USE OF PARTICIPATORY METHODS IN TEACHING AT THE UNIVERSITY

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Abstract: The methods used represent an important tool for ensuring the educational process. The selection of appropriate methods is determined by the aim of the subject. However, the use of a suitable combination of mutual educational methods should be conditional on the individual needs of students and teachers, social needs and trends. The selection should respond to the current global trends in technical, economic, and educational research and development. The implementation of appropriate methods is determined by various factors. It is, for example, the number of students in one group, their present and desired level of knowledge, skills, motivation to learn, functional position. The level of expertise and experience of teachers and spatial capabilities are also important. The aim of the article is to show how it is possible to increase the efficiency and attractiveness of the subject at university using participatory methods.

Keywords: motivation, teaching methods, participatory methods, role play

Introduction

The key elements in the implementation of education are the students themselves. Their motivational readiness to learn depends inter alia on the emotional state of mind, cultural and educational backgrounds. Emotional status and disposition also have an effect on what will be their approach to learning. Motive is an internal momentum that causes a change in human´s behaviour and to leads to his needs.

Much of the criticism has been directed to higher education in Slovakia over the decades. It is argued that the current education focuses more on acquiring encyclopaedic knowledge rather than promoting the creativity to develop ability to identify problems. As a result, students are less able to analyse specific situation, to present and evaluate alternative solutions, stand up for their own opinions and use their knowledge in practical applications. These applied tools will help us enhance the quality of education and attract the attention to more effective learning at the universities as the imperative of successful preparation of students for both their professional and personal life.

Motivation

At universities, unfortunately, studying also those students who do not wish to periodically prepare and they decided to study only because this wished their parents or because of their field of study is the low interest from other students. The idea of obtaining a university degree is great, but interest in the study and willingness to make an effort - it is negligible for some of students. What to do in such cases? Is it possible to motivate some young people with no interest in anything?

There are a lot of motivational factors, of course. Interest in the subject depends on the content and form of teaching, nature of teachers and students and of other factors. Everything is determined by the time possibilities arising from the timetable, the number of students in a class, surround possibilities, teacher´s readiness and alike. For students is motivating when the teacher at the beginning of the semester informs about content and goals of the course, and also gives them space to comment about what they interested in, respectively what another topic related to the content of the course would be welcomed and what are their expectations. This is useful information for teachers about what could be added to the content part to meet the requirements and the interest of teachers and students, too.

Motivation increases the amount of effort and energy that learners expend in activities directly related to their needs and goals (Csikszentmihalyi & Nakamura, 1989). It determines whether they pursue a task enthusiastically and wholeheartedly or apathetically and lackadaisically.

Motivation increases initiation of and persistence in activities. Students are more likely to begin a task they actually want to do. They are also more likely to continue working at it until they've completed it, even if they are occasionally interrupted or frustrated in the process Motivation increases students' time on task and it is an important factor affecting their learning (Larson, 2000).

We can say that motivation is the force that drives us to carry out activities. We are motivated when we feel like doing something and we are able to sustain the effort required during the time required to achieve the objective we set ourselves. Motivation should be considered carefully by teachers, trying to mobilize the capabilities and potential of each student for academic success. (Ferreira, Cardosob & Abrantesc, 2011)

Educational science defined two basic types of motivation: intrinsic and extrinsic, that have a potentially different consequences on learning (Standage, Duda&Ntoumanis, 2005). These are based on self-determination theory that considers humans to actively seek optimal challenges and new experiences to master and integrate. The most self-determined type of motivation is intrinsic motivation. Intrinsic motivation refers to engagement in activities for their own sake, namely for the feelings of pleasure, interest, and satisfaction that derive directly from participation. When intrinsically motivated, individuals are fully self-regulated, engage in activities out of interest, experience a sense of volition, and function without the aid of external rewards and constraints (Deci & Ryan, 1985).

Teachers should also create an active learning environment that enhances students' perceived autonomy and competence, providing students with choices and opportunities for self-directed learning, and planning learning activities that might increase their feeling of mastery. In fact, intrinsic motivation was shown to be a factor of great importance that can lead to higher perceived learning in the course (Ferreira, Cardosob&Abrantesc, 2011).

