RESEARCH ARTICLE
Published: 28 February 2023
doi:10.21070/pedagogia.v12vi1i.1576

Revolutionizing Education: Exploring the World's Most Engaging Interactive Technologies and Effective Teaching Approaches

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OPEN ACCESS
ISSN 2548 2254 (online)
ISSN 2089 3833 (print)
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Received: 21 February 2023
Accepted: 25 February 2023
Published: 28 February 2023
Citation:
Shermukhammadov (2023) Revolutionizing Education: Exploring the World's Most Engaging Interactive Technologies and Effective Teaching Approaches. Pedagogia: Jurnal Pendidikan. 12:1. doi:10.21070/pedagogia.v12vi1i.1576

The aim of this study is to explore the latest innovations and advanced foreign experiences in teaching pedagogical sciences. A qualitative research approach was employed to gather data from various sources, including academic literature, interviews with pedagogy experts, and case studies of innovative teaching practices in foreign countries. The results of this study indicate that there are several innovative teaching methods and practices that have been successfully implemented in foreign countries, such as flipped classrooms, project-based learning, and the use of technology in education. These practices have been shown to improve student engagement and achievement, as well as foster critical thinking and problem-solving skills. The implications of this study suggest that there is a need for greater collaboration and knowledge sharing between educators and institutions across borders, to promote the adoption of innovative teaching practices and enhance the quality of pedagogical education. Additionally, this study highlights the importance of continuously reviewing and updating teaching practices in response to the evolving needs and demands of the educational landscape.

Keywords: Learning Technologies, Interactive Method, Case Study, Strategy, Graphic Organizer

INTRODUCTION

The years of independence have become a period of revolution in the field of education in Uzbekistan. After all, the young, independent republic will have to revolutionary reform the sphere of education, rebuild the education system that is perfect in all respects, renew the content of education, and enrich it with the latest achievements of modern science, technology, and apply world experience in the sphere of education and training of the individuals ensuring that professionals trained in this field can meet the standards of global education are so broad that they amount to revolutionary efforts. Abdukadirov (2015)

The national personnel training program, which has received high recognition from the world community and represents the general essence of the republican system of education and personnel training, serves as a standard in determining the level of specialization and professional training of specialists in all social spheres. The upbringing of an ideal person and a qualified specialist is an essential educational process in itself.

METHODS

This study uses a qualitative descriptive research method. Until the data used is considered suitable, qualitative data analysis is carried out thoroughly and continuously. Miles & Huberman. Data was collected by observation and interviews. Field notes were made using observational data collection methods during the learning process. Using survey data collection techniques, we found information about "case study" technology helps shape students' skills to find the most optimal option by analyzing concrete, real, or artificially created problem situations. Abduqodirov et al., (2012)

RESULTS AND DISCUSSION

Today, the system of continuous education in our country effectively uses advanced pedagogical educational technologies and educational innovations used in the pedagogical practice of developed foreign countries in the context of the procedures of globalization taking place in the world. It should be emphasized that today the most popular interactive educational technologies are used in the form of 3 types of methods. Abdukadirov (2015) They are: 1) interactive methods: "Case study" (or "Educational cases"), "Modeling", "Blitz-survey", "Creative work", "Intercommunication", "Plan", "Conversation", etc., 2) Strategies: Brainstorming, Boomerang, Gallery, Zigzag, Zinama-zina, Icebreaker, Rotation, T-Table, Rounded Snow, etc. 3) Graphic organizers: Fishbone Diagram, KWL method, Concept chart, Venn diagram, Insert, Clustering, Why?, How? etc. Below we will touch on some of them.

Interactive case study method. It was first used in the field of law in foreign education as a teaching method based on the analysis and solution of practical situations. It was first used at Harvard Law School in 1870. In 1920, lecturers at the Harvard Business School (HBS), Abduqodirov et al., (2012) relying on the teaching experience of lawyers, chose the analysis and discussion of specific situations in economic practice as the main teaching method, and this teaching method began to be widely used.

