ACTIVE LEARNING FRAMEWORK CONSULTATION FORM

The consultation is part of the Novigado project's O2 "Active Learning Reference Framework".

How should active learning look like in a school? What would you recommend to teachers?

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Challenges posed by the dynamically developing civilization, social, economic and political problems, as well as specific global experience, such as the pandemic of COVID-19, are conducive to asking once again questions about the contemporary role of formal education and tasks of school. We prepare young people to function in a world that we cannot fully predict or describe in detail. We can identify civilizational development opportunities, we can determine threats and crises, but the future remains something that we still cannot predict precisely.

However, a number of educational research and social diagnoses conducted locally and internationally indicate a crisis of the traditional school model, hierarchical teacher-student relationship, and the erosion of the belief that the content of school textbooks as well as the teacher knowledge are an important and significant source of information about the world. The way of measuring the effectiveness of school education, subordinated to the set educational standards, checked by external national or international tests is also subject to criticism.

Nowadays, two trends can be identified as far as formulating goals of school education is concerned. The first of them, more common and enjoying more followers, is the standardization of educational practice, achieved by the implementation of top-down core curricula that strictly regulate the principles of school functioning, systems for assessing the effectiveness of education, with particular emphasis on external tests, which are subject to measurable standards, and a strong need to place educational achievements on the levels of the ranking ladder. The effect of this approach, especially close to education management authorities, is to limit the diversity of educational concepts, depersonalize education, and subordinate education to specific norms, which is supposed to improve the control over the achieved effects. The destination point is defined at the beginning of the education process, because the achievement of these "expert goals" is the basis for assessing the value of the teacher's pedagogical work and the effectiveness of the educational institution. The educational system operates under the pressure of these target activities and in the fear of not being effective enough to achieve the set goals (M. Foucault: 2009) Język, Dyskurs, Społeczeństwo, 2009 PWN.

The other trend common among educators, education researchers, psychologists and sociologists who analyze the conditions for the effective functioning of education, is a focus on diversity and multidimensionality of our society. In education, this means an individualized, personalized, holistic approach, taking into account different styles of student development and educational needs that manifest themselves in various contexts and conditions, which altogether create a specific space for the functioning of education (Taguchi 2013: 19). This results in promoting learning theories focused on the child and revealing the child's potential,

stimulating and supporting student independence and being active in the process of constructing knowledge through critical thinking and developing skills through social interaction.

What are some of the key characteristics of active learning in contemporary school? What competencies does active learning require on the part of the teacher? What effects are achieved by promoting active learning and what teaching methods and measures support this model of education?

The traditional approach to education, referred to as the transmissive model of organizing the learning process, can be characterized by a hierarchical teacher-student relationship and the dominance of strategies close to behavioral approaches. Teachers plan individual educational activities, anticipate the possible reactions of their students, ask a series of questions that they will not always get the answer to in the classroom, but then they will answer it themselves and think that they have achieved the required educational effect. Students in this model are passive participants of the teaching process which their teachers have planned and which the teachers try to fully and conscientiously implement. In this way, children tend to develop the attitude of waiting for ready-made solutions, interpretations of texts, understanding of the artistic message that their teachers present to them with all diligence and commitment. Student activity during the lesson is limited to attempts to understand the teacher's message, waiting for the proposed action strategy, and then using it and exercising in a series of typical tasks. Active learning in this approach means undertaking task-exercises, which are viewed as a kind of training in consolidating knowledge and skills provided by the teacher. It's reproductive activity in which students are supposed to adopt their teacher's way of reasoning. Children learn to perform tasks in exactly the same manner their teachers perform them.

Another educational model, i.e. the constructivist approach, implies a change in the role of the teacher and students. It assumes that children learn in an active way, which in the case of constructivism means inviting students to the process of constructing knowledge. Teachers create educational situations that pose a challenge for students, enter their sphere of immediate development and allow for research and exploration activities, searching, formulating hypotheses and verifying them while solving problems (Wygotski:1989; Wood: 2006). Students in this model do not just wait for the share of knowledge from the teacher that will allow them to solve the problem, they are not expected to assimilate this knowledge prior to facing a problem-solving question, but they are put in a situation where they can say: I do not know how to do it, but I will try. They can experiment, look for their own solution strategy, make mistakes, draw conclusions, and actively participate in the process of gaining knowledge (Klus-Stańska, Szczepska-Pustkowska: 2009). In the process of active learning children are not supposed to take over their teacher's way of thinking about the world, but they gradually and consistently learn to create their own strategies, individual interpretations and negotiated meanings. Crucial aspects of this model of education and of active learning, include learning through social interactions on various levels: between students, between the teacher and children, as well as between school and the external environment. An integral component of active learning is the process of communication, which requires the teacher to be able to participate in conversation with students, listen to them, encourage them to argue, explain, and convince others to their own way of thinking. The teacher actively participates in such a conversation, but does not impose their way of thinking, but tries to understand the student's way of thinking, and asks questions in order to better understand the student's way of thinking.

In terms of constructivism, active learning is about the individual discoveries which children make on their own or in cooperation with adults and peers, where building meaning in the process of communication plays an important role. The role of the teacher is to create a rich learning environment, create a kind of scaffolding in communication (asking open questions, provoking thinking, arguing, explaining, persuading, negotiating). The teacher provides language support, actively accompanies children in the process of building understanding in social interaction but does not provide direct instruction.

