THE NET GENERATION NEED TO BE SELF REGULATED THAN EVER:

Using Web 2.0 Technologies For Enhancing Self-Regulated Learning

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Abstract

We are trying to educate the Net Generation. Do we educators aware of the characteristics of this new generation? They expect to be able to remix and share material often by way of social networking sites that provide tools and access to other users. Activities in these spaces are becoming increasingly important to help them develop of their own identities, but the effect of these developments on learning is still uncertain. It is hard to ignore the power of these effects while young people across the globe have embraced information technology. Educators have to find a way to intersect the school curriculum and the preferences and perceptions of the technology-age students' who are needed to be motivated in technology based active learning environments which are social, participatory and which are supported by rich media. What about the pedagogical needs of those learning environments? It is important to consider that using developing technologies in education brings out greater personalisation of learning. Students need to be self regulated to be succesful in student centred, indepented learning environments. Social media can be used as an opportunity for this pedagogical change in education (Albion, 2008; Maddux, Liu & Johnson, 2008; McLoughlin & Lee, 2010).

New social media applications are transforming the Internet from a read-only (Web 1.0) environment to a read-write ecology that many are calling Web 2.0 technologies that are becoming popular in teaching and learning environments. Among them several online collaborative writing tools, like wikis and blogs, have been integrated into educational settings (Heafner & Friedman, 2008; Rosen & Nelson, 2008). This article reviews current uses of Web 2.0 technologies as self-regulatory tools for enhancing learning.

Keywords: *Web 2.0 technologies, wikis, blogs, self-regulated learning.*

NET-JENERASYONU ÖZDÜZENLEMELİ ÖĞRENENLER OLMAK ZORUNDA:

Web 2.0 Teknolojilerinin Özdüzenlemeli Öğrenme Becerilerinin Geliştirilmesinde Kullanılması

Özet

Bilgi tekolojileri ile birlikte yetişen bu nedenlede (inter)net-jenerasyonu olarak adlandırılan bir kuşağı eğitmeye çalışıyoruz. Peki biz eğitimciler bu kuşağın özelliklerinin yeterince farkıda mıyız? Onlar bilgi teknolojilerini günlük hayatlarının bir parçası olarak kolaylıkla kullanıyorlar. Sosyal ağlarda bilgi ve çeşitli materyaller paylaşmak ve diğer kullanıcılarının paylaşımlarına erişebilir olmak onlar için neredeyse bir ihtiyaç. Söz konusu sanal ortamlardaki varlıkları ve aktiviteleri bu gençlerin benlik algıları ve kişisel gelişimlerinde gün

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geçtikçe daha da etkili olmakta ancak bu gelişmelerin öğrenmeleri üzerindeki etkileri hala belirsiz. Bilgi teknolojileri yaşamımızı böylesine kuşatmışken bu etkileri görmezden gelmek oldukça güç. Bu nedenle eğitimcilerin; mevcut eğitim programları ile teknoloji çağı öğrencilerinin tercihleri ve ihtiyaçlarını, öğrencilerin aktif ve katılımcı olabilecekleri tekonoloji temelli sosyal öğrenme ortamlar geliştirerek kesiştirmeleri gerekmektedir. Bu tür öğrenme ortamlarının sahip olması gereken pedagojik özelliklerin neler olduğu tartışılması gereken konuların başında gelmektedir. Gelişmekte olan teknolojilerin eğitimde kullanılması öğrenmenin gün geçtikçe bireyselleşmesine neden olurken öğrencilerin bu ortamlarda başarılı olabilmeleri için özdüzenleme becerilerinin gelişmiş olması önemlidir. Sosyal medya, öğrenen merkezli bağımsız öğrenme ortamları oluşturulmasında bir fırsat olarak kullanılabilir (Albion, 2008; Maddux, Liu & Johnson, 2008; McLoughlin & Lee, 2010).

Bu çalışmanın amacı, yeni sosyal medya uygulamalarından Web2.0 teknolojilerinin özdüzenlemeyi destekleyici araçlar olarak kullanılabileceğini ortaya koyan güncel çalışmaların incelenmesidir.

Anahtar Kelimeler: *Web 2.0 teknolojileri, wikiler, bloglar, özdüzenlemeli öğreme.*

Self-Regulated Learning: A Social-Cognitive Framework for Creating Desired Learning Environments

According to Bandura (1997) the information technologies are transforming the educational enterprise itself. The process of learning is individualized and enables student to exercise considerable control over their learning. Computerized systems provide a handy vehicle for transactive construction of knowledge. Educational systems, therefore, must teach students how to educate themselves throughout their lifetime. It means that students must be self-regulated to construct their own learning environment to meet their own needs.

Winnie and Nesbit (2009) syntesis that a very large proportion of students will fail to learn how to learn without support. Using software systems to support forms of metacognition that underline self-regulated learning is a way to make students able to cope with the new technology based individualized learning environments.

