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CONSTRUCTIVIST APPROACH AND RESEARCH SKILLS

Abstract. The application of the constructivist approach in higher education aims to form competencies and skills for searching, structuring and conducting independent research. Guided by aspects of the constructivist approach and its relationship to research skills, a study was conducted. The purpose of this article is to study the opinion of students on the topic.

Keywords: constructivist approach, research, skills.

Changes in the education system in recent years are a fact. Universities strive to provide conditions and educational environment adequate to the high requirements of modern society. An environment in which students can reach their potential.

The main idea of the constructivist approach is to put students in practical situations in which to acquire skills for different forms of research activities. This will give them confidence and the opportunity to transform their knowledge into new situations. The application of the constructivist approach in higher education aims to form competencies and skills for searching, structuring and conducting independent

research. Setting such tasks assigns the role of student “researchers” who, using their accumulated knowledge and skills, can transform them into new activities.

According to Radev, “Learning in constructivism is a process of going through successive situations through which the individual acquires knowledge and competence” [5].

T. Fosnot defines constructivism through the prism of several principles: ... learning involves inventing ideas rather than mechanically accumulating facts; meaningful learning is done by rethinking old ideas and reaching new conclusions about new ideas that are at odds with our old ones [4].



Figure 1. Aspects of constructivist learning

According to Adriana Tafrova-Grigorova, the new knowledge is built on the basis of the previous knowledge and experience of the individual as a result of purposeful activities in a specific situation. Popularly formulated descriptive descriptions of constructivism in education include the “philosophy of learning” [2].

Buzov believes that: “... attempts to decompose the system of main activities of teachers and students in the learning process, in essence translate into practice the ideas of constructivism – a doctrine according to which man actively constructs his own understanding or knowledge through the interaction of between what he knows and what he believes in” [1].

The main aspects of constructivist learning are presented in (Figure 1).

Guided by the ideas of the constructivist approach and the most important aspects of constructivist learning and its relationship with research skills, a study was conducted at the Faculty of Engineering and Pedagogy-Sliven, among students majoring in “Preschool and primary school pedagogy”, educational qualification “Master”. The created questionnaire used a “liqueur scale” for grading the answers.

The formulated statements provide an opportunity to gather information from the respondents. The students evaluated the ten statements given to them through five different degrees of agreement or disagreement: 5 – I strongly agree; 4 – I agree; 3 – I have no opinion; 2 – I do not agree; 1 – I strongly disagree.

The first of the proposed statements is: “I easily cope with my research tasks”. The results are: “I strongly agree” – 25%; “I agree” – 45%; “I have no opinion” – 10%; “I do not agree” – 15%; “I strongly disagree” – 5%. The obtained results give us grounds to say that the students, who think that they are confident in the research tasks set by the teachers – 14 of the respondents, believe that this is the case.

“Finding an innovative solution to a problem is a challenge for me” is the second statement offered to students – “I strongly agree” – 30%; “I agree” – 55%; “I have no opinion” – 5%; “I do not agree” – 5%; “I strongly disagree” – 5% are the preferred answers. Innovative thinking is one of the most valuable life skills of our century. Teachers face different challenges and problems on a daily basis. The skills to react quickly and make innovative decisions is a sure way to deal with them quickly (Figure 2).

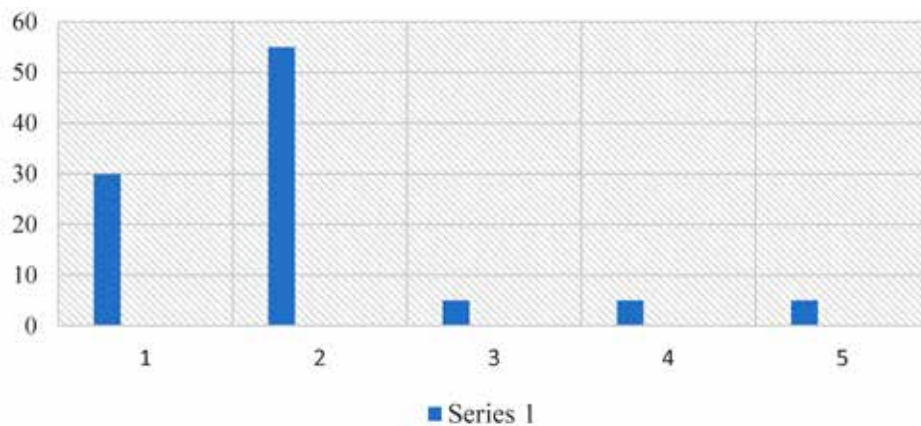


Figure 2. Finding an innovative solution to a problem is a challenge for me

“Following an algorithm by the teacher facilitates research work” – “I strongly agree” – 20%; “I agree” – 55%; “I have no opinion” – 10%; “I do not agree” – 10%; “I strongly disagree” – 5%. Whenever they have an algorithm set, students feel more confident in their abilities. By following the steps set by the

teacher, they reach the final research product more easily. However, there are students who want to run away from the algorithm or not follow it.

