

Pedagogic innovation through simulated enterprises – a prerequisite for higher education economic adaptation to the requirements of the knowledge society

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Abstract. *The proposed theme is consistent with the current concerns of the European Union aiming to create a "Europe of Knowledge" in which people are able to live and operate in a competitive environment based on knowledge. Addressing innovation as a condition of higher economic education adaptation to the demands of modern society, this paper aims to provide a perspective on the use of new teaching methods, to test not only knowledge, but especially practical skills in various business activities from inside the simulated enterprises, offering those interested a reason to support their application in higher education.*

Keywords: innovation, interactive teaching methods, knowledge society, individual creativity.

JEL Codes: D83.

1. Introduction

In today's society, higher education will act as the engine of the new economy as the reorganization of a company that is transforming the way we live and learn how to teach, the nature of knowledge transferred, arrangements for evaluating and assessing the outcomes of educational relations educated and educators with whom we have been accustomed for decades. By vocation, mission, objectives and functions, the university will contribute to the building and assertion of new knowledge and learning society [1]. Higher educations occupy a privileged role and at the same time, bear a great responsibility in that a university experience and activity are important factors of development. Thus, although there is now a so-called demand of higher education market, universities do not yet have the coping mechanisms of involvement in the game market. In this context, it is required to correlate the study programs offered by universities with the future jobs offered by the current economic environment and outlook.

European [higher education institutions](#) are facing these last years a number of relevant political and social changes that have asked for more transparency, accountability, comparability and legitimacy of degrees. In the light of these new challenges, the great majority of universities have responded by implementing quality assurance processes, either through evaluation or through accreditation. Orsingher collects [2] the evaluation and accreditation experiences gathered by higher education institutions in Finland, France, Germany, Italy, the Netherlands, Spain, the United Kingdom and Sweden. It provides a synthetic picture of the present state of quality assurance practices in Europe and offers a few lessons for a future European dimension of quality assurance. J.C. Smart [3] focuses on twelve general areas that encompass the salient dimensions of scholarly and policy inquiries undertaken in the international higher education community.

Crosier et al. [4] conclude that the coexistence of the old and new systems and the insufficient information conveyed by higher education institutions has most likely favoured the surge of controversy on its implementation among higher education institutions, students, and labour markets. According to that paper, an indicator of scepticism concerning the benefits of the Bologna process is the fact that only 22% of the institutions surveyed reported that most of their students will enter the labour market after finishing the first cycle. Employers' lack of information on the Bologna principles, on the one hand, and the belief, among academics and parents, that the master's level is the “real degree”, on the other hand, may explain the apparent reluctance of graduates to enter the labour market after concluding their first cycle of studies.

Over the past decade, new dynamics have emerged in each of the key domains of higher education, research and innovation, which are the integrated base for the Forum's activities [5]. In higher education, these include: demand, diversification of provision, changing lifelong learning needs, and growing Communication and Information Technology (CIT) usage and enhanced networking and social engagement, both with the economic sector and with the community at large.

In this study we started from the idea that adaptation of future graduates of the "Constantin Brâncoveanu" University of Pitești to labour market requirements will be supported to a greater degree of implementation of simulated businesses stronger university and use interactive teaching methods. In other words, it is assumed that the various interactive teaching methods known and applied by teachers on the one hand, and the simulated enterprises used as an essential tool in the practical training of students, on the other hand, will have a more or significantly less capacity to adapt to future graduates on the labour market.

First, it should be noted that simulated enterprises are a modern form of training, used worldwide (European global network – EUROPEN- includes over 4,000 simulated firms), helping students to learn by working effectively. As it has already been proven, Romanian and foreign universities have set up business simulation which contributed to more rapid integration of future graduates in the various areas addressed in the simulated enterprises, by using actual, practical skills and abilities in their training.

2. Research

The research goal is to determine how the use of different teaching methods, traditional or modern, of the simulated enterprises, is correlated with preparing students for the labour market. We want to emphasize the importance of teaching innovation in higher education by creating simulated enterprises, especially the need for thorough preparation of future graduates and their adaptation to the market demands. The concept of educational innovation means the transition from tradition to modernity, by introducing changes in order to increase the efficiency of training and the personality of the contemporary man. Innovations in higher education can be achieved by trying to change the people's preconceptions on modern teaching methods. Thus, this research aims to continue the previous ones regarding the connection between teaching methods – the practical training of students, on the one hand, and the students' adaptability to the labour market, on the other hand.

