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THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY MEANS IN THE ORGANIZATION OF STUDENTS` LEARNING ACTIVITY

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Information Communication Technology is basically an electronic based system of information transmission, reception, processing and retrieval, which has drastically changed the way we think, the way we live and the environment in which we live. Studying issues related to the development of information and communication technologies (ICTs) in all areas of human activities attracts more and more attention from the scientific community.

Many innovative projects are brought into life of pupils and students. But there are a lot of topical issues in the development of the competitive professionals' competence in days to come. It is required from scholars and teachers to perceive and organize the students' educational process of training quite otherwise.

We repeatedly meet debates where the issue of modern teachers who do not use computer technologies in their teaching activities as well as those are little familiar with modern tools are discussed. The after-effect of these results is characterized by a low formation of students and their low motivation to their study process. The obtained results show faults from the sector of the education sector in the educational-bringing-up process. This matter can be evaluated differently as we see many factors having impact on such a problem and giving different ways of its solution. Factors affecting the learning process will be discussed in another chapter.

The teacher must fundamentally change the manner of any information submission and organize the teaching and learning process so that students feel themselves as an important link in the contemporary world of knowledge transferring from the advanced teacher to the advanced student.

ICTs are increasingly playing an important role in organizations and in society's ability to produce, access, adapt and apply information. They are being heralded as the tools for the post-industrial age, and the foundations for a knowledge economy, due to their ability to facilitate the transfer and acquisition of knowledge [3]. Information and Communication Technology development is a global revolution. Digital literacy is a deep understanding of ICT technologies also includes knowledge and competences at the user level required to use technical equipment and software which is popular both in the labour market and at home [1].

Shiang-Kwei Wang et al. [5] paper describes the to facilitate science teachers' use of information and communication technologies (ICTs) as cognitive tools to shift their practices from traditional teacher-centered methods to constructivist, student-centered ones.

As the practice [7] shows good results of ICT adoption should be followed by Ukrainian universities.

Modern approaches to the arrangement of learning environment guarantee a formed young competitive professional. Many studies being conducted both in Ukraine and abroad, demonstrate some effectiveness of information and communication technologies in the education sector [6]. It should be noted some higher level of teachers using information technologies, as indicated by, and rather interesting findings were obtained in the study of education processes where teachers use ICTs and some qualitative changes in the use of ICT for students of technical specialties were outlined [2].

Methods of Research

The key methods of our study were: empirical – observations, questioning and testing. The study involved 191 students of the 1st – 6 th courses. We used common data collection methods - questionnaires, namely, when students work closely together in identifying the initiatives to adopt innovations in any learning process. The author developed a methodology for conducting classes where all the students' grades were fixed in a special e- Gradebook at the end of each lesson. Also, some studies were organized in the form of questionnaires to retract the quality of technology using in learning process. This study is associated with tasks having been given via copyright teacher's websites that have been individually developed for students of pedagogical and technical directions of training.

Research Findings

Students are very active individuals quickly responding to changes around them. They try to be the center of all the news, including IT [4]. But, what today's students are? What are their motives in their learning process?

The list of questions for the analysis was reduced (as to the effective groundings of urgent problems) and the most interesting students' answers were taken.

Such an urgent issue was investigated by the questionnaire survey including a list of questions which found the students' motives to get higher education. The research outcomes are presented in Fig. 1.

