" [4].

The first mental movement necessary for working with a computer is cognition as an explanation of cause-and-effect relationships, a rough ("Is there no rough work in science?" [6]) component of which is transmitted to the computer. And the possibilities here are huge: "Correction is not everything. It can make reports on pre-prepared materials, fill out questionnaires and statements, check student papers, serve as a card index ..." [6]. In general, it "frees people from a lot of manual work", always remains an "incredible tool" that "will save a person more energy" and which "allows doing one's work better" [3].

A significant body of scholarship focuses on computer-assisted learning, such as research on mobile technologies [7], Artificial Intelligence in the context of training [8], or even the artistic impulses of programs [9]. However, this discourse still gives a significant place to the human factor, such as the development of a mathematical understanding of cloud technologies [10], process optimization [11].

However, using the term "digital learning", the authors assume, or rather even assert, that the computer is involved in the "process of transferring and acquiring knowledge", and not just "skills and abilities". That is, it is the computer that transmits knowledge to a person and ensures that they acquire this knowledge, and not only performs the routine component of this process. A few points are missing here. Firstly, the fact that the computer does not deal with knowledge but with information as "the designation of the content obtained from the outside world in the process of one's adaptation to it and the adaptation of one's senses to it" [12]. Without delving into the problem of "knowledge-information", it can only be noted that the ease of handling a computer and the speed of access to information as a "designation of content" does not withdraw but rather sharpens the task of acquisition of this content through comprehension and understanding. However, this task somehow

recedes more into the "background" since this type of comprehension is durable and it is much easier to turn on the computer and read the next "final sum of words" from the screen. Moreover, the information found on the Internet often does not serve as an impetus for the subsequent movement but is perceived as a "complete information base", the only true and complete one.

And here is the insidiousness of another point that is usually overlooked in discussions about the computer as a participant in the "process of knowledge transfer and acquisition". Namely, the computer is not "just one of the receptacles where what one is afraid to forget is stored" [13]. In this case, there would be no problem with "digital learning" as there is no problem with "book learning" since the book is not attributed to the ability to be a subject, a carrier of action. However, the main and only purpose of a computer is to perform calculation operations, that is, information processing. In other words, the computer does not so much store information as it processes it, converting the incoming stream of information into an output, with a structure different from the first. Therefore: "It can also write, plan, be a super calculator, a communication centre, an assistant to an artist" [3]. "Only for this it will be necessary to finalise and release new programmes", clarifies S. Jobs [3]. That is, all computer skills are just human designed, modified, released, installed, and launched (including those marked "by default") "new programmes". "A robot, that's why he is designed in the image of a man so that he can use tools and devices that people have created for their use from time immemorial", says one of the characters of "Galley Slave" by A. Azimov [6]. However, without the next "new programmes" as an external command written by a person (!), the computer simply cannot demonstrate what it is "capable of". The conversation of the main characters of "The Moon Is a Harsh Mistress" by R. Heinlein [14] is devoted to the nuance of why a central computer named Mike, "why Alvarez cannot get to his materials, knowing where they are stored". Thus:

“Mike, cannot you explain it to her?”

“I will try, Man. Wayo, I can give out blocked materials only after receiving a task from the outside. I cannot program myself for such information retrieval. My logical structure does not allow this. I must receive a signal from the outside”.

“Okay, but tell me, for *God's* sake, what is this signal?”

“This”, May gave out without hesitation, “is a special file “Zebra”. And paused expectantly.

“Mike! Unlock the special file “Zebra”, I said.

He obeyed and information flowed to us [14].

In other words, "actually existing, not imaginary machines, *assume* that a person is a system that differs from them precisely by the ability to act on a "target" (and not on a "causal") determination" [15]. Or, as Zb. Brzezinski [16] noted, "the growing ability to instantly calculate the most complex interactions", "going beyond the capabilities of the human brain", expands "the potential sphere of a person's conscious choice of the area of development and thereby makes it increasingly imperative for them to be able to lead, choose, and change". In general, it expands the scope of choice of actions, "and actions require an understanding of goals" [16]. Although "we do not know all the subtleties of human psychology and cannot determine what is possible

for a given person and what is not. But we know exactly what is impossible for a robot" [6]. And this – "to make a deliberate and conscious choice", is related to an answer to the question of "what goals should our power be directed to achieve" [16].

