THE VISION OF READINESS OF TEACHER TRAINING COLLEGES FOR ACCEPTING NEW EDUCATIONAL TECHNOLOGIES AND MODELS ON THE WAY TO EUROPE

PhD. Nevenka Tatković
Faculty of Philosophy/ Teacher Training College of Pula
I.M. Ronjgova 1, Pula, Croatia
e-mail:dekanica@vuspu.hr

ABSTRACTS

On the way to enter the European educational space, the Croatian higher educational system attempts to come to terms with the conclusions of the Bologna Declaration and undertake the reform of the higher education of the Republic of Croatia and introduce the ECTS points- system. Intensive activities in connection with the making of the new educational concept have been under way at the teacher training colleges, in order to achieve the reform of curriculums taking into consideration a few basic principles: single-semestral courses, multidisciplinarity, 3+2+3 or 4+1 study model implementation (pre-graduate, graduate and postgraduate), students` and teachers` mobility or better to say the internationalisation of teaching in the European context. The intention is to ensure the smoothness of studying and diploma acquiring (together with the diploma supplement) which would be valid throughout Europe. The work emphasises that this transformation and modernisation of curriculums shouldn't be done without the incorporation of the basic indicators of the educational quality that the EU prescribes, and one of them is the introduction of information contents, which have so far been represented to a small extent, in every curriculum at teacher training colleges. The results of the survey, carried among the students of teacher training colleges and higher schools, are also interpreted and talk about the students` insufficient level of information on actual changes of the higher education in the Republic of Croatia in the spirit of the Bologna Declaration.

KEY WORDS: teacher training colleges, new educational models, European educational space.

1. INTRODUCTION

The European Union in building Europe as a society of knowledge, that is a learning society, among its priorities, besides the development of the democratic values, gives an important place to education. Stressing its quality as one of important guidelines of the learning society, it seeks its identity in the European cultural heritage and the stimulation of research, science and creativity. By developing various programmes which encourage the co-operation of educational institutions, students` and teachers` mobility is encouraged as well as the exchange of knowledge, ideas and research range. The European credit transfer system (ECTS) has been introduced, which enables the exchange of students, their mobility at different or related universities by transferring the acquired points-credit, and acknowledgement of the sameness of a diploma, that is the acknowledgement of acquired educational qualifications during the study at a nonparent institution of higher education.

Croatia has been getting ready to introduce the ECTS system in every higher education curriculum by 2010. This universal action has been carried out at all universities and institutions of higher education in the whole of Croatia. The diversities of educational systems and curriculums of studies that exist in Europe, made during the long history of the development of the European schooling system, give rise to many speculations and questions how to "fit" in the European educational system – specially into higher education, how to harmonise it in the way which should incorporate national differences and ensure the quality of education, and all in the spirit of the Bologna Declaration. (Commission of the European Communities, 2003.)

2. CONSTRUCTIVIST LEARNING METHOD AND INFORMATION COMMUNICATION TECHNOLOGIES

Four dominant groups of profession emerged at the threshold of the 21st century as a consequence of the information era:

1. manual industry workers
2. technological workers or technologists
3. service workers
4. those dealing with knowledge. (Jensen, Eric, 2003, page 8)

Information era has influenced the reduction in the amount of industrial workers (1) and the increase in the number of technological workers (2) (computer programmers, laboratory technicians, physiotherapists, nurses and similar professions which could be regarded as a modern version of the factory worker. They are service and industrial workers whose profession should be of higher education, and rarely expertly as well.

Teaching profession is a part of the third group (service sector) (along with doctors, lawyers, managers, persons in charge of the public relations etc.) the majority of these professions require higher education.

The fourth category consists of those who deal with knowledge. (Drucker, 1994, according to Jensen, E. 2003. page 8). Comparing it with other professions, Drucker says that it requires a strong formal education and a big capability of application of the theory in the practical world. Writers, publishers, inventors, executives, neurosurgeons and scientists belong to this category.

The speed of changes which occur in the world of science and information warns and obliges institutions of higher education to the information training of future teachers in order that they could acquire indispensable skills for the use of modern digital media. We have become the world dependent on computers, encyclopaedias, CD ROM-s and digital communication.
" Since the human brain can absorb only a limited amount of concrete knowledge in limited time, we must talk the pupils out of absorbing the knowledge and direct them to be " the managers of information". (Jensen, E. page 3, 2003.)

