

INFORMATION AND COMMUNICATION TECHNOLOGY AS A PART OF LEARNING IN TALLINN HEALTH COLLEGE

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Key points:

- Process of learning and teaching is an old science but is constantly developing.
- Modernization of education system is necessary for the better preparation of new graduates.
- IT-learning as a mixture of old and new learning methods used in a modern technical environment.
- IT-learning in Tallinn Health College.

Introduction

Tallinn Health College as a higher education institution is interested in following the best practices in Europe. Bologna and Lisbon ideas form the bases for our future development plans.

The new strategic goal set for the European Union (EU) by the Lisbon European Council on 23 – 24 March, 2000 and reaffirmed by the Stockholm European Council on 23 and 24 March, 2001, “to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth, with more and better jobs and greater social cohesion (Council conclusions ... 2005: C141/7). To achieve these goals not only European economy but also modernization of social welfare and education system is necessary. Ministers of education agreed on three major goals to be achieved by 2010 for the benefit of the citizens of EU as a whole: 1) to improve the quality and effectiveness of EU education and training systems, 2) to ensure that they are accessible to all, 3) to open up education and training to the wider world. To achieve these goals they agreed upon thirteen specific objectives covering various types and levels of education and training aimed at making lifelong learning a reality (LLL). Integration of IT, efficiency of investments, language learning, lifelong guidance, flexibility of the system make learning accessible to all; mobility, citizenship education are important parts of the plan (European Commission. 2008: 1).

Learning, learning methods and teaching

Science of learning and teaching methods is old but still under development. Learning can be defined as more or less permanent change in behavior, knowledge or belief (Maslin-Prothero et al. 2001: 22).

We are all familiar with the so-called traditional teaching methods: lecture, demonstration, seminar, discussion. During the last ten years it has become very popular to talk about problem-based learning (PBL), enquiry-based learning (EBL) and evidence-based materials (EBM) used in the learning process. PBL and EBL are active, self-directed learning methods, increasing students' ability to search evidence-based information, use critical thinking in the integration of different parts of the curriculum to solve problems, connected with the subject area (nursing, midwifery, occupational therapy etc.). Teachers' role in this situation is to act as facilitator, helper to teach, helper to create learning atmosphere, supporter of students' professional development and motivation (Toumi, Äimälä 2007: 5 -6). Described methods are usually used in classrooms at the same time with the whole group. Practical training, simulations, study visits and project learning are also an integral part of health care students' curriculum.

IT-learning as a mixture of old and new learning methods used in a modern technical environment

Rapid development of IT enables to use study time more effectively, take into account individual needs of a student: study the same model or exercise several times till the learner is sure that her/his goal has been achieved. It ensures open access for everybody at any age and any time thus providing possibilities for flexible time planning. For teachers it gives possibility to use different teaching methods in integral way. This method is emphasizing the self-learning and active part of the student (Balanskat et al. 2006: 4; Märja et al. 2003; Sestini 2007).

IT-learning in Tallinn Health College

Tallinn Health College development plan foresees the concrete plan for IT learning development till the year 2013. Wide usage of computers in learning and teaching processes starts from the acquisition of necessary equipment and preparation courses for teachers and students. In 2005 special courses "How to use special graphs in education" for better understanding of computer-based learning materials were performed with the help of governmental program "Tiigrihüpe" (Tiger Jump). Wider development of computer-based learning has been achieved with the support of the European Union Social Fund programs through the projects "Estonian E-school. E-learning in Estonian higher educational institutions" (Eesti e-Kutsekool 2005). Moodle and IVA are mostly used web-environments for learning in Estonia.

IT environment is an environment with endless possibilities. You can present information about the purpose of the course, target groups to whom the course is prepared, previous knowledge of a student, exact name with the code and credit points of the course, short description of the course, timetable of different activities, description of outcomes, course materials with the individual guide. Course methods such as lectures, tasks for discussions, pictures, movies and schemes for demonstration are the most important part of the course. Additional information sources as links to libraries, web-sites etc. can be added. Individual and group tasks, analysis and feedback, problem solving, tests and tasks for independent work can be presented. Different discussion rooms, forums between individuals and groups can be open during the course. Description of evaluation procedures and feedback forms are also the part of the course in IT environment.

Several IT environment-based courses have been worked out in Tallinn Health College for the students of nursing, midwifery, optometry and pharmacy and also for practicing nurses during last three years. The following courses have been assessed: Orumaa, R. "Computer science in Tallinn Health College"; Kundla, M. "EKG and cardiac arrhythmias; Liping, M. "Infection diseases and nursing"; Ernits, Ü. "Methodology of research in nursing studies"; Ruuben, L. "Inorganic chemistry for pharmacists"; Moks, M. "Ergonomics of vision"; Hörrak, E. "Anatomy".

