**Module IV: Educational project as a method for integrating knowledge and didactic cooperation**

Topic 4.2 – The role of a teacher in education that uses project method

<https://www.youtube.com/watch?v=geeoy3BMmE0>

**THE ROLE OF A TEACHER IN EDUCATION THAT USES PROJECT METHOD**

The use of project in everyday life of students and teachers becomes bigger and bigger, because of growing importance of projects for the functioning of schools and universities. This led to vast development of the field of education which is called project management. Project management methodologies are generally guides for teachers and what they would like to convey to students.

The most important tasks of the teacher, who leads the group, include:

* selection of appropriate methods,
* passing to group substantive material,
* improving students' competences.

In recent years, changes in the choice of teaching methods by teachers can be observed. The project teaching method is becoming more and more popular. An important element in leading the group through the project, is the approach to the team and the organization of its work taking into account individual potential of each of its members. The implementation of the principle of constant cooperation of all students and the increase in the level of trust and freedom of work obviously affects the structure of the work, and also the key aspects of the success of the educational project . Managing the group and learning through the project 's is a challenge for the teacher, whose role is to enable and help the group in implementation of the project. In this method of teaching, the teacher should be focused on delivering results, so the task is to create a team capable of flexible reorganizing and changing their roles in group. The teacher's task is also to create a team spirit of cooperation so that team members are characterized by a special level of commitment and are ready to make a special effort. This is the most important element of project learning, as the project team is the most important factor in the success of a project. Equally important as the involvement of team members is the effectiveness of the teacher's work. It depends on the allocation of work for students, their level of motivation, preparation for work and assessment of performed tasks.

The first basic thing that working with the educational project method teaches is flexibility. Project work forces the continuous updating of knowledge, raising the level of competences and social skills of students. The method of teaching through an educational project may become a permanent element of running groups of students, but it requires the acquisition of new competences and continuous education of teachers and lecturers. When working on a project, it is very important to be able to select the appropriate units for the team, so that each of them has a chance to develop their competences, while taking an active part in creating the final design work, using already available resources.

**The role of the teacher:**

1. Support in narrowing down the search for the project topic
2. Creation of a contract containing the rules agreed in the group
3. Is a mentor who advises groups when looking for information or carrying out tasks, he does not take the initiative himself. The form and time of support are specified in the contract
4. Indicates the form of presenting the results and ensures the appropriate atmosphere / conditions
5. The evaluation of the implementation is carried out by himself, taking into account predefined rules or appointed by a team from other groups.

**During work, the teacher:**

1. He should be actively interested in the work of the groups, consult with them the status of work and support them in formulating ideas. Worth using, with: What? How?;
2. All consultations are carried out in accordance with the principle of independent work of groups, allowing them to experiment;
3. He asks questions (e.g. Why do you think so? How else? What do you think about?) And provokes discussions about the solutions and ideas proposed in the group. It encourages drawing conclusions and forming opinions, but also listening to the opinions of others;
4. Adapts his questions and the form of consultation to the group's knowledge and skills - initially supporting the introduction to work in the design method, and then based on the group's experience
5. Observes and analyses the abilities of people in groups
6. He also actively introduces his assessment of the situation or the implementation of tasks by the group in the form of his own comments

**Project as a method of learning through experience**

Carrying out the learning process is a challenge for every teacher. Each of them knows how important it is to match the methods to the age group. The biggest challenge for the teacher may turn out to be adult learning, due to their already acquired knowledge, their own perspective, which they can often defend, and the calculation acquired in adulthood: whether it will be useful for them or not, or the belief that they can do something better than in the way suggested by the teacher. An effective method of teaching adults was proposed by David Kolb .

Learning through experience theory continue to have a major impact on the conduction of workshops and classes for adults. Kolb theory differently describes the teaching process and what is it about. It differs significantly from the approach of traditional approach, which describes learning as acquisition of fixed habits. Until now, schools assumed that the better learned the more permanent habits are, and thus they less vulnerable to modification. The author of the theory of learning through experience claim however, that the immutability of behaviour and not modifying habits or approach to matters under the influence of experience is a sign of a lack of learning, not its effect . The theory at the tame of its creation, was extremely controversial and aroused many doubts, standing in front of even well-known concept of education, which bases on empirical philosophy of John Locke's - based on the belief that the elements of consciousness and ideas remain the same and changing judgements are only the reflection of their combination . This concept sees knowledge as storage of information, habits, etc., and the learning process is treated as making this space larger so that you can store even more items. On the other hand, learning outcomes can, according to the traditional theory, measure the size of the "storehouse" by counting the elements mixed in there, i.e. by reconstructing the acquired information. David Kolb has revolutionized the approach to conducting the learning process by introducing proposal of constant modification of acquired experience through the acquisition of new ones. The author argued that ideas are not constant and unchanging elements, but are rather formulated and reformulated on the basis of acquired experience. Kolb emphasizes the importance of a current experience taking place at a specific point in time and the modifying effect of feedback in the learning process. He also highlights the processes of assimilation and accommodation of experiences. David Kolb states in his theory that new ideas do not follow a 1:1 scale, like signs on the white sheet of the learner's mind, but interact with ideas already adopted earlier.

