



Original Contribution

TECHNOLOGIZED EDUCATIONAL ENVIRONMENT IN MEDICINE AND SATISFACTION FROM EDUCATION

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ABSTRACT

Work in a technologized environment is among the criteria for contemporary education in medicine and a problem of university management. It is of importance for the quality of education, which indicates the study of two questions. The first is whether the students have the necessary technological culture to work in a technically innovative educational environment. The second question is the evaluation of the student satisfaction from the application of their skills in foreign language learning.

Key words: satisfaction, education in medicine, language learning, foreign students.

INTRODUCTION

A substantial point in the general professional training of the future medics is the study of contemporary informational technologies in education. Having and applying the computer skills of the medical students are among the criteria for the quality of education, acquired in MU Plovdiv. Creation of software products in theoretical and preclinical disciplines fits in the pattern of the Declaration of medical Education (43rd International Medical Assembly in Malta 1991). “Changes in the content and form of medical education are directed mainly at two directions – integration of the curriculum and placing students in an active position in the educational process.” (1)

After Bulgaria’s joining to the Bologna Process (1999) medical universities work in the circumstances of continuous competition. Two of the indicators that MU Plovdiv is able to establish itself as prominent institution of higher education are opportune technological innovation of the environment and the high number of foreign students, seeking interest of education in this university.

The prestige of a university is influenced in a considerable degree by the evaluation of equality of the theoretical knowledge and practical skills of the students in the studied course and the acquired competencies, consistent with the global labour market requirements. Foreign language learning and having basic computer skills are among the priorities in global education and among the European educational requirements in medical education. They are defined as “learning for knowledge and competence” and “learning for understanding and life together” (2). In this sense, educational process organization in a technologically innovated environment is among the first-rate problems of university management and an instrument for quality promotion of the education in it. “Quality management encompasses all functions of management which form the policies of the school, educational centre, university etc.” (3).

Having computer skills is among the educational requirements that the students should possess. The level of their technological competence is of important significance for the preclinical departments which aim at organizing and establishing a contemporary educational process. A particular place in a medical university has

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foreign language teaching. It includes training in Western languages, Latin and Bulgarian as a foreign language. The efficiency of the educational process at the university is in direct relation with the communicative competence of foreign students - language and technological. Foreign language teaching in a technologically innovative environment suggests several things-ensuring software products for class work, innovation of the teaching technologies, maintaining good technological culture of the teachers and basic computer skills of the students which are to be used in the educational process.

The need for maintaining educational quality in the Medical University suggests a study with the following aim: how do students entering MU Plovdiv are able to work in a technically innovative educational environment and how this affects their satisfaction from the education at the university.

The environment for study is the educational environment at the Department for Language and Specialized Training (DLST) in which the foreign language and specialized training of foreign students from a preparatory language course takes place.

MATERIALS AND METHODS

The study encompasses a period of three years (2008-2010). Observation units are 34 teachers from DLST and 282 students.

The creation of the data base is through sociologic methods. Two types of questionnaires

are made for the needs of the study- for teachers and for students. The questionnaire for students is presented in two languages- in Bulgarian and in English in order to encompass the group of foreign medical students who are taught in English. (38.3%, n = 158).

The technical processing of the obtained data base is with the programs SPSS v.15.0 and MS EXSEL. The questions in the questionnaires are closed and defined as categorical variables. A five-point scale for rang assessment of teacher opinion is used. Analysis of the frequency distribution for setting up the limits of the confidence interval of the statistical parameters of the population has been made. A parametric and non-parametric test for the association of the phenomena in the educational process has been conducted.

The average age of the teachers surveyed is 43.97 ± 1.29 r. CI 95%. The share of women in the extract is 82.35 %, and of men – 17.64 % (n = 34). Out of the surveyed teachers 6 have PhD and 3 are habilitated people. The share of non-habilitated senior lecturers is 58.82 %. The share of teachers with over 20 years of practice in foreign language teaching is 61.76 %.

The students participating are n = 282 (**Table 1**). Their distribution according to nationality is the following: Bulgarians (n = 75), Greeks (n = 75) and Turks (n = 132). Students from the preparatory course are 124 and from the first course- 158.

