

PRO AND CON FOR THE APPLICATION OF THE INFORMATION TECHNOLOGIES IN THE EDUCATION

Stoyan Iliev Papanov

Ekaterina Georgieva Petkova

Nikoleta Ivanova Traikova

Medical University Plovdiv, Plovdiv, Bulgaria

Abstract

The computer is a great student assistant in the process of digestion, understanding and remembering of new information. It helps finding the right means for individual work and control.

Through the computer and the computer technologies a specific new studying environment is created.

The electronic dialogue conducted with the computer creates new rules, norms, and educational technologies between the teacher and the student.

Objective: The current paper represents analysis of students' opinion (medical nurses) about the application of computer technologies in the process of learning in study course "Medical equipment in the nursing practice".

Keywords: Computer, education, information, communication

Research methods applied

The computer is a great student assistant in the process of digestion, understanding and remembering new information. It helps finding the right means for individual work and control [Denev 2010, Dimov 2004].

The study course "Medical equipment in the nursing practice", not only grants capability, but it also demands the usage of information - communication technologies as in teaching, as well as in mastering the newly acquired knowledge.

Through the computer and the computer technologies a specific new studying environment is created [Dimov 2004, Todorov 2000].

The electronic dialogue conducted with the computer creates new rules, norms, and educational technologies between the teacher and the student [Todorov 2004, Todorov 2000].

Objective

The current paper represents analysis of students' opinion (medical nurses) about the application of computer technologies in the process of learning in study course "Medical equipment in the nursing practice".

Main object of the survey is the opinion of "Nurses" about possible optimization of teaching in "Medical equipment in the nursing practice", using computer technologies.

Period of survey spans from September 2012 till December 2013.

Place of research – Medical university Plovdiv city – Medical faculty, in discipline medical nurse.

Research methods applied:

1. System approach and critical analysis of available scientific phases.
2. Statistical methods – documental – questionnaire on the possibilities of application of computer studies for optimization of study process in Medical equipment in the nursing practice.
3. The questionnaire is developed by the authors of the current survey with the help of the following literature sources: [<http://techs-mobile.blogspot.com>, <http://debian.fmi.uni-sofia.bg>, <http://eacea.ec.europa/education>, <http://www.internetworldstats.com>]
4. The questionnaire consists of two parts:
 - a. Part One – characteristic data on the interviewee
 - b. Part two – special
5. Own research on the issue.

Results and discussion

According to the unified state requirements "USR", in order to obtain professional qualification "medical nurse", in Republic of Bulgaria, one has to obligatory study the course of Medical equipment in the nursing practice.

The discipline is taken in the fifth semester of the education; it consists of 15 scholastic hours – 10 hours of lectures and 5 hours of exercise.

In our work we apply computer assisted and internet assisted education.

76 students participate in the conducted survey. 72 of them are women nurses and 4 are men nurses. This fact we explain with the feminization of the profession.

All of the interviewed students are from the "medical nurse" discipline and they all obtain their knowledge in the Medical University, Medical faculty, Plovdiv city.

The majority of the students are 25 years old – 57 in count.

The age fragmentation is shown in Table 1:

Table 1.Age fragmentation of the students

Scholastic year	Up to 25 years of age	Above 25 years of age
2012/2013	28	11
2013/2014	29	8
	57	19

As seen from table 2, the fragmentation of the students by the characteristic of “acquired secondary education” is pretty divers.

Table 2.Division of the interviewed by the type of the school, where the secondary education has been obtained.

Scholastic year	High school	Language high school	Professional high school	Other
2012/2013	21	4	12	2
2013/2014	19	2	14	2
	40	6	26	4

The share of the interviewed with regular high school education is 52,63%, followed by those who graduated from professional high schools – 34,21%; then graduates from language high school – 7,9% and 5,26% have acquired their secondary education in other types of high school.

Information and communication technologies are the contemporary challenge for the education.

Generally there are many factors that influence the education. We believe that some of them are significant, which lead us to asking question number 5 about the factors rendering influence on the character of the education. The answers are presented in Table 3

Table 3.Factors of the education

<i>Nº</i>	Factors rendering influence on the education		
1	Dynamics of the social processes	32	29
2	The raised demands on each individual	28	31
3	The sudden increase of the volume of knowledge	32	28
4	Elevation of scientificity of the knowledge	24	24
5	Accelerated development of the contemporary generations	39	37
6	Progress of the electronic communications	39	37

The analysis of the answers of question 5 show that the interviewed are mostly influenced by the Accelerated development of the contemporary generations and the Progress of the electronic communications (all interviewed voted). As another factor influencing the education the interviewed from the school (2012/2013 year) point as the sudden burst of the volume of knowledge, and the interviewed from the 2013/2014 year point as the raised demands on each individual.

