ASPECTS ON THE USE OF MODERN TECHNOLOGIES IN THE PROCESS OF THE QUALITY OF THE EDUCATIONAL SYSTEM

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ABSTRACT: *Globalization, as a whole, implicitly implies the globalization of educational systems, whose evolutionary trend is conditioned by the development of competences through innovative collaborative educational tools. The paper aims to highlight the impact of modern technologies in the process of globalization of education, based on a case study consisting of the implementation of a didactic laboratory at the Faculty of Engineering of the "Constantin Brâncuşi" University of Târgu- Jiu, in order to increase the quality of undergraduate and masters programs in energy. The presented teaching laboratory is an example of good practice in organizing practice communities that establish a bizarre connection between the private business environment and the educational system.*

KEY WORDS: globalization, education, modern technologies, didactic laboratory.

1.Introduction

In the age of globalization, the educational process must reconcile the quality, the competitiveness and the compatibility of education systems with the transformations and professional standards that govern the labor market, both at national and European level. In this context, it is obvious that Romania follows the Integrated Guidelines for Employment, which promotes a knowledge-based society formed by quality educational activities. Also, the concept of globalization can be identified from the educational point of view with the need to increase the interaction between the representatives of the industrial sector and the decision-makers within the educational system. This can be accomplished by conducting local / area surveys / to really know the demands of the labor market and for university education offers to respond to these requirements.

Starting from the most important functions fulfilled by the university, the formative function is appreciated to be satisfied if the product, ie the student, is able to demonstrate that he/she has acquired cognitive, functional and actional skills and other acquisition of learning (values, beliefs, attitudes etc.), through which it embodies the four fundamental goals of education, as they are laid down for the first time in the UNESCO Report (Unesco, Paris, 1996, Jaques, Delors) [1]:

- knows (knows and understands), respectively, that he/she has a general and specialized culture sufficiently wide to understand the rapid changes caused by the progress of scientific knowledge, the ever more radical democratization of the access to the latest scientific research results achieved with the means modern investigation, communication and knowledge transfer;

- knows how to act and react rationally and efficiently on the basis of accumulated knowledge, various living and working conditions, proving entrepreneurial spirit and inclination to work in a team for the practical solution of problems;
- knows to be himself/herself by affirming a honest attitude of self-assessment, self-knowledge and self-esteem in situations involving personal initiative and assuming responsibility for making projects useful to the community in which they live and work;
- knows to live together, which means knowing, accepting and respecting diversity in terms of history, traditions, culture and faith. To reach this goal, language learning is not enough, but formal and informal promotion of intercultural communication as well as the initiation and implementation of joint projects for the benefit of multicultural communities at each job or in civil society [1].

It is worth noting that the educational process in the age of globalization requires cognitive or practical skills and knowledge compatible at European and world level. Taking into account that skill means *the ability to apply and use knowledge to carry out tasks and solve problems, it can be said, according to the* European Qualifications Framework, *that they can be cognitive or practical (involving manual dexterity and the use of methods, materials, tools and tools). Recommendation of 23 April 2008 of the European Parliament and Council on the establishment* European Qualifications Framework - CEC - for Lifelong Learning - proposes the following definition of competence:*"Competence is the proven ability (of the graduation diploma holder) to select, combine and use appropriate knowledge, skills and other learning (values, attitudes) to successfully solve a particular category of work or learning situations , as well as for professional or personal development in terms of efficiency and effectiveness. In the context of the European Qualifications Framework, competence is described from the perspective of responsibility and autonomy. "[2]*.

Korka, in the volume *Quality Education for the Labor Market*, appreciates the quality of education in the modern age through both the professionalism of graduates and the national recognition of the performance of the scientific knowledge of the active teachers in these institutions[3].

The University has self-defined its own quality, responding to the social order as it thought it best, trying to adapt to the demands of the society that it considers compatible with its mission. Society accepts this attitude. Today, the university carries out several functions that allow it to cope with a market-based society, competition between active operators in the same segment of social life, democratic principles [4]. More specifically, according to the author, we have six important functions.

In the first place, as importance, are the formative, occupational and innovative mobility functions. These are defined as following[3-4]:

The formative function, also called the socio-economic function of education, consists in *"socially expressed need to cultivate at tertiary education the ability to work and promote rapid insertion into active working life. The training of trainers is an essential part of this function performed by the university. "*[4].