Motivation affects cognitive processes. Motivation affects what learners pay attention to and how effectively they process it. For instance, motivated learners often make a concerted effort to truly understand classroom material—to learn it meaningfully—and consider how they might use it in their own lives (Ormrod, 2006). One of the most important motivational factors in the learning is the use of suitable, modern and interesting teaching methods.

Teaching Methods

The term teaching method refers to the general principles, pedagogy and management strategies used for classroom instruction. The choice of teaching method depends on what fits the teacher - educational philosophy, classroom demographic, subject area(s) and school mission statement. Teaching theories primarily fall into two categories or "approaches" — teacher-centered and student-centered.
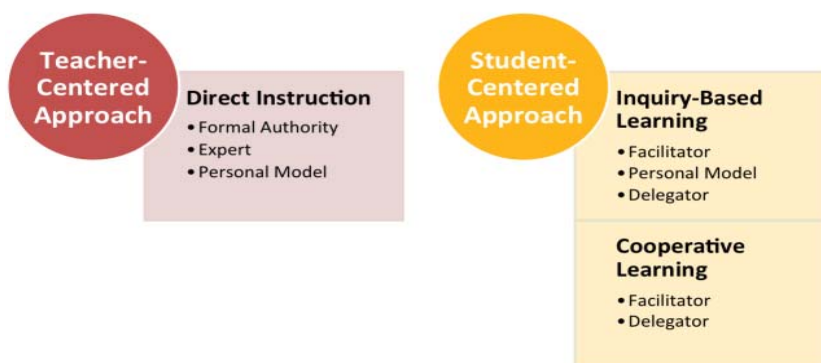
Figure 1: Teaching methods

Teacher-Centered Approach to Learning - teachers are the main authority figure in this model. Students are viewed as "empty vessels" whose primary role is to passively receive information (via lectures and direct instruction) with an end goal of testing and assessment. It is the primary role of teachers to pass knowledge and information onto their students. In this model, teaching and assessment are viewed as two separate entities. Student learning is measured through objectively scored tests and assessments.

Student-Centered Approach to Learning - while teachers are an authority figure in this model, teachers and students play an equally active role in the learning process. The teacher's primary role is to coach and facilitate student learning and overall comprehension of material. Student learning is measured through both formal and informal forms of assessment, including group projects, student portfolios, and class participation. Teaching and assessment are connected; student learning is continuously measured during teacher instruction.

Teaching methods are an important tool for the implementation of the educational process. Selection and use appropriate methods should reflect the needs of students and respond to current global trends in technological and economic development. Choosing appropriate methods course is determined by various factors such as the number of students in the study group, spatial and technical capabilities, motivating students to learn, professional level and experience of teachers, as well as the quality and availability of teaching resources and supporting textbooks (http://teach.com).

The most frequently used methods of teaching at universities are lectures and seminars. Lectures are suitable for the transmission of large quantities of information to large numbers of students, but this is missing the opportunity of interaction. **Lectures** are verbal presentations of a particular topic. They are suitable for the presentation of a large amount of information to large groups, but there is missing the opportunity to mutual interaction of a lecturer with participants. They are focused primarily on improving knowledge. They can be very impressive and imaginative using modern multimedia tools; however, in terms of preserving the information, they are not very effective.

Seminars realised as seminary works or discussions allow the exchange of information and views on certain issues, but the quality of learning depends on the knowledge level and responsible preparing of students. The advantage is the support and development of ideas, immediate feedback. However, the quality of learning depends on the knowledge level of the participants.

Currently, there has been dynamically expanding **E-learning** (electronic education), which is faster and cheaper than other conventional forms of education, but its use is limited to the theme of education and technological equipment of companies. The advantages of using modern ICT in education is also the fact that: the student can use his own pace, updated material is available immediately and it can be provided for a large number of students at the same time, opinions and thoughts on the topic being acquired can be easily exchanged among the participants. Some disadvantages can include the following factors: lack of visual contact with the teacher in each group, therefore, non-verbal reactions cannot be easily captured and processed; difficult to set down rules of cooperation, high demands are placed on teacher in the coordination and involvement of all participants. Because students are very happy to work with ICT, e-learning is very useful as a complementary tool to the above methods (Vodák&Kucharčíková, 2011). The e-learning concept had professionally been applied on some majors offered at The Hashemite University in Jordan and gained a great impact on the learning process, students and staff. The Hashemite University has made an excellent progress toward practicing e-learning environment through sequence of actions in real life scenario that overcome the limitations related to the traditional learning system (Fayyoumi, Idwan, AL-Sarayreh & Obeidallah, 2015).