2 Methods

The main research methods employed were the analysis and synthesis of scientific and literary sources. General scientific research methods, including the use of analogies, deduction and induction, abstraction, concretization, and system analysis, were widely applied.

These methods were used to collect possible scenarios when the function of the computer shifts from a learning tool to an educator. A number of statements have been analyzed that can characterize the thinking process of a digital unit and the interaction of the results of such a process directly with a person. Using the methods of deduction and induction, conclusions were drawn regarding the understanding of individual abilities that a computer program operates with. The generalization of the literature sources was used to create prototypes of individual learning trajectories and alternative digital learning models.

3 Assessment of the "human-computer" interaction in the learning process

Processing information, the computer deals exclusively with the results of cognitive activity, which, being represented in a "digit" (a set of binary system symbols (1 and 0)), are entered into it by a person and are output in the form of solutions to the problem formulated by a person. Due to the creation of a worldwide information network, Zb. Brzezinski [16] wrote that all the cumulative knowledge of mankind will become available, "and also available immediately in response to a request". A pun is possible here. Namely, the knowledge that is already available will be available. That is, it has been obtained by mankind in the process of cognition of objective reality. However, it was produced by humanity, not by the "world information network". If this nuance is missed, then the illusion of subjectivity of the computer arises, the illusion of its ability to increment knowledge because: "Strictly logical reasoning can prove anything, depending on which initial postulates to take" [6]. Manipulation of these "initial postulates" is perceived as obtaining new knowledge, which is possible only "by further investigation of *a particular reality*, namely reality itself" [16]. And the one who is the subject of cognition, admittedly, can also be the subject of learning. Moreover, in the matter of controlling the acquisition of knowledge, the authors understand that, for example, the tests with a mark of which answer option is correct are entered by a person and the computer serves only as a "link between the student and the teacher" [3].

However, in the situation of, say, an "individual learning trajectory", which is proposed to be formed using artificial intelligence, the question of who and for what

purpose will use a programme that operates with "data on the individual abilities and needs of particular students" [17] remains open. However, most importantly, the question remains open: which "knowledge, abilities, and preferences of each person" [18] are written in this programme as "correct", and which – as excessive. In general, what concept of human capacity [19] is being promoted under the guise of the idea of forming "individual learning trajectories" "due to the introduction of artificial intelligence tools", the predecessor of which was actually developed at the time by F. Taylor [20] as "the system of tasks or lessons".

The key question here is what abilities are considered to be those "initial postulates", the operation of which will allow the programme to conclude about the proportionality or disproportionality of a person's "individual learning trajectory", which largely determines their individual trajectory of professional growth. F. Taylor [20], in this regard, speaks of "natural abilities" (there is no contradiction here because an individual is natural for a particular person), due to which a person is "well adapted for the production of their work". And here the question of which abilities are considered "initial postulates" turns into a question about the circumstances of the "naturalness" of these abilities. If they are natural in the sense of randomness, that is, given from birth as "individually morphological" [15] or individual psychological characteristics of a person, given by the randomness of their social origin [21], etc., then F. Taylor's [20] programme initially condemns (predestines) a person to perform exactly this and not another kind of activity, teaching them to perform it with "maximum daily productivity".