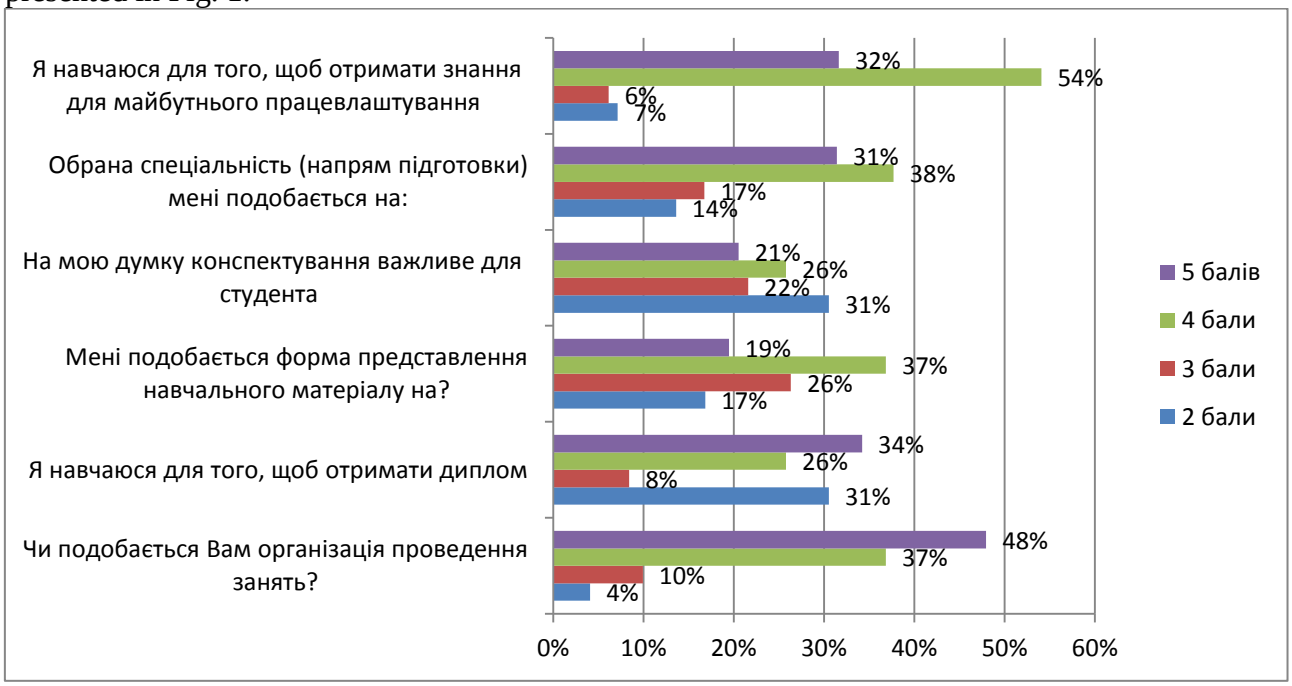


Fig. 1. Student Motivation for Learning

Students had the opportunity to evaluate the value of ICT tools in organizing the educational process. The research outcomes are presented in Fig. 2.