Technology becomes a more integral part of education more teachers want to use different forms of modern tools to help teach students. There are innovative and new teaching methodologies which incorporate the use of modern technology to encourage students to participate and take an active role in learning. Wafta &Audi (2015) presented for the first time three teaching methodologies: 1) dynamic lecture notes using live student feedback; 2) an extension to the dynamic lecture notes that incorporates an online video repository to substitute some lecture presentations both during and after class; 3) 24/7 teacher-student portal using mobile social networking.

To achieve higher efficiency of education is necessary to use a combination of several methods. They should also include participative methods. Participative methods assume a high degree of student activities. Their advantage is that they support better remember learned. They represent the current modern methods, which is typical for active practice, experience and direction to the learning of "learning by doing". They are thus based on the fact that people will learn more if you try to do something, than if they just read or listen to the new information, such as a lecture. Lecture prefer the content of learning, participative methods prefer the procedural aspect. Students can be activated using a combination of various participative methods such as group work, brainstorming, case studies, role playing, management games, and so on. An important part of this method of teaching is to provide feedback and evaluation of activities.

Successful managers understand that a reasonably activity in processing information not only accelerate their use, but primarily improves the quality of decision-making. And it is this activity which students should be prepared using participative methods. In the context of teaching are often created problems with space, time, time-tables

and the like. Many students take more than the studies focus on "chasing credits" and often they are not interested about course itself. However, for all those who are interested in learning, it is important that teachers do experiments and use the innovative, non-traditional teaching methods and practices. In order to achieve a higher efficiency of education it is appropriate to use a combination of several methods. The most frequently used includes lectures, seminars, but more modern and more efficient are so-called participatory methods. Because participative methods are used for education (training) small groups, universities can be applied mainly in seminars or tutorials. In this way there is a better choice than strengthen knowledge accumulated in lectures and linking them to practical model situations (Kucharčíková, 2013).

Participatory Methods

Participatory teaching approach is a form of a reflective teaching approach which is sometimes termed as interactive teaching method or learner centered teaching method. This method stresses the subjectivity of learners and the self construction of knowledge. It is a shift from a belief that learners are empty plate who are supposed to be imparted with knowledge (teach concept) to a belief that learners can construct knowledge and learn on their own if properly guided (learn concept) (Kafyulilo).

Participatory methods expect a high degree of activity and personal involvement of participants in the learning process. They are designed only for smaller groups of participants, but their advantage is that they encourage better retention of learned. They are contemporary modern methods of education (Table 1).

Table 1: Same of the participative methods

METHOD	DESCRIPTION	ADVANTAGES	DISADVANTEGES
BRAINSTORMING	Frequently used method to solve problems. It is necessary to respect the principle of non-criticism, fantasy release, mutual inspiration and equality of participants	– speed – the involvement of a large number of students	– necessity of clearly explain the method before using – the need for compliance with the rules of the method
WORKSHOP	Popular method addressed to discuss specific situations and find possible approaches to their positive management.	– informality – use in the more numerous group	– requirements for teacher facilitation skills
AQUARIUM	One group of students solves the problem the second group observes and then provides the feedback.	– practicing of giving feedback – solid training of the learned skills	– stage fright and nervousness participants who solves the role and who are observed – demanding facilitation by the teacher
ROLE PLAYS	The group gets the script with roles. Students play a selected situation and examine the various possible approaches to solving problems or unforeseen events.	– fun – practicing well as unpleasant situations	– games can be considered unrealistic – stage-fright and fear of missed "actor´s" performance
SOLUTION TO THE INCIDENT	The method is similar to the case study. Enter the basic facts of the incident and the group decides what further information needs and what needs to answer questions.	– exploration real problems without the risk – good simulation of reality	– possible sense the artificial situation by the participants
LABYRINTH	Used induced situation. At some point, students have to solve several tasks simultaneously and options identified consequences of one of the selected options. Proceed in this way until the successful solved task.	– it can keep its own pace of work – a high degree of student participation	– time-consuming – difficulty preparation for teachers