"Individual learning trajectories" very much resemble the "learning tapes" (or "educational tapes") from the story of A. Azimov's "Profession", which, in turn, is an artistic analogue of Zb. Brzezinski's [16] idea on the use of "the latest computing and information technology" to find "the most effective methods of rational exploitation of public talents". "... intellectual talent can be measured using a computer ...", says Zb. Brzezinski [16]. "We know how to analyse intelligence, George, and determine that this person can become a decent architect and that one can become a good carpenter" [22], the main character of "The Profession" is being told. And then the computer puts this or that programme into the human brain and the output is a corresponding "specialist model". Thus: "Almost anyone can acquire any knowledge but each individual brain is better suited for some types of knowledge than for others. We are trying to combine the brain structure with the relevant knowledge within the quota for specialists of each profession, if possible" [22].

And therefore, the "educational tapes", which "teach too much and too easily" but do not teach "to learn further independently" because they are designed "to immediately put a certain amount of ready-made knowledge into the brain" [22], this very ability to "learn further independently" is marked as a kind of "wrongness" and "meaninglessness". Let us recall the dialogue between George and Dr. Antonelli:

“I read about programming, sir <...>. I bought a book on this topic and was studying it”.

“A book intended for certified programmers?”

“Yes, sir”.

“But you might not understand what is written there”.

“Yes, at first. But I got other books on mathematics and electronics and investigated them”.

“And why did you do it, my friend? <...> you know that it does not matter in the slightest. No matter how much you are attracted to this or that profession, you will not get it if the physical structure of your brain makes you more suitable for other kinds of occupations <...>”.

“Doctor, I did not mean anything bad”.

“Who says it is bad? It is useless, that is all” [22].

A similar situation is described in I. Efremov's novel [23] “Hour of the Bull” but in a more tragicomic perspective. Let us recall that there were machines on Tormance that "gave all kinds of information, up to the identification of abilities and advice in choosing the type of work needed in the capital" [23]. It is an artificial intelligence programme that operates with data about "everyone's knowledge, abilities, and preferences". One of the main characters of the novel, the Earthman Vir Norin, decided to ask such a machine what it "thinks" about his abilities and, having done the "manipulations listed in the table", he heard: "Mental abilities are low, mental development is below average, stupid but the muscle reaction is excellent" [23]. Puzzled, Vir Norin, nevertheless understood the reason for the ridiculous, at first glance, the conclusion of the machine. Namely: "The machine is programmed according to the norms of Tormance, it cannot understand the indicators that have gone beyond the highest level, and inevitably counted them beyond the lowest level" [23]. It cannot because it is just not programmed for this. I. Efremov's "Norms of Tormance", A. Azimov's "quotas for specialists of each profession", behind which unequal access to "learning tapes" lies – these are the classification criteria that are written in the computer programme as "initial postulates", using which it calculates the "correct" individual abilities from the standpoint of "initial postulates" and offers the appropriate "learning tapes" or "type of work". What does not meet these classification criteria is classified as "logical 0", in this case as the lack of abilities that meet the requirements of the "initial postulates".

"A team of scientists from Baylor College of Medicine and Rice University has developed artificial intelligence models that help to understand the brain calculations underlying thoughts" [24]. Therefore, "Learning tapes" are not that fantastic.

4 Conceptual understanding of "digital learning"

The rapid development of information technologies led to the significant integration of Internet technologies into everyday life, the business environment, education and other spheres. Thanks to this, large-scale digital learning environments were developed on the Internet. Today, with the use of "digital learning" tools, students can learn independently via the Internet, being able to get much more educational information without limitations in space and time, in contrast to traditional forms of education. According to many scientists, "digital education" increases the efficiency, enthusiasm and interest of students in educational activities, and fosters independence and craving for new knowledge [25; 26; 27]. With the

development of technologies, education is becoming more and more "digitalised", which makes it necessary to study the experience of students using digital educational tools to identify existing difficulties and gaps in this system. Considering the user experience is essential to creating a successful digital learning environment [28; 29].

