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18

IMPACT OF EDUCATIONAL GAMES IN THE LEARNING PROCESS ON THE DEVELOPMENT OF STUDENTS' PROFESSIONAL AND ECONOMIC COMPETENCE

IMPACTO DE LOS JUEGOS EDUCATIVOS EN EL PROCESO DE APRENDIZAJE EN EL DESARROLLO DE LA COMPETENCIA PROFESIONAL Y ECONÓMICA DE LOS ESTUDIANTES

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ABSTRACT

The paper presents a method of organizing and conducting educational games for students in non-economic specialties. The purpose of the study is to organize the educational process by implementing the practice-oriented and personality approaches. The authors employ a combined methodological approach that uses the methods of active and interactive interaction and roleplay modeling. As a result, the authors develop an educational game scenario that imitates the ecosystem of the market economy. The study concludes that the implementation of projects realizes a practice-oriented approach to learning and provides a strong meta-disciplinary connection between the disciplines of the educational program. Training with the proposed game scenario demonstrates that this approach to learning awakens students' interest in academic disciplines or professional activities, which ensures the development of a high-class specialist with the necessary competencies.

Keywords:

Pedagogical technologies, education, professional competencies, educational process, quality of education.

RESUMEN

El artículo presenta un método de organización y realización de juegos educativos para estudiantes de especialidades no económicas. El propósito del estudio es organizar el proceso educativo mediante la implementación de los enfoques orientados a la práctica y de la personalidad. Los autores emplean un enfoque metodológico combinado que utiliza los métodos de interacción activa e interactiva y el modelado de juegos de rol. Como resultado, los autores desarrollan un escenario de juego educativo que imita el ecosistema de la economía de mercado. El estudio concluye que la implementación de proyectos realiza un enfoque de aprendizaje orientado a la práctica y proporciona una fuerte conexión metadisciplinaria entre las disciplinas del programa educativo. El entrenamiento con el escenario de juego propuesto demuestra que este enfoque de aprendizaje

despierta el interés de los estudiantes por disciplinas académicas o actividades profesionales, lo que asegura el desarrollo de un especialista de alto nivel con las competencias necesarias.

Palabras clave:

Tecnologías pedagógicas, educación, competencias profesionales, proceso educativo, calidad de la educación.

INTRODUCTION

Current trends in social and technological development pose new requirements for graduates of educational institutions. As pointed out by Chen (2022), a young professional graduating from university should be goal-oriented, principled, communicative, mobile, and creative, meaning that their training should develop their personal characteristics. To meet these social needs, educational institutions must unlock the creative potential of the student, modernizing the traditional educational process.

Iliukhina (2021), emphasizes in her research that a student needs to develop their "individual educational trajectory", which presents an effective solution to the problem of organization of learning and changes the student's status to that of a subject in the educational and upbringing process. A study by Kryzhanovskaia (2020), indicates that during their training students have only a partial understanding of the professional values and personal qualities required for a specialist in the labor market. Kryzhanovskaia concludes that this primarily owes to the lack of a comprehensive approach to students' self-determination as specialists throughout their studies and the detachment of the content of academic disciplines from the real state of the industry. A similar point about the lack of a practice-oriented approach in the training of specialists is found in the works of Logachev et al. (2020, 2022).

For this reason, the purpose of the present study is to organize the educational process implementing the practice-oriented and personality approaches, containing the model of the market economy. To meet this goal, we developed a scenario for an educational game.

The applied significance of this study consists in the development of an educational game scenario modeling the real conditions of the market economy in the context of future specialists' professional practice, as well as in the use of the competency approach in student training.

The theoretical significance of the research lies in the opportunity to use the obtained results to improve the educational process, reinforce meta-disciplinary links in the training program, and improve teaching methods and management of the pedagogical process.

The research hypothesis is that the use of educational games in training students provides for the formation of their professional and economic literacy.

