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The Study of the Application Rate of Effective Learning Technologies in Self-Regulation of KFU and VIIU Students

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The aim of the present research is the study of the application rate of learning technologies in KFU and VIIU electronic courses to improve students' self-regulation. For this aim, this research was based on Kitsantas research, the rate of the use of effective learning technologies in students' self-regulation in electronic courses in these two universities were studied. The statistical sample included the professors and attendants of the online courses. The research tool was interview. Results showed that wiki sites, podcasts and blogs that are effective in the creation of some of the self-regulatory processes are not used. In addition, the professors as a key factor in teaching process do not have sufficient knowledge about the role of learning technologies in promoting students' self- regulation.

Keywords: learning technologies, self-regulation, e-learning courses, Iran, Russia

INTRODUCTION

Relevance of the subject

Because of the lack of face to face relationship in e-learning and little relationship in blending learning courses, a very important factor is the carefulness in observing the rules and the situations in which on line learning occurs successfully. The aim of learning technologies is facilitating the design, presentation, and the management of on-line and blended learnings (Kitsantas & Dabbagh, 2010). Understanding and realizing self-regulation in online environment is very important, because evidences show that e-learning needs more self-regulation as compared with face to face learning. Experimental studies about the effect of self-regulated learning intervention on the students' learning outcomes in e-learning environments show that support for self-regulated learning fosters significantly higher academic outcomes (Row & Rafferty, 2013). Some researches done in this field have proved

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this assertion. Researchers have also examined how learning technologies can support and promote students' self-regulated learning (Kitsantas &Dabbagh, 2011; Dabbagh & Kitsantas, 2013; Valeeva et al., 2016). For example, research evidences indicate that self-regulated learning processes such as goal-setting, self-monitoring, and self-evaluation can be supported by using experiences and resource sharing tools (e.g., blogs and wikis) whereas communication tools can enhance help-seeking behaviors. In turn, technology-enriched learning designed to enhance students' self-regulation and motivation facilitates academic performance and increases positive attitudes towards learning (Chang, 2007; Kramarski& Gutman, 2006; Perry & Winne, 2006). As we have seen in the research literature, self-regulation is commonly accepted as an important structure in learners' successfulness in learning environments such as online courses (Williams & Hellman, 2004).

Problem statement

Self-regulation is a process, which concentrate the people on the development of complementation of their tasks in different domains of human performance (Bandura, 1991). Zimmerman (2000) describes self-regulation as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals". Self-regulated learning is a process that includes learners' intentional efforts for managing and guiding complex learning activities in order to complete instructional objectives successfully (Zimmerman & Schunk, 2001; Nasibullov, Kashapova & Shavaliyeva, 2015). Pintrich (2000) believes that self-regulated learning is an active and creative process that the learner sets his/her learning objectives and then tries to accomplish them in order to monitor, adapt and control his/her cognition, motivation and behavior. Some of the self-regulatory processes which have influence on learning outcomes are goal setting, time management, self-monitoring and thinking, reforming of learning strategies , feedback adaptation, seeking help and resource oriented learning (Bandura, 1991; Pintrich , 2000; Zimmerman & Schunk , 2001; Vlasova, Kirilova & Curteva, 2016).

Barnard et al., (2009) mention that self-regulated learning skills, which are important in face-to-face classes, have more important role in learning in on-line environments. Because of physical absence of the teacher and learners, it is more probable that having no self-regulated learning skills leads to doing tasks and homework unsuccessfully. Barnard also believes that in face-to-face environments more attention has been paid to the self-regulatory while in online learning environments less attention has been paid to self-regulatory skills. Because of this matter, in recent years, researchers have studied and paid more attention to self-regulatory subject in online environments. For example, in the fields of the relationship between the self-regulatory and online learning, we can refer to the researches of Lynch & Dembo (2004) and Whipp & Chiarelli (2004). In the field of the use of the online tools to develop self-regulatory behaviors, researchers have conducted researches such as Cho (2013) & Cho & Cho (2013); Dabbagh & Kitsatas (2012); Kitsantas & Dabbagh (2005), Kassab et al (2015); Kauffman (2004). In this direction, Kitsantas (2013) mentions that the proper use of learning technology such as using LMS and their facilities can potentially support the stages of self-regulation. She refers to special examples of learning technologies and their instructional use in self-regulatory field (Table №1). In her opinion, learning technology is the different sets of web-based tools, application software and mobile technologies, which blend the technological and instructional aspects and the internet facilities with each other.

METHODS

In this research, because of the importance of the self-regulation behaviors in on line courses and also the role of learning technologies in their development, the rate of the use of learning technologies in students' self-regulatory development of VIIU and KFU based on the view of the professors and e-learning attendants was studied. The statistical sample of the research included 10 professors and 4 attendants. Five professors, two attendants of KFU, five professors, and two attendants of VIIU. The research method was descriptive survey and the research tool was interview. In addition, the researcher studied on line courses of KFU and VIIU from 2014 to 2015 by the use of the lists of Kitsatas learning technologies (Table 1).

Considering the explanations in the above table, which was derived from Kitsatas research about learning technologies, and their roles in promoting students' self-regulation, the researcher observing some of online courses of KF and VIIU, studied the learning technologies, which were used by these universities. For this purpose, researcher observed and studied the online course structure, syllabus, and different files in LMS, exercises, the students' facilities, instructional calendar, notes, news and forums in order to precisely determine which type of learning technologies used. It should be mentioned that both university use Moodle as LMS. The results of these studies are shown in Table № 2.

