



THE TEACHERS OPINION ABOUT INTRODUCTION INTERACTIVE METHODS IN TRAINING OF MEDICAL SPECIALISTS

Assoc. Prof. Dr. Stefan Velikov
Medical University - Sofia, Faculty of Public Health
8 Bialomorestr., 1527
Bulgaria
s.velikov@foz.mu-sofia.bg

Prof. Dr. Ralitsa Zlatanova-Velikova
Medical University - Sofia, Faculty of Public Health
8 Bialomorestr., 1527
Bulgaria
r.zlatanova@foz.mu-sofia.bg

Assoc. Prof. Dr. Pavlinka Dobrilova
Medical University - Sofia, Subsidiary "I. Mitev" - Vratsa
University Complex, Corpus 1, fl.1, 3000
Bulgaria
pavlinka1969@abv.bg

Abstract

The development of information and communication technologies increases the possibility for more active participation of students in the process of teaching and learning. The material presents a survey of teachers in medical universities on the introduction of interactive teaching methods / ITM /. A survey was carried out among 134 lecturers in the period September 2017 - February 2018. The made analysis shows that the improvement of the material and technical base influences the motivation of the students. At the same time, the conditions for integrating ITM and their impact on educational achievement were studied. The role of the lecturer in the training and the introduction of the ITM is analyzed. The results show that the establishment of ITM by improving the material and technical base reduces the role of the teacher as an "instructor" and emphasizes its role as a "facilitator".

Keywords: Training, interactive teaching methods, medical specialists.

INTRODUCTION

Modern students are more informed, more free, but more sophisticated, not even always demonstrating it directly. They need alternative education and training according to the development of the world they live in and prepare for. The generation born after 1981 is significantly influenced by the digital revolution, as digital technology accompanies their entire animal (Prensky, 2001). The digital generation communicates with each other differently than their predecessors, using digital resources, and easily "talks" to the world. Their style of learning is visually kinetic (Fleming 1995). This generation differs from the previous one - so educational transformation is needed.

FORMS AND METHODS OF STUDY IN MEDICAL UNIVERSITIES

There is a clear tendency for students to focus on the practical part of their training. According to lecturers, the most effective forms and methods of nurse education are pre-graduate internship and practice, teaching practice and lecture, and the most useful training tools are patient care, followed by mullahs and multimedia.



On the preference for the form of training influences the age of the graduates: with age preferences are mainly to part-time training - most pronounced in older than in '40. Distance learning is most preferred at the age of 25-29 years, and regularly - up to 24 years of age. In multiprofessional training students from different medical specialties prepare together and acquire team work skills. This type of training takes place at the universities of Linköping (Sweden) and Bobnie (France). The training is realized in a real environment, where each category of medical specialists contributes to the educational goal. This is how the individual holistic approach to the patient is applied to the fullest extent (Чакърова, 2002).

INTERACTIVE TRAINING METHODS

A learner-centered learning system is based on relations facilitating the learning process between a learner and a trainee, between presenting information and audience, and the relationship between the learners themselves. The aim is to create a stimulating and supportive learning environment in which the teacher and students are equal partners.

The term "Interaction" is "Interplay and mutual influence between people in the process of their communications" (Децев, 2010). In order to determine the levels of manifestation of interactivity in education, it is necessary to explain the forms, methods and tools used. Interactivity can occur at the following levels:

- as a component of interpersonal communication;
- in the framework of educational technologies, in the context of a team organization of learning activities, using information and communication technologies (Тодорина, 2014).