In creating national educational systems one should bear in mind that the use of modern ICT actually enables the realisation of the constructivist model of learning, which is very important for the creation of the learning society. It is well known that knowledge is acquired through active acquaintance with new contents, and not through imitating or memorising by means of mechanical repetition. In constructivist discourse learning activity is not characterised by passivity but by an active attitude of the person who learns – involvement in the learning subject matter, research activities, problem solution and interaction with others. Constructivism suggests that a person bears responsibility for his learning if in terms of quality it is well organised. In other words, learning is not a process of simple transmission of knowledge from a teacher to a student but it is constructed in student's conscience owing to his own activity. Therefore the pupil/student is encouraged to make new ideas only when he is actively involved in work, whose constituent part is a reflection of the course of change and the product itself, which was created through work as well as sharing experience with other students. (Mušanović M., 1998.)
This approach to learning enables the creation of high quality internalisation and deeper understanding of the learning subject matter. In view of all this it is evident that the constructivist model of learning includes a research activity of persons who learn and a development of specific socio-educational communication. In the process of learning how to learn a person develops his own educational culture which in the whole results in the growth of autonomy essential in the usage of sophisticated ICT.

Information era provides teaching stuff with many innovations, researches and applied theories that strongly influence the outcome of the teaching and learning processes in the 21st century.

3.EUROPEAN DIMENSION OF THE EDUCATIONAL QUALITY AS A STARTING POINT FOR THE CREATION OF NATIONAL EDUCATIONAL SYSTEMS

Changes that the information era brings reflect themselves on the European educational space. The process of intensive creation of the schooling policy marked the end of the past and the beginning of the new century in the countries of the European Union. The European Council, through its Commission tries to standardise and harmonise the educational systems of its members pointing out the importance of:

1. **knowledge of high quality** necessary in the context of labour market changes and freedom of worker's movement inside the European Union that encourages a permanent dialog on the quality of the education of all countries;
2. **modernisation of the strategies of the European social model** where it is invested in people and fought against social exclusion.(Everyone must be able to take their chance of advancement in the society for the sake of their own fulfilment, no matter of their social origin and educational background);
3. **lifelong learning of the shaping of the future** as much in the personal as in the professional individual's plan. There must be a permanent and wide approach to a number of different forms of knowledge.
4. **common dimensions of the knowledge base.**

The National Experts` Working Committee named by the ministers of the member countries in association with the Commission of the Council of Education has directed its attention towards four big fields which include sixteen indicators of quality as a starting point in the national ranking of the educational systems of the countries of the European Union. (Muradbegović, A., Morosini, S. 1998, p.334-353)

Table 1. A review of fields and indicators of the quality of European schools (according to Commission Europeene, 2000.)

FIELD	INDICATORS OF QUALITY
I. Indicators of the achievement level in education	Mathematics Reading Natural sciences **Information and communication technologies** Foreign languages Civil laws **Learning of learning**
II. Indicators of school systems` success and flexibility	Giving up school Finishing secondary school Involvement in the higher education
III. Indicators of educational control	Evaluation and operating of education Parent's participation
IV. Indicators of financial investments and model of organisation	**Teacher's training and education** Involvement in the pre-school education **Number of pupils per computer** Financial investments per pupil

(SOURCE: Muradbegović, A. and Morosini S.1998., p. 334-353, according to Commission Europeene,2000.)

It is evident from the table that information and communication technologies, teacher's education and training and a number of pupils per computer are a basic part of the mentioned indicators of quality.

3.1 Information and communication technology as one of the indicators of the level of achievement

All member countries of the EU think that the ICT (besides above mentioned subjects) represent the essence of the general education curriculum. The ICT knowledge and skills are basic for the success in many educational fields and essential in many professional careers.

Teaching about the ICT as an indicator of the educational quality has brought in the EU to the need for reconsideration of the educational curriculum on informatics, to the synchronisation of national plans and curriculums, the encouragement of pupil's/student's motivation for learning information contents as well as reconsidering teachers` methods of teaching informatics.

Our research among the students of the Teacher Training College and the Faculty of Philosophy of Pula (N = 412) carried in 2003. shows that there is a significant link between positive and negative attitudes in students towards informatics in relation to the choice of study that they will attend for their permanent education. Student's opinion is that the education on the ICT represents a basic skill of the individual learning and intellectual growth. The EU Commission has similar data and reports in which it is expressed that the skills of using the ICT represent a key in every educational field and ease the process in the context of lifelong learning because they contribute to individual and social integration and person's individual development as well.

