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Condition of first-year students' didactic adaptation within educational environment enriched with information and communication technologies

Introduction

Nowadays, higher education in Ukraine is in great demand among school-leavers striving for achieving a desired degree and becoming qualified specialists in the chosen field. On the one hand, students often find the new period of their life – studying at university – exciting and making them consider themselves grown-ups. On the other hand, first year at university is in many ways challenging, since students face formidable problems which they never encountered earlier at comprehensive school.

The didactic component of these problems arises out of the contradiction between the didactic systems of comprehensive school and university. Students often lack essential skills of autonomous learning, optimal time management, self-organization and self-control as well as fail to become actively involved into the learning process. All these skills are considered fundamental in acquiring higher education and becoming desired employees in today's job market, who are able to adapt easily to dynamic working conditions and environment, put forward new ideas and concepts, take positive attitude toward their jobs and apply their skills to the full.

Besides, the increasing volume of information to be processed at university and the need in both acquiring information literacy and information competency skills add to the challenges that students typically undergo in their first year at university.

1. Objectives of the paper

Study the condition of first-year students' didactic adaptation at Vinnytsia Educational and Scientific Institute of Economics of Ternopil National Economic University within the educational environment enriched with information and communication technologies (ICT), evaluating the impact of the latter on students' learning skills.

2. Results of research

In spite of numerous didactic and psychological researches, the problem of didactic adaptation of first-year students is still under discussion. Actually it is not paid much attention regardless of physical, psychological and social adaptation. Nevertheless, it is students' didactic adaptation that can help develop their cognitive activity and become the basis for their further successful lifelong learning under the changing conditions. Consequently, from the initial stage of learning the teachers are supposed to actively involve students into academic process, with them realizing that the results achieved in their learning activities become their intangible assets. The first year at university is extremely important from the point of view of students' didactic adaptation. Academic load, information multiplicity, a large amount of unusual forms of learning activities – all these factors increase freshmen's frustration and anxiety, having significant impact on their adaptation. It often takes students much time to adjust to university requirements and environment. Another reason of slow and inefficient adaptation of first-year students is lack of coordination between students and teachers in organizing teaching-learning process. Thus, adaptation problems are nothing but problems in combining both students' learning and teacher's educational efforts. Permanent mental tension combined with inefficient time-management often result in disadaptation which can cause poor progress and serious health disorders.

On the basis of the carried out analysis of psychological and didactic literature we conclude that one of the main components of the organizational--pedagogical background for first-year students' adaptation is organization of cooperation between teacher and student within the educational environment enriched with ICT [Іщук, Лєсовий 2012: 230–231], the target function of which is to provide students with direct access to necessary data, information, hypotheses, theories etc. with further development of students' abilities to process, analyze and synthesize the information, and efficiently use it in their learning activity. These skills can be acquired through information interaction of all the parties to the learning process.

The main objective of the educational environment enriched with ICT is to provide a remote interactive access to all kinds of educational resources (educational, reference and normative etc, which can be handy in efficacious learning). The educational environment at university is regarded as a multilevel system of conditions providing optimal parameters of educational activities from the point of view of the target, content, process, result and resources. The conditions of the educational environment enriched with ICT are regarded as system of facilities (internal and external, dynamic and static) for enhancing students' successful didactic adaptation.

Changes in educational environment call for adequate changes in the applied methods. Understanding and scientific substantiation of applying ICT become the primary objectives of the educational environment enriched with ICT. These technologies, being personality oriented, help develop students' competence in self-education and self-development, independence and self-actualization.

It is obvious that learning resources must differ from ordinary Internet information resources in the way they are going to be used: they are supposed to be embedded in the educational process, which in turn is a quite complex system of both direct interaction between the subjects to this process and indirect one, via manifold information resources. Students are expected to have access to the very resource which meets their educational demands and is adapted to their individual background.

In order to study the peculiarities of students' adaptation within the educational environment enriched with ICT, a pilot research was conducted among 85 first-year students and 42 teachers of Vinnytsia Educational and Scientific Institute of Economics of TNEU. In the pilot research, a number of empirical methods were applied: questionnaire survey, observation, synthesis of independent data, analysis of the results, and pedagogical experiment.

Fig.1 and 2 show how often students used information and communication technologies at school compared to university.