Feedback of students and practicing nurses shows that they were highly interested in using the possibilities offered by IT-based course. *"The beginning was a mess but I gained experience using IT--based -learning system and I liked it", "IT possibilities are something new in the study process and I want to learn it", "IT-based course made learning more interesting and more fun".* They found out that IT course gives more possibilities to compile her/his own individual timetable and choose a place where to work. *"It is easy to work, you are free to choose your time, place and own tempo"; "IT learning is very flexible for the learner".* IT-based course was found to be an excellent communication environment for learners and teachers. *"IT-based learning is very comfortable as it enables to work at home and discuss your works without any problems with fellow students and also with a teacher,"; "Most of all I enjoy practical tasks – for example measuring houselights using the IT possibilities".* Self-evaluation and evaluation are valuable part of IT possibilities enabling to follow the learners' progress. *"The tests were not very interesting but I am sure that they were very useful for self-evaluation".*

Teachers have agreed that IT-based library has already become regular among the students and teachers. IT- based learning will make education more international: students will get the possibility to take courses from different countries. *"IT-learning is definitely the step towards the open society".*

Teachers pointed out some problems. The first one was a question of the responsibilities of a teacher and a learner. Has the learner really acquired all the knowledge as it has been planned? Teachers still feel that they are too much responsible for students' knowledge base and are worried about quality insurance. A student using IT-based learning method mostly works with a computer - can this lead to the decrease of oral presentation and discussion skills?

Some concerns connected with technical preparation and personal knowledge were indicated, but these were not common problems. *"Still there is restriction of technical possibilities – for example testing"; "Of course the IT-based course is a window to the world, but only in case, if you are technically very good. Then all the world is open for you".*

Some teachers mentioned that the first preparation of IT-based course was a process which consumed so much time, but they were sure that having these experiences the next time it will be much easier.

To overcome these problems the teachers recommended: the best method is to combine face-to-face teaching with IT-based teaching. *"I have used the IT learning/ teaching method during two semesters. I think that this method will stay as a part of learning. I definitely*

need classes where I am together with my students and have a possibility to have eye contact with them” (Ernits 2007).

Conclusions

- The use of IT-based learning is a necessary tool for the development and modernization of education and learning.
- IT-based learning gives new challenges to students and teachers for enriching the learning and teaching process.
- IT – learning is an excellent method for the integration of the so-called “old learning methods” and the new ones.
- IT learning offers excellent possibilities for flexible planning of individual learning.
- IT learning gives good possibilities for self-evaluation and feedback which enable to raise the effectiveness and quality of learning and teaching.
- There is no age limit - IT learning can be used in all ages.
- IT teaching method is time consuming for the teacher – at least at the first time.
- Preparation of IT course presumes good IT skills and support of IT specialists.
- IT learning is considered an integral part of learning process in Tallinn Health College.

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References

1. Balanskat, A., Blamire, R., Kefala, S. (2006). The ICT Impact report. A review of studies of ICT impact on schools in Europe. European Communities. <http://google.ee/search?hl=et&q=The+ICT+report%2C+european+schoolnet&btnG=Otsi&tr=>
2. Council conclusions of 24 May 2005 on new indicators in education and training. (2005/C 141/04). *Official Journal of European Union, C 141/7-8*.
3. European Commission. (2008). Education and training 2010. Diverse systems, shared goals. The education and training contribution to the Lisbon strategy. http://europa.eu.education/policies/2010/et_2010_en.html
4. Eesti e-Kutsekool. (2005). <http://www.e-vet.ee/>
5. Ernits, Ü. (2007). E-õpe – kas “aken maailma” või “isolatsioon”? E-õppe jäljed Infoajastu KiirTeel. <http://voru2007.e-uni.ee/>
6. Maslin-Prothero, S. (2001). Group work and presentation. In: Bailliere’s Study Skills for Nurses. Ed: Maslin-Prothero, S. 75-97. Harcourt Publishers Limited.
7. Märja, T., Lõhmus, M., Jõgi, L. (2003). Andragoogika. Raamat õppimiseks ja õpetamiseks. Tallinn: AS kirjastus Ilo.
8. Tuomi, J., Äimälä, A-M. (2007). Idea of problem-based learning. Project “Development of the education of nursing and health care. Problem-based learning. Study materials and final works”, Tallinn: Tallinn Health College, 5-6.
9. Sestini P. (2007). Use of a Moodle, a free, open source course management system, to support learning of evidence based practice. 4th International Conference of Evidence –Based health care teachers and developers “Better Evidence for Better Health Care”. 53. Taormina (Italy), 31. October - 4th November, 2007.

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The article “Information and Communication Technology as a part of learning in Tallinn Health College”, presented by Tiina Juhansoo, MD, PhD, Ülle Ernits, RN, Msc, Tallinn Health College, Estonia, describes the development of IT learning method as an integral part of learning and teaching comprising both old and new learning and teaching methods in the modern environment. The feedback of IT learning and teaching methods is described as a modern, flexible, accessible to everybody at every age method, as a method requiring a certain level of technical preparation and support of IT specialists.