

Promoting Creativity and Innovative Spirit in the Learning Process Through Advanced Web-Based Technologies

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Abstract: Throughout the history of evolution of humanity, knowledge, creativity and innovation have been the decisive factors in the intellectual as well as the economic development. However, lately, the tools necessary to create, share and apply knowledge have radically changed. As a result, the economy is transformed into an economy which has knowledge and creativity at its foundation, as a cornerstone, and the production process generates an innovation-based production, which involves the use of knowledge applied in technology, know-how, new organizational structures and management. The current generation has little and a fairly fragile experience in the development and evolution of the capitalist state and, thus, it is not prepared to deal with the economic crisis and the stages of recession. For this purpose, a philosophy of change, flexibility and intelligent survival is welcome. Under such conditions, it becomes absolutely necessary for the citizens of a country to be trained towards the development of flexible and adaptable behavior by cultivating creative skills and innovative spirit. Based on classifications of online tools and Web technology solutions applied through advanced learning methods, the conditions for their application and use will be analyzed, looking at the effects that have been recorded so far and further refinements.

Keywords: *key competences; transversal skills; simulated enterprises; entrepreneurial skills.*

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1. Introduction

The use of modern student-centered learning methods in educational processes can facilitate the development of entrepreneurial skills, as well as the development of cross-cutting skills in line with employers' requirements.

One such method is the simulated enterprise, a simulation of the business in educational purpose, but respecting the principles of market economy.

In the knowledge-based society, the simulated enterprise is simultaneously regarded as an educational and entrepreneurial center, and the involvement of students in the activities of these enterprises primarily aims at building and expanding their practical skills in order to encourage students' complete involvement of in the entrepreneurial activity.

The simulated enterprise is based on the theoretical and systematic learning including applications solving, practical testing, development of acquired knowledge, as well as generation of new skills and aptitudes. On the other hand, for the development of the entrepreneurial initiative, the simulated enterprise provides students with a complex framework of action and experience developed inside an organizational structure similar to that of real enterprises.

Among the activities carried out in the simulated enterprise, the idea of competence development should be promoted while encouraging students' own initiatives and ensuring the link between theory and practice by developing an action-oriented educational process. Moreover, the ROCT platform and methodology (Headquarters of Exercise Firms Network / Simulated enterprises in Romania) must support this approach [6].

In the context of the above mentioned, the present study aims at identifying the benefits of experimental learning from the perspective of the students involved in practical training in simulated enterprises organized by the Valahia University of Targoviste under POSDRU / 160 / 2.1 / S / 138113 - Transition from school to active life through practice and the creation of simulated enterprises (SIMPRACT).

2. Problem Statement

In the continuous progress of technology and information, science is always coming up with new proposals and developments. In the 21st century, the teacher would have to recognize and learn change, as well as how to adapt his teaching methods and teach others to manage this change.

Having access to innumerable and diverse technological and computer resources as well as advanced learning facilities, there is also an obligation to adopt a visionary model of the teacher, meaning a more flexible and adaptable one, a good communicator and collaborator, while continually adapting curriculum content to new paradigms of specialization. In a world that is continually changing, connected, adapted and evolving, the method knowledge is presented must inspire students the way they have to learn.

There are new jobs on the labor market every day, and many of the students who study in a higher education institution today will take these jobs. It is likely that they will not be trained for these jobs, but they will still have to find some way to learn. In this context, we shall quote Plutarch, "*The mind of man is not a vessel to be filled, but a fire to be ignited,*" and the idea that "*Nothing is more important in the twenty-first century than learning to manage change*" [3] which will always be actualate.

The knowledge and the learning content must be placed in the context of work tasks, concrete activities or projects that students will complete. The students respond much better to real world issues when the taught knowledge forms the foundation for concrete activities [2]. Today's student calls for concrete examples and models which focus on real-world issues, firmly established on the basis of an understanding of opportunities and necessities. They also require that the subjects they learn in a certain field to be relevant and applicable in another curricular area. The mentors and the teachers are required to expand their area of expertise by working together to link the learning from one area to another in a multidisciplinary effort. The unified multidisciplinary scientific knowledge is a guarantee of correct interpretations of different processes, phenomena or laws used in the process of teaching interconnected concepts. The academic content presented in the subjects taught should allow students to form a unified vision of concepts, thus facilitating the development of student integration into the real world. In an interdisciplinary approach, the project-based learning, based on labor market realities and using the most up-to-date information technology, proves to be the most effective.

The project-based learning should encompass, reunite and strengthen the discipline-based learning, so that the amount of knowledge gained is greater than the individual aspects taught in isolation. This is an overall, holistic view of the educational process, building and assessing every aspect of youth education (the millenniums) of the 21st century [1].