Our previous longitudinal researches of the ability to use the ICT in students point to a different level of this skill already on arrival at the teacher training colleges as well as different methods of supporting the culture and knowledge of informatics and students` skills (Tatković, N., Šehanović, J., Portorož 2001.). It was noted that the number of high quality books, manuals at students` disposal directly affects the level of achievement if the books are used in an effective manner. The state of the use of literature in our recent study dating from 2003. carried among students of the Teacher Training College and the Faculty of Philosophy of Pula (N-412) reveals that there is not enough literature in the Croatian language which would be available to students who individually wish to improve their knowledge of informatics. The majority of literature is in the English language and the prices are inadequate in regard to students` financial potential.

The EU figures show that the affirmation of informatics through a number of classes is a measure present in some member countries, while other countries try to support information knowledge and skills as an important learning factor through the curriculums of all subjects.

In our 2003. study students point out that the basic information education is not acquired in Croatia prior to the secondary school. It is their opinion that the acquisition of basic knowledge should be lowered to the primary school, and upgraded in the secondary school by introducing more demanding information knowledge into the curriculum. (Tatković, N.2003)
In creating a new school system our country should resort to measures for developing interest towards the acquisition of information knowledge and skills as early as in the early school age. Students should be given a chance to explore the ICT possibilities, because it increases their ability of analysing and understanding the world and prepares them for the life in EU.
In students opinion the successfulness of the educational process depends on the use of different methods and techniques of teaching information subjects, the presence of information contents in higher education curriculums, the equipment of the institutions of higher education with the ICT, students` and teachers` motivation for the information science, students` attitudes towards the information science and other factors. Students stress the need for the application of constructivist learning theories, where " the learning of learning" occupies an important place.
Measuring "the learning ability of learning", which includes intellectual skills, attitudes and motivation, still doesn't exist at the European level. A number of countries have recognised and pointed out the importance of the development of learning ability which would enable a better understanding of success and failure in school and undertaking of certain measures to stimulate successfulness and prevent failure in learning which takes hold in Europe.

The failure of students to finish their studies is evident in Croatia and no matter of taken measures to upgrade the quality of higher education teaching, bigger results can't be spotted even today.

3.2. Information subjects` representation at teacher colleges in the Republic of Croatia

The insurance of the educational quality for the purpose of entering the European society of knowledge is determined by the level of information equipment and application of the ICT (information and communication technologies) in education as well as the degree of the representation of these contents in educational programmes. It is interesting that in our country no special attention is given to the introduction of information science novelties into curriculums
Departments of information studies and teacher colleges, which in the process of foundation innovated their programmes and introduced basic information contents, are exemptions to this rule. The issue of experts who would carry out the decision of the government of the Republic of Croatia about the introduction of the information technology in all institutions of education and general education in informatics of the Croatian population is still open to doubt.

The preoccupation of the Committee for the creation of the ECTS system with the mere crediting of courses draws the attention away from the importance of the structure and content of the programme. We wonder if Croatia will fail to contribute with its noninclusion of information subjects in new curriculums to the shaping of the new educational reality, which in the forthcoming years will determine the guideline and fate of the Croatian education.

Table 2: Courses/departments/ of the Croatian teaching colleges that don't have information subjects in their curriculum.

UNIVERSITY OF ZAGREB
Faculty of Philosophy
Department of English language and literature
Department of Archeology
Department of Ethnology
Department of Philosophy
Department of Phonetics
Department of German language and literature
Department of Classical philology
Department of Comparative literature
Department of Croatian language and literature
Department of General linguistics
Department of Oriental studies and Hungarology
Department of Turkology
Department of History
Department of History of art
Department of Romances languages and literatures
Department of Slavic languages and literature
Department of Italian language and literature

UNIVERSITY OF OSIJEK
College of Education
Croatian language and literature
Librarianship and Croatian language and literature
History and Croatian language and literature
Psychology
Pedagogy and librarianship
Pedagogy and Croatian language and literature
English language and literature and History
English language and literature and German language and literature
German language and literature and history
Music
Biology-chemistry

UNIVERSITY OF ZADAR
University departments
Department of Archeology
Department of English language and literature
Department of Philosophy
Department of French language and literature
Department of Geography
Department of Classical philology
Department of Croatian and Slavic languages and literature
Department of German language and literature
Department of Pedagogy
Department of History
Department of Sociology
Department of Italian language and literature