In a technology-based learning system, interaction takes place between learners (with or without a teacher) and different technical means to initiate and support learning, respectively the learning process (Гюрова, 2006). There are many examples of integrating the human-oriented interactive learning system with the technology-based, eg, blended learning. It is a mix of learning through information and communication technology (ICT) and face to face learning - otherwise there is a hybridization between ON-line and OFF-line training. The technology-based interactive learning system is largely covered by the concept of "e-learning": a lifelong continuous training (Zlatanova et al., 2015), e-learning (Petkov et al., 2013; Vodenicharova et al., 2015), distance learning (Popov et al., 2015) and use of information technology. It is realized through a computer in online mode and includes web-based training, distance learning and virtual classrooms. The computer is an integral learning and technical tool that performs the following didactic functions: training, information support, exercise, self-study, control and evaluation. Network learning is a process in which ICT is used to create a link between one and many learners, between learners and the teacher, between students and learning resources. The basis of e-learning is the so-called LMS (Learning Management Systems) and VLEs (Virtual Learning Environments). These are systems for multimodal electronic presentation of learning materials for students. Virtual Worlds are e-based environments designed to stimulate the real ones by enabling users to interact with the environment and with each other via avatars (virtual images).

MATERIAL AND METHODS

An anonymous inquiry was conducted with 134 lecturers from the Faculty of Public Health at Sofia Medical University, Yordanka Filaretova Medical College in Sofia and Dr. Ivan Mitev Branch from Vratsa between September 2017 and February 2018. The aim of the study was to analyze the teachers' opinion on the introduction of interactive methods in the training of healthcare professionals and their influence on the motivation of students is studied.

RESULTS

The distribution of the respondents is: 86.56% are women and 13.44% are men. 68% of them are in the age group 41-60 years. The average length of service in the specialty is about 20 years. Figure 1 presents the answers to the question "Which interactive training methods do you know and use?". Respondents point to e-learning - 40.74% and multimedia (40.34%), followed by lectures (14.81%), role plays (13%) and the learning tasks (typological and situational) – 13%. 10% of teachers have noted that they are not using interactive learning.

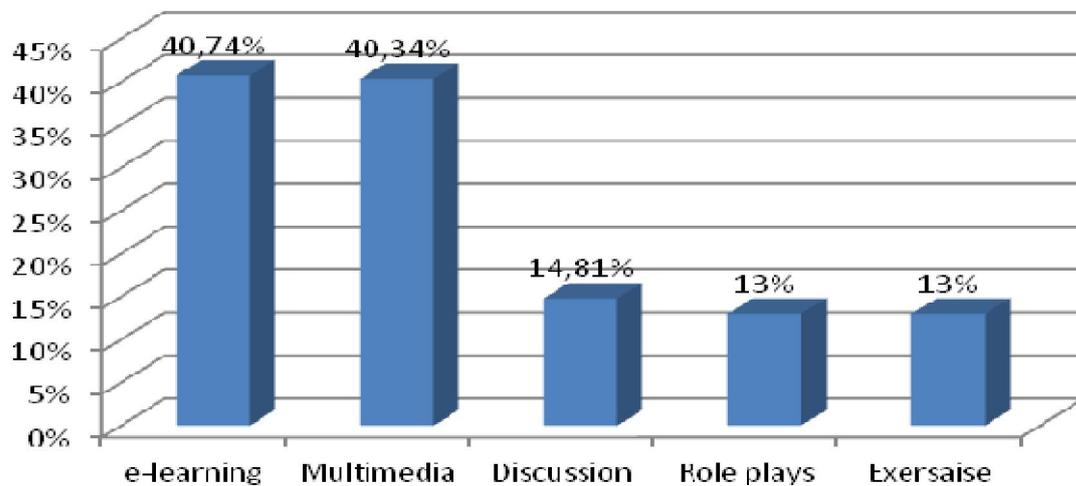


Fig. 1: Interactive Learning Methods Used

Teacher suggestions for validating interactive teaching methods in medical education are shown in Fig. 2.