As you can see from this survey, and the careful analysis of the scientific data reveals that the information and communication technologies have a positive influence on the education. The emanated advantages go

beyond using just computer and internet, but application of other technology, as for instance digital cameras and cell phones.

We asked question 6, concerning the functions of the computer and the answer we represent in Table 4

Table 4.Functions of the computer

№	<i>The computer serves as:</i>	<i>School year 2012/2013</i>		<i>School year 2013/2014</i>	
		<i>YES</i>	<i>NO</i>	<i>YES</i>	<i>NO</i>
1	Means of information, communication, visualization of processes and phenomena, as well as creating tough situations and introduction of new possibilities	39	-	39	-
2	Used as a partner and tool	34	5	35	2
3	Controls the actions of the student	36	3	35	2

For all of the interviewed the computer is a medium of information, communication, visualization of new processes and occurrences, creation of problematic situations and delivering new possibilities.

69 of the interviewed consider the computer as a partner and a tool and 7 do not. It is not only the teachers, but the students also believe in the capabilities of control with the help of a computer.

In order to depict the attitude of the students toward the computer – assisted education and specifically its advantages we asked question number 7. And the results are summarized in table 5.

Table 5.Advantages of the computer assisted education

№	<i>Advantages of the computer assisted education</i>	<i>School year 2012/2013</i>		<i>School year 2013/2014</i>	
		<i>YES</i>	<i>NO</i>	<i>YES</i>	<i>NO</i>
1	Completes the traditional education	32	7	32	5
2	Work in modules	39	-	34	3
3	Immediate feed back	39	-	37	2
4	Using different methods of study	39	-	37	2
5	Raised control over studying	34	5	36	3
6	Capability for diverse teaching	38	1	35	2
7	Individual education	22	17	24	15
8	Standardization of course	21	18	21	18

The answers of question 7 we could summarize like that:

- Computer-assisted education fulfills the traditional one according to 64 (84,2 %), while on the opposite 12 (15,79%);
- It grants a module work according 73 students and three do not share this opinion;

All of the interviewed agree that this way you get immediate feed back and different study methods are applied. The control over study is

raised according 70 of the interviewed and the rest 6 think otherwise. 73 students believe that there is a great possibility for agile teaching and only 3 are on the controversy. The taught students, as well as many teachers, look at this method as individual (43 interviewed) and the rest 30 are on the opposite opinion. 21 from each separate group of scholars view this type of education as standardization. And the rest 34 do not share that opinion.

The processing of the results of the survey, suggested the necessity to ask question number 8, concerning the disadvantages of the computer-assisted learning (Table 6)

Table 6. Disadvantages of the computer - assisted learning (KPIO)

№	Typical characteristic features KPIO	School year 2012/2013		School year 2013/2014	
		YES	NO	YES	NO
1	Limited interaction	28	11	30	7
2	Platform dependence	26	13	28	9

Among all interviewed, 76,23% consider the limited interaction as disadvantage, and the other 23,68% do not.

54 students mention platform dependence and 26 are on the controversy.

In order to compare internet (web) assisted education we structured question number 9 about its advantages. The acquired answers we show in table 7.

Table 7. Advantages of internet (web) assisted education

№	Advantages of internet (web) assisted education	School year 2012/2013		School year 2013/2014	
		YES	NO	YES	NO
1	Time independence	39	-	37	-
2	Election of study modules	32	7	34	3
3	Independence on geographic location	38	1	37	-
4	Easy usage	39	-	37	-
5	Flexible schedule	-	-	-	-
6	Program currency	34	5	33	4

100% of the students are convinced in the “time independence” and the “easy usage” of internet in their study process. 86,84% say it is convenient to select a study model and the other 13,16% don't. The internet assisted education is geographically independent for 98,68% and unexplainable to us 1 of the interviewed withheld his answer.

The interviewed did not consider necessary to answer the question about the flexible schedule thought as an advantage.

We ask about the flaws of the internet assisted education into question number 10, and the answers are shown in table 8.

Table 8.Flaws of internet assisted education.

№	Features of disadvantages	School year 2012/2013		School year 2013/2014	
		YES	NO	YES	NO
1	Necessary access to computer and internet	32	4	31	4
2	Net access expenses	33	6	35	2
3	Secure connection required	35	4	36	1
4	The speed is not always enough	28	11	30	7
5	Preconditions the spread of viruses	39	-	37	-

For instance when the students have to check in internet, the characteristic of different equipment delivered by different vendors, 83% encounter problem, concerning the access to a computer and internet, 13% disagree and 4 withheld their opinion. 68 students claim that they make additional expense to access the net, if the found data has to be sent to colleagues. 71 students want to have a secure net connection. From low speeds of the net complain 58 interviewees, and 100% of them think that it preconditions virus spread.

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