Impact of Activating Teaching Methods on Results of the Students

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Abstract. The aim of our case study was to find out how students perceive the use of economic games as a teaching method and at the same time how these games contribute to acquisition of knowledge and skills. The group with classical way of teaching contained 59 students. The group where didactic economic games were used consisted of 57 students. The students from the group, where the economic didactic games were used, were asked to fill in a questionnaire where they answered questions about the way of teaching. Then, both groups wrote a knowledge test. The questionnaire shows that the students were interested in the teaching method of economic didactic games. It is evident from these results that students show better results in the part of the test according to the teaching method applied during the semester. Students who were taught only by using the didactic economic games achieved better results in the practical part of the test.

1. Introduction

Games have accompanied man since the beginning of his existence. As small children, we used to play what enabled as to acquire new knowledge, experience and skills. A game can be considered the most natural means by which we learn new things. That is why the inclusion of games in the teaching process is of great importance especially nowadays when it is difficult to attract students. Economic subjects, where games simulate partial or complex economic systems, are no exception. Through them, students can solve situations and problem from everyday life, and at the same time interconnect knowledge from other subjects. In general, activating methods bring more fun to teaching. Anything what is attractive to a student tends to stay in his memory for longer time. In recent decades, the interest in games in classroom has increased. Roskos & Christie (2000) [1], Ginsburg (2007) [2], Cenčič et al. (2008) [3], Miller & Almon (2009) [4] and Juriševič (2012) [5], are only some of the authors that have researched the effects of didactic game on teaching and learning among different age groups of children and on different educational stages. Positive effects have been proven on different stages, therefore there is no doubt didactic games are a desired and useful part of teaching process.

2. Didactic Games

Games belong to activating methods of teaching. They are mainly used to stimulate students, support their creativity and increase their performance in the classroom. As a result, students are more motivated and interested in the subject matter and its fixation. This interest is spontaneous and natural.

Game includes something what is interesting for the player and that makes the game interesting and adventurous. It brings the individual into a new reality, where the player discovers new unknown things. A desire for knowledge and discovery gives the player an experience that makes him fully focused on the respective activity. [6]

Didactic play is a voluntary activity with pursuing certain didactic goals. Its product is the acquisition and fixation of taught subject matter in a non-violent playful form. One of the main advantages of
didactic games is stimulating charge. With this charge, we are able to awaken the student's interest and increase his involvement in the teaching process; it supports motivation of students, their creativity, compatibility, but also ability to cooperate. The didactic game forces students to use their knowledge and life experiences. Some of them are similar to real life simulations. A didactic game can be performed in the classroom, in nature, in the gym or in the village. The game must have its rules and requires management. In the end, each didactic game must be evaluated. It is designed both for individuals and groups. The teacher can play various roles in this game, from the observer to the main organizer. [7]

2.1. Economic Didactic Games

Economic didactic games find their application especially in teaching professional economic subjects. They focus on behaviour of complex systems as a whole, what leads to planning of strategies and tactics. Either it is a complex simulation, where the students are in charge of the whole business, or just a part of the functional section depending on the time and extent of teaching. Such games are suitable for interconnecting and acquiring all the knowledge which a student acquires on several professional economic subjects. The student gets a better understanding of importance of all the information that gradually fits together.

Using these games, the student develops his cognitive functions, acquires skills and competences to solve various tasks and problem. He can subsequently apply them in real life. This way of teaching increases the students' enthusiasm and strengthens the acquired information. It is a positive interactive way of teaching increasing students' interest in the learning content. Competition games are of particular importance for development of emotionalization among students. They educate themselves to sense of fail-play. They learn to tolerate defeat, to be polite, tolerant, and to have respect for better rivals. Each game has its own rules and their respect supports socialization of students. The student acquires certain abilities and has the opportunity to compare them with abilities of other students. He can perceive his benefits and shortcomings in the group according to his usefulness in the team, while having the opportunity to get to know both himself and his classmates better. An integral part of every game is communication between team members. The game helps the student to express his thoughts, to formulate them into coherent sentences with content and to exchange them with classmates. In most of these games, problem situations are solved in which students have to show a certain amount of creativity and ingenuity needed for solving the problem. It means that this way of teaching forces students to use their creativity.

Economic didactic games could be classified differently, e.g. in terms of time to short-term and long-term. In terms of a place of their implementation, e.g. in a classroom, specialized classroom, in the city or in the plant. In terms of their focus - emphasis is given to acquisition of knowledge, repetition of knowledge, motivating of students to activity or development of communication and social skills, etc.