The more efficient application of any method is supported by audio-visual device, such as flipchart, projector, overhead projector, whiteboard, various educational or amusing films, models or support materials. Fashion hit is the use of computers and presentation of educated themes in PowerPoint programme. The risk is that the interactivity is disappearing and teachers and students often focus more on the visual aspect of the presentation when creating presentation, the content is underestimated. We should not forget the appropriate arrangement of the room where the educational activities are practiced. The arrangement is necessary to adapt to the main theme of activity, methods used, group size, room size, timing etc. Also, new technologies open new possibilities and opportunities in education. When using them, it is necessary to pay attention to that they can meet the expectations of students and make learning efficient enough. The conditions and approaches to learning, as well as specific conditions for learning support, are generally applicable and it is necessary to pay attention to them, even using the most modern technologies. The creation of more effective combinations of these methods and the ability to design new innovative methods of education will be important for the future.

The current labour market effects the university education to a large extent requiring a graduate of interdisciplinary knowledge and with the skills to find the solutions to both technological and economic issues (Ďurišová, 2013). But many contemporary students study subjects that are not profiled for their chosen field of study with displeasure and unwillingness. The most common argument used therein, is "what I do in life will be?" It depends on the teacher that he himself explain the practical application of the "unpopular" subject or to ask the students themselves to seek and identify possibilities for practical application. This also applies to students of Informatics who are prejudiced to study the subjects of economic and managerial specialization. In order to increase motivation and efficiency of teaching the subjects of economic character for students of study programme Informatics, we have innovated teaching Macroeconomics at the Faculty of Management Science and Informatics using participatory methods of education. In the context of the previous text, we apply a combination of lectures, discussions, brainstorming, group work, buzzing groups within teaching. At the end of the semester, when students have plenty of expertise knowledge, obtained presentation skills and have enough experience of teaching using participatory methods, we use role plays "Negotiation."

Role Play

It is an active method, which is based on the simulation of real situations and practice different work tasks (Průcha&Veteška, 2012). Role-play is useful where learners share a somewhat similar experience, which is difficult to recall because of its emotional nature. Here learning takes place from re-enactment of past experiences. It is a powerful training method if the focus of learning is to generate awareness. The method of role-play is useful as it helps learners utilize their experiences of real life situations. The enactment is helpful in developing awareness at individual and group levels. Through role play it becomes easier to discuss complex social issues in a non threatening environment. In order to use role-play effectively, you need to select a suitable role play depending on the purpose of learning and identify role enactors/performers. Next, you need to prepare briefs and explain the situation to the learners and tell the audience all the points to be noted. Now is the time to set the stage and start role-play. After the play you can consolidate and debrief. In certain situations, a role-play is also used to practice skills. For example, you can practice how to motivate adult learners by enacting different roles. The prime method of learning here is practicing and receiving feedback from learners and adult educators after that practice. As a re-enactment of past experiences. Learners may enact a past situation with which they are familiar (Subin).

In role plays, participants use their own experiences to play a real life situation. When done well, role plays increase the participants' self-confidence, give them the opportunity to understand or even feel empathy for other people's viewpoints or roles, and usually end with practical answers, solutions or guidelines. However, role plays can be time-consuming and their success depends on the willingness of participants to take active part. Some trainees may feel a role play is too exposing, threatening or embarrassing. This reluctance may be overcome at the outset by careful explanation of the objectives and the outcome. Some role plays can generate strong emotions amongst the participants. It is therefore essential that a role play is followed by a thorough debriefing. This provides the opportunity for the trainer and the participants to raise and assess new issues. (Makokha&Ongwae). Role plays are useful for exploring and improving interviewing techniques and examining the complexities and potential conflicts of group meetings. They help participants to consolidate different lessons in one setting and are good energisers.