The simulated enterprise is a modern learning method that aims to develop entrepreneurial skills in young people by simulating internal processes in a real firm and its relationships with other firms and institutions, in accordance with the procedures of the EUROOPEN (*Europen*

Practice Enterprises Network). In order to ensure the prerequisites for graduates' integration into the labor market and for the continuous vocational training, it is necessary to create a flexible and adaptable system of the types of competencies specific to the occupational standards required for the market economy [4],[5]. This approach to learning is directed towards the individual and his personality development. In practice, the closest interrelation to reality is established between people in the course of different types of activities, such as those specific to the production process of a company. The proposed model creates unlimited opportunities to carry out active and development processes, as well as to the establishment of mutual ties between the members of the staff and between various enterprises in the country and abroad. During the activity, the company undertaking the exercise acquires the basic skills and abilities necessary to be employed in a real company. The organization of education and training, in the form of simulation of a company operating on a determined market and subordinated to the legislation in force in the country and abroad, establishes the following: to what extent, how, where and when the knowledge acquired during the training, study / learning process can be applied. The goal of the Virtual Enterprise is that young students acquire key competencies which would enable them to successfully integrate into the labor market, into the real world, into a company with a real activity.

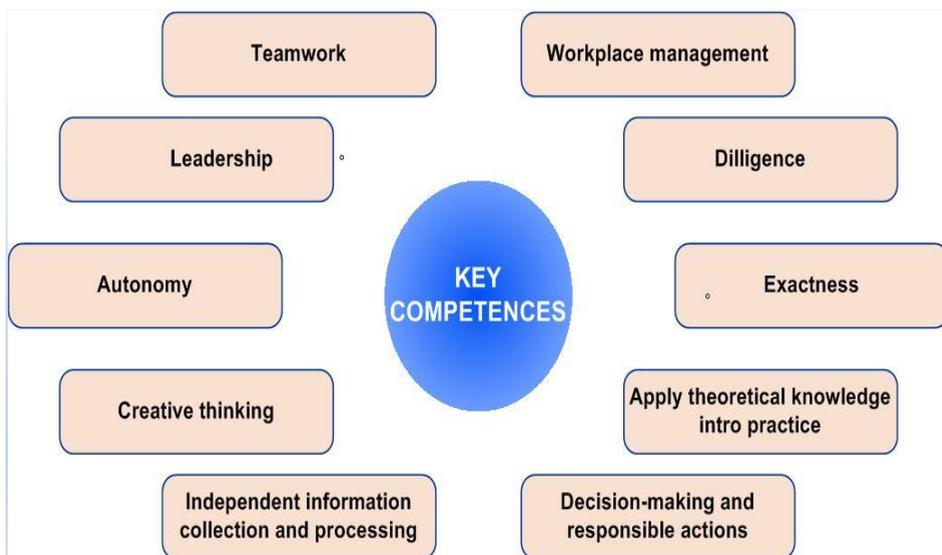


Figure 2. *Key competences built into a virtual enterprise*

The key competences allow the young people to acquire the skills needed to:

- Organize and manage the activities within a company;
- Develop the company's supply products and services;
- Do the accounting of the company;
- Analyze the company's economic and financial efficiency.

Lately, Information and Communication Technologies (I & CT) have made changes in all areas of society, including education, and their implementation is also present in the activity of virtual companies. From the foundation or the takeover of a company the participants have access to the ROCT Web site at <http://www.roct.ro/>. There can be downloaded information on procedures, registration / re-registration forms (establishment, takeover, continuation of company activities, other legal transactions, and virtual settlements) as well as the events organized and submitted to the Exercise Firms Center. The participants use electronic communication to establish a relationship with other virtual enterprises in Romania as well as other countries [6].

With the Internet and the new type of transactions that have constantly grown internationally, through e-commerce or online applications. The advantage of building such an application is also evident in the case of the exercise firms, the virtual shop being permanently active and interactive, allowing the possibility of practicing commercial law procedures without any time and space limits, both for the trader and for the consumer, with all the rights and obligations arising out of the transactions made.

3. Research Question/Aims of the research

The effectiveness of the activities of the simulated enterprises should be related to their specific pedagogical and formative objectives, and the present questionnaire survey aims to highlight the benefits of experimental learning from the perspective of students involved in practical training in simulated enterprises, organized by Valahia University of Târgoviște, within the SIMPRACT project.

The objectives of this investigation were:

- Identifying the reasons that prompted students to participate in the activities carried out in the simulated enterprises.
- Establishing the extent to which the practice in the simulated enterprises has contributed to the development of entrepreneurial skills.