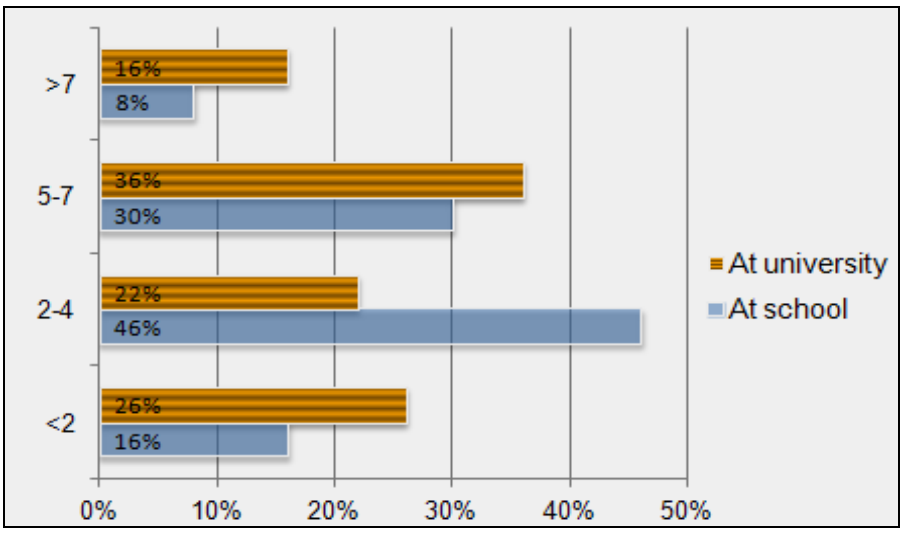

Fig. 1. The average time spent on a computer a day

As the graphs illustrate, entering a university first-year students have to use ICT more often than they used to at school. Moreover, we found out that Internet-resources are the most popular source of information, since they are used by

72% of students in their reading for seminars and workshops, whereas a little few than 50% use their synopses and 33% only use paper textbooks.

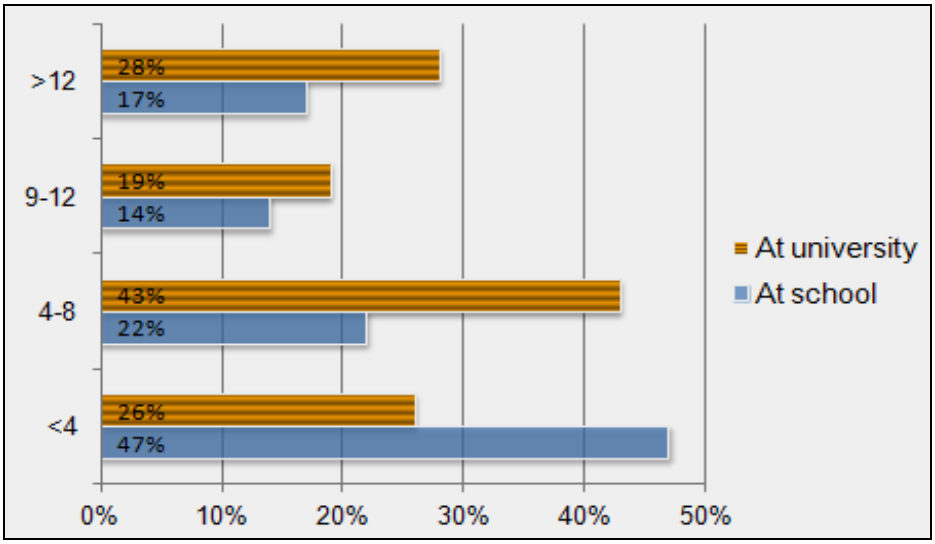

Fig. 2. The average studying time spent on a computer a week

When asked how ICT facilitate their learning, the students rated the following aspects:

