**The use of e-learning Course Management Systems to support learning strategies and to improve self-regulated learning**

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Today’s in higher education the course management system for web based is increases. A CMS is a software program or combined platform that contains a series of web-based tools to support a number of activities and course management procedures (Severson, 2004). It is believed that eLearning can increase the metacognitive skills of students, as well as educators. In order to improve the learner’s subject and learning strategy, we should design the eLearning environment within CMSs in term of learning style, culture and self-regulation skills. Self-regulative learners are learners who can demonstrate 'personal initiative, perseverance and adaptive skill in pursuing learning' (Zimmerman, 2002). We argue that a controlling CMS and functionalities that can provide extensive support to learners in becoming self-regulated.

Since the late 1990s , the utilization of CMSs for web-based in higher education was steadily increased. E-learning delivered the electronic learning material to the distant learners. A recent study in the US displays that among the largest colleges and universities (institutions with a total enrolment of 15,000 or more), more than 96 percent have online course offerings (Allen & Seaman, 2006). The same study shows that during fall 2005, there were 3.2 million students enrolled in at least one course in the US. As a result of this increasing of CMSs in higher education, the instructors' first fears that they would ultimately be replaced by the CMSs were soon.

The utilization of CMSs in education were differ and evolving. Many classroom teachers use the CMSs to simply distribute course materials by electronic means in order to offer students more flexibility in accessing these materials. A class teacher can also use the blended approaches by using the CMS as tool to deliver additional course material to the students. This teaching method is usually called 'blended learning' and the courses are called 'hybrid courses' (Garnham & Kaleta, 2002). There are many universities that offer distance education; the CMS is backbone for the course delivery.

CMSs can provide online access to course materials, assignments, assessment , discussions, communication and collaboration, registration, records, transcripts, schedules, reports, etc. (Tortora, Sebillo, Vitiello & D'Ambrosio, 2002). Research has also shown that the web-based communication tools that are inserted in CMSs, like discussion forums, chat and e-mail, are underutilized by students and teachers (Nelson, 2003). The commonly used communication tool is e-mail, but it is normally used by personal communication among others. Strong metacognitive skills support learners to plan, monitor, and evaluate their learning process.

The underutilization of CMSs, by both instructors and learners, results in a lack of robustness to offer extensive support for learning (Mitrovic, Suraweera, Martin & Weerasinghe, 2004; Swenson and Curtis, 2004; Dabbagh, 2004). According to Boekaerts (1997), instruction of learning strategies must go hand in hand with instructional support in order to encourage the learners and help them to control their learning. There must be different kinds of design are needed for instructional support, adapted to the different characteristics and needs of the student. This suggests that the structural design of a CMS should integrate instructional support that permits both inexperienced learners and more experienced in learning online to improve their self-regulation skills. As suggested by Boekaerts (1997), the e-learning environment in a CMS should provide chances for students to learn how to: “select, combine, coordinate their cognitive strategies in connection to the new knowledge, and prompted to reflect on their strategy use, extending their metacognitive knowledge with strategy and capacity beliefs”.

Learning objects are the basis of the instructional design for web-based learning. “A Learning Object is an independent and self-standing unit of learning content that is predisposed to reuse in multiple instructional context” (Polsani, 2003). The idea of reusing assets for education is as old as education itself. Books and other physical learning resources have always been reusable. Now worldwide web introduces a new method of reuse, qualitatively as well as quantitatively changed from any previous form. Learning assets can now be reused repeatedly with the aim of conforming more complex resources, which in turn are more cost-effective to produce (Downes, 2001). If learning resources were designed in the form of reusable education objects, CMSs could even carry new motivating possibilities such as the interaction between different CMSs or the exchange of education objects created and designed by different organizations.

The instructor observers the student and provides assistance when essential during the learning activities. The instructor will need technical support and training in order to increase knowledge and skills on how a CMS can be utilized using its full potential for education and assessment results. It is essential that instructors are skilled and supported to obtain the 'new' instructional role and the implementation advantages they can suggestion to educational technology (Severson, 2004).

E-learning environments within a CMS should address learners' diversity in terms of metacognitive skills, learning styles, prior knowledge, and cultures. In order to use the CMS as learning tool in the higher education institution, institution need to develop its own service team. This support team should be composed of graphic designers, programmers, multimedia specialists, instructional designers, and information system specialists who are answerable for the faculty development, the maintenance and service of the CMS hardware, software, and network. Tutors should be trained through seminars, tutorials, conferences, etc. on how to use CMSs to design effective e-learning environments and how to make the best use of the features of the CMS.