F. Taylor [20], who, although does not allow the possibility of reformatting already existing "natural abilities", offers a person only an algorithm for their best (from the standpoint of individual labour productivity) use, but also does not stipulate which set of "natural abilities" should be rigidly (forever) assigned to one person and, most importantly, whether this kind of assignment should exist at all. One more step and there is an idea of developing the abilities that are naturally necessary for all types of human activity, an "alphabet" of human elementary mental and physical movements that can act as developing elements [19]. The so-called "human capacity" can no longer exist in the form of randomly detected "natural abilities" of a person that undergoes selection. And the "natural abilities" appear as some kind of universal knowledge and mental movements, which are fixed in the form of skills (the skill of counting, analysis, synthesis, memorisation, and cognition in general), so that on their basis only further professional specialisation of a person is possible.

"The universal education that an individual receives in the cultural centre in a comprehensive school and which <...> gives them universal skills of operations with signs, access to knowledge, played and plays the role of the initial common moment – the beginning of the path to specialisation" [19]. In this case, even in high school, a person acquires the "invariant" of human activity, which is a cognitive activity specified each time by the subject of its application and thereby specifies the acquired skill of cognition. In the case of higher education, which is working on specialisation, the question of human capacity is whether it should be initially "sharpened" under the functional value of knowledge (to teach how to use something) or still under their content (to teach how and, most importantly, why something is arranged this way). In the latter case, it is important to consider that this content inevitably has a "domain of postulate datum" [19], that is, its part inevitably exists in the form of "solid knowledge", in the sense of basic, elementary, necessary knowledge for a certain professional specialisation.

It exists in the form of "theory", not to forget that a theory is always a concept of something, a system of knowledge about something. Its understanding is through the comprehension of internal necessary connections, which are fixed by elementary "solid knowledge", basic definitions, and are taught (through repetition, clarification, discussion, etc.) by academic disciplines. Comprehension of these connections is a long process that requires perseverance, intense and painstaking work of thought and therefore cannot be replaced by simply finding the right definitions and formulations on the Internet [30]. This search is always only an auxiliary operation, the result of which is rather not informative but general. In addition, focusing only on digitised texts narrows the field of research interest.

With this understanding of natural (or individual as natural for an individual) human abilities, the digital learning scenario described by A. Clark [31] in the novel "Dolphin Island" comes into play. The novel mentions a "big cybernetic machine" named OSCAR, which carefully examined the main character of the novel, Johnny,

"to establish the level of knowledge, then it prepared the appropriate tapes for self-study, and printed the programme of classes". After some time, OSCAR developed a new schedule for Johnny "with an emphasis on those subjects" in which he was not good enough. It is very similar to the "learning tapes" by A. Arseniev. But there is one nuance about which Johnny is told by one of his mentors, Professor Kazan: "... an important problem remains unresolved – your education. OSCAR can only help you get through part of the way. ... you will have to choose a specialisation and develop all the abilities that are allotted to you".

That is, work with OSCAR, carried out in conditions of Johnny's "immersion" in the reality of a scientific experiment and incessant communication with his mentors, provided him with the acquisition of only basic knowledge and abilities in the sense mandatory for everyone to learn, and this is – "only part of the way". "But you still lack discipline and knowledge", continues Professor Kazan, "you will acquire both at the university" [31]. "Discipline and knowledge" are what a computer cannot give a person. After all, their definition cannot be clearly written as "correct" (unknown to a computer is a logical 0) referring to "the development of all the allowed abilities", and not about preserving them in one or another "specialist model", the transition to which a person cannot make independently because they have not been taught to "learn further". It is impossible, because in "reality itself" [15] there is always "another asymmetry, in addition to the moment of truth and lies" [6].

This, by the way, is also recognised in the society from the novel "Profession", where the computer chose the optimal profession for a person and put the appropriate "educational tape" in their brain. "It is known how to analyse intelligence… But it is not known how to determine whether a person is capable of creative thinking. This is too subtle" [22]. And further: "... and there is no such device that would help to single out the only one we need out of ten. The tenth must prove it themselves" [22]. Including demonstrating their "indiscipline" by refusing to accept the instructions of the "learning tape". A person must prove their ability to cognise because they are their only subject, even though "*they cannot* by nature *be what they should be*" [32]. Whether it becomes such or not depends not on the computer but on the learning system in which this computer is included as a "link between student and teacher" [3].