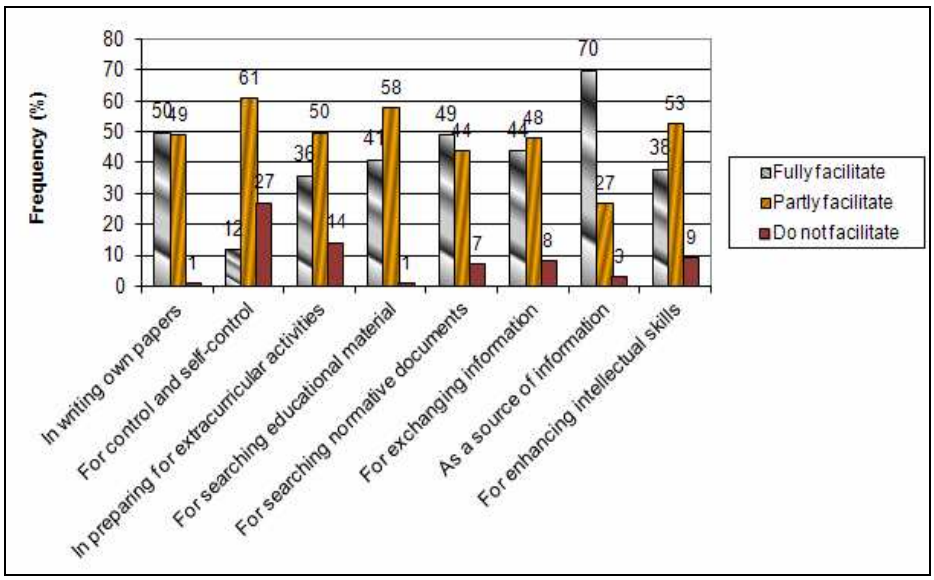

Fig. 3. Students' educational activities facilitated by means of ICT

The surveyed teachers claim there is an increasing need in using ICT in teaching humanitarian and fundamental disciplines to first-year students'. As they suggest, today's first-year student needs use ICT in order to become proficient in about 37% of the course size. The teachers also outlined the kinds and nature of work to be done by students via the Internet or with ICT. Thus students must use the Internet when reading for module tests and workshops, doing complex practical individual tasks, in their autonomous learning, searching extra educational information, designing Web-Quests and using videos.

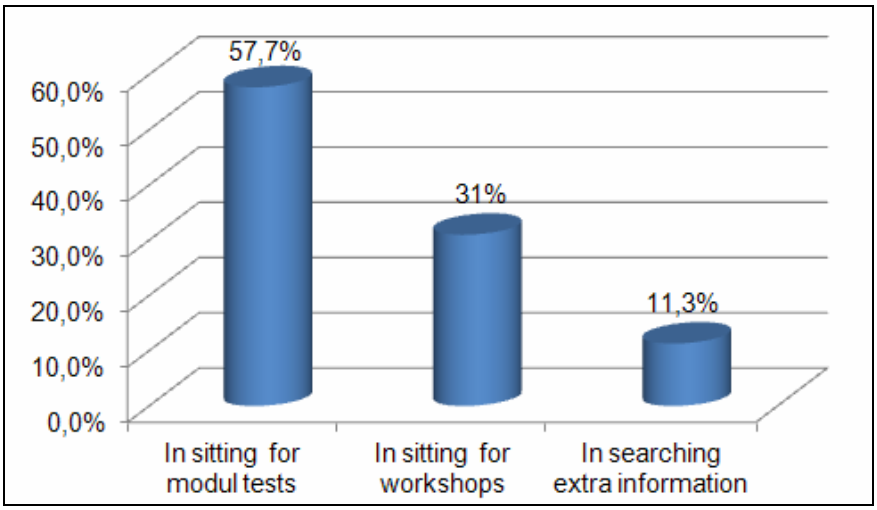

Fig. 4. Educational activities requiring involving ICT

As the graph shows, no first-year student can perform beyond educational environment enriched with ICT. Nevertheless, the teachers observe students' inefficient use of ICT on the whole. Students' ability to qualitatively process, analyze and compare the information they use got 4 points out of 10. Adequacy of the conducted research to its objectives is measured as 5.3 in 10-point scale. The level of students' readiness to use the Internet is much lower, having got 3 points. Teachers suggest that the low efficiency of students' use of the Internet is caused by lack of didactic adaptation in the educational environment enriched with ICT, where new disciplines themselves become a real challenge.