The statement “I have the opportunity to be creative and independent in my research activities” and the results obtained gave us an answer to the question of freedom

and the right to choose through creativity and independence to perform research tasks. “I strongly agree”

– 15%; “I agree” – 65%; “I have no opinion” – 5%; “I do not agree” – 10%; “I strongly disagree” – 5%. (Figure 3).

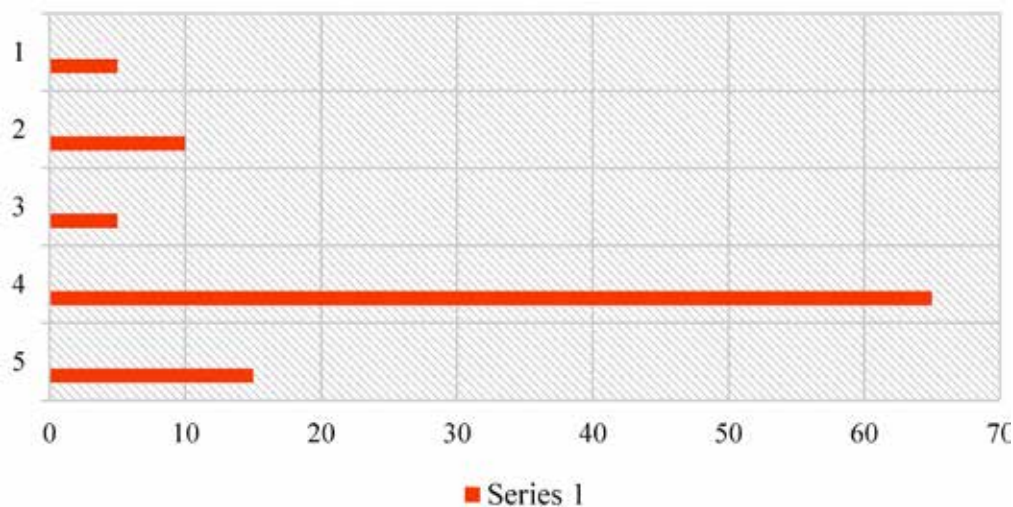


Figure 3. I have the opportunity to be creative and independent in my research

“I prefer to have freedom in deciding to conduct research” – “I strongly agree” – 15%; “I agree” – 50%; “I have no opinion” – 5%; “I do not agree” – 15%; “I strongly disagree” – 15%. This is the statement that best shows us the extent to which students have formed independence as a skill.

“I can apply scientific knowledge in practical situations” – “I strongly agree” – 10%; “I agree” – 60%; “I have no opinion” – 10%; “I do not agree” – 15%; “I strongly disagree” – 5%. Students’ self-esteem is important in terms of research because it shows their self-confidence and confidence in applying what they have learned.

“I prefer different types of teaching and research tasks” – “I strongly agree” – 25%; “I agree” – 55%; “I have no opinion” – 5%; “I do not agree” – 10%; “I strongly disagree” – 5%. Students like the variety of different types of research tasks.

“I apply modern methodology in conducting research” – “I strongly agree” – 10%; “I agree” – 50%; “I have no opinion” – 15%; “I do not agree” – 25%; “I strongly disagree” – 5%. More efforts are needed in this direction by teachers and students.

“I have developed skills to work on projects” – “I strongly agree” – 25%; “I agree” – 55%; “I have no

opinion” – 5%; “I do not agree” – 15%; “I strongly disagree” – 0%. Project work is often team work. Students cope with this fact and have no problem reaching the goal together.

“As a result of the training my professional competence has increased” – “I strongly agree” – 35%; “I agree” – 45%; “I have no opinion” – 5%; “I do not agree” – 10%; “I strongly disagree” – 5%. The last statement and the obtained results give us hope that at the end of their studies the students know that they have increased their competencies and can be realized successfully.

As a comprehensive conclusion from the study, we can say the following:

The training in the master’s program is aimed at the formation of various professional competencies in the field of teaching and educational work. Knowing and dealing with everyday challenges and complex situations requires educators to have communication skills, cooperation, skills to quickly solve problems and make adequate decisions. Applying a constructivist approach to teaching will increase interest in research and future teachers will be able to apply their skills successfully in their pedagogical practice.

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