

# The Role of Business Simulation Programs in Developing Students' Economic and Information Competence

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**Abstract:** In the context of the modern digital economy, improving the quality of economic education in higher education institutions and developing students' economic and information competence is one of the urgent tasks. This article analyzes the pedagogical and methodological aspects of using business simulation software in the process of economic education. The study examines the educational potential of economic simulation programs such as Big Ambitions, Capitalism II, Timeflow – Time & Money Sim, Internet Cafe & Supermarket Simulator 2024, and Business Mania. The results of the study indicate that business simulators serve as an effective pedagogical tool for developing skills in modeling economic processes, making economic decisions, and working with economic information.

**Keywords:** Economic education, economic and information competence, business simulators, economic modeling, digital technologies.

**Introduction:** In the 21st century, processes of economic development are increasingly shaped in close connection with information technologies. In the context of the digital economy, the analysis, modeling, and forecasting of large volumes of data play a crucial role in the process of making economic decisions. Therefore, one of the important tasks of the higher education system is to prepare students studying in economics-related fields to work with modern economic information technologies.

In the process of developing students' economic and information competence, innovative pedagogical technologies, particularly simulation-based teaching methods, provide effective results. Simulator programs create a virtual experimental environment for students by modeling a real economic setting. In such an environment, students not only study economic processes but also gain the opportunity to analyze the outcomes of different economic decisions.

For example, in business simulators, students can observe how the volume of demand changes when

they modify the price of a product. If the product price increases, in some cases demand may decrease, which helps to understand the principles of supply and demand. In this regard, business simulators make it possible to connect economic theories with practical experience.

## LITERATURE REVIEW

In recent years, the use of simulation technologies in economic education has been studied by many researchers. In particular, the scientific study titled "Teaching Economics Using Simulation Games" written by Becker and Parker analyzes the pedagogical effectiveness of using simulation games in economic education.

In this study, the authors scientifically justify that simulation games help students gain a deeper understanding of economic concepts. According to them, in traditional lecture-based teaching methods, students learn economic processes mainly from a theoretical perspective. However, when simulation technologies are used, students gain practical

experience by modeling economic processes in a virtual environment.

In the studies conducted by Becker and Parker, it is emphasized that economic simulators help students understand the process of making economic decisions. For example, in company management simulators, students can observe economic outcomes by changing production volumes, developing marketing strategies, or making investment decisions.

The authors also highlight that simulation games transform economic education into an interactive form. In this process, students are not passive listeners but active participants who take part in managing economic processes. The results of the research show that simulator programs are effective tools for strengthening students' knowledge, developing analytical thinking, and forming skills for solving economic problems.

### **METHODOLOGY**

This research is aimed at determining the effectiveness of using business simulator programs in developing students' economic and information competence. During the research process, pedagogical observation, comparison, modeling, and analytical methods were used. A group of students studying in the field of economics at a higher education institution was selected as the research object. During the study, simulation-based practical training sessions were organized with the students.

The main idea of the methodological approach was to develop students' economic thinking skills by modeling economic processes in a virtual environment close to real-life conditions. During the experimental sessions, students were assigned tasks related to modeling various business processes. In these tasks, students were required to perform activities such as starting a business, setting product prices, developing marketing strategies, planning production volumes, and making investment decisions.

During the experiment, several economic simulator programs were used. In particular, with the help of the Big Ambitions program, students learned the process of establishing and managing a business in a virtual city. Through this simulator, students modeled economic processes such as opening a retail enterprise, hiring employees, organizing logistics systems, and developing marketing strategies.

In addition, training sessions on managing production and logistics processes were conducted using the Capitalism II simulator. This program enabled students to model processes such as purchasing raw materials, producing goods, and bringing products to the market.

During the experiment, students studied the relationship between production costs, product cost price, and profit through practical examples.

Furthermore, the Timeflow – Time & Money Sim simulator was used to develop financial literacy. With the help of this program, students modeled economic processes related to investment activities, forms of passive income, and capital management.

One of the important aspects of the research methodology was the systematic analysis of students' activities. During the training sessions, the economic decisions made by students, their outcomes, and the students' economic analysis skills were continuously observed. This made it possible to determine the impact of business simulator programs on the effectiveness of the educational process.

### **RESULTS**

The results of the research showed that the use of business simulator programs has a positive impact on the development of students' economic and information competence. During the experimental training sessions, students were able to connect theoretical knowledge with practical activities by modeling economic processes.

For example, with the help of the Big Ambitions simulator, students learned the process of managing a retail enterprise. In the virtual stores opened by the students, product prices, advertising expenses, and the number of employees were adjusted. As a result, students were able to observe how economic decisions influence business efficiency.

As an example, a virtual electronics store managed by the students can be considered. Initially, the students set the product prices at a high level. However, in this situation, the sales volume did not reach the expected level. Later, the students reconsidered their pricing policy and managed to increase sales volume by lowering the product prices. This process helped students understand the laws of supply and demand from a practical perspective.

With the help of the Capitalism II simulator, students gained experience in managing a production system. Students modeled processes such as purchasing raw materials, organizing production lines, and bringing products to the market. As a result, students understood the economic relationships between production costs, logistics costs, and product cost price.

The Timeflow simulator, aimed at developing financial literacy, also became an important tool for students in learning about investment activities. Through this program, students modeled the process of earning passive income by investing in real estate, stocks, and

other financial instruments.

The results of the research showed that business simulators help develop students' skills in analyzing economic information, making economic decisions, and strategic planning.

### **DISCUSSION**

The use of business simulator programs makes the economic education process more effective and interactive. In traditional teaching methods, students mainly learn economic theories through lectures. Although this method helps increase students' theoretical knowledge, the opportunities for developing practical skills remain limited.

Simulator programs, however, actively involve students in the learning process. By making economic decisions in a virtual environment, students model real business processes. This process enables students to connect economic theories with practical experience.

For example, with the help of the Internet Cafe & Supermarket Simulator 2024, students can study business processes in the service sector. In this program, students manage a supermarket or an internet café and analyze factors such as customer flow, product assortment, and service quality.

Another important aspect of simulator programs is their ability to develop students' analytical thinking skills. By making various economic decisions, students can observe their outcomes. This helps them gain a deeper understanding of economic processes.

In addition, business simulators develop students' skills in working with economic information. During the management of virtual business activities, students are required to analyze various economic indicators. This process contributes to the formation of their economic analysis skills.

### **CONCLUSION**

The results of the study show that the use of business simulator programs is an effective pedagogical tool for developing students' economic and information competence. By modeling economic processes, simulator programs create an experience close to a real business environment for students.

With the help of business simulators, students develop skills in making economic decisions, analyzing economic information, and strategic planning. These skills play an important role in their future professional activities.

Furthermore, the research results indicate the need for the wider implementation of business simulator programs in the economic education process. Such programs not only make the educational process more

interactive but also contribute to the development of students' practical skills.

In the future, expanding the possibilities of using simulation technologies in economic education and developing new pedagogical methodologies will remain one of the important scientific directions.

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