PEDAGOGICAL ASPECTS OF E-LEARNING IN HIGHER EDUCATION

E-STUDIJU PEDAGOĢISKIE ASPEKTI AUGSTĀKAJĀ IZGLĪTĪBĀ

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Abstract. The IT boom in the world has contributed to the wider application and development of e-learning/e-studies in the higher education of Latvia as well. *E-studies are the studies, which take place with the application of electronic technologies: telecommunication and computer networks, radio and TV, video records, interactive TV and multimedia CD-ROM.* In some countries e-studies are understood as online studies in the network. An especially organized virtual environment is an *essential feature of e-studies*, interactive study materials for instructors and students self-study, possibilities of self-assessment for both and the support of instructors in the study process.
E-study principles enter Latvian higher education institutions slowly, however. It is stressed by specialists – during the next years students and lecturers more and more will discover the opportunities offered by modern technology. Practically it is: the instructor is reading the lecture face-to-face, but the variety of study materials, tests, group work and project development is organized virtually: discussion forums, chats with instructors and classmates, etc. Twenty years ago the telephone and fax, radio and TV, audio and later video were technologies characteristic of *distance learning*. It was possible to achieve a remarkable improvement in the quality of studies.
E-studies/e-learning is more than only business. The *new teaching methodology* is characteristic to this form of learning, which differs from full-time study. Via e-learning the student acquires the necessary information society added value of education – learns not only the subject matter, but also learns how to work with new technologies. In Latvian universities e-studies are realized in different versions. One of the most common is the acquisition of study courses attending lectures in person at the university as well as working in a virtual environment.
The problem with e-studies is that in Latvian universities, it is necessary not only to explore new technologies and to acquire new study habits, but also to encourage not only students but also the lecturers themselves to use the new study technology. The latest trends show that study work is increasingly switched to the virtual environment, but that does not mean that, thinking about the quality of studies, the "effect of presence" will disappear, which cannot be provided by e-studies without the sufficient "effect of presence" of the lecturer. Students wish to mix- face-to-face lectures where the teacher can be asked what they do not understand and also work in a virtual environment. That is the way to make study process more effective and to improve the quality of specific courses.
E–study is becoming more and more popular in the world. However, aiming for maximum quality, such studies recquires large capital investments in different sectors as well.
Key words: education, technologies, e-learning, instructors, motivation

Introduction

The author`s intention is to study pedagogical aspects of e-learning on a larger scale – to look at them on the world scale, through the articles published in the Proceedings of the conferences which take place regularly in different countries of the world, and to look at not only the instructors` attitude but the business world/people point of view toward such a form of study as e-learning is, and study the ways of the instructors` encouragement to use e-learning as a new approach to study process or only a new form of study. E-studies or e-learning or Distance learning or e-training is used to describe similar *form of study which takes place in virtual environment and application of electronic technologies make the study process interactive.* The definition of the process allows recognize it as web-based learning taking place simultaneously all over the world for about twenty years already. Research was carried out to study pedagogical issues concerning

encouragement of students and lecturers to apply new study technologies and also to touch upon and to examine pedagogical issues, to reconsider them, therefore different literature sources revealing different views of different authors from all around the world were analyzed.

The **aim** of the research is to study pedagogical aspects of e-learning in order to introduce (tell about) them to Latvian academic community, revealing their similarity all around the world, mainly focussing/drawing attention to some the instructors have while dealing with techologies as well as with students motivation, encouraging them to apply e-training in their studies.

Research methods

Investigation of the events reflecting e-learning in the world and illumination of the published materials in the Proceedings of the conferences devoted to application of technologies in study process, analysis and selection were carried out. The author of the given study carried out the review of the latest reports, published during last twenty years, articles and other kinds of publications on the topic under discussion related to e-learning and blended learning environments. Literature analysis is presented to assist the reader to reveal and appraise importance of instructor`s and the learner`s motivation as well, in the success of e-learning and blended learning courses. From the selection of evidences it is expected to conclude, that student motivation is resulting from the lecturer`s willingness and competence to apply technologies in study process being a major factor for e-learning and blended learning success. The results of the report have to alert the reader, that student success and quality of the study process, in e-learning environment, is heavily related to course layout and accessibility as well. The author of the article tries to provide a summary of current research on the topics of e-learning and blended learning while also the role of instructor in encouragement of students is stressed.