The rapid and steady changes in a field of information and communication technologies have increased demand for high qualified specialists not only in a field of cybernetics and applied informatics, but also in related fields such as economy and management (Tokarčíková, 2013). This role play is designed for students of Macroeconomics to practice and repeat topics related to models of macroeconomics equilibrium (Keynes's model of equilibrium output determination, IS-LM Model, IS-LM-BP Model, AD-AS Model), topics related to macroeconomic problems (unemployment, inflation, deflation, business cycles) and the application of knowledge in the field of

economic policy, particularly fiscal, monetary and foreign trade policy. In addition to repeating knowledge of entire semester study of Macroeconomics, the aim of the game is that students examine communication skills, professional reasoning, presentation and teamwork.

The game, however, can be determined as well as for other economic subjects such as Microeconomics, Business Economics, and the like. The game can be adjusted to conditions for any economic subject to a demonstration of what is deciding demanding solutions to a problem, and it is necessary to have mastered the theoretical knowledge. All students are always involved in a game within a particular study group. Based on our experience, it is more preferable when under observation of character properties and communication skills of the students during the semester, the teacher determines the **key players** of game which are three members of the government (left-wing, right-wing and independent expert). Each member of the government has at his disposal policy **advisers** and **experts** from the field (there may be three experts depending on the number of students present in the group). Journalists observe the behaviour of the actors, the search for solutions and progress throughout the game. Number of students role for advisors, and journalists will determine the teacher, depending on the total number of students in the study group.

Time subsidy for the game is 100 min. At the beginning of the teaching, all players / students receive short game instruction input from the teacher (10 min.). Subsequently, there are distributed information sheets with the necessary instructions to all players. It is basically a scenario according to which the players will play their roles. The examples of information sheets for the players are shown in Figure 2-4. Then, the teacher defines physical space for three teams (it is important that the various work teams do not disturb and influence each other), assigns the necessary tools and specifies the beginning of game. He does not provide players with further instructions, all the necessary information is in information sheets. In order to better understand the instructions, they depend only on mutual communication for explanation of uncertainties. Teacher supervises the smooth course, points out time limits, takes notes from observation of students/players throughout the game. He monitors whether and how correctly they solve tasks using the theoretical basis, what extent they are identified with their task, what is the level of activity and participation of individual members, what is the level of mutual communication, cooperation, teamwork, what other skills students apply and he facilitates feedback at the end (Kucharčíková, Ďurišová&Tokarčíková, 2015).

Information sheet

Member of the government - representative of <u>right-wing party/ left-wing party/ independent expert</u>

Slovakia is the country of EU with a high degree of unemployment. Although governments have taken various measures to address this problem in different years, we still have not won over the high unemployment.
You are a member of the present government to which you are nominated by a political party oriented to **left-wing (social).**
Your **task** will be to read and think about this instruction during 5 minutes. Then, prepare together with your advisory team (which consists, first, of either your political contemporaries and experts from the economic and social fields) material for government meeting in the course of 25 minutes, where you design various options for addressing high unemployment in the Slovak Republic referring to any difficulties, or advantages and disadvantages of each solution. When preparing, use the knowledge you obtained from the existing study of Macroeconomics - models of macroeconomic equilibrium, economic policies (fiscal, monetary, foreign trade). Proposals must correspond with your political orientation.
It is necessary to prepare these proposals for the government in writing (on A4 paper, flipchart or whiteboard) so that they are clear, understandable and illustrative for all involved.
At the same time prepare for difficult negotiations in the government, which except you, attend even a member of the government for the right-wing party and independent and that will take 30 minutes.
Your **task** will be:
1. to present proposals of Yours and Your advisory team: 7 min.,
2. to respond to the objections of other members of the government,
3. to factually discuss the other two proposals,
4. to decide to adopt one proposal.

Figure 2: Information sheet for member of the government

Information sheet

Advisors of <u>right-wing / left-wing politics/expert advisors</u>

Slovakia is the country of EU with a high degree of unemployment. Although governments have taken various measures to address this problem in different years, we still have not won over the high unemployment.