Since then, Harvard Business School has amassed a rich collection of case studies and has taken this method to the level of an independent concept of education. For the same reason, this method is often referred to as the “Harvard method”. At its core, Harvard Style is quality learning that helps students solve practical situations using videos, computers, and software.

There are two classical case-study schools. These are Harvard (America) and Manchester (Europe) schools. Within the framework of the Harvard School, this method is considered a method of teaching the search for the right solution, and the second school offers a multivariate solution to the problem situation described in the case. The American case contains dozens of pages of text and many drawings. The volume of European cases is slightly less.

In business schools of foreign countries, on average, from 25 to 90 percent of the study time is allocated to the study of typical situations. For example, students at Harvard review up to 700 cases and spend up to 90 percent of their study time on them Tolipov & Usmonboeva (2006). In Uzbekistan, case studies are increasingly being used in the field of education, mainly in the system of retraining and advanced training of specialists, especially in the field of management. In recent years, there has been an interest in teachers in the development and implementation of cases in higher education institutions.

Students master the technologies of case development, acquire the skills of analyzing practical problem situations presented in the case, searching for optimal ways to solve them individually and as a team, forming functional competence in the future specialist - designing his management and organization technologies in professional activities, Axunova (2005) building the logic of the professional process methods also help to create approaches of solving professional tasks in an independent and mobile way.

In the case-study method, a statement of various life situations is given, it is required to observe their consequences, evaluate the effectiveness of students' actions, and suggest ways to solve the problem. But in any case, work on the model of practical action is an effective means of developing professionally important characteristics in students that are in demand by the labor market. Since the case study is inherently an interactive method, it provides a positive attitude on the part of students who perceive this method as a practical tool that provides skills related to obtaining educational information and its use.

A case is a “piece” of real life (eng. “true life”, “case” - a collection (suitcase), “study” - education, study). A case is not just a simple factual description of a situation but a unique information complex that allows understanding and evaluating the situation. It is an interactive educational method based on a problem-situational analysis of a specific-real or artificially created situation that is reported and guides students to express the problem and search for its appropriate solution. Nuribet (2010)

A case study is based on a problematic situation. Situation (lat. "situation" - position, situation) - a specific condition, a set of positions and circumstances that create a situation. A

problematic situation means a situation that threatens the achievement of the subject's goals now or in the future. Yusupov (2013) Key Features of Case-Study: a) existence of an institutional system (enterprise system) model; b) being a problematic situation; c) full expression of the situation; d) having many alternative solutions; e) the possibility of working individually, then as a team, and publicly presenting the conclusion; f) based on a single goal; g) the existence of a group evaluation system of activity results; h) presence of controlled emotional tension in students; i) participants are both responsible and unrestricted; j) high responsibility of the teacher; k) student's free approach to find a solution; l) the responsibility of the student and possibility of the his/her to make a mistake in finding a solution; m) transparency and persistence in planning and achieving results.

Before the rating control, a student can take a case, solve it and present an analysis of a practical situation and suggestions for its solution in the form of a written work. The case can also be presented to the students directly during the grading control. However, it should be very short, and the goals should be such that the student can solve them within the specified time.

Independent work of students outside the classroom in the academic subject may also include the solution of a series of cases. The written presentation of the results based on the graph (terms are determined according to the curriculum and the educational program) allows for operational control and evaluation of the assimilation of educational information, the knowledge, skills and qualifications provided by the state educational standards for the course. Cases are classified as follows:

[Table 1 about here.]

The task of a case specialist is to select and apply the specific features of a case type that allow optimal implementation of the set didactic objectives. Karimov (2008). The case as an intellectual product has its resources. These are: social environment, science, and education. The social environment in all its diversity is the source of the plot, problems, and factual basis of the case. Another resource is education, which defines the goals and objectives of education and training, as well as educational technology. Science is the third source of the case. It provides analytical activities, a systematic approach, and other scientific methods used in the case-solving process.