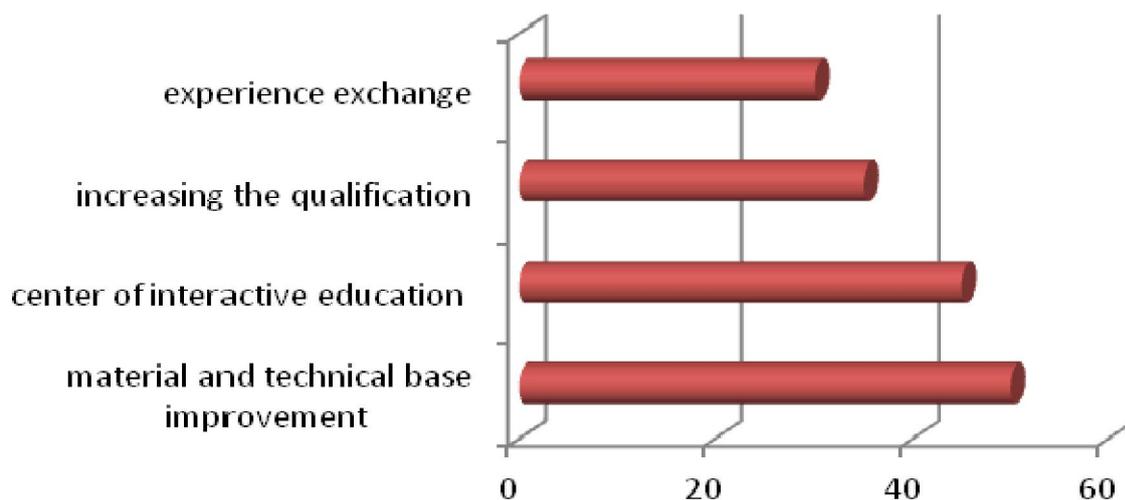


Fig. 2: Validating interactive learning methods

The analysis of the relationship between the improvement of material and technical base and the importance of interactive learning methods shows that it can positively influence learning motivation of students

The Chi-square χ^2 test, shows that improving the material and technical base influences the motivation of the students. The relationship is statistically significant: $\chi^2(2) = 6.063$, $p = 0.039 < 0.05$, The strength of the effect by Cramer is average ($V = 0.213$).

More than 2/3 of respondents /71/ site that improving technical facilities are important for validating interactive learning, they point out that the introduction of interactive learning methods is very important for enhancing motivation to learn. This can be explained by the fact that in a technologically evolving society, students are much easier and quicker to adapt to new technologies and more easily handle them, which has a positive impact on teaching and learning processes.

The relationship between assistance for the integration of interactive learning methods and the importance of achieving certain educational goals is analyzed. Table 1 presents the results of Fischer's exact test.

Table 1: Relationship between Educational Objectives Achieved and Assistance in Integrating Interactive Learning Methods

	χ^2	df	p	Cramer's V
Raising motivation for learning	10.978	4	0.017	0.208
Ability to work in team	15.834	4	0.001	0.266

Fig. 3 presents the results of the relationship between the assistance received by teachers for the introduction of interactive learning methods and their impact on enhancing motivation for learning.

