

## THE INFORMATIZATION OF EDUCATION, A RESOURCE FOR MODERNIZING THE SOCIETY

NEGRUT, V[asilica]; COSTACHE, M[irela] P[aula]; NEGRUT, A[lexandra]; MAFTEI, J[ana]; COMAN, V[arvara] L[icuta] & MATEI, D[orin]

**Abstract:** *The education institutions are going through challenging times, as they are called to contribute to innovation through teaching and learning, research and transfer of knowledge. Modernization and computerization of education are part of a wider objective of the European Union, respectively a society based on knowledge and competitive European economy at global level. The presented aspects have allowed us to evaluate the present impact of informatics technologies in education. The modernization of education through informatics systems contributes to the creation of new institutional strategies, such as the promotion of high quality programs, the collaboration between education institutions and the economic and social environment, the increase and diversification of learning sources, the development of the international dimension of quality education.*

**Key words:** *education, e-learning, computerization, modernization, competence*

### 1. INTRODUCTION

Gone through a long history, education is today the pillar of resistance of the new Europe. The new society is devoted to the truth that education is the main factor of success of the competitiveness of a nation (Radoi, 2004, p.118). The educational component is not an exception from the necessity of quality as the preparation of the future generations in order to successfully face the multiple requests of the present society depends to a great extent on the quality of the educative offer and performance. Accordingly, the quality of education and training is an essential process, of maximum importance for the progress of a society in permanent evolution. (Oprean, & Kifor, 2002, p. 44) This paper discusses the role of information technologies in modernizing education and underlines the possibilities of improvement in the quality of education through them.

### 2. THE PRESENT DIMENSION OF MODERNIZING EDUCATION

The rapid implementation of scientific discoveries and technical inventions made out of science a force of production, generating rapid changes in all domains of activity to which humans have to adapt through education. Modernizing education includes the educational system as well as the learning process. The system offers the institutional frame of the educational process and the latter ensures the conditions necessary for materializing the objectives of educational action. (Istrate, 2000, p. 29) Modernization is a logical process, constituted by a series of actions, aiming at accomplishing a fundamental concordance, actions that take place in social life, economy, science, technology and especially culture. Modernization aims at reducing the gap between education and the development of society. This represents an indispensable condition for the educational progress in its entire range and has become a fundamental side of state policy in education, a

fundamental concern of the central decision making organs, a problem that concentrates the efforts of many categories of specialists: teachers, economists, psychologists, sociologists etc. Education and modernization merge in a unitary whole so that only a modernized educational system can become a factor in accelerating social progress. The finality of modernization, the adaptation of education to society's requests, does not exhaust and cannot explain its internal mechanisms, articulations and psycho-pedagogical reasons that are the basis of this finality. Regarding the content of modernization, we can mention the fact that it consists of establishing optimal relations between the structural elements of education, as a unitary whole, so that education can ensure an adequate frame and stimulate the application of the educational ideal at the same time. Thus, two fundamental coordinates of education come as a conclusion: one coordinate stipulates that fact that modernization extends over education in its assembly so it does not refer to isolated or particular aspects of it; another coordinate underlines the fact that the efficiency of modernization can be evaluated only through the perspective of its contributions to the materialization of the educational ideal.

### 3. DETERMINANT FACTORS OF MODERNIZING EDUCATION

Modernization is determined by two categories of factors: internal and external. The internal factors include all the factors constituted in the dialectic process of educational development, through the accumulation and generalization of positive elements, whose utility was demonstrated in the educational-training practice by assuming and adapting to solid conditions of the different general principles of organization and development of education. The next focus is on the relation between tradition and modernization between which there has to be a dynamic balance as they are two moments of a unique process- continuous development of education. Tradition is the real basis for innovations; they are never implanted in an empty space and modernization is called to value the positive elements and impose principles, modalities and techniques for new organization and development of education. These factors could be explained using the paradigm "educational logic". The external factors refer to the present and future social conditions that impose certain modifications and restructure education in its whole. Because these factors are in a strong interdependency, we can mention in this case the paradigm "social logic". The latter is manifested through the intensification and acceleration of the rhythm of change and evolution not only of its diverse components but also of the society as a whole. As a component of social logic, the scientific revolution triggers the continuous growth of stored information while education selects and processes the information. Modernizing education means discovering and applying solutions that counterbalance the negative effects of the phenomenon of "accelerated wear of knowledge". Between the two categories of factors there is a strong interdependency.