The objective of this research is to identify the propensity of teachers in the "Constantin Brâncoveanu" University of Pitești to pedagogical innovation, namely the interactive teaching methods, modern, and to identify awareness and willingness on the implementation of simulated enterprises in the university as a modern method of training in higher education. **The specific objectives** are: identifying teacher inclination to classical and modern interactive teaching methods; highlighting how to deal with theoretical concepts and practical concerns regarding proper applicability; highlighting the actions initiated by teachers to support innovative, creative students learning; identifying methods and procedures to stimulate and drive individual and group creativity used in teaching; identify knowledge and availability of teachers to participate in creating and carrying out simulated business activities; highlighting the main advantages of simulated operation functioning and of the obstacles to use this instrument in the University; to identify concerns regarding the improvement of teaching -learning –evaluation methodology.

The research hypotheses are:

- First hypothesis claims that different methods and the stimulation of the individual and group creativity used in teaching are positively correlated with students' practical skills, enabling them to understand the real problems of economic life;
- The second hypothesis research says that there is a strong correlation between teachers specializing in their teaching area and theoretical concepts approaching;

- A third hypothesis argues that there are no differences according to academic rank in terms of staff capacity to support students' innovative- creative learning;
- Fourth hypothesis states that there are no significant differences between centres in knowing simulated enterprises significance as a method of students' practical training.

Research methodology. This study is based on a questionnaire applied research directed towards identifying the orientation of teachers on teaching innovation. The research was conducted on a sample of 65 teachers of the "Constantin Brancoveanu" University of Pitesti. The data collection instrument used was a questionnaire developed by the authors of research that includes 19 items. Of these, four were identification items and the other 15 ones aimed at self-evaluation of the educational activities. Respondents had to examine each claim and to give scores from 1 to 4 (strongly disagree, partially disagree, partially agree and strongly agree). In order to fasten things up, we chose to send the questionnaire to the teachers, by e-mail, giving requirements in completing the questionnaire, without imposing a time limit. It was also noted that the team will maintain the confidentiality of responses and that data will only be used for the purpose of this research. For all presented hypothesis to be tested, data were processed using statistical processing program SPSS.12.

Results of Analysis and Processing. The Research sample is representative and has the following structure:

- the majority of the surveyed teachers come from Pitesti (43.08%), then from Braila (32.31%) and Râmnicu Valcea (24.62%);
- according to the teacher's degree (Figure 2), the sample structure is as follows: Ph. D. Professor - 7.69%, Ph. D. Associate professors - 15.38%, lecturers - 46.15%, Ph. D. assistant professors - 18.46%, assistant professors - 9.23 % and junior academics - 3.08%;
- depending on the length of higher education, the situation is as follows: there are nine respondents over 20 years of seniority (13.85%), 11 teachers between 15 and 20 years seniority (16.92%); 18 people between 10 and 15 years seniority (27.69%), 21 people between 5 and 10 years (32.31%), and six teachers under 5 years seniority (9.23%);
- the majority of the surveyed teachers are women (75.38%), as compared to the number of men (24.62%).

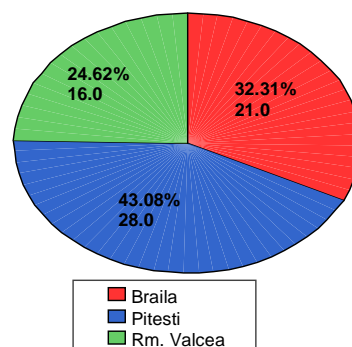


Fig. 1: Sample structure of the centers

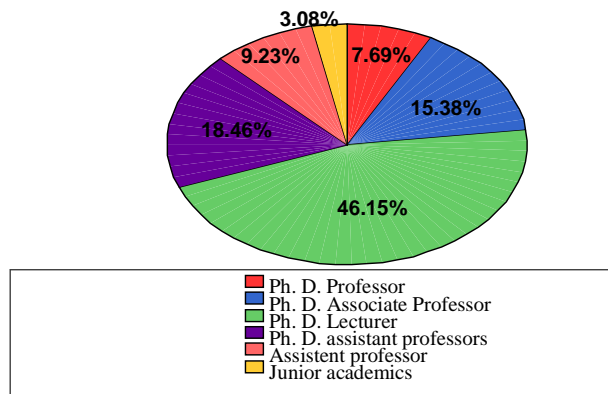


Fig. 2: Sample structure by the length of higher education

Analyzing teachers' propensity to **use interactive teaching methods** (Figure 3), it is revealed that the majority (50 persons or 77%) consider the use of modern technology in teaching as a proper method, while only 15 respondents, and 23% disagree. It also notes that most teachers (50 respondents, i.e. 77%) encourage students to draw up practical projects aimed at economic issues in real life (Figure 4).