Approaches such as the above are the basis for the classification of cases according to their main sources Isakha (2017) : 1) life cases - reflect absolutely real life situations; 2) cases in the office - include a practical situation modeled by a case manager; 3) cases based on scientific research - will be directed to the implementation of scientific research activities.

“Local” information, statistical materials, information about the market situation, socio-economic descriptions of the enterprise, scientific sources, journalistic and artistic works, the Internet and its resources serve as a source for the cases. “Decision Tree” (“Decision making”) strategy. A strategy is a technical approach aimed at mastering rather complex topics related to the foundations of certain science, coming to certain conclusions based on a comprehensive and thorough analysis of certain issues, and finding the most appropriate and correct one among several conclusions expressed concerning the problem. It serves to re-analyze the decisions made in previous situations, to understand them perfectly.

Utilizing strategy in education creates an opportunity to analyze each option presented by the student (students) and determine its acceptable and unacceptable aspects to make a rational decision (conclude) regarding the studied problem. According to it, during the training, the student (students) work based on the following diagram (using the blackboard when conducting activities of this or that order):

[Figure 1 about here.]

The peculiarity of this strategy is that it is applied directly based on a specific project. A sample view of the project is as follows:

[Table 2 about here.]

“6X6X6” strategy. With the help of this strategy, it is possible to solve a task or problem by involving 36 pupils (students) in a particular activity one time to determine the capabilities of each member of the group, and to evaluate their views. In the exercise that is organized based on its, six groups, with six participants in each, discuss the problem (issue) raised by the teacher. At the end of the set time, the teacher regroups six groups. Each of the newly formed groups will have one representative from the former six groups. The members of the newly formed group discuss the solutions together, stating the conclusion presented by the former group as a solution to the problem (assignment) to their teammates. Mukhtorov (2012)

The teacher monitors the process of doing the activity by the groups and gives them advice, guides them when necessary, and asks the groups to finish the discussions after making sure that the tasks are solved correctly by the groups.

The application of the strategy in the lessons is organized in the following order: a) 6 chairs are placed around 6 tables, before the lesson; b) Students are divided into 6 groups by the teacher; c) the teacher announces the topic of the lesson and gives certain tasks to the groups, after the students have settled down; d) a specific time is set and the discussion process is organized; e) the teacher monitors the activity of the groups; f) the teacher will reorganize the groups, after the set time has elapsed; g) there will be one representative from each of the previous 6 groups in each new group; h) After the students switch places, at the appointed time they tell their teammates about the problem assigned to their previous groups and its solution; i) the newly formed group discusses the conclusions (solutions of the assignment) adopted by the previous groups and makes a final conclusion; j) the teacher evaluates the activities of the team individually and as a whole and ends the lesson.

“Know. Want to know. Learned” (KWL) graphic organizer. It allows students to assess their level of knowledge on specific topics. Students can work in groups or teams, while using it. When working in a group, at the end of the training, the work done by the groups is analyzed. Group activities can be organized as follows:a) each group performs the tasks

given by the teacher based on the general scheme;b) at the end of the training, the thoughts of the groups on the items of the project will be summarized; Educational activities are organized on the basis of the following scheme, which is reflected directly on the blackboard or worksheet:

[Table 3 about here.]

Using the graphic organizer is based on three steps Ghaziyev (1999):a) the level of students' understanding of the subject that is planned to be studied is determined; b) studying the needs of students in enriching existing knowledge in the subject; c) students get acquainted with the information on the topic in detail.

The details of the steps by stages taken are as follows: 1) students are divided into small groups; 2) the levels of students' understanding of a new topic is studied; 3) the concepts noted by the students are recorded in paragraph 1 of the project; 4) the needs of students to enrich their existing knowledge on a new subject are studied; 5) the concepts that are described as the needs of students will be recorded in paragraph 2 of the project; 6) the teacher gives students information on a new topic; 7) new concepts learned by students will be determined; 8) the stated new concepts will be recorded in paragraph 3 of the draft.