The survey results indicate the need in developing first-year students' information competency through indirect ICT-based tasks. For example, some teachers practice involving students into learning their subjects via social networks, Facebook being one of them. They put forward an idea to be discussed motivating students to suggest their own ideas in comments. Since the majority of first-year students feel uncertain about their proficiency, they may hesitate whether to set forth their understanding of the issue in question or not. For this

reason teachers encourage them by involving their competent colleagues into discussion and asking them to vote for worthwhile comments. This incites students to search relevant information in the Internet and feel free to suggest their ideas. Basing on both the students' and experts' suggestions, teacher continues disputation in class with further coming to common conclusion. The best papers take part in the All-Ukrainian competition funded by ex-President of Ukraine Leonid Kuchma "Ukraine in the XXIst century: civilization choice".

Fig. 5 illustrates the most meaningful factors of enhancing first-year students' adaptation (in their opinion):

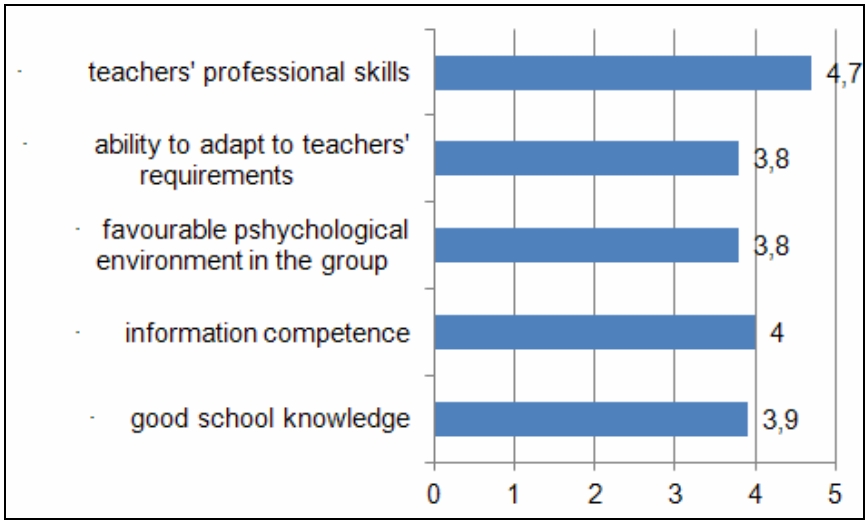

Fig. 5. Students' motivation and values regarding the factors enhancing adaptation

The graph proves that the importance of information literacy and competency in helping students' didactic adaptation forward cannot be exaggerated. Moreover, the majority (59%) of students state that the educational environment enriched with ICT together with adequate information competency expedite the learning in full, 30% – partly, and the rest found it difficult to answer.

Conclusion

Our findings prove that university educational environment enriched with ICT empowers implement all didactic capacities of ICT which in turn increases educational activities efficiency. A further development of the educational environment enriched with ICT in the multilevel system of higher education will inevitably be accompanied by increasingly growing capacities of ICT.

Although the results of the pilot research show the weaknesses of students' use of ICT, they prove the positive impact of the educational environment en-

riched with ICT on first-year students' didactic adaptation, since it increases their didactic motivation and in many ways facilitates educational activities.

Literature

Іщук Н.Ю., Лєсовий В.Ю. (2012), *Виокремлення організаційно-педагогічних умов адаптації першокурсників до навчання у вищих технічних навчальних закладах //* Педагогічні науки: теорія, історія, інноваційні технології: Науковий журнал. – №5(23). – Суми: СумДПУ імені А.С.Макаренка – С. 227–232.

Abstract

There being a contradiction between the didactic systems of comprehensive school and university, university teachers have to find solution to the problem of first-year students' didactic adaptation. The wide use of ICT in doing every university course calls for adequate teaching methods and didactic conditions for students' efficient progress in their first year of study at university. The article provides the condition of first-year students' didactic adaptation within the educational environment enriched with ICT on the basis of the pilot research carried out at Vinnytsia Educational and Scientific Institute of Economics of Ternopil National Economic University. Although the results of the pilot research show students' weaknesses of use of ICT, they prove the positive impact of the educational environment enriched with ICT on first-year students' didactic adaptation, since it increases their didactic motivation and in many ways facilitates educational activities.

Key words: didactic adaptation, first-year students' didactic adaptation, information and communication technologies, educational environment enriched with ICT, pilot research.