There is no answer to the question of what digital learning teaches without first understanding what kind of result the entire learning system is "programmed" for. If this is a person as a recipient and performer, then their connection with a computer, without which digital learning is impossible, is carried out utilizing an individual learning trajectory formed (the key question here is "by whom?") using artificial intelligence. In fact, by classifying their knowledge, abilities, and preferences (operating with data about them) as "correct" or "null" (meaningless and useless) from the standpoint of those "initial postulates" that are written (again, by whom) in the programme that is used to calculate the specified trajectory. If it is a person as a subject of cognition and decision-making, as noted by Zb. Brzezinski [16] on the "area of development" and "desirability of a particular form of public organisation", then its connection with a computer presupposes the development of a person's ability to "learn independently and continue to learn further" [6]. The abilities, which include the ability to formulate a purpose and set a task, to make a "deliberate choice of the

range of problems to be solved", to establish "the order of solving issues" [16], and the ability, as noted above, to comprehend computer-calculated solutions adjusted for the situation as circumstances of the place and time of a "particular reality". And since the necessary element of the latter are always people whose joint actions are an important condition for the feasibility of any solution, and which only a person can coordinate (which is perfectly shown in A. Azimov's "How to catch a rabbit" [6]), these also include the ability to organise and discipline. Such a person will not expect one or another "individual educational trajectory" to be developed for them. For them, a computer is just a tool that takes over the routine component of cognitive activity but not a source of sanctions for creativity like: "You can create. So, create" [22].

The line between the two concepts of human involvement in digital learning rests on the person's understanding of their natural abilities and their formulation of this understanding with the setting of the criterion "correctly". Let us recall the words of Susan Calvin, the main character of A. Azimov's "Female Intuition", regarding the evidence of the robot Madarian, where the driver appears and which her colleague Peter neglected. "Your mistake, Peter, was that you decided that the witness <...> must necessarily be a planetary scientist. You divide humanity into categories and despise most of them or do not take them into account. A robot cannot reason like that" [6]. And further: "The robot does not make distinctions. All people are absolutely equal in it <...> For you, the driver is an animate belonging of the car, that is all, but for Madarian it was a person and a witness" [6].

A person should be given a job "that is more in line with their body condition and inclinations" [33]. In the novel "Razor Blade", I. Efremov [34] drew attention to the insidiousness and attractiveness of this kind of teaching concept: "And the thing, it seems to me, is this. The creation of combat and working automata is a very expensive thing. There are cheap, almost gratuitous wonderful biological mechanisms at hand – people". In this case, the person turns out to be an accurate and unquestioning embodiment of the "lessons-tasks" developed for them.

If a person's abilities are natural in the sense that everyone must have them, then training means naturally necessary, mandatory, and indisputable mastery of them as elementary for each person (subject to mandatory development), regardless of their further professional specialisation. Considering that "a person ... has and should have the ability to think" [35], this turns out to be the ability to cognition as a search for a non-standard (not provided for in the computer programme) solution in a non-standard situation that goes beyond the asymmetry of "truth and lies". And a computer, even if it is "capable of perceiving some properties of space very subtly" [35], is only a tool here that, like any other tool, has limitations "in terms of functionality" [36]. And this limitation is conditioned upon the fact that the computer begs a person for disposal and has "no choice but to submit to the will of a man" [35].

The bundle of "Computer – Fallom", as evidenced by the ending of "Academy and Earth", is the most dangerous for humanity. (Arguing about the importance of the unity of humanity before the aliens and claiming that "there are no enemies among us yet," Trevize does not notice the gaze of Fallom, feeling a "sudden doubt", which, however, he neglects [35]).