UNIVERSITY OF RIJEKA
Faculty of Philosophy
SINGLE-SUBJECT SYSTEM OF STUDY
Arts
DOUBLE-SUBJECT SYSTEM OF STUDY
English language and literature
Philosophy
German language and literature
Pedagogy
History
History of art
DOUBLE-SUBJECT SYSTEM OF STUDY – FIXED COMBINATIONS
Mathematics – physics
Faculty of Philosophy Pula
SINGLE-SUBJECT SYSTEM OF STUDY
Italian language and literature
Music
Accordion
DOUBLE-SUBJECT SYSTEM OF STUDY
Croatian language and literature
Italian language and literature
History
Latin language and Roman literature

Source: web pages of particular universities

The study and curriculum analysis at the teacher training colleges show that there is a large number of those that don't have information courses. If we want to enter the Europe of knowledge, use modern media, control information and create new ones, we will have to change this image of the information

subjects` representation in curriculums as soon as possible. Current activities in higher education are an opportunity to correct these faults, which is very important for teacher training colleges.

3.3. The level of information of the students of teacher training colleges on actual changes in higher education of the Republic of Croatia

Changes that the Republic of Croatia has been carrying out in higher education should concern all subjects of the higher educational system. The issue of students` level of information on actual changes in the higher education, which will directly affect the course of their studies and education, was examined in a questionnaire carried out among students of two institutions of higher education (the Faculty of Philosophy and the Teacher Training College of Pula, N-412) in December of 2003.

Table 3: The level of information of the students of teacher training colleges on actual changes in higher education of the Republic of Croatia

N.	Question	Yes	No	Rest
1.	Have you heard of the changes in the higher education of the Republic of Croatia?	22%	77%	1%
2.	Have you heard of the new law on scientific-research in the higher education?	12%	86%	2%
3.	Have you heard of the Bologna Declaration?	14%	84%	2%
4.	Have you heard about the harmonisation of the higher education of the Republic of Croatia with the European higher education?	17%	81%	2%
5.	What does it mean?	KNOWS 11%	DOESN`T KNOW 89%	-
6.	What do the educational models 3+2,4+1 mean?	KNOWS 18%	DOESN`T KNOW 82%	-
7.	What are the benefits for teachers when they finish the first phase of study?	DIPLOMA2 2%	VOCATION 4%	DOESN`T KNOW 74%
8.	What significance has the 2nd phase in education for a teacher?	PROFF. EDUC. 17%	DOESN`T KNOW 83%	-
9.	Where do you think will teachers work after the finished first phase of higher education?	EDUCATION 17%	KINDERGARTEN 9%	DOESN`T KNOW 71% NOWHERE 3%
10.	Where do you think will teachers work after the finished second phase of higher education?	DOESN`T KNOW 85%	EDUCATION 15%	-
11.	Who should have informed you about these changes?	UNIV.& COLLEGE 70%	MASS MEDIA 9%	DOESN`T KNOW 85%
12.	Do you hold this information important?	YES 84%	NO 6%	REST 1%
13.	Have you heard about the obligation of establishing a new model of the education of teachers at the Teacher Training College/the Faculty of Philosophy of Pula?	YES 13%	NO 86%	REST 1%
14.	Do you think there will be changes in your actual education?	YES 31%	NO 36%	DOESN`T KNOW 13%

Univarient statistical analysis of this initial inquiry shows that a small percentage of students is informed on the most important changes which happen in the higher education: the Bologna Declaration, the new law on scientific-research and higher education, the harmonisation of the higher education with the European educational space, new models of education, professions that will be acquired after finishing a particular segment of the higher education, employment possibilities in regard to the achieved level of education. Students think that professors at the institutions of higher education should inform them about these changes, because they find them very important. They are not informed enough about the possibilities of postgraduate professional education as well. There is almost an identical percentage of those students who think that there will, that is that there won't be changes in their actual education, which talks in favour of the fact that events on the conceptualisation of a new higher education remain unknown to them. The large majority of students don't know that these activities and tasks have been intensively done at their universities/colleges. It absolutely points to an insufficient and partial flow of information "from the university's apex" to students, to the fact that they are not sufficiently informed by their professors, by students "apex" as to the fact that their access to information via media is insufficient. It is interesting to note that a large majority of students are not afraid of changes that will arise due to actual events in the higher education. Their explanation is that the reforms of education in Croatia are so frequent that they shouldn't be taken too seriously and be afraid of their long-term consequences.

4. CONCLUSION

Every serious analysis of the existing curriculums at teacher training colleges shows that there were no significant changes in educational contents in Croatia during the last ten years or development of necessary experts who would systematically deal with information education serving the needs of the teaching profession.
Lagging behind other countries so obviously that some approaching stages to the European education or discussing about it must simply be skipped – in order to follow to some extent so dynamic changes in the European educational space.

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