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HEURISTIC LESSON ON THE TOPIC «VISUALIZATION OF DATA OF SOCIO-ECONOMIC CHARACTER WITH THE HELP OF DIAGRAMS»

Annotation. *The article discusses the possibilities of using the heuristic method in teaching the discipline «Fundamentals of information technologies». An example of a heuristic lesson on the topic «Visualization of data of socio-economic character with the help of diagrams» is given.*

Keywords: *heuristic technologies, information technologies, data visualization, charts.*

The development of the creative potential and intellectual abilities of students is one of the most important tasks of studying at the university. The purpose of higher education is the comprehensive development of a person, his talents, communication skills, mental and physical abilities, education of high moral qualities, enrichment on this basis of intellectual, creative, cultural potential, raising his educational level, providing society with qualified specialists.

In recent decades, information technologies have been actively used in all branches of science, including sociology. «Fundamentals of information technologies», like no other discipline, contributes to the development of creative abilities in sociology students. The task of the teacher of the basics of information technology is to convince students that the study of computer science, as well as the use of modern information methods in sociology, contributes to an increase in the level of education of the future specialist, serves as the basis for the successful mastering of special knowledge, makes it possible to expand horizons, increase the level of thinking and general culture. [1, 9].

This problem can be solved, for example, using a heuristic method. The heuristic method is used to enhance the creative activity of students through the system of creative tasks and allows you to successfully realize your own intellectual and creative potential in research activities [2, 152]. Students are encouraged to develop a creative assignment (independent compilation of examples and tasks on a selected topic, compilation of crossword puzzles, preparation of visual aids, multimedia presentations on the studied topics of the course). The events organized within the framework of the heuristic teaching method are focused on achieving an unknown result in advance, allow students not to passively acquire knowledge, but to independently create it, realize themselves, demonstrate their knowledge and abilities, as well as develop the ability for introspection and reflection.

In this article, the author offers your fragments of a heuristic lesson on the topic «Visualization of data of socio-economic character with the help of diagrams», included in the course «Fundamentals of information technologies», developed for students of the Faculty of Philosophy and Social Sciences of BSU, specialty «Sociology» [3, 121]. The lesson of a heuristic type on the topic «Visualization of socio-economic data with the help of diagrams» is aimed at the development of visual thinking of students and their heuristic qualities; promotes self-realization of students by completing open assignments; provides an opportunity to create an educational product that is different from others; in the process of forming a stable result of the student's actions, the existing information is structured and the object is visualized in the form of a diagram.

At the beginning of the lesson, the teacher introduces the students to the topic of the lesson and suggests completing the task: select from the proposed lesson objectives the three most significant for yourself (or suggest your own version) and justify them:

1. Get new knowledge of information technology, which will be useful in my future profession.
2. Learn the possibilities of visualizing social data using charts.
3. To attend the lesson, because the rating score depends on it.
4. Make sure that your own knowledge, skills and abilities are sound.
5. Improve your own communicative competence during a discussion with a teacher and classmates.
6. Improve teamwork skills.
7. Demonstrate to the teacher my level of knowledge of information technology.
8. Demonstrate to classmates my level of knowledge of information technology.
9. Your version.

Then students are offered an open assignment to study a real object of reality and create their own educational product.

«Student years»

You were instructed to conduct a sociological survey to analyze student life at BSU. Divide into 3 teams (4-5 people). Discuss with your team members the idea of your questionnaire for polling classmates on a topic of interest to you (study, extracurricular activities, hobbies, etc.) and its further processing. Develop a questionnaire with at least 8 questions. Conduct a survey among other classmates based on the developed questionnaire. Next, process these questionnaires and present the data obtained in the form of various visual diagrams (at least 4) using Excel. Justify the choice of diagrams. Reflect the results of the sociological survey analysis and its visual presentation in the form of a presentation.

After the lesson, the teacher suggests returning to the questions of goal-setting and analyzing how much they were achieved. Further, it was proposed to answer the questions:

1. List the difficulties you encountered while studying the topic? How did you overcome these difficulties?
2. What did you succeed most in studying the topic and why?
3. What and why did you fail?
4. What is the main result for you personally when studying the topic?
5. Describe your emotional experiences at different points in the session.
6. What was the most difficult emotionally and what was the easiest?

It should be noted that all students coped with the heuristic task. Among the undoubted advantages of organizing this lesson using the technology of heuristic teaching, one can single out the possibility of choosing a personal goal for each student. All students actively interacted with both the teacher and classmates during the preparation of the questionnaire, survey, demonstration of the presentation and reflection.

Analysis of the completed tasks and reflections of the participants showed the effectiveness of the introduction of heuristic classes in the discipline «Fundamentals of information technologies» and the feasibility of further work in this direction. The students noted that most of all they liked the creation of an individual educational product, teamwork, as well as accompanying all stages of the study of the topic with a group discussion of the process and the results obtained.

As a result of completing these tasks, students develop creative self-realization and cognitive interest in the application of information technologies in sociological research. These results are achieved due to the fact that visualization allows you to create visual associations, demonstrate the properties of objects, describe the process under study, and show the change in an object depending on external influences.

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