Nowadays computer economic games have a significant position among economic didactic games and are often used in teaching economic subjects. Economic computer games create a simulated environment for students. In this environment, the student must be able to orientate and react correctly, make decisions, take into account all the risks of his decision and impacts on the future development of the game. This creates better understanding of the basic principles of economics. In most cases computer simulations imitate complex units, it means management of the whole company or market. These games cover different areas, e.g. a game used on the subject of business economy requires knowledge of management, marketing, accounting and other subjects. It means that the student has a possibility to combine knowledge from different subjects with simulated practice. Games should be so attractive that the student does not notice that he is learning. However, these games can also have a negative side. They are so engaging that students may be at risk of addiction. [8]
3. Research Methodology

The aim of our case study was to find out how students perceive the use of economic games as a teaching method and at the same time how these games contribute to acquisition of knowledge and skills. The participants of the case study were students of our university in the field of teaching economic subjects and students of other subjects, who also include economic subjects in their study plan. The study was carried out during teaching of the subject—business economics. Teaching was carried out during one semester, it means 13 weeks at our university. The group with classical way of teaching (marked as 1st group)—it means lecturer—contained 59 students. The group where didactic economic games were used (marked as 2nd group) consisted of 57 students. After the lessons were completed, the students from the group, where the economic didactic games were used, were asked to fill in a questionnaire where they answered questions about the way of teaching. Then, both groups wrote a knowledge test. The knowledge test consisted of two parts. The first part of the test contained theoretical questions of the type—please define, name or describe. The second part of the test contained practical questions of the type—please calculate or specify the procedure. In conclusion, we compared two groups of students from the knowledge test in the first part and the second part of the questions.

4. Results of the Research

First, we evaluated the questionnaire, which was filled in by students in the group, where the teaching was conducted using economic didactic games. Students were asked how they identify with the following statement:

1. The wording of this statement was as follows: Teaching using economic games as a teaching method is fun for me. 62% of students answered I agree; 30% of students answered I rather agree; 7% of students answered I rather disagree and 1% of students I disagree.

2. These lessons require me to participate actively and engage me in processes in the classroom. 81% of students answered I agree; 10% of students answered I rather agree; 9% of students answered I rather disagree and 0% of students I disagree.

3. I like to be actively involved in activities carried out during the lesson. 46% of students answered I agree; 21% of students answered I rather agree; 23% of students answered I rather disagree and 10% of students I disagree.

4. The lessons will teach me how to communicate and cooperate with my classmates. 63% of students answered I agree; 27% of students answered I rather agree; 9% of students answered I rather disagree and 1% of students I disagree.

5. I like to perform and present my skills in front of the whole class. 21% of students answered I agree; 16% of students answered I rather agree; 49% of students answered I rather disagree and 14% of students I disagree.

6. I think that this way of teaching increases the level of my knowledge. 59% of students answered I agree; 31% of students answered I rather agree; 10% of students answered I rather disagree and 0% of students I disagree.
The knowledge test was written by all students from both groups. As mentioned above, the test consisted of two parts, theoretical and practical. The success of the test was evaluated from the theoretical and practical part for both groups of students and then the results were compared. The test was graded by using A, B, C, D, E and FX grades. Rating A means excellent—excellent results with minimal errors; B—very good—above average results with minor errors; C—good—quite good, average results; D—sufficiently—the results meet the minimum criteria. A student with FX grade did not achieve the minimum knowledge required for the test.

The Figure 1 shows the results achieved by students of the first group in the theoretical test. Most students, it means 76% are graded with B and C grades. All students passed the minimum knowledge test requirements.

![Figure 1. The Results of the Theoretical Part of the Test Group 1.](image)

The Figure 2 shows results of the second group in the theoretical test. We can see that students achieved worse results in the theoretical part of the test when taught by didactic economic games. 39% of students from the second group are graded with B and C grades compared to 76% of students from the first group; it means for 37% less. 59% of students are graded with C and D grades. In the second group, there was one student who did not meet the minimum knowledge requirements.

![Figure 2. The Results of the Theoretical Part of the Test Group 2.](image)

The Figure 3 shows the results of the first group in practical questions. The results show that two students did not meet the minimum requirements. 71% of students are graded with C and D grades, the grade E was achieved by 10% of students, the grade B by 12% and the grade A only by 3% of students.
Figure 3. The Results of the Practical Part of the Test Group 1.

The Figure 4 shows the situation in the second group. This group achieved better results in the practical questions. The grade A was achieved by 18% of students, the grade B by 44% of students, C by 17% of students, D by 12% of students and E by 9% of students. No student was graded as FX. Almost 61.4% of students achieved excellent to very good results.

Figure 4. The Results of the Practical Part of the Test Group 2.

5. Summary

The questionnaire shows that the students were interested in the teaching method of economic didactic games. In this method, students see the benefits for education. However, we can also see that students are concerned about the perform and presentation of their skills before the team.

It is evident from these results that students show better results in the part of the test according to the teaching method applied during the semester. The most common goal of testing pupils and students at Slovak schools is to monitor the level of their knowledge, while less attention is paid to practical skills. To use activating teaching methods such as didactic games, case studies or project teaching at schools more often, it is necessary to adapt the way how the knowledge and skills are to be tested. We can see that the students who were taught by the classical lecture achieved better results in the theoretical knowledge test. Students who were taught only by using the didactic economic games achieved better results in the practical part of the test. If the test contained only theoretical knowledge, students would achieve relatively poor results. As the national testing of pupils and students is carried out by the Ministry of Education, teachers cannot adapt the tests, so they choose teaching methods which will held them to achieve better results in knowledge and are adapted to the test method. Therefore, testing of pupils and
students would need to focus more on practical skills than knowledge, and then modern and activating teaching methods could be applied to schools.

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