METHODOLOGY

The content of the educational game was formed by the academic disciplines "Theory and Practice of Business Negotiations" and "Databases in Strategic Communications Planning" of the undergraduate degree program "Advertising and Public Relations in Digital Media". We deemed the meta-subject links between the chosen academic disciplines to be some of the strongest. Students need to develop professional competencies in communication with the client (finding out what the client wants, constructing dialog so that the client is comfortable, recording and formalizing the results of negotiation in a form that is understandable both for the client and the performer, maintaining communication during project performance, organizing and performing the transfer of the completed order) and the project team (assigning persons in charge of the project stages and their responsibilities, assessing the labor intensity of each task and setting realistic deadlines for their completion, etc.), as well as in the use of modern software (in communication with the team and the client, in the performance of the project, etc.).

The educational game was organized through the combined use of the following methods:

1. The active interaction method, at the core of which is the dialog between the teacher and students. This method allows for activating the thinking and practical work of students in finding solutions to non-trivial problems (Zetzmann et al., 2021).

2. The interactive interaction method, which is grounded in the dialog between the teacher and students and among students themselves. In this case, students can independently establish the range of tasks and methods to solve them, analyze their actions, evaluate solutions, and perform operational management on this basis (Shaikhatova, 2021).

3. Roleplay modeling, which allows each student to define their personal responsibilities based on the model of behavior established within their team (Rahimi et al., 2021; Talandron-Felipe & Rodrigo, 2021). An opportunity arises to assess the social content of one's future professional practice and model the system of relations not only within the team but also with the specialists who control the professional activity and people who are ready to use the services of a specialist from the relevant environment within the framework of the educational program (Dvorkovaia & Kurenkova, 2016). Roleplay modeling of professional activity is pivotal in practice-oriented learning (Zhukova, 2017; Logachev et al., 2020, 2022).

DEVELOPMENT

The use of the stated methods enabled us to develop a scenario of an educational game simulating a market economy ecosystem for small businesses. Such a game is

practice-oriented, which allows students to not only develop professional and general competencies but also improve their financial literacy.

Educational game scenario

For the game, in the introductory class, students were asked to divide into teams of no more than five. Each team in the game was a limited liability company engaged in the creation and use of databases and information resources, as well as promotional activities. Each team assigned specific roles and corresponding responsibilities to its members. It was imperative to have the role of a leader, who distributed responsibilities for projects and reported on the company's activities throughout the game.

Teams received orders they had to fulfill at varying time intervals. These orders were categorized into the following types:

- Individual orders (designed for a specific company; a variant of the legend for the game: the customer is recommended by acquaintances/colleagues/relatives to contact this particular company because they are better than others);
- Tender orders (a variant of the legend: the government is looking for a company to solve a stated problem faster and better than others);
- Hackathon orders (a variant of the legend: a company announces a common problem for all other willing companies to solve and gathers a bank of solutions).

For each order, there were defined time limits and conditions of performance, penalties for non-compliance, and the amount of remuneration according to the complexity of the work. Teachers who taught the specified academic disciplines acted as customers. It was up to the teams to decide whether to accept the order in their work or to participate in tenders.

Each team had to report on their financial and economic activities at the end of the time interval:

1. Accrual of wages for each employee of the organization (not less than the minimum wage of 17 thousand rubles);
2. Payment of personal income taxes for each team member (13%), as well as the accrual of social taxes (30%);
3. Payment of rent and utilities (30 thousand rubles).

At the start of the educational game, each team was given a start-up capital of 100 thousand rubles.

At the end of the semester, each team was required to have a certain amount of money in their account based on the results of their work. In addition, each participant also accumulated some amount of money in their individual account. Performance was evaluated by team and individual scores. Thus, grades were determined by setting thresholds for the amount of money accumulated in the accounts.

Teachers in the educational game played the role of supervisory bodies (labor inspection, tax service, central and private banks, etc.), as well as customers of the projects. All cash flows between the teams and participants were transparent and handled centrally by one bank. Violators were fined for concealing income, transfers, and other manipulations with savings.

Money transfers were allowed between individuals (5% transfer fee), legal entities (15% transfer fee), and individuals and legal entities (20% transfer fee). Thus, teams were not restricted from exchanging experience with each other or employing consultants to fulfill orders. Members of other teams or faculty members could act as consultants (or performers). In addition, if a team had problems organizing its work, it could call upon a crisis manager (a faculty member).

The teams were allowed to take loans from the bank to sustain their activities. Each loan had its conditions. All loans had to be repaid at the last class on the schedule.