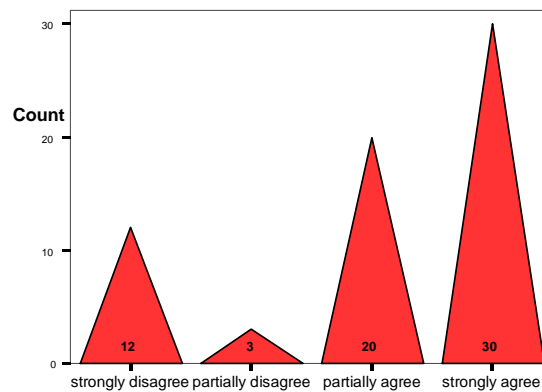


Fig. 3: Propensity to use interactive teaching methods

Encouraging students to draw up practical projects

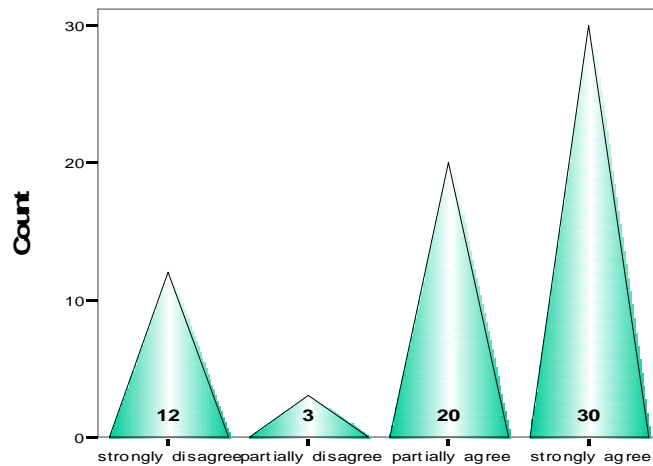


Fig. 4: Encouraging students practical projects

Among the methods and processes used to stimulate and train individual and group creativity, a significant number of respondents (64.7%) indicated that they use more modern methods as compared to the classical ones. Among modern teaching methods there were mentioned: brainstorming method (38.5%, Figure 5), the games business (26.2%, Figure 6) and research and discovery (40%), which shows an increased propensity to modern methodology.

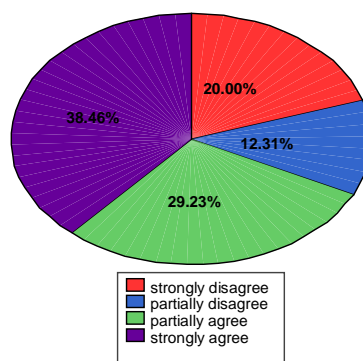


Fig. 5: Inclination to use brainstorming method

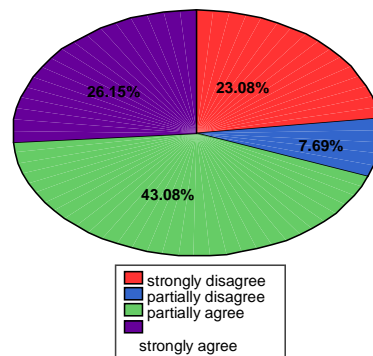


Fig. 6: Inclination to use the games business

The first hypothesis, stating that there is a connection between the teaching methods used and the practical skills acquired by students, is verified, which means that teaching methods based on innovation and creativity affect the development of students' ability to understand the real problems of economic life and helps them in their future jobs adaptation.

It is to be noted that a share of 44.6% of the area teaching specializing teachers, have also past practice, and 49.2% are currently working in the field of teaching. Most of the teachers surveyed (80%) indicated that they support the concepts taught with practical examples, even if they are taken from sources other than their own experience. In addressing the theoretical notions, most respondents (57 teachers, 87.69% respectively) say they are under constant connection between theoretical concepts and their practical applicability (Figure 7). By correlating the two variables, we have discovered that many of those stating that they consistently combine theoretical concepts with practical means, 32 teachers, i.e. 49% are currently working in the field of teaching practice. Also, those who disagreed to combine theory and practice (6.2%) are no longer operating in the field of teaching. Therefore, the second hypothesis, which states that there is a relation between teachers and theoretical concepts specialized approach seems to be proved.

Regarding **teachers' ability to support students' innovative and creative learning**, starting from their individual peculiarities, it may be noted that 46.15% expresses total agreement on the students' creative development and 40% shows partial agreement (Figure 8). Only 7.69% of those surveyed disapprove of it. By correlating this variable with the academic rank, it appears that the university professors and lecturers fully support innovative, creative learning, and those who show a reduced tendency to do so, are more people with lower academic degrees. However, there is not a strong correlation between the two variables, which leads to the idea that the third research hypothesis is also validated.