The innovative function is also called the scientific research function of the university.

The occupational mobility function requires *"competent training of the trained upper part of the active population in the continuous effort to rapidly adapt to the permanent changes in the labor market under the influence of the technical progress*

in each field of human activity and also through the impact of the new information and communication technologies , the globalization of economic, cultural and political life "[4].

The other three functions are*:* culture transmission function, political function, university perpetuation function. The latter consists *in training of new generations of researchers and teachers in the careful selection, attraction and motivation of those who will be received in the academic staff, so that the university would be also in the future a reference point of the society* [4].

The idea of setting up a quality assurance system in the higher education system first appeared alongside the other five main directions of reform of the university system in the European countries in the Bologna Declaration in 1999. These six directions have the ultimate goal the establishment of a European Higher Education Area (SEIS). This reform implies a new approach to quality in universities, where graduates employability becomes a priority. More specifically, quality is directly related to learning outcomes, skills, abilities, attitudes, knowledge, etc. We all know, however, that the responsibility for introducing the graduate into the labor market can not only come from the university but is also the result of the interaction of four factors, as *Korka* says: [3-4]:

- *University, faculty and / or department*, offering a study program leading to a university qualification provided to the labor market;
- *Teacher* involved in student teaching and evaluating process;
- *Student* who knowingly chooses a particular study program; It also fulfills several roles: clients, beneficiaries and product of the educational system, ie graduates endowed with different competences that allow them to integrate into society and the labor market.
- *Employers, labor force recruits and professional associations*. They have a duty to communicate their expectations about the skills, attitudes, knowledge, and graduate values to meet their demands.

This involvement of several factors brings with it a number of disadvantages recognized by most of us and confirmed by numerous studies (Study under the project "Active adaptation of university education to labor market requirements, Soros / Gallup survey of 2007 and of the ASG / Totem in 2008). Unfortunately, each factor attributes the failure of the graduate of the other three to join the labor market. Students appreciate that because of the lack of applicability in the labor market of those assimilated in college, the employer is more and more dissatisfied with the performance of the educational system, and the teachers observe the student's demotivation, unrequited and preoccupied with other interests during the faculty period.

2. Example of good practice in the use of modern technologies in education

An example of good practice in the use of modern education technologies is the project titled "*Increasing the Quality of Bachelor's Degree Programs and Masters in Energy*", following which a didactic laboratory was put in place, which offers the opportunity to prepare students according to the labor market requirements in the field of electricity generation, transport and distribution within the National Energy System.[5].

As a result of the activities carried out within the didactic laboratory, the degree of adaptability of the young people to the labor market conditions and their ability to bring added value in the economic activity after graduation is increased.

This application aims both increasing the quality of higher education, promoting new learning opportunities and implementing innovative educational tools, as well as the relevance of higher education to the labor market by strengthening the partnership with the business environment, thus contributing to the priorities for developing a capital human performance.

The general objective of using modern technologies is to expand learning opportunities and promote innovation in higher education by expanding the use of ICT in teaching / learning activities.

As a detail of the teaching technique of the laboratory, there may be mentioned the facilities for identifying the situations that occur in the field technical intervention operations by simulating scenarios, including receiving the notification to the dispatcher, sending the incident to the mobile teams, carrying out the intervention, and Real-time reporting of the situation in the field.

Running a training course within such a teaching staff has as feedback learning the skills needed for real situations that can occur in companies in the energy sector, where response times and the accuracy of interventions are criteria for performance and cost tracking.

The training course within the teaching laboratory is mainly aimed at [5]:

- expanding learning opportunities and promoting innovation in higher education;
- increasing the institution's capacity to provide better education programs adapted to changing labor market demands;
- strengthening the involvement of the business community in the higher education system with positive long-term effects on the correlation of study programs with market requirements and increased opportunities for future participation of students in the labor market by organizing community practice;
- developing skills through innovative collaborative educational tools (didactic laboratory for simulation of technical interventions in the field) involving both university and private system interventions.

Figure 1 shows the application interface of the didactic laboratory, which initiates possible scenarios of real situations that may occur in the energy management companies, where in certain situations the optimal functioning of the National Energy System may depend of the response time and the accuracy of the interventions[5].