In the educational game, the following restrictions were set: one week equaled one month, at the end of which reporting on the established rules was required; a moratorium on the dismissal of employees. All other events were interpreted and solved according to current legislation. In addition, at the end of the month, there was a random event, which could positively or negatively affect the economy of the makeshift state. An exemplary list of such events:

1. The state makes decisions on the development of individual entrepreneurship. It is allowed to register five individual entrepreneurs with the obligatory indication of the type of activity. A tax deduction of 10%.
2. The central bank raises its key interest rates. The interest rate on all loans grows by a factor of 5
3. Inflation grows faster than expected. The price of utilities doubles.
4. The country enters default. All money is devalued by a factor of 100.
5. Commissions on money transfers are canceled.

Importantly, the selection of events has an internal gradation: from extremely negative (for example, a default is an extremely negative event and an increase in the loan rate is a negative one) to positive events (the cancellation

or simplification of some conditions). In this case, the list of events was picked depending on the current situation in the improvised state, so that all the processes did not become uncontrollable.

Any business game, which is a variety of educational games, is a practical exercise that simulates working situations. Researchers agree that these games provide experiences marked by personal involvement and a strong emotional component on the part of students and simulate various business cases (Dvorkovaia & Kurenkova, 2016; Logachev et al., 2022) . The scenario of the developed game allowed us to engage all students in the educational process, regardless of their level of knowledge, to establish the value of each team member and their contribution to the work of the team (Kosiborod et al., 2022). Laboratory works were transformed into projects that required a creative approach to solve the arising problems, teamwork, and distribution of resources, considering not only the personal interests of each student but the overall situation in the impromptu industry market. Students were required to make a decision about the project not because it had to be done at the request of the instructor, but due to the current workload of all team members, the economic state of their firm, potential threats, profit levels, and further development of operations. All of this simulates the work situations faced by any organization and its employees in a real market economy.

As noted by Kurenkova (2014); and Kindeeva & Zueva (2021), the entire learning process is built as a chain of learning situations. The tasks set in the course of an educational game are solved as a result of the collaborative efforts of the teacher and the student. In this way, the student learns to communicate and structure the search activity together with their team and to distribute not only their own but also the team resources (Kurenkova, 2014).

These observations are substantiated by the results obtained in our study and are consistent with research findings on practice-oriented learning (Logachev et al., 2020; Ourie & Wilson, 2021; Bazargani et al., 2021).

The teacher in the developed game scenario was not just a controlling element, but a participant in modeling the processes of interaction between companies and the customer. Depending on the situation, the instructor chose different models of behavior:

- a customer who does not have professional competence in the relevant project, but is ready to pay money for the result;
- a professional who has all the knowledge and can assess the presented result not only by external (apparent) parameters;
- a crisis manager who can distribute functions within the team to obtain the maximum result;
- a consultant who can provide point-by-point information without interfering in the internal affairs of the team, etc.

With this, the company must pay from its virtual account for the services rendered at the stated price. This allows students to establish communication with the instructor as an industry expert able to respond promptly to any challenges.

CONCLUSIONS

Summarizing the study, we should note that there are increasing pragmatic trends in educational practice, digitalization, and market mechanisms of functioning, which shape the need for meta-disciplinary teaching and learning in empirical situations. The use of modern technologies and non-standard forms and methods of teaching renders any educational program competitive.

Today the teacher has to act as a mentor who defines the individual educational trajectory. Such a path should rely upon the strategy of the development of innovative and creative ideas, the formation of personal and professional qualities, and the creation of conditions for self-development and teamwork.

The developed educational game format embodies innovative approaches in education, revealing the potential of each student's personality. Training with the proposed scenario can not only awaken interest in academic disciplines or professional practice but also raise the level of financial and legal literacy. The student gains a value-oriented unity of the group and an understanding of the role of the leader and their responsibility for decision-making. Working in a team provides for the development of conscious competence in communication both between team members and with teachers. Tolerance and respect for any point of view are formed, and the skills of analysis and introspection in the process of group reflection are developed. All this ensures that the training process produces a high-class specialist who is ready to perform tasks of varying complexity in any environment. The results obtained in the course of the study are accurate and reproducible within the framework of academic disciplines of any profile. Thus, the goal of the study is achieved, and its hypothesis is confirmed.

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