You are the members of **the political advisory team/expert advisory team** of one of the members of the present government. Your **task** will be to read and think about this instruction during 5 minutes. Then, help to prepare material for government session for the member of government of your political group together with his expert advisory team, where you propose various possibilities for addressing high unemployment in the Slovak Republic referring to any difficulties, or advantages and disadvantages of each solution. When preparing, use the knowledge you obtained from the existing study of Macroeconomics - models of macroeconomic equilibrium, economic policies (fiscal, monetary, foreign trade). Proposals must correspond with your political orientation.

For the government negotiations, it is necessary to:
1. prepare proposals in writing (on A4 paper, flipchart or whiteboard) so that they are clear, understandable and illustrative for all involved,
2. prepare for negotiations (prepare your arguments and counter-arguments) to the government for approval of proposals you submitted.

Figure 3: Information sheet for advisors

Information sheet

Journalists - observers

Slovakia is the country of EU with a high degree of unemployment. Although governments have taken various measures to address this problem in different years, we still have not won over the high unemployment.

You are a member of a group of journalists who follow the preparation and government session where three members of the government will submit proposals to address the problem of unemployment in Slovakia.

Your **task** is:
- to notice logical connections, expertise, or political involvement of arguments of government members
- to observe:
    - behavior of members of the government before and during the negotiations,
    - setting goals before the negotiations,
    - team approach to solving tasks,
    - decision-making before and during negotiations,
- inform the public objectively about the course of negotiations after the government session,
- write a short and interesting article in tomorrow's newspaper about what you have observed.

Figure 4: Information sheet for journalists

Evaluation is a final, but very important phase of educational process. Evaluating allows looking back on educational activities, successfulness and interest of students and provides information about what to do in other way in future activities, what improve, what topics omit, what complete etc. For this reason, it is also important to implement evaluation of the game after realization of role plays. Students will get a little feedback about how they worked in content and procedural aspects during the game from journalists/observers. It is a view of the students. However, it is necessary that the players themselves express their initial impressions of the game and subsequently analyse both sides of the problem-solving process (content and process) and identify their contribution to the game and their failures. Finally, teacher provides feedback to the whole game. It depends only on his facilitation skills, to what depth in the feedback he will go and what lessons he "pulls out" of the students. There is one interesting finding arising from our experience. The game of learning "weaker and lazier" students has the greatest positive impact. They understand the reasons just using this form, why they study the subject, they realize their imperfections in the study and final achieve excellent results in the examination. This is precisely the objective. To make subject more attractive for those who do not take interest at the beginning of the semester. These students make the greatest promotion and marketing of the subject among the student public. Of course, it is expected that smart students who deal with their obligations responsibly throughout the semester provide the appropriate background and expertise for the game. These are the students who create the necessary support for the teacher. Therefore, teacher must appreciate the work and contribution of all involved at the end of the game. The game

does not succeed if students bring "great solutions", but when they realize the importance of knowledge obtained during their studies at the university and later in the practical and personal life. Evaluation has a higher positive effect, if it is done using a camera and playing key situations that arose in the game by using a projector. However, the use of cameras and data projector is significantly limited by time demands of this approach and timetable at university.

Evaluation creates preconditions to improve the quality of teaching and increase student interest in the future. Short evaluation can be done after each seminar or lecture and exercise, after a check exam, at the end of the semester, after the examination period, but also at the beginning of the next semester, when we find the reasons why the students enrolled on the subject. It is implemented using several methods, such as interviews, questionnaire feedbacks, and self-reflection.

Conclusion

We have introduced an example of how is it possible to innovate and make more attractive Macroeconomics for students of Informatics using participatory methods, namely the role plays. It depends only on the teacher, his professional and pedagogical knowledge, skills, experience and creativity to find space for the implementation of participatory methods in the context of teaching his subjects. The reward for efforts will be very satisfied teacher and students, resulting in higher interest in the subject, higher education efficiency and better results. Knowledge, skills and experience that students thus obtain, are a more memorable and easier to apply in the future of their profession even personal life. When are properly used different modern methods of education and when learning styles of students are correct linked to teachers' educational styles, it is possible to improve the quality and attractiveness of higher education and student preparedness for successful completion of the examination, thesis defense, state exams, but also to deal with everyday and work situations. This is in a presumption for successful application of students in business practice.

Acknowledgements

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