Results and Discussion

Not only in Latvia and other European countries but also in America, application of the latest technologies in e-learning in Corporate, Government, Healthcare, and Higher Education are widely discussed at forums of different scale, as well as on regular basis at the World Conferences on e-learning. Canadian scholar Sir John Daniel (Commonwealth of Learning, Canada), at „World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2009" proposed the following issues for discussion: „What is technology and what are its strengths? ... Technology in a people-centred way and Adam Smith's analysis of technology in terms of division of labour, specialisation, economies of scale and machines. In other areas of life technology has

used these principles to increase access, improve quality and lower costs. Is this true of e-learning?" (Daniel, 2009) E-training is considered nowadays as a very important issue for business organization in such a remoted country for Europeans as Jordan is in the Arabian world. *Osama Harfoushi, Ruba Obiedat* (Jordan) have researched organization's acceptance of the new training system before implementing it. System`s functionality of organisation, finance resources, human resources, their potential/capabilities, regarded as pedagogical preconditions of the successful study environment, in their research were proved being the main factors which affect e-training acceptance. „E-training is considered nowadays as a very important issue for business organization because of the benefits it can bring. Unfortunately, e-training is not fit well in most of Jordanian organization. In order to implement e-training successfully in an organization, you need the right people at the right place using the right resources. Furthermore, it is essential to measure the organization's acceptance for the new e-training system before implementing it in order to gain its full potential. The research proposes a model to measure an organization's acceptance for a new e-training system. The model has been developed from various previous studies and then it has been tested using quantitative methods (questionnaire). The studied factors which are believed to affect the e-training acceptance are: System Functionality, Finance Resources and Human capabilities." (Harfoushi, Obiedat, 2011) Not only for business organization but also for the university, which nowadays is also regarded as a business organisation, e-studies/e-learning is more than only business. *New teaching and learning methodology* becomes a challenge in this form of learning, which differs from full-time studies at the university. Via e-learning the student is encouraged to acquire added value of education, so necessary for web-based learning and on-line work in information society, to learn not only the subject matter, not only acquire the content but also to learn how to work with new technologies. „Many colleges and universities are now investing more in e-learning and blended learning courses. For a course to be worth the investment the institution must first recognize the most important factors to consider while developing the course. Of all the factors considered while developing a course the student must be considered as the most critical."(Shivetts, 2011) Technology is changing higher education in many ways. Distance education has become common. Curtis J. Bonk, a professor of instructional systems technology at Indiana University (US), surveyed the landscape in „The World Is Open: How Web Technology is Revolutionizing Education (Jossey–Bass)." (Bonk, 2009) and drew educators attention to the development of instructional systems technology market and education expenditure on e-learning acceleration from 5% of total expenditure to 50% and the capacity of quality improvement and frameworks which had to have some "innovative consideration" as well.

"Harness DisruptiveTechnologies"

With the present changes taking place in both the US and the UK (read: European) education systems, it is interesting to look back to see where they have arrived at in, as called by some authors, "Harnessing Technology" or "Disrupting Class" as education systems looked to adaptation and evolvement, according to their opinion, to „the massive changes technology is bringing to learners lives and how they live them and consequently how and where they learn."(Becta, 2008). It is almost full marks to the Becta research team in their analysis of the trends most likely to impact upon young people, while they certainly picked up the trend toward mobile devices. The Becta research related to the learner and the learner's context, identified four emergent or potential future trends: 1) consumption of multiple technologies by young people; 2) increased dependence of young people on mobile technologies for online social networking; 3) increased parental encouragement of their primary age children's educational uses of computers in the home; 4) increased use of TV-on-demand by young people in the home. American scholar Clayton M. Christensen (US), by contrast, had delved deeply into the malaise he believed that was effecting the US education system at that time and Latvian at present, beyond simply looking at the impact of emerging technologies on the lives of learners and how they could be used to support learning. Interestingly his solutions were aimed not at harnessing emerging technologies for learning, but at the school system itself (by disrupting it) and centred principally on giving schools the right framework to innovate. Learning Platforms creation was regarded as one of innovative intuitive tools to create learning content with modes to allow, for delivery, in some form of content exchange, model emerge. Into the concept of the platforms social learning environments were included to allow collaborative content development and collaborative learning and collaborative peer to peer sharing of learning, and also support the exchange and delivery of learning over a multitude of differing devices at the Latvian universities as well. It should be noted, that the next generation of learning platform, given the speed of technology and, in fact all (and much much more) of the requirements, could be met in the corporate e-learning market already. The challenge was in firstly giving the universities in Latvia the right infrastructure in which to innovate in: Academies, Free Schools or Virtual Schools, etc. Consequently pedagogical aspects concerning schools to discuss were: 1) exploration of new technologies, 2) motivation and encouragement of teachers to use new study technology, 3) encouragement of pupils to use new study technology, 4) acquisition of new studying habits using new study technology, 5) making of the study process more efficient (personalizing it), 6) the quality of schooling, 7) improvement of the quality of specific courses. It should also be noted, that knowledge and training skills/techniques acquired at

