Activating Methods: Tools To Increase Quality And Effectiveness Of Tertiary Education

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Abstract

Tertiary education must respond to the contemporary changes that take place in our society. Such changes do not touch only transformation of the content of school curriculum, do not result only in new forms of areas of study, in new ways to organise education and evaluation of students' work, in relations between students and their teachers, but they also bring variations in the usage of teaching methods. Knowledge explosion, its inclusion in learning and immediate practical efficiency – it all requires a new way of university preparation. The output of studies thus is a definition of graduates' competences that involve critical and comparative thinking, problem solving, creativity, team cooperation, and communicativeness.

Appropriate teaching methods enable university teachers to develop the above mentioned students' personal qualities and to extend theoretical knowledge of a certain area of study. They create conditions in which a university teacher and student enter a relationship marked by a mutual respect, regard and quality partnership that enrich both partners in a professional and personal way. By selecting and choosing appropriate teaching methods, a university teacher may directly affect the quality and effectiveness of tertiary education. In the complicated financial situation that takes place and the reforms that Slovak universities are undergoing, teaching methods may be considered tools to increase the level of quality and effectiveness of tertiary education. Activating teaching methods do not usually require raising financial resources, ensuring special teaching aids, technologies, nor creating or building special classrooms. We, nevertheless, ask a question whether it is necessary to search for new teaching methods and techniques or whether we could manage just with the standard methods that have been innovated within the area of education by active and creative teacher's approach. These are the phenomena that we tackle in our paper as well as the results of our research that the paper offers.

There are many discussions over quality of education. However, there is not a clear and single-valued definition of this term. It is due to the fact that the matter of quality of education cannot be understood only within one body of science. Quality of education is influenced by many factors, such as financial and economic facilities (economics), personnel (pedagogy), life-long education of the personnel (andragogy), family and its social-economic status (sociology), teaching and learning styles and their effects on mental processes of the student's personality (psychology) and also students' social-pathological behaviour in the process of education (special pedagogy). Quality in our terms may be therefore understood as any attempts to reach its high level in order to get desired results. J. Průcha (2002, p. 360) says that the level of processes or institutions may be determined by the school curriculum and thus it is possible to measure and evaluate quality objectively [1]. The role of university teacher in the process of quality improvement involves improvement of his/her educational activities during teaching. A teaching method becomes an essential factor to measure the quality of the educational process.

The term effectiveness is quite a frequent category touching various areas of social relationships. Effectiveness of education belongs to the current issues related to the educational process. S. Uhrín (1994, p. 23) defines it as a relation between the results of education (changes in people's mental awareness and behavior) and the effort spent on reaching such results [2]. The importance of

effectiveness is to gain a model of activities that enables students to acquire new facts in the form of knowledge, skills and abilities within the shortest time, the least effort, the most practical usage of all tools and with the attempt to keep the highest quality level. However, effectiveness of education was born together with the didactics. Already J. A. Komenský (1991, pg. 6) suggested that our teachers should teach less but the students should learn more; that less stress, aversion and purposeless work should be at school but more free time, enthusiasm and guaranteed success … [3]. In his idea, effectiveness is described in a full extend and could be applied in the present situation as well. In the tertiary education, it is possible to study the effectiveness of educational process. Two forms of university education – lectures and seminars – are most frequently used teaching methods and we can do research on their effectiveness. We assume that this is the part that the teacher may influence directly in order to gain the best results of his/her work. By using adequate teaching methods the teacher could transmit knowledge and motivate students to the further study, to individual approach to the problem, the teacher could also create a positive relationship towards a profession or develop creativity.

The teaching method is a way to reach educational aims or the procedure for the student to gain the desired level of knowledge. The aim of tertiary education is a complex development of the student's personality through the educational process. In comparison with the lower grades of education, university students develop their personalities mainly through self-study that is why the method that activates the student's personality is considered most appropriate. Methods could be divided into two groups:

1. Standard methods – when the teacher tells facts the way he/she understands them or how they are quoted in textbooks (lectures and explanations). Those methods develop especially cognitive part of the student's personality.
2. Activating methods - described as teaching procedures that enable the student to reach the goals while taking into account mental processes such as thinking and problem solving (Maňák – Švec, 2003) [4]. Activating teaching methods in tertiary education:
    - develop students'cognitive processes, analysis, deduction, synthesis, critical and comparative thinking;
    - develop students' communicative abilities through verbalization of their ideas, opinions, stimuli, solutions and thus their abilities to express their views, to formulate correctly questions and arguments;
    - teach students to react emotionally, develop their empathy and personality acceptance;
    - develop the ability to cooperate with other members of the working team;
    - teach students to set adequate evaluation criteria, appropriate techniques of evaluation and self-evaluation;
    - develop creativity of students'personalities;
    - increase motivation to study and to the chosen profession;
    - improve the educational atmosphere, help create confidence, trust and participation within formal relationships.

Activating teaching methods in tertiary education such as a problem solving method, discovery method, poster, case study, heuristic methods and many others are used to reach the aim of university education. However, we cannot say that standard teaching methods are not necessary or inappropriate. University teachers choose their methods in accordance with different factors that direct the choice. A standard method when selected in an appropriate way could also be effective and developing students' personalities, however, it needs to be modified. University teachers should select their teaching methods related to the following:

- form of teaching (lecture, seminar, practising, consultation);
- study group (year of study, number of students, motivational aspects etc.);
- content, aim of the lesson and number of lessons;
- room facilities and material equipment;
- teachers' own pedagogical knowledge, abilities and skills.