- Assessing the perception of students employed in SE on facilitating their access to the labor market as a result of their participation in the SE specific activities.
- Establishing the main advantage of experience learning in a virtual business environment.
- Identifying the benefits of participating in the activities of simulated enterprises.
- Establishing the possibility of implementing the business model tested in the virtual environment into a real business.

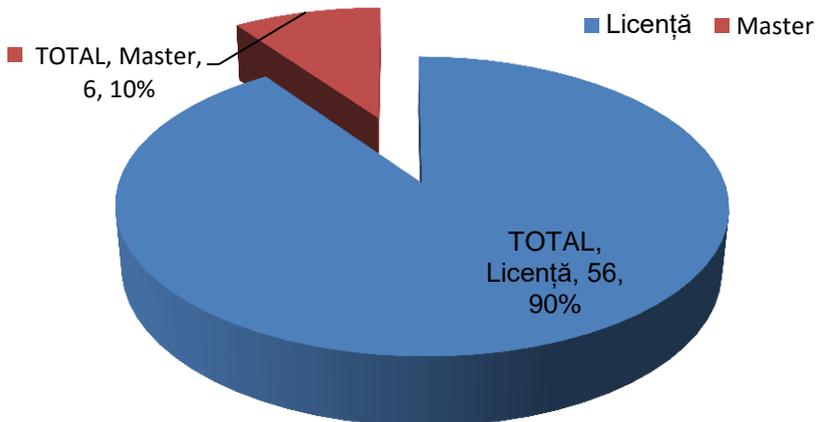
4. Research methods

The survey was carried out between October 25 and November 20, 2015, the questionnaires being distributed directly to the students employed in simulated enterprises.

The used questionnaire comprised 13 questions, the response rate was 69% (90 questionnaires were distributed to students and 62 completed questionnaires were received).

The students who completed the questionnaires were enrolled in study programs at the University of Valahia in Târgoviște, and from this point of view, the structure of the sample consists of 90% students enrolled in bachelor's degree programs and 10% students enrolled in masters programs (Figure 1).

Figure 1. Structure of the sample by level of studies



5. Discussion

The chapter of conclusions should answer the research questions. In case of hypotheses, it should present whether they were validated or not.

The assessment of young people's perception of the benefits of experimental learning in practical training in simulated enterprises, organized by P7-Valahia University of Targoviste partner, highlighted the following:

- the main reasons that led students to participate in the activities of the simulated enterprise were "The chance to gain relevant experiences in a certain field" and "The possibility to acquire and develop skills";
- the most important skills developed through the activities developed in the simulated enterprises are: social, teamwork and communication skills, along with practical skills to create promotional materials and document preparation;
- the main advantage of experiential learning in a virtual business environment is the opportunity to test different business ideas and projects;
- the most important benefits of participating in the activities of simulated enterprises are: acquiring the skills needed to set up a business and increasing the employment opportunities in real firms;
- the business model tested in the virtual environment (simulated enterprise) can generally be transposed into a real business.

Thus, through the multitude of activities carried out in the simulated enterprise, it has been satisfactorily fulfilled the objectives of this learning method through simulated enterprises.

6. Conclusions

By using the virtual enterprises and the simulated enterprise method in the educational and learning process, there is a chance for the practical training required for professional life to be acquired, and an important interaction between university and industry takes place, which is beneficial in both ways.

An educated, innovative and creative entrepreneur will be able to operate and compete in a market economy characterized by rapid changes brought about by the technological and social environment. Business continuity and practice supports entrepreneurship and encourages the start-up of private businesses while reducing business risk.

References

- [1]. Crespo B, Míguez-Álvarez C, Arce ME, Cuevas M, Míguez JL. The Sustainable Development Goals: An Experience on Higher Education. Switzerland: MDPI, Basel; 2017. Available from: <http://www.mdpi.com/2071-1050/9/8/1353> [Accessed 6th February 2020].
- [2]. EC publication. Helping to create an entrepreneurial culture; 2009. Available from: http://community.flexiblelearning.net.au/TeachingTrainingLearners/content/article_6081.htm [Accessed 6th February 2020].
- [3]. Fullan M. Six secrets of change. San Francisco: Jossey-Bass A Wiley Imprint; 2008.
- [4]. Stefan V, Granic A. Delivery of education and training frameworks through mobile technologies. Proceedings of 6th International Conference eLSE, April 15-16, Carol I University. Bucharest: Editura Universitară; 2010: 39-47.
- [5]. Stefan V, Ilie S, Albu R.. Business strategy games – tools for learning and development of entrepreneurial competencies. Proceedings of 6th International Conference eLSE, April 15-16, Carol I University, Bucharest: Editura Universitara; 2010.
- [6]. www.roct.ro