Another approach to the learning process which also implies active learning is connectivism. This trend is a reaction to the dynamic development of information technologies, computer literacy, and digitization of culture. Connectivism assumes that in the era of fairly universal access to various sources of knowledge, active presence of students in the digital world as well as in the learning process, it is no longer a priority to memorize information transferred from teachers to students at school, but rather it is crucial to master the skills of finding relevant information, of knowing where to find individual pieces of information and how connect them together. The effectiveness of learning depends on being able to create connections in different ways, look for relationships between concepts, and finally to take into account different opinions. Learning is perceived as a process of active creation of knowledge, not just its acquisition and consumption. This requires critical thinking and independence in making decisions about the content of learning. The goal of the learning process is to support the development of thinking rather than collecting information. (Downes: 2008; Siemens 2005). In the connectivist approach, knowledge is created by engaging in the thinking process in a network, and is represented in various ways, although the dominant type is iconic and pictorial representation. This type of approach to the learning process changes the perspective of thinking about active learning, the role and tasks of the school, understanding the role of the teacher, and student activity. The teacher becomes the organizer of the students' learning experiences, which are characterized by deepened knowledge of digital culture and the ability to use it, but in a creative and critical way.

It should be noted that the use of ICT and its extensive introduction into school and educational practice is not tantamount to the actual implementation of active learning. Information technology is only an instrument that can be properly used to serve the concept of active learning. But first one needs to prepare a methodology for organizing the learning process that provides active learning, gives students a free hand in decision-making, provides independence and the opportunity to experience, and only then to introduce tools related to information technology that will allow to put this methodology into practice. However, examples of how the use of ICT in education consolidates the traditional model of transmission learning, but implemented in a more attractive way can definitely be seen too often. As M. Fullan emphasizes:

> It is necessary to revise the trend in which new technologies are winning the race against teaching methods. The good news (usually) is that technology lives its own life. New applications of ICT are emerging, it is becoming cheaper and more accessible. In recent studies, learning and teaching methods are given more and more emphasis, so we will be guiding technology, not being left at the mercy of this powerful, but by its nature purposeless phenomenon (Fullan: 2011, s. 19).

The way communication is carried out in the school class is particularly important in the organization of active learning of children at various levels (Żytko: 2015). The traditional model

of the hierarchical relationship results in a monologous type of communication and relationship: The teacher issues a command / asks a question - students responds by answering / undertaking the assigned task - and the teacher in turn assesses the results of students' work.

Another interesting approach to education is the concept of dialogic teaching, developed in the last two decades of the 21st century by the English education researcher Robin Alexander (2008). He emphasizes that speaking plays a key role in building knowledge through social interaction, but the quality and way of using communication should be defined in a particular way. The student is invited to participate in a discourse in which autonomy in thinking is ensured. Dialogic teaching taps into the potential of speaking in the process of developing students' interests, but also in stimulating thinking and understanding, sharing ideas and individual strategies for problem solving in various areas. It provides the basis for participation in a learning and teaching process that is democratic. According to R. Alexander, this is not only a way of supporting students' cognitive development, but through the dialogue understood in this way, social and emotional development is activated as well.

According to R. Alexander, the value of dialogic education is reinforced by the results of psychological research and supported by the achievements of neuroscience from the last few decades. They point to the importance of developing language and thinking relationships, and in particular, to expanding children's ability to use spoken language in kindergarten and school in social interaction from the earliest stages of institutional education. In this type of active learning, questions are structured to elicit informed answers, and the formulated answers provoke further questions and are perceived as elements which co-create dialogue not as the final goals themselves. Individual teacher-student and student-student exchanges are linked by a joint process of finding a solution.

Here is an example of communication in a maths class in grade two that illustrates the analyzed phenomenon:

> JAKUB: Can any mathematical problem be solved?
>
> N: And what do you mean by "any mathematical problem"?
>
> JAKUB: For example, like 6 - 8 =?
>
> N: Well, do you think this problem can be solved? (long silence, children think)
>
> KASIA: It will be -2
>
> D: Could you try to explain to everyone where the -2 came from?
>
> KASIA: Good. It's like that: I have 6 lollipops, but I have to give Janek 8 lollipops. I now give him these 6, and I still have 2 to pay. This is like a debt, so it is a minus.
>
> MIKOŁAJ: It means that when I subtract a larger number from a smaller number, the result will be on "debt", that is, a minus. (Bydgoski Bąbel Matematyczny: 2014)

This interesting exchange of questions and answers is an important example which illustrates the phenomenon of active learning in the process of language communication. The dialogue was provoked by the student's question and then by the teacher's answer encouraged the students to look for the answer, not just to provide the answer and finish the communication process. This in turn encouraged the other children to look for answers. Kasia gave her answer,

but the teacher's next question motivated her to give an exact explanation, and this in turn encouraged the boy to build his understanding of the concept of a negative number.

Active learning requires, above all, democratic relationships in the approach to the learning process, and in particular to communication during school activities. Thinking is perceived as an individualized form of interpersonal communication. Therefore, communicating with the other children and the teacher and communicating with the world form the basis for active learning. However, this is only possible if communication with the child and between children takes place on the basis of reciprocity and respect for the individual point of view of students, their personal knowledge and faith in the children's ability to co-create and to negotiate the integration of knowledge based on a variety of educational experiences.

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