Connection between theoretical concepts and their practical applicability

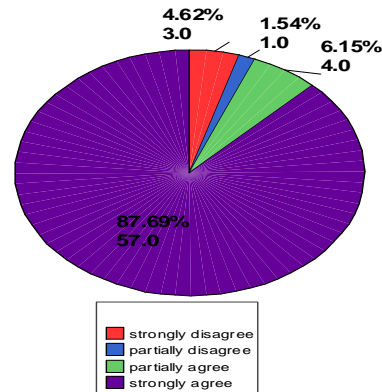


Fig. 7: Connection between theoretical concepts and their practical applicability

Support students' innovative and creative learning

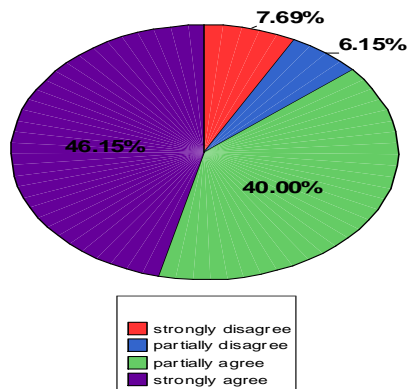


Fig. 8: Support students innovative and creative learning

The simulated enterprises significance understanding is a reality, so that the majority of university teachers (59 respondents, i.e. 90.77%) indicate that they have information regarding simulated enterprises and their benefits over teaching and future graduates (Figure 9). If we examine this variable on centres, we see that there is a close connection between the teachers and the simulated businesses knowledge origin. Therefore we confirm the fourth hypothesis according to which centres do not differ in terms of knowing the significance of simulated firms.

The simulated enterprises significance understanding

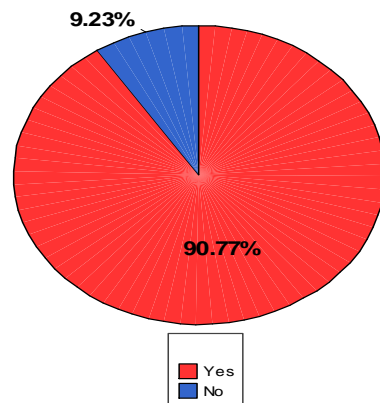


Fig. 9: The simulated enterprises significance understanding

The simulated business benefits

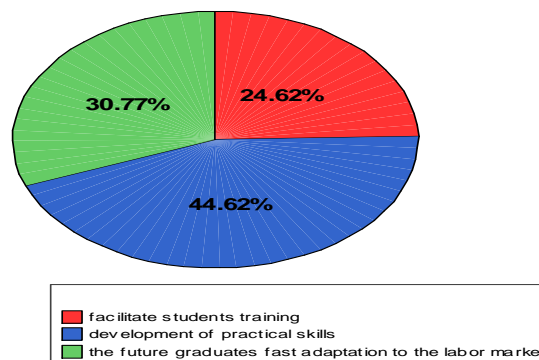


Fig. 10: The simulated business benefits

By analyzing **the simulated business benefits** for both students and the teaching process, it appears that the main advantages identified by respondents are: development of practical skills - 44.62%, the future graduates fast adaptation to the labor market - 30.77% and facilitate students training - 24.62% (Figure 10). Regarding **the obstacles in the implementation of simulated enterprises** adumbrated at the university, 17% of respondents felt that they would hold the work program of trainers and students, 17% believed that there could be difficulties in persuading students to participate in the development of specific activities and 15% considered that an obstacle may be the additional financial resources this method of training would require.

3. Conclusions and suggestions

We believe that the present study adds knowledge to the issue of pedagogical innovation, demonstrating that the application of innovative teaching methods, creative educational and support, focused less on memorizing information and reproduction of knowledge and more on developing students' creative skills, are entirely in conformity to the new demands of the knowledge-based society. The

implementation of simulated business as a modern training form represents a real necessity for any institution of higher education addressing the economic area, in the context of an extremely demanding job market, imposing on its employees to possess practical business features and special abilities. The purpose and applicability of this research are to provide points of support in future changes to be put into practice at the university in the context of higher education need to adapt to the demands of the knowledge society. Taking into consideration the above mentioned, we propose the creation of simulated enterprises inside our institution focusing more on the development of these modern training methods, which we consider to be an opportunity for graduates to adapt to the requirements of the extremely difficult job market.

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4. References

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