Table 1. Student distribution by nationality

Year	Nationality (n = 282)								
	Bulgarians (n = 75)			Greeks (n = 75)			Turks (n = 132)		
	number	P [%]	Sp[%]	number	P [%]	Sp[%]	number	P [%]	Sp[%]
language (n = 124)	-	-	-	55.00	44.35	6.70	69.00	55.64	5.98
first (n = 158)	75.00	47.46	5.77	20.00	12.65	7.43	63.00	39.87	6.17

The average age of the nationality groups is: Bulgarians -19.3 ± 0.4 y.; Greeks -19.52 ± 0.35 y.; Turks -20.23 ± 0.3 y. CI 95%. The share of men is 62.41 %, and of women - 37.58 %.

The distribution of education of foreign language students is the following: secondary education- 93.46 %, higher non-medical education 2.12 %. Greek students having the Bachelor Degree in Nursing are 1.6 %. 2.82 % of the Turkish

students entering MU Plovdiv have degree from medical school.

Distributions of students by faculties are: Medical Faculty- 28.72%, Faculty of Dental Medicine - 2.41 %, Faculty of Pharmacy- 14.89 %, Preparatory language course (DLST) - 43.97 %.

RESULTS AND DISCUSSION

The teacher's opinion on work with web-based curriculum in foreign language teaching is presented in a five-point scale. The arrangement of the assessments is: 'more likely positive' – 64.70%, 'absolutely positive' - 20.58 %, 'more likely negative' - 11.76 %, 'doesn't matter' - 2.94%, 'absolutely negative' – no one has given this grade (4). The prevalent opinion of the teachers in Bulgarian (n = 21) is that work with computers in the educational process imposes a serious change in teaching technology. Particular problems are established- for example difficulties in managing the Cyrillic keyboard, incompatibility of the programs which students use on their personal computers while doing their homework and starting the program at the university etc. The computer mediated communication has greater importance in foreign

language teaching. Greater opportunity for the visualization of the material and for the phonetic perception and speech production is presented. (5) Teachers find most significant the immediate communication with the students, the emphasis on the communication in teaching and establishing a balance between the classical technologies in foreign language teaching and the ones of the contemporary informational technologies. Arguments such as:

- We work for the inclusion of students, not for their social isolation;
- We limit the opportunities for normal human communication;
- Linguistic abilities worsen substituted by the immediate contact with the student; are supportive of the grade 'more likely negative'.

The analysis of the students' opinion reveals that 96.77 % of the foreign students from the preparatory course have basic computer skills. With Bulgarian first year students it is 100 %. Students' evaluation of the web-based materials in western language and Latin teaching are presented in a three-point scale (**Table 2**).

Table 2. Assessment of student opinion on IT usage in foreign language teaching (n = 282)

year	Modern way			Necessary way			Not necessary		
	number	p[%]	Sp[%]	number	p[%]	Sp[%]	number	p[%]	Sp[%]
preparatory	74,00	49,66	5,81	40,00	32,78	7,42	10,00	90,90	9,09
first	75,00	50,33	5,77	82,00	67,21	5,18	1,00	9,09	28,75

The highest share (67.21 %) is with first-year students who have chosen the answer 'necessary way of work'. For the foreign students from the preparatory year the highest share is with the answer "modern way of work" (49.66%). A change of the opinion of these students is accounted. For a year they assess work with computers in the educational process not as 'modern' but as 'necessary' way for efficient language learning.

In this study a high percent of satisfaction is accounted for from the educational circumstances of language teaching in MU – Plovdiv and more specifically teaching of Bulgarian (79.8 %). The distribution in the foreign students group shows that students from Greece (n = 55) have 39.66 % share with the

assessment "very good", while these from Turkey (n = 69), who have chosen the answer "good", are 63.77 %.

The influence of the quality of the educational environment in DLST on the process of foreign student adaptation to the university is registered by a non-parametric test Pirson's criterion χ^2 . It has been proven that the faculty is a factor for 'satisfaction with education' in the specialty ($\chi^2 = 13.47$, $\kappa = 6$, $p < 0.05$). The faculty is a factor also with 'satisfaction with the environment' in which education takes place ($\chi^2 = 26.15$, $\kappa = 3$, $p < 0.05$). It can be asserted that the student assessment on 'satisfaction from the education in the specialty' is influenced by the factor year of studies ($\chi^2 = 51.70$, $\kappa = 6$, $p < 0.05$) (**Figure 1 and 2**).