school form basis for university studies. Learning results are of the utmost importance for school, for well developed content and information exchange mechanisms in the form of acquired information technology skills as study links are important for students, therefore it is so important for the assessment of university study outcomes to examine learning process at school.

Technology assists to develop study skills

Developed content and exchange mechanism was viewed by Christensen as the second stage disruption of the classroom. Indeed the work of Professor Sugata Mitra's "Hole in the Wall" experiments had shown that," in the absence of supervision or formal teaching, the children can teach themselves and each other, if they're motivated by curiosity and peer interest". (Christensen, 2008) The first stage of disruption in Christensen's model was broadly how ICT was deployed in the classroom, with computer based learning replacing monolithic learning. As it was pointed out by him, that this was driven or rather made possible by the falling prices of computers, e-learning content (and a parallel recognition that e-learning had improved in quality), but was driven ultimately by budgetary constraints (and looming teacher shortages in the US) – in short – technology was substituting the teacher at school and the instructor at the university. Christensen predicted that technologies share of the education budget in the US would grow from 5% to 50%, and the flip in the substitution curve would begin in 2012! It would be noted, that a new virtuous circle of demand emerged that promoted both: a growing demand for e-learning content due to its cost saving, leading in turn to a fall in e-learning content prices due to the rise in demand and an ever improving quality of learning materials (development of E-study content in the form of study courses) and technology (including the development of students` self-directed study skills) to create e-learning, improves in Latvian universities as well.

In the corporate market

In the corporate market of the world, the impact of the 2008-2009 economic crisis saw massive downward pressure on corporate training budgets and a consequent strong uptake of e-learning and other web based communication technologies. Technology did in some ways replaced the trainer, - will technology now replace the teacher, or, at least, fill any of the gaps? Time will tell. Perhaps the US education system would benefit by looking at many of the excellent research papers to give learner perspective and explain how education systems can harness new technologies for learning. And, perhaps, the UK schools could look toward the US for new school models for the emerging Academies and Free Schools as how to innovate and differentiate disruptively! Any

company or organisation that can bridge countries in learning technologies should be highly valued as the opportunity to share best practise from both education systems would be of huge value. (BECTA, 2011) Perhaps not only European but also Latvian education system would also benefit by studying experience of both: the UK and the US schools and new school models not only in secondary but also in higher education. However, **it is interesting to note** that while the BECTA researchers focused on how emergent consumer technologies could be harnessed to support learning, Christensen looked for the development and adaptation of new solutions from the software developer market as opposed to the consumer market and in particular "Applications" – pieces of sophisticated software developed for specific purposes. (Not APPS as so often associated with i-phones).To Christensen the ability to deliver personalised learning or student centred learning is paramount and to provide platforms of tools that will enable non-professionals (by this he means non-professional software developers) "to create software that helps different types of learners" is one of key themes. Christensen **argues**, that „these tutor tools are likely to emerge as some form of virtual tutoring" (Christensen, 2008). According to research published by Ambient Insight (See http://www.youtube.com/watch?v=gtVYkEdGtfo) tools and vitally mechanisms for their exchange – via learner user networks will grow in the future and become enhanced as learners and teachers will also contribute to content development and catering for all types and styles of learner. **Virtual schools – already a strong trend in the US** model is believable and likely to only accelerate and can be regarded as e-learning model in Latvian higher education as well.