Table 1. Learning technologies and instructional uses in self-regulatory processes

Learning technologies	Definition	Self-regulatory processes	Instructional Use
Blogs	Online web-journal maintained by a user whose entries can be open for others to comment on	Self-monitoring Self-reflection Self-efficacy	Publishing questions online for others to answer Providing and receiving feedback from peers Combining notes with the course content to create a study guide
Podcasts	Downloadable digital audio or video media file	Modeling Self-efficacy	Audio/video lectures Recording study group sessions
Social networks (facebook)	Online social structures	Task strategies Self-monitoring	Networking among students within and across institutions Connecting with other experts in the field File sharing and transfer
Virtual worlds	Interactive, online social environment	Self-efficacy Peer modeling Task strategies Self-monitoring	Virtual modelling Role playing/simulations Online meetings/training Providing instructor/peer feedback
Administrative tools (e.g., calendar)	Online date keeper	Time management -Goal setting Self-monitoring	Keeping records of activities Recording due dates Recording daily and long-term tasks
Online marking tools	Online test feedback	Self-monitoring Self-evaluation	Record keeping Providing instructor/peer feedback
Online Grade book (LMS tools)	Online grades	Self-evaluation Self-satisfaction Attribution	Record keeping Providing instructor/peer feedback Collaborative learning
Wikis	Online, open access publishing tools	Self-evaluation Peer modeling Seeking help	Knowledge sharing Debating Bulletins

Table 2. Learning technologies used for promoting self-regulation in KFU and VII

Learning technologies	Self-regulatory processes	Application in online courses VIIU		Application in online courses KFU	
Blogs	Self-monitoring Self-reflection Self-efficacy		×		×
Podcasts	Modeling Self-efficacy	Using recorded audio files for explaining how solve exercises			×
Social networks (facebook)	Task strategies Self-monitoring		×		•
Virtual worlds	Self-efficacy Peer modeling Task strategies Self-monitoring		•		•
Administrative tools (e.g., calendar)	Time management -Goal setting Self-monitoring		•		•
Online marking tools	Self-monitoring Self-evaluation		•		•
Online Grade book(LMS tools)	Self-evaluation Self-satisfaction Attribution		×		×

Considering the results of Table №2, we can say that not all facilities in VIIU and KFU learning management systems have been used in online courses. For example, in KFU blogs, podcasts, and wiki sites and in VIIU face book, blogs and wiki sites have not been used. As we see in Table № 1, a tool such as wiki can provide the possibility of self-evaluation, peer modelling and seeking help by sharing knowledge, discussion and argument among the students.

Podcasts can prepare the possibility of modelling and self-efficiency for the students by presenting the audio and video lectures. In addition, blogs as tools for communicating questions, answers, and receiving feedback can facilitate self-regulation processes such as self-monitoring, self-reflection and self-efficiency for the students. Social networks such as online learning tools can improve self-monitoring and task strategies by networking among the students and other institutions and making relationship with other experts in the intended field and sharing and delivering the files. Thus, lack of use of the above learning tools causes the students not to be well and sufficiently exposed to the process of self-regulation in online environment.

RESULTS

The results of the interview showed that most of the professors were not familiar with the role of the learning tools in forming self-regulatory behaviours and they need training courses in this field. After the interview with the attendants of online courses in KFU, it was clear that one of the major results of the incomplete use of the facilities was the insufficient budget.

In the case of VIIU, based on the professors' opinions the most important problem and the root of the other shortcomings and defects are the low speed of the internet and the problem of disconnecting. Although, one of the online courses professors in VIIU spoke about the positive effects of the e-learning tools in students' self-regulation states:

"I held on line practice class weekly and gave the recorded file to the students, too. In the mentioned half term, I wondered a lot about the students' performance both in their test grades and their behaviors and I found them very intelligent and good tempered."

As a whole, what the professors in both universities stated was *having insufficient skills in using different types of e-learning technologies*. It shows that in spite of this situation, there is some training for professors regarding content development and establishing the courses; these courses should be developed and should include progressive subjects such as how to use learning technologies to promote students' self-regulation in online environment.

DISCUSSIONS

The study of learning technologies used in online courses of KFU and VIIU shows shortcomings and the problems of these courses in the development of the students' self-regulation. In order to attain the maximum effectiveness in online courses, it is necessary to prepare rich content using learning technologies. It is necessary for the professor, as the key factor in management and monitoring of the self-regulatory processes of the students, to be well familiar with the online environment, learning technologies, their capabilities and the methods of using them. In other words, one of the effective factors on self-regulation of the students is the role of professor, his/her skill level and his/her qualification in this field.

Therefore the aimless and unconsciousness use of learning technologies cannot help professors and students reach an important goal such as self-regulation.

In fact, the professor should not limit his/herself to the mere use of new technologies, but he/she should make his/herself obligated to use them intentionally, carefully and without any hurry in order to help students in their professional development.

To do this, it is necessary to familiarize professors with the possibilities of learning technologies to support the students' self-regulation and practically teach them how to use learning technologies to enhance the students' self-regulation in online environment.

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