“The optimization between the social logic and the educational logic represents the propellant of development and perfection” (Nicola, 2003, p. 554).

#### 4. COMPUTERIZING EDUCATION

Together with the increase in the need for education, the practical offers that satisfy the request are diversifying and are becoming more complicated. More and more roadmaps for achieving education are moving from classical institutions towards the formula sustained by new media and information technologies. Under the conjugated impulse of the informational technologies, the education and training are under the sign of fundamental transformation, both from a procedural and a structural point of view. The practice of computerizing education entails the exploitation of the computer in general, in order to achieve the purpose of education. This technological perspective surpasses the didactic vision that underlines the technical advantages of computer assisted education. At the level of education policy, the computerization of education involves the following confirmed priorities, at social scale, in the context of international cooperation: introduction and use of information and communication technologies under the conditions of harmonious interaction between the hard, soft and personnel training; application of information and communication technologies in the efficient management of pedagogical resources and in the activity of designing the curricula of the educational framework, programs and university classes; ensuring the development of the curricula by permanent collaboration between didactic programming specialists and soft creators; ensuring the necessary data base to accomplish the managerial functions and those of planning and organization, methodological orientation- guidance, regulating-self regulating (by actions of research and improvement) of the educational system and process. (Ghaoui, 2004)

An essential element of modernizing education using electronic instruments is represented by the access to *e-libraries* and *electronic encyclopedias*. E-libraries are a collection of documents and e-books stored in certain servers or on the *e-network*. Beginning with the Gutenberg project, the number of e-libraries has been in continuous growth and information has been made available for free download on the Internet. There are many institutions that have replaced the documents existent on paper with the electronic version of them. Also the number of magazines, journals promoting the easy dissemination of information in education is continuously growing. At the same time, by advanced technology, numerous data bases can be accessed and this leads to the simplification of access to recent results of research, by their organization according to specific domains. The diversity of available materials in computerized form comes as a support for both the teachers in the teaching process, widening the scope of didactic methods as well as those who benefit from the educational process.

At European level, there are numerous projects aiming at using new technologies in education. Universities, companies and research centers of the European Union collaborate for increasing the quality of the educational process, for an increased competitiveness at an international level, for the development of competences of the teaching personnel as well as the improvement of administrative and legislative mechanisms in order to encourage the development of e-learning. The experiences of evaluation using the modern technologies from different states indicate the concern for innovation in testing and measuring performance but especially the extent in which the degree of penetration of the new technologies is being correlated with complementary efforts in the assimilation of these innovations at a theoretical level and in quality pedagogical practices. Most of the universities of the European Union have implemented at least one e-learning

system (*open-source* type Moodle and personalized, acquired-such as Ariadne- or a platform developed *in house*) which allows the possibility to evaluate the students online.

It is noteworthy that in states such as Great Britain and Denmark there are evaluation guides (or codes of practice in evaluation) meant to be used at national level, including a chapter on evaluating students using new technologies, providing even specifications on designing the items in tests and the aspect of the tests. A very important step in ensuring a progress in education is represented by blending learning and computerized technologies through the use of groups working together, elaborating learning projects, online assessment questionnaires, including video materials etc. All these converge towards the modernization of education through the advanced use of IT digital competencies.

#### 5. CONCLUSION

The informatization of education is an essential element of modernizing education. In a world of constant change the permanent need to adapt becomes inherent as well as ensuring their competitiveness to be able to face the challenges imposed by globalization, manifested as well at educational level. In order to achieve this goal, each academic staff must gain a basic IT training, which involves the following objectives: developing an overview on the scale and importance of computer applications and their social and economic effects on the individual and the community; building the capacity to identify situations in which the use of computer is recommended for finding appropriate solutions, focusing on curriculum strategies; knowing the means of communication with computer equipment; establishing collective relations of cooperation with communities from other countries of the same category.

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