According to Kolb, the learning process is the main process of adaptation and takes place mainly in the interaction with the environment, and the knowledge is acquired through the transformation of the acquired experiences. Kolb proposed that the learning process should be perceived as a certain cycle in which the experience of individuals and its analysis play a key role.

The Kolb cycle consists of 4 stages:

* ***Concrete experience.****The learning process begins with a specific experience taking place here and now. This experience agrees with or contradicts existing views of the learner.*
* ***Reflective observation.****Now this experience is being analysed. Followed by data collection, observation and reflection - experienced that is recognized from various perspectives.*
* ***Abstract conceptualization.****At the next stage learner continues analysing data and begins to learn from experience and which he participated in. He creates generalizations and some of his own theories that integrate his observations into a logical whole. The process of internalizing what he has learned from concrete experience begins.*
* ***Active experimentation.****The final stage begins with the learner changing their behaviour. This is the stage of experimenting and testing new knowledge to see how the newly developed theories work in practice, in new situations, in problem solving and in decision making. (Łaguna, 2008, p. 39)*

The cycle may follow one after the other. Each attempt of trying out new behaviours will deliver to learner new experience, which may initiate a next cycle. The cycle is so flexible that it can start in any of the four stages and continue in a spiral, but usually the learning process is started through concrete experience. The adoption of this model of action by the teacher requires some changes to the teaching process. The method of teaching through an educational project enables a group work cycle, thanks to which learning is to become more effective and better memorized in students'memories. Traditional approach to teaching assumes that the first step should be to provide a certain theory, and when the learner learns it, he can turn into practical step. David Kolb's concept suggests the opposite . Why? Because for an adult learning through a project, it is easiest to adopt the information he has discovered from his own experience. In order to enable the learner to take part in such a cycle, he firstly must be given an opportunity to live without indirect experience, so that he can then draw conclusions based on it and relate them to the theory. Thanks to this, he will be able to understand better what he has experienced, and the subsequent stages of the cycle will allow him to generalize the acquired knowledge and transfer it to other situations. Learners at a later stage can relate a personal experience to a broader theoretical concepts, which will help him better understand them. In this way of learning, theoretical knowledge is no longer so distant from personal experience, because it is related to what the student is or has been personally involved in.

**Student individualism as an important factor in teaching through project**

For years, theory has been associated with something that should be learned by heart. In fact, it is to give a student chance to understand better in what he is participating and what often is a part of a larger processes taking place in the world. That is why, it is so important that the teacher could introduce the student to the reality, in which he is no longer given ready definitions or classifications, but starts from direct experience and only after understanding and analysing it, he can move forward to another stage – filling in the content with theory. It is a path from concrete to theory, from experience to generalization, and allows you to build your own concepts based on a confirmed theory. The role of the teacher in guiding the group through the project is important as it aims to guide the students not only through the teaching material, but also to create an environment for experiencing the experience, taking into account individual learning. The author of the theory, David Kolb, noted that most people develop their own learning style that focuses on a one from four elements of the cycle. The style is influenced by:

* genetic equipment,
* acquired experience,
* characteristics of current environment

On this basis, we prioritize some learning abilities over others. Based on the learning styles testing method, David Kolb, Peter Honey and Alan Mumford created a method called "Learning Styles Questionnaire" which found a wide application. Learning styles are included in project work, and even more so in teaching through an educational project, in order to provide the student with the most effective form of knowledge delivery. The authors distinguished 4 learning styles:

***Activists****– preferred by activists, empiricists - people who learn best through action,  when they encounter new experiences, new problems; people open to change;*

***Reflectors****- it is preferred by the so-called analysts, reflective – the prefer collecting data, searching for information, considering situations and drawing conclusions;*

***Theorists****- they learn best, seek inter-relationships and dependencies, like analysing theoretical models, combine observation in complex, logical whole;*

***Pragmatists****– they are interested in practical application of new knowledge and its practical use.*(Łaguna, 2008, p. 43)

The impact of the diversity of learning styles on the preparation of the didactic plan requires to know learning styles preferred by participants. This will help to better align specific tasks in the educational project to need of the group. In guiding students through the project, it is important to guide them through activities that allow them to experience situations that can be translated into new information.

* **Activists (empiric)** - prefer learning through new experiences, solving problems which have to be solved. New jobs are challenge for them, therefore, they benefit from active forms of learning , e.g. exercises, games,, simulations etc. They freely present their ideas, but traditional forms of teaching, such as: lectures and their theoretical character are a problematic for them. Interpreting many chaotic information may be problematic for them, as well as working in accordance with strict instructions. The necessity of repeating the same activities, requiring precision may be boring for them, they find joy and happiness in cooperation with others.

The teacher in the project can assign them : tasks that require presentation of results in the forum, group cooperation, activating and motivating the group, allow them to propose their own forms of performance and are not put in a rigid theoretical framework.