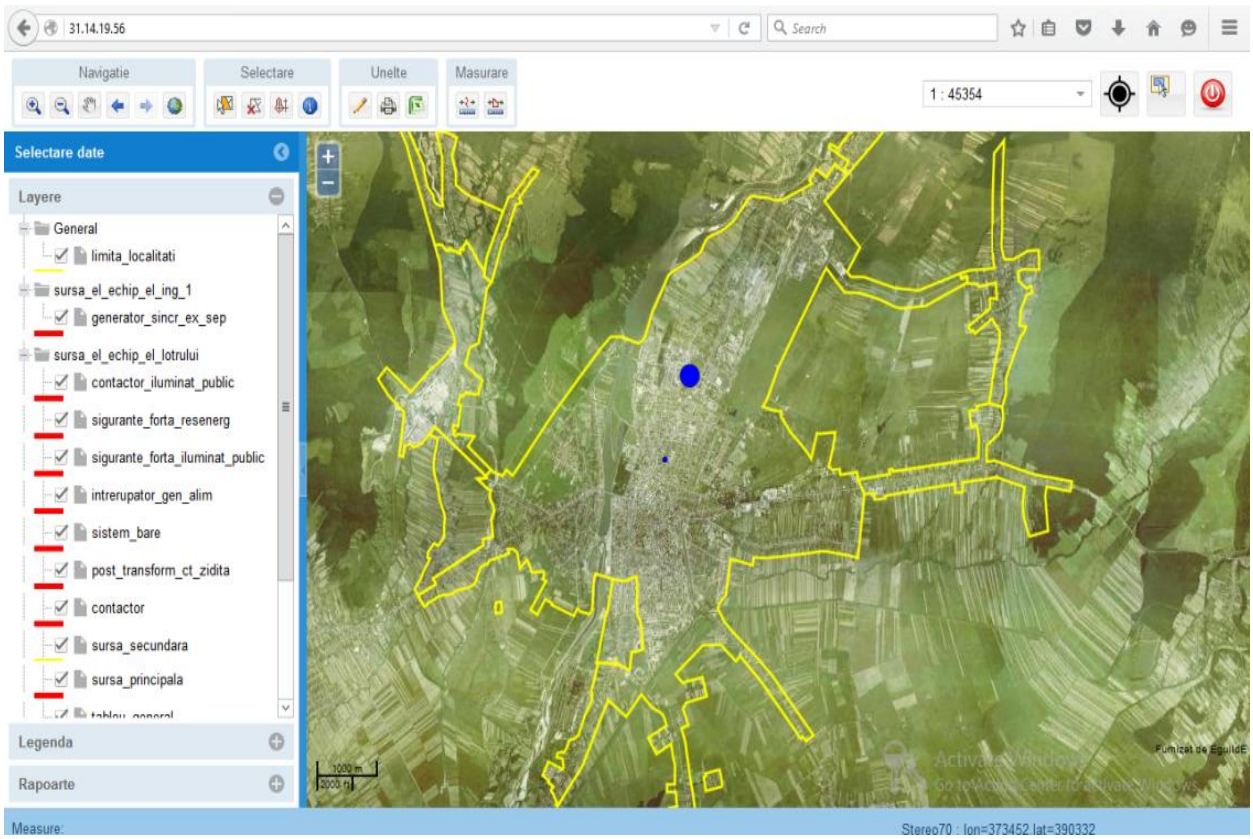

Figure 1. The interface of the application to the teaching staff [5]

3. CONCLUSIONS

1.Starting from the most important functions fulfilled by the university, the formative function is appreciated to be satisfied if the product, ie the student, is able to demonstrate that he / she has acquired cognitive, functional and actional skills and other acquisition of learning (values, beliefs, attitudes etc.)

2.The presented didactic laboratory represents an example of good practice with regard to the organization of practice communities that establish a mutual connection between the private business environment and the educational system, a structured link on activities that take place in real time and are in line with the modern techniques of interventions and maintenance.

3. Referring to these aspects, it can be said that the implementation of a didactic laboratory, the adaptation / improvement of the study and development programs / the correlation of the curriculum correlated, both with the higher education standards and with the requirements of the labor market, fall within the requirements and the coordinates of the process of globalization.

4.Globalization, as a whole, demands, implicitly, the implication of educational systems whose evolutionary trend is conditioned by the development of competences through collaborative innovative educational tools (didactic laboratory for simulation of technical interventions in the field), which involve both interventions of the system university and the private environment

4. REFERENCES

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