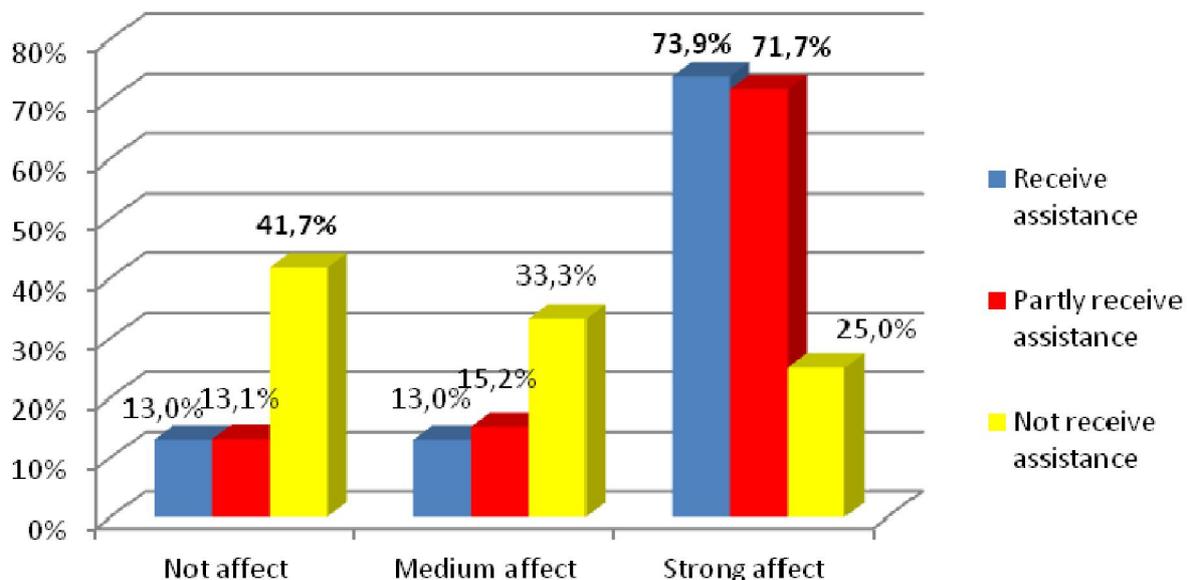


Fig. 3. Connection between introducing interactive methods and motivation

It can be seen that 41.7% of those who do not receive support for the integration of interactive learning methods claim that they do not increase motivation to learn while the percentage of those who receive part or all of their assistance and claim that interactive learning increases motivation exceeds 70%. The conviction of teachers about the effectiveness of interactive learning methods in terms of motivation is directly related to the co-operation they receive for the introduction of new learning technologies.

This leads us to seek an answer to the next question: How improving the material and technical base as a factor to promote interactive learning is linked to the role of the teacher in the learning process

This also leads us to the answer to the next question: How improving the material and technical base as a factor promote interactive learning is related to the role of the lecturer in the training process. Pearson's chi-square test analysis shows a statistically significant correlation between the proposal to validate interactive learning by improving the matrix technical base and the role of the instructor as instructor: $\chi^2(1) = 4.945, p = 0.026 < 0.05$, with moderate strength of the Cramer's effect $V = 0.192$.

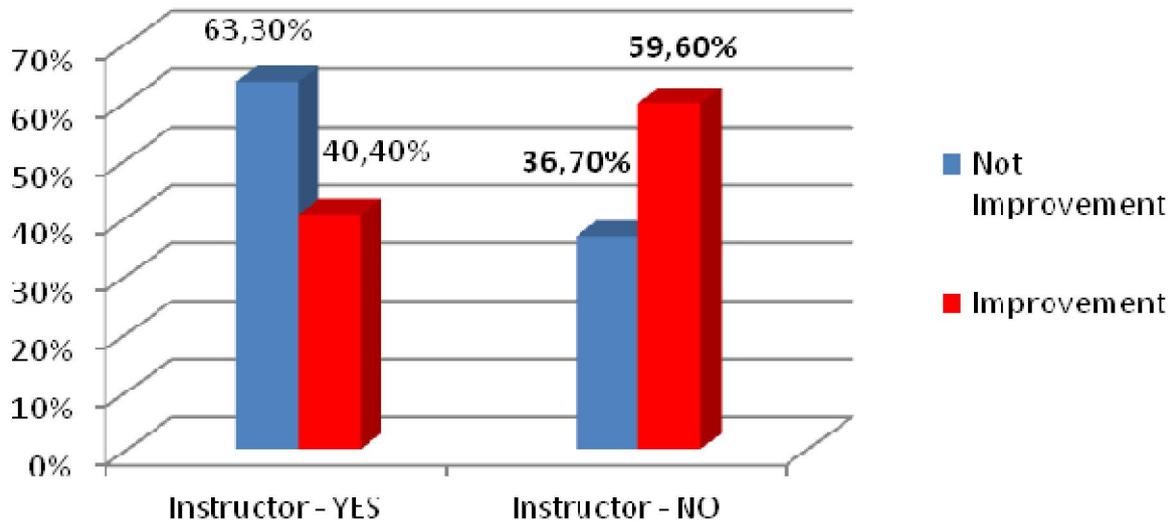


Fig. 4: Connection between improving the material and technical base as a factor to promote interactive learning and the role of the lecturer in the training process