To test the effectiveness of the selected method, a reliable criterion may be the level of

knowledge acquisition. We chose **experiment** to test effectiveness of teaching methods. We proceeded two experiments with their aims to find out effectiveness of standard and activating teaching methods used during lectures and seminars and to determine the amount or extend of knowledge acquired and students' ability to use it within model situations simulated practical lives. Experiments lasted one semester. We prepared pre-tests and post-tests (knowledge test and a model of problem solving situation). We assumed that students who had been taught through activating methods would receive more theoretical knowledge rather than those to whom knowledge had been presented through standard methods under the same conditions. Moreover, we assumed that activating methods would help students offer more practical solutions.

The first experiment concentrated on activating methods during seminars and the second one during lectures. In our experimental group, we used activating methods (heuristic, case studies, simulations, brainstorming, virtual dialogues, poster lecture, discussions, etc.). The students in the second group, the so called controlling group, were taught through standard methods such as presentations of their seminar works followed by discussions, method of systematic explanation with the use of teaching aids. The same knowledge test was taken during pre-testing and post-testing. The test consisted of 41 closed questions – multiple choice of three possibilities. After the comparison of the finings we can say that the students (subjects) of the experimental group extended their knowledge by 8.01% more under the same conditions (financial, material and spatial) than the students of the controlling group. The findings show that activating teaching methods are more effective for knowledge acquisition; in another words, students who gain knowledge through activating teaching methods during seminars learn more than those who are taught by standard teaching methods.

In the second experiment we found out that activating methods again were more effective in theoretical knowledge acquisition. The experimental group extended their knowledge by 9.3% more that the controlling group. The students of the experimental group gained more theoretical knowledge than the students in the controlling group under the same conditions and the same time limit.

The last method used in our research was the content analysis of the text documents. This method was a complement of the both experiments. We set 16 analytical categories of the content that meant possible correct solutions of the model situation with the use of those methods the students dealt with during the seminars and lectures within the experiment. We matched to each category the ideas, methods and solutions of the model situation that were most frequently used by the students. Although they were not written in the same words, their content and meaning were the same.

The results show that the experimental group suggested by 93% more solutions than the controlling group. That means that the use of a teaching method significantly influences not only theoretical knowledge acquisition but also the ability to transfer the knowledge into the practical solutions. Finally we can say that our experiment confirmed effectiveness of activating methods used during seminars and lectures – not only when acquiring theoretical knowledge but also when transferring the knowledge into models of practical situations is needed. This fact is due to the highly motivational character of activating methods. As they are attractive, they support and encourage motivation to study and take into consideration individual singularity of students.

Another positive aspect of activating methods that increases theoretical knowledge acquisition is an activated student-teacher interaction. The student is not only a passive receiver and the teacher is not only a mediator of new facts and information. Students "become active participants in the educational process – they want to know not only what they are studying, but moreover why they are learning it and how they can use it in their practical lives" (Smetanová, 2009, p. 103) [5]. Activating teaching methods create the space for effective student activities directly in the educational process, they teach him/her how to be autonomous and independent while studying and how to develop his/her own abilities and skills. On the other hand, activating methods make the teacher improve his/her professional abilities and theoretical knowledge but also his/her pedagogical skills.

While applying activating teaching methods, students solve various problems in small groups and learn to accept one another's opinions, evaluate their ideas and learn the rules of team work. Activating methods also contribute in development of the student's personality and his/her creativity.

To acquire theoretical knowledge is for the student's personality essential only when he or she can use the knowledge further. It does not mean to use the knowledge during the university studies only but also to apply it in practical life situations. The best practice of application of such knowledge is to offer students model real life situations. In our experiment we wanted to know how the methods affect

the students' ability to solve practical situations when being introduced theoretical solutions first. The students who are familiar with activating methods designed more options to solve the problem than those who are taught through standard methods. It is due to the fact that activating methods enable students to train themselves for certain situations. Standard methods, on the other hand, provide students only with problem discussions.Nevertheless, we cannot refuse traditional standard methods even though the percentage of their success was quite low. They may be useful in disciplines that introduce students to subjects in the lower grades of their studies. Activating teaching methods are demanding for the teacher's as well as student's personality. They require the person to be familiar with the presented topics or issue, they request for creativity, flexibility in communication. That is why an ideal solution to be used in tertiary education is a combination of traditional standard methods together with activating teaching methods – so that they are in balance.

There are many reasons why we should concentrate our attention to the teaching methods that we select. Quality and effectiveness of education, progress of cognitive processes, methods of self-evaluation – these are the phenomena that depend on teaching methods that are appropriately chosen by the university teacher. To a great extend, they affect and influence the development of the student's as well as his/her educator's personalities.

Bibliography:

[1] Průcha, J. 2002. Učitel- současné poznatky o profesi. Praha: Portál. ISBN 80-7178-621-7.
[2] Uhrín, S. 1994. Zvyšovanie efektívnosti výučby spoločensko-vedných disciplín v systéme VŠ prípravy príslušníkov PZ. In: Efektívnosť vzdelávania rezortného školstva MV SR, Bratislava: APZ SR 1994, s. 23-29.
[3] Komenský, J. A. 1991. Veľká didaktika. Bratislava: SPN
[4] Maňák, J. – Švec, V. 2003. Výukové metody. Brno: Paido. ISBN 80-7315-039-5
[5] SMETANOVÁ, E. 2009. Student-centred approach and foreign language acquisition. In: Linguistics and Didactics in the 21st Century – Trends, Analyses and Prognoses II. Praha: Kernberg Publishing, s.r.o. ISBN 978-80-87168-09-7
[6] Danek, J. 2009. Pedagogická komunikácia. Trnava: UCM. ISBN 978-808105-128-9.