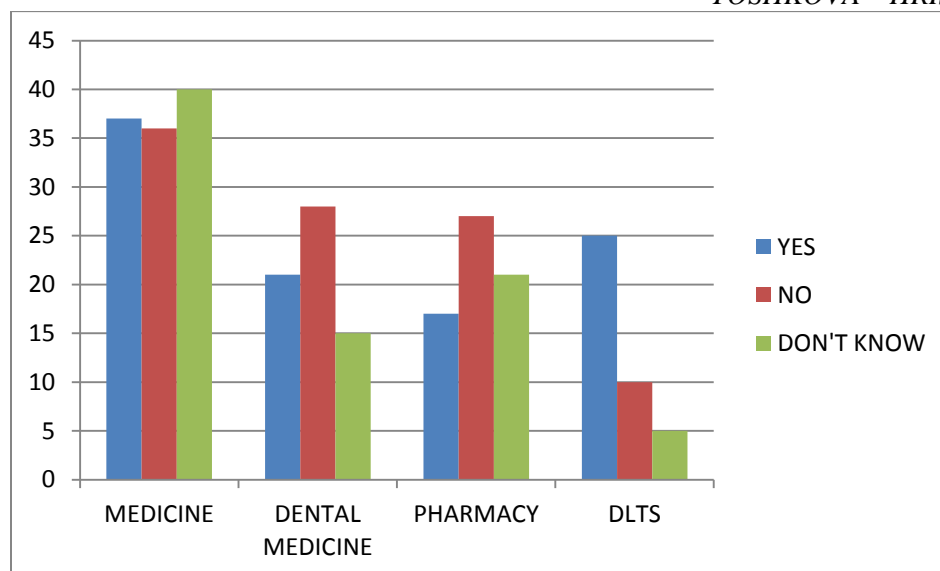


Figure 1. Student satisfaction from the educational departments

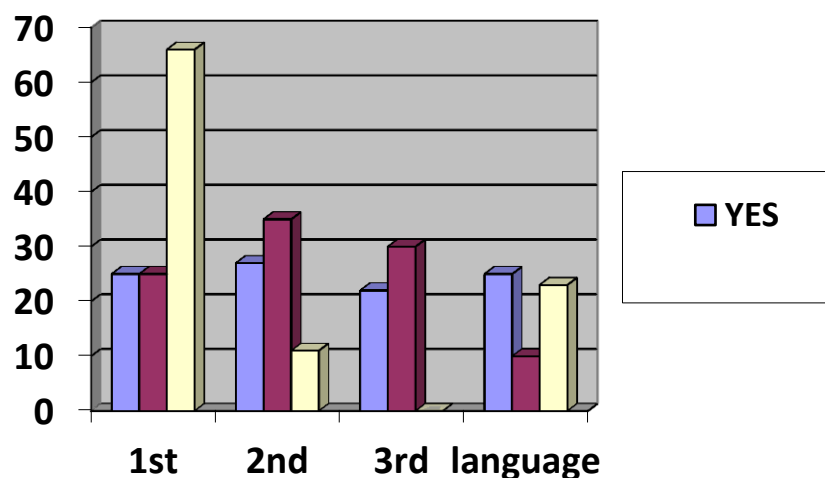


Figure 2. Student satisfaction in year of studies

CONCLUSIONS

The study leads to the following conclusions

- Work in a technologically innovative environment and the use of students' basic computer skills are among the instruments of the positive management in Medical University.
- The technology provision of the environment is a prerequisite for the activation of the process of student adaptation to the university environment.
- Satisfaction from the use of modern technologies in education in Medicine stimulates learning motivation in the specialty.

- We have been working on the development of skills and acquisition of competencies forming the general professional competence of the future medics.
- It can be asserted that language teaching efficiency is associated with the factors-quality of the educational environment and the quality of specialty training.
- The statement of K. Mechkov that 'adaptation is a function of the satisfaction of the needs' (6) is asserted.

The application of basic computer skills in web-based curriculum should be viewed in respect with the adaptable personality – environment of

adaptation. They are instruments for improving the level of training in MU-Plovdiv by which the prestige of the university and its competitiveness are influenced. Satisfaction with education in an environment consistent with the education of students traditionally belonging to a non-Bulgarian model of culture is perceived as a positive evaluation for the quality of the education in the university.

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