The results show that the validation of interactive training methods by improving the material technical base in the opinion of respondents reduces the role of the instructor as "Instructor". Nearly 60% of those who responded positively to improve the material technical base, affirm the role of the instructor as a "Instructor", at the expense of being a "Facilitator".

CONCLUSIONS

The following conclusions can be made:

1. The main used interactive methods are: e-learning - 40.74%, multimedia - 40.34%
2. In the opinion of the teachers, the main role for the introduction of interactive training is the improvement of the material and technical base;
3. The Chi-square test, shows statistically significant ($p=0.039$) relationship between the improving of the material and technical base and the motivation of the student's;
4. The Fischer's exact test shows statistically significant ($p=0.039$) relationship between assistance for the integration of interactive learning methods and raising of motivation for learning and ability for team work;
5. The establishment of interactive training methods by improving the material and technical base reduces the role of the teacher as an "instructor" and emphasizes it's role as a "facilitator".

Acknowledgement: The presented material was realized in cooperation with and within performance of the project "Exploring the possibilities for using the ICT in training of healthcare specialists in branch Prof. Dr. Ivan Mitev - Vratsa" in competition "GRANT-2018", sponsored by a Council of Medical Science at the Medical University – Sofia.

WJEIS's Note: This article was presented at 9th International Congress on New Trends in Education - ICONTE, 10- 12 May, 2018, Antalya-Turkey and was selected for publication for Volume 8 Number 2 of WJEIS 2018 by ICONTE Scientific Committee.



REFERENCES

Fleming, N, I`m different, not dumb. Modes of presentation in the tertiary classroom, Proceedings of the 1995 Annual Conference of the Higher Education and Research Development Society of Australasia (HERDSA), 1995

Petkov V., Velikov St., Zlatanova-Velikova R., (2013), E-Learning chalanges and perspectives in Medical Colledge of Sofia – Part 1, Health and Science, no 4, ISSN 1314-3360, pp.36-39 /in bulgarian/

Prensky, M, Digital natives, digital immigrants. On the horizon (MCB University Press), 9, 2001, № 5

Velikov St, Zlatanova-Velikova R., Petkov V. (2012), Analysis of the use of electronic test as a tool for education at the Medical college – Sofia, Challenges In Contemporary Economy, IBS Press, pp. 1287-1294 /in bulgarian/

Velikov St. (2011), Virtual learning environment in medical college - Sofia, Journal of International Scientific Publication: Economy & Business, Volume 5, Part 3, 2011 ISSN 1313-2555, Publish at <http://www.science.journals.eu>, pp. 260-265

Velikov St., L. Ivanov (2012), Role and place of continuous training contemporary education, Journal of International Scientific Publication: Economy & Business, Volume 6, Part 3, ISSN 1313-2555, Publish at <http://www.science.journals.eu>, pp. 376-381

Zlatanova-Velikova R, Velikov St. (2011) A methodology for use of tests in training, Higher Education in Bulgaria and the Europe 2020 Strategy, IBS Press, pp 1028-1034 /in bulgarian/

Гюрова, В., В.Божилова, В.Вълканова, Г.Дерменджиева, Интерактивността в учебния процес, изд."Агенция Европрес", София, 2006 г.

Десев, Л., Речник по психология, изд. „Булгарика“ София, 2010 г.

Тодорина, Д., Място на интерактивните методи на обучение в съвременното образование, сп Педагогика, № 6/2014 г.

Чакърова, Л., Съвременни дидактически технологии за подготовка на висши медицински кадри, изд. Филвест, София, 2002 г.