The connection between a person and a computer is represented by "Trevize – computer", in which the leading role belongs to Trevize. For the latter, a computer is, paraphrasing M. Lifshitz [5], an extension of their own brain. However: "In the case of the computer, Trevize, owned the situation utterly and completely. The computer was just a submissive, obedient creature". Adoption of key ones, such as Zb. Brzezinski considers concern the "desirability of one or another form of public organisation" of decisions – the prerogative of a person, not a robot. After all, no matter how perfect the "brain" of the latter is, it is a "human creation". Therefore, "a single word of Trevize, a human being", formed based on his "own "something new" – new thoughts", becomes decisive in the further course of human development, and, thereby, can put an end to Daniel's work, despite its duration of twenty thousand years.

"Being able to rely on these new computing methods and media increases the social significance of human intelligence and the urgent need for education". And the other side of this possibility is that the computer should simply do the work assigned to it by the person, carry out its orders, and all its (computer's) attempts to make "reasoning" deserve only leniency from the person [37]. This moment is ironically played out in the dialogue of two characters of A. Azimov's "Logic" about the robot Cutie, who was a "reasoning robot" and assured those that people are "inferior beings <...> who have exhausted the meaning of their existence".

The ability to produce "new thoughts" causes Trevize's dissatisfaction with his other ability – "to know without thinking". "Yes, it bothers me. I do not like to act under the influence of some inexplicable impulse. I feel that there is some reason behind the impulse but ignorance of it makes me think that I am not the master of my own consciousness – something like quiet insanity". However, the "robot student" can "know without thinking", that is, without delving into the essence (in fact, without understanding) of those cause-and-effect relationships, the logic of which is reconstructed in the logic of reproduced knowledge, there is no doubt about it. And all because a computer cannot correct errors "on the merits of the issue", "look below the surface", and "make judgments about abstract ideas" because both the "essence of the issue" and "abstract ideas" are a product of cognition. However, as it is said, why remember, know, and learn something, if at any time one can get the necessary information just by turning on the computer and connecting to the Internet. But if one does not join, then the "ability to know without thinking" will disappear. And without it, a person did not have the ability to think. The opposite of this is Trevize, stating: "Whatever abilities I have, they stay with me wherever I am. Is that why people are the only ones "whose actions matter for the development of history and society", and only they can resolve the contradiction associated with the "Zero Law of Robotics".

5 Conclusions

The purpose of the research is to analyse the concept of digital learning, and to outline the potential threats of the dominance of "digital learning" for human cognitive activity. Thus, if the human brain is not affected by the "Three Laws of

Robotics" and a person perceives a computer as an educator, not as a tool, then the dilemma of the "Zero Law of Robotics" associated with the choice of a new form of public organisation and ways to establish it can be solved by classifying that "way of thinking" that is compliant with the idea of a "single human organism" as "correct", and all other intellectual projects (and, accordingly, their supporters) as "false". "Another asymmetry, in addition to the moment of truth and lies", related to how to understand this very unity of humanity, eludes the one whose brain is brought up by a "positronic brain" and embedded in them.

The key to the issue of digital learning is the understanding of natural (individual) abilities, the data of which is operated by a computer programme. If these abilities are natural in the sense of their detection because of selection as necessary to perform a certain kind of work reduced to a "system of tasks and lessons" dictating a certain order and pace of movements, then teaching means training a person to maximise the use of these abilities to the extent that they are already established. And the "individual learning trajectory" is most welcome here. Its prototype is still visible in F. Taylor's words on the obligation to train all subordinates in the fastest ways of production, which, according to his conclusion, makes sense if the movements provided for by one or another type of work are best placed in a person's "natural abilities".

Which of these concepts of digital learning will prevail? It all depends on which "initial postulate" the training system is guided by in general. And: "The alternative here is inexorable. Either technology (cybernetic or non-cybernetic) is considered only as a means, an instrument for fulfilling human goals, or it turns into an end, and a person – into a means, into raw materials". Without discussing this alternative, without an open and honest conversation about it, all the arguments about digital learning are incomplete and, in some ways, even misleading.

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