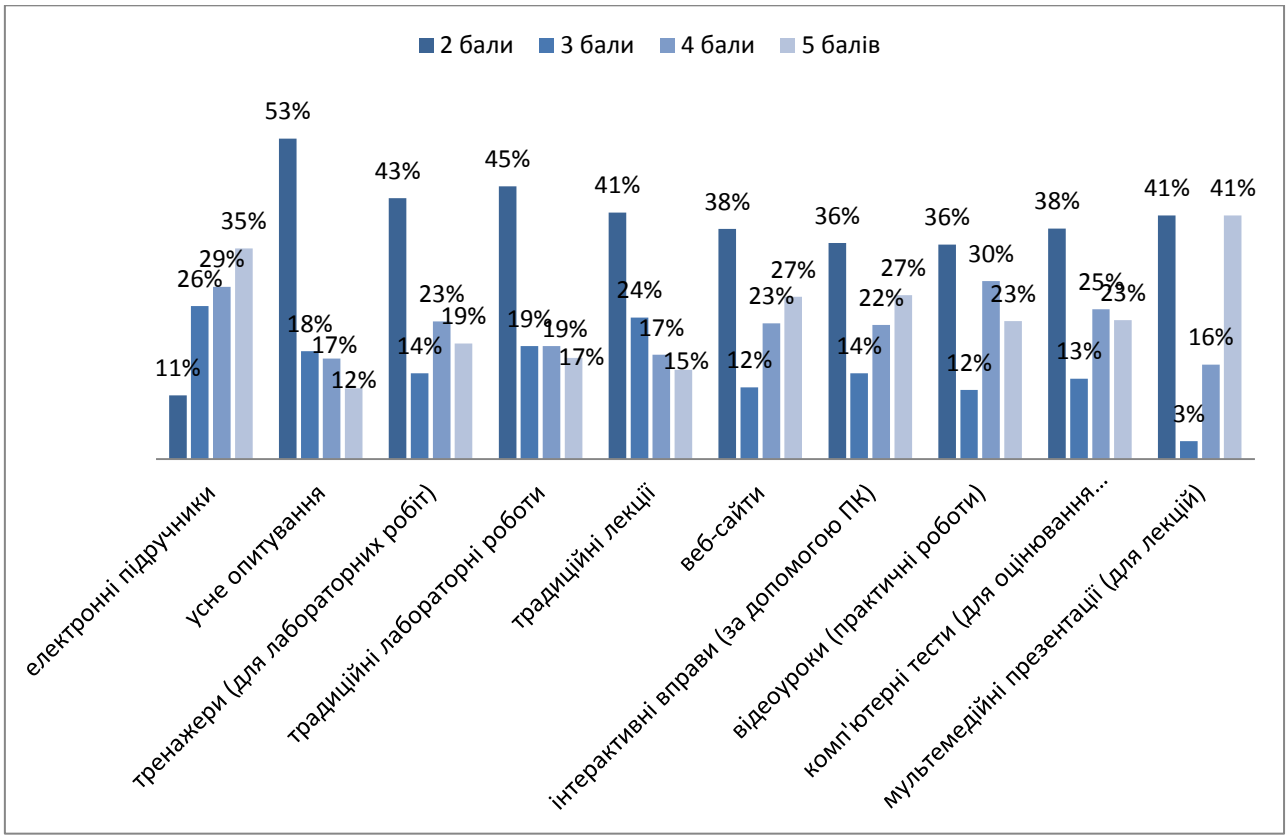


Fig. 2. Evaluation of Learning Resources

Thus, students are interested in having the educational process organized through the use of ICT tools. This is confirmed by the results obtained from a student survey.. Obtained results show a significant fault of the administration of the educational institutions, teachers and employers. It is necessary to pay attention to the fact that students annually become more aware of new technologies and therefore, any school must meet not only the general rules of their organization, but also hold a comfortable environment for the knowledge transfer, namely, to provide the audience with everything necessary for the educational process on a high modern professional level.

Despite the issues being discussed herein, we came to the conclusion that changes come slowly or any planned arrangement is not duly performed by the administration of the educational establishments.

Basically, schools need not only material support, but also educational and methodical. The organization of training is the process showing the efficient organization of the education process. We understand that no matter how educated the teacher is (with good subject knowledge), but when he/ she badly organizes classes, the transfer of information and the end results will be lower or even unachieved.

Conclusions and Recommendations for Further Research

The study proves the effectiveness of the ICTs use. ICTs use are good assistants in the educational process of teaching in both technical and pedagogical educational establishments. Electronic instruments positively influence on the formation of knowledge and skills of students, and it is very important in today's time in the transfer of any professional experience. In addition, students need changes in any data presentation, as evidenced by the survey results, they require the curriculum change, and more advanced classes. Working with ICT can have beneficial

impacts in motivation of students but also allow differentiation in the teaching since ICT can be used both individually and collaboratively.

References

1. Kalvaitis, A. (2009). Visuotinio kompiuterinio raštingumo tyrimas [accessed on 4 May 2011]. Tyrimo ataskaita. www.suaugusiujusvietimas.lt/?id=6&did=10.
2. Matviichuk, L. A. (2012). Theoretical Foundations of Teaching Technical Subjects by Means of Information and Communication Technologies, as the Prospect of the Future Professional. Collection of scientific works 'Pedagogical Education: Theory and Practice',Ukraine, Vol. #12, pp. 97-101 (in Ukrainian).
3. Morales-Gomez, D. and Melesse, M. (1998). "Utilizing Information and Communication Technologies for Development: The Social Dimensions". *Information Technology for Development.* 8(1). pp. 3-14.
4. Pontes, A. (2012). Representación y comunicación del conocimiento con mapas conceptuales en la formación del profesorado de ciencia y tecnología [Knowledge representation and communication with concept maps in science and technology teacher training]. Revista Eureka sobre Enseñanza y Divulgación de las Ciencias Eureka [Journal on Science Education and Spreading], 9(1), pp. 108-125.
5. Shiang-Kwei Wang, Hui-Yin Hsu, Thomas C. Reeves, Daniel C. Coster (2014). Professional development to enhance teachers' practices in using information and communication technologies (ICTs) as cognitive tools: Lessons learned from a design-based research study, *Computers & Education,*Volume 79, 101-115.
6. Tay, L. Y., Lim, C. P., & Lim, S. K. (2015). *Differences in ICT Usage Across Subject Areas: A Case of an Elementary School in Singapore*. Journal of Educational Computing Research, 2015, Vol. 53(1) pp. 75–94
7. Timms, M., DeVelle, & S., Lay D. (2016). Towards a model of how learners process feedback: A deeper look at learning. Australian Journal of Education. Vol. 60(2), pp. 128–145.