CONCLUSION

Therefore, the "case-study" technology helps to form students' skills to find the most optimal options by analyzing a concrete, real or artificially created problem situation. It teaches students to study and analyze any meaningful situation. On the basis of technology, future specialists are effectively prepared for real professional situations. Utilizing other types of interactive educational technologies in the education of developed foreign countries teaches students to think logically, learn theoretical information based on in-depth analysis, put forward their hypothesis, and firmly defend their opinion. This process, in turn, serves the development of the educational system.

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Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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LIST OF TABLE

TABLE 1/Case Classification

Typological signs	Type of case
Main sources	1. In natural conditions. 2. In the cabinet. 3. Scientific research.
The presence of a plot	1. With a plot. 2. Without a plot.
Dependence of the situation on time	1. Case in the mode of coming from the past to the present. 2. A case-memory that goes back in time. 3. Prognostic case
Case object	1. Personal. 2. Organizational-institutional. 3. Multi-subject.
Method of presentation of material	1. Story. 2. Essay. 3. Analytical correspondence. 4. Journalist investigation. 5. Report. 6. Essay. 7. Set of facts. 8. A set of statistical materials. 9. A set of documents and production samples, etc.
Size	1. Short . 2. Average. 3. Large.
Structural features	1. Structured. 2. Unstructured.
The method of presentation of the educational task	1. Case with questions. 2. Case with assignments.
Didactic objectives	1. Explain the problem, solution or concept. 2. Trainability of the subject, based on the acquisition of qualifications and skills in the subject. 3. Teaches analysis and evaluation. 4. Teaching of identification and solution of the problem, and managerial decision-making. 5. Motivating to development of new strategies and ways of development of the subject of the situation, new assessment methods, and others.
Method of Formalization	1. Print. 2. E-version. 3. Video case. 4. Audio case. 5. Multimedia case.

TABLE 2/Sample Project View

COMMON PROBLEM					
1st decision option		2nd decision option		3rd decision option	
Advantages	Disadvantages	Advantages	Disadvantages	Advantages	Disadvantages
DECISION:					

TABLE 3 / Education Activity Scheme

Know	Want to know	Learned

LIST OF FIGURE

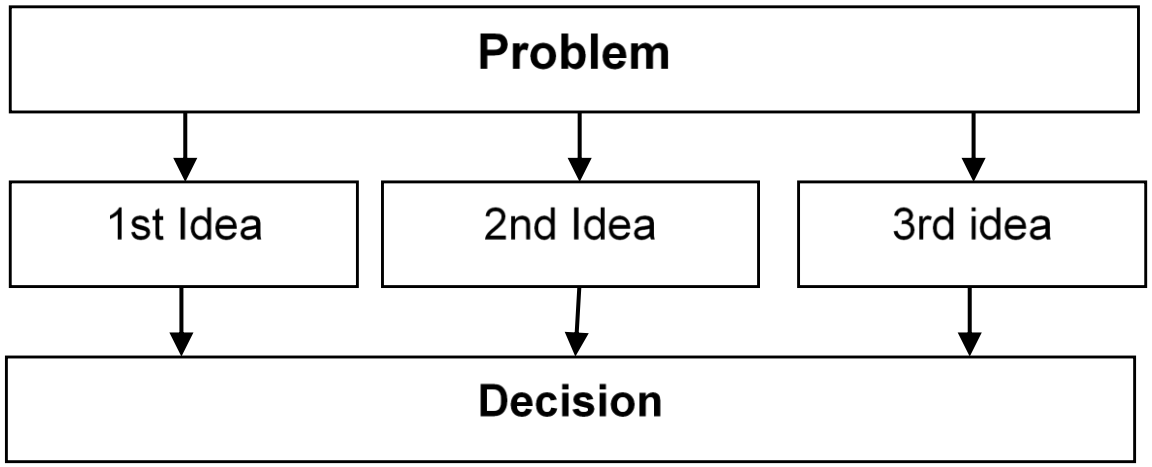

FIGURE 1 | Strategy in Education Creates an oOportunity to Analyze Each Option Presented by the Student