* **Analysts ( reflective )**prefer tasks in which they have time to reflect on action, analyze what happened, and observe the situation from the side . They like to have time for consider the problem, to prepare for the performance or on gathering  information  necessary to complete the task and carefully doing their job. They make the best decisions without time pressure and are happy to use group support. They have difficulties with tasks that require quick execution, improvisation and action without prior planning, they do not find themselves in the centre of attention, being a group leader or in the process of making decisions based on limited information.

The teacher in the project can assign them: tasks that are not under time pressure, that require precision, accuracy, focus on details and group collaboration.

* **Theoretician -** find themselves best in jobs that cognizable content are part of a larger theoretical model. They prefer jobs in which they have appropriately high desired of time to get to know relationships and dependence desired receivables between ideas and ideas. They learn most easily when they receive information in advance about the goals and tasks and when the situation is structured. They like to ask questions, analyse the causes of successes and failures. They are convinced by issues that emphasize rationality and logic. Situations involving emotions can be a difficulty in the learning process. Uncertainty and unclear rules of conduct in a task, or situations in which there are many different possibilities of action or which cannot be fully explained, constitute an obstacle to their operation. They don't take on tasks that don't have a clear goal. Being in a group does not favour their sense of comfort in the learning process.

The teacher may assign to them  in the project: tasks which have clear objectives, require familiarization with extensive theoretical material, ordering the whole operation syststem and error analysis for already proposed solutions.

* **Pragmatists**– learn best when they see the benefits of the solution of the problem. They draw attention to the practical features of  issues, to the possibility of trying out new techniques and obtain feedback from experts. They focus solely on practical problems. The presence of a group motivates them to work because they like to compete and compare their results with other team members. To do a task properly, they need practical and clear directions on how to get the task done . Their motivation for the job is low at the moment in which there are no specific practical applications and when presented content are far from reality.

The teacher in the project can assign to them: tasks that bring quick and tangible benefits, require improvisation and quick decision-making and finding the application of the theory in practice.

Teacher should be aware that individuals can learn differently and a group of students will always be differentiated in this respect. Therefore, you also need to vary your working methods, and the project method is one of the best ways to do this. Committing to teaching according to one specific technique will be a limitation in the teacher's work. Tailoring to the diversity of styles of learning prevailing in the group will allow to plan classes so that the same content can be taught in different ways and by different methods. Taking into account the individual predispositions of the student - this is the first step in preparing the group for learning through an educational project, and thus through experience. Another important factor is the presentation of the goal of activity, assigning tasks and establishing the principles of cooperation, which are the basis for introducing the group into the project work mode. A good way to collect these rules is in a form of group discussion called a contract.

**Contract**is a commitment drawn up during a joint discussion by the teacher / tutor and participants of the project group and signed by all of them. It contains: a project plan, information on where to get knowledge from, developed time frames for each stage, and methods of evaluating the performance of tasks. The next element is to construct a **project description**as a homework assignment for the participants. Such a description includes a precisely defined topic, clear and verifiable goals, the way in which the project will be carried out, assuming in previous discussions potential difficulties, results or effectiveness, as well as the roles and division of responsibilities of the participants. Ultimately, the description is presented to the teacher and analysed, corrected and accepted by everyone.

**Stages of coping with the problem:**

1. **Noticing and getting to know the problem**
2. **Gathering information**- using all available sources (observing, getting to know the available knowledge on the subject, previous experiences, etc.) and where we can get help: people in the group with the best understanding of the problem, family, third parties and neighbouring institutions (state, municipal), schools, experts, etc.
3. **Precise definition of conditions for dealing with the problem**(e.g. brainstorming)
4. **Evaluation of selected solutions**in accordance with: resources, possibilities, reachability, threats, costs
5. **Determining the most attractive solution**- by active participation in the discussion of all participants with full use of their skills, predispositions, intuition

The lecturer introduces the above rules in order to organize the work of the project and transfer good practices of cooperation in the group. Thanks to this, each team member, regardless of the assigned tasks, has an influence on the solutions that will be used in the project. Each new problem or task should involve the entire team, and the teacher's task is to structure each discussion in an orderly manner.

**Steps in problem solving:**

* Determining the problem and possible solutions by the teacher,
* Presenting the reason why the problem should be solved
* Defining the rules of work:
* We count on a large number of proposals,
* We don't judge them
* Anyone can suggest something
* We present the proposals individually
* We can build on previous proposals
* We report or wait for our turn
* Everything is recorded
* We have a limited time for this
* Defining the role of person making notes
* Solution proposals
* Time for clarification
* Selection of inappropriate solutions
* Evaluation and scoring of other solutions
* Choice justification

The educational project allows the student to experience situations in which he will be able to discover the sense of applying the solutions proposed in the group. It is one of the most effective methods of teaching adults as people who, in many situations, make decisions based on their own experiences and beliefs. The teacher's task is to create a project environment in which each participant will find their place, and their individual predispositions will be able to find their application and add value to the group.

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