Two sides of the same coin

Many excellent BECTA reports addressing school and college use of e-learning and learning technologies offered a vision of an insightful vision of the future (see the 2008 report "*Analysis of emerging trends affecting the use of technology in education. Research to support the delivery and development of Harnessing Technology: Next Generation Learning 2008–2014")* and was perhaps one of the most accurate and forward looking pieces in terms of highlighting the up and coming trends . BECTA (and its researchers) looked at toward the US and into the UK to highlight what is believed would be the key trends in technology's use in learning and education. By contrast also in 2008 Clayton M. Christensen published his work "*Disrupting Class"*, - with the sub title "*How Disruptive Innovation will Change the Way the World Learns"*. While Christensen's sub title talks about how the world would learn, his work principally addressed the challenges and issues faced by the US education system. Indeed Christensen's introduction painted a bleak assessment of the US school system of that time. As two sides of the same coin, it has to be noted

also, that still there exists instructors` negative attitude toward introduction and application of technologies in study process. Not only in Latvia but also in the United Kingdom voices of opposition can be heard. **Susan Greener (University of Brighton, Brighton, UK),** BA, MBA, EdD, FHEA, Chartered Fellow CIPD, at present works at Brighton Business School as a lecturer in HRM, Business Context, Research Methods, Learning and Development. She is Course Director of the fully online final year undergraduate course, validated by University of Wales, with international students. Her research interests are in e-learning strategy, teacher support and development and reflective learning. In her research she had pointed out, that there would always be academic staff who manifest resistance to changes and innovation, referrinng to/dealing with technology enhanced learning which is the issue of pedagogics. „Traditional management approaches suggest that resistance is an enemy of change. However there is an increasingly attractive counter view which suggests, that, resistance is something to be explored and understood, in order that communication and understanding about the proposed change is better implemented. This is the approach taken in the paper, which seeks to explore resistance among academic staff to the adoption of technology affordances in Higher Education teaching and learning. The initial hypothesis based on survey research suggests that there will always be faculty who eschew information and communication technologies (ICTs) – beyond basic PowerPoint™ and email - and thus will be unable to take advantage of learner engagement through the pedagogical affordances both of virtual learning environments (VLEs) and of Web 2.0. Institutions increasingly require staff to adopt basic engagement with VLEs, but that is as far it goes with many teachers. Rather than just have to put up with this situation, or make people participate despite their personal views, we should seek to understand better what causes such resistance, what underlying personal pedagogies are driving this perspective, and how best to accommodate strongly held personal pedagogic diversity amongst teaching staff. As part of a larger project to explore and map academic staff stances in relation to e-learning and e-teaching, the preliminary research discussed in the paper analyses initial qualitative unstructured interviews with staff, selected for their reluctance to explore the possible learning and teaching affordances of ICTs. Results from the initial study have been analysed in relation to current thinking on change management discussions of resistance (Waddell and Sohal, 1998, Ford et al., 2008), in order to offer some tentative recommendations on how the phenomenon may be further studied and how institutions wishing to develop staff adoption of ICTs in learning and teaching may proceed”(Greener, 2010).

Conclusions

1. Currently wide-ranging discussion of the wide-spread use of technology in the study process takes place in the world. Technology in a people-centred way and in terms of division of labour, specialisation, economies of scale and machines is used in all areas of life. Technology principles have been used to increase access, improve quality and lower costs in e-learning as well.
2. Before implementation of the new training system at the university, the existing organization`s functionality, finance resources, human resources, their potential, regarded as significant pedagogical preconditions of the successful study environment, have to be examined. That will provide sound basis for acquisition of new studying habits using new study technology.
3. The ability to deliver personalised learning or student centric learning is paramount and to provide platforms of tools that enable non-professionals to create software that helps different types of learners at the university study process is important. These tutor tools are likely to emerge as some form of personalized virtual tutoring as well.
4. Instructors/Teachers contribute to content development and catering for all types and styles of learner and their skills development; it is believable and likely not only acceleration of the virtual schools, but virtual study environment as well.
5. Resistance, as psychological aspect in education, is something to be explored and understood in students, instructors and administration as well, in order that communication and understanding about the proposed change is better implemented. To explore resistance among academic staff to the adoption of technology affordances in Higher Education teaching and learning is significant, too.

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