Metacognition is defined as the awareness of and knowledge about one's own thinking. There are two aspects of metacognition; knowledge (person, strategy, task) of the cognition and the regulation (planning, monitoring, evaluating skills) of cognition (Brown, 1987; Pintrich & De Groot, 1990; Pintrich, 2002; Schraw, 2002; Schraw & Moshman, 1995). Winnie (1995) and Zimmerman (1995) argue that self-regulation involves more than metacognitive knowledge and skill, it involves an underlying sense of self efficacy and personal agency and the motivational and behavioral processes to put this beliefs into effect. Pintrich and De Groot (1990) are also mention that knowledge of cognitive and metacognitive strategies are not enough to promote achievement without motivation which is necessary to regulate their cognition and effort to use these strategies.

Zimmerman's (2000) model for self-regulated learning which is structured from a social-cognitive perspective combines self-regulatory processes and accompanying

beliefs fall into three cyclical phases: forethought, performance or voliational control, and self-reflection.

Open-ended learning environments such as hypermedia, hypertext, collaborative learning environments, and web-based learning environments typically involves the use of numerous self-regulatory processes such as planning, knowledge activation, regulation, and reflection (Azevedo & Hadwin, 2005; Azevedo, Moss, Johnson & Chauncey, 2010; Winnie & Nesbit, 2009). There are challenges in desinging web-based and other open-ended learning environments because of the complex stracture and the interrelationships of the self-regulatory processes. One of those challenges is self-regulatory processes are not hierarchically or linearly structured such that earlier phases must occur before later phases. Self-regulated learning with hypermedia environments involves a complex cycle of temporally unfolding cognitive and metacognitive processes that impacts student learning. Dynamic adaptive learning environments should tailor scaffolding to knowledge and the components of self-regulated learning. Adaptive hypermedia environments should diagnose, guide and evaluate planning, monitoring, and strategy use. Due to individual differences and developmental constraints, learners do not constantly regulate their cognition, behavior, and adoption of goals in all contexts. The personal agency, which is a belief in one's self-efficacy to perform a task, underlies the motivation and effort which is necessary to regulate accurately the learning process. Self-efficacy expectations refer to personal beliefs about one's capabilities or competence to perform a particular behavior. Therefore, considering the reinforcement of learner's self-efficacy beliefs are another challenge in desinging web-based, collaberative active learning environments (Azevedo & Hadwin, 2005; Azevedo & Jacobson, 2008; Moos & Azevedo, 2009; Bandura, 1997; Zimmerman & Campillo, 2003; Zimmerman & Schunk, 2004). Consequently, using Zimmerman's self-regulated learning model consisting three cyclical phases could be useful while creating web-based learning environments to overcome the difficulties stated above.

Web 2.0 Tools: As an Opportunity for Enhancing Self-Regulated Learning

Rosen and Nelson (2008) argues that Web 2.0 tools to illuminate three key characteristics of the Web 2.0 platform: (a) user-initiated publishing of information without significant technical knowledge, (b) social networking, and (c) online communities formed around specific content.

Bandura (1997) argues that if people form interactive networks, they can learn from one another through collaboration. This educational technology can greatly extend the learning opportunities of children in school systems with limited resources. Multimedia educational resources available on the network enable teachers to tailor learning environments in their classrooms to suit particular purposes.

The socio-constructivist learning theory is essentially a collaborative learning theory that learning is seen as a process of peer interaction that is mediated and structured by the teacher. Therefore, development of Web 2.0 tools may mark an important turning point in information technology in education. Education at all levels will become less

textbook driven, less linear, less hierarchical, more interdisciplinary, and more collaborative in nature. Some educators have begun to apply these tools in classrooms but, as their use in society expands, there will be expectations for their wider application in schools. Wikis and blogs are the most common used Web 2.0 tools in educational settings. Blogs are more personal like diaries and quite structured whereas wikis are like on-line flexible colloberative databases that anyone can edit. Web 2.0 represents a more participative and potentially paradigm-changing environment for building and sharing knowledge. They have the potential to enhance student-centered learning by facilitating collaboration and communication at little cost (Albion, 2008; Brodahl, Hadjerrouit & Hansen, 2011; Cheon, Song, Jones & Nam, 2010; Maddux, Liu & Johnson, 2008; Thomas & Li, 2008).

Heafner and Friedman (2008), synthesis that wikis have the potential to allow students to become active contributors to the Internet and, data suggest that the use of wikis facilitated student oriented, constructivist learning, which resulted in increased student self-efficacy. The long-term cognitive value of the wikis positively impacted student understanding by helping students to link content, both literally and figuratively, and develop a deeper understanding of content through visualization of the chronology of events as well as cause and effect relationships.

According to McLoughlin and Lee (2010), the socially based tools and technologies of the Web 2.0 can shift control to the learner, through promoting learner agency, autonomy and engagement in social networks that straddle multiple real and virtual learning spaces independent of physical, geographic, institutional and organisational boundaries when they are used appropriately.

Cifuentes, Xochihua & Edwards (2011) observed that in their study even though students had experienced cognitive overload in the course under study, their abilities to work through and manage the chaos had indicated that through course design and application of self-regulation strategies students could learn in the context of multiple Web 2.0 tools. Students would benefit from more training including self-regulatory strategies in how to use Web 2.0 tools to support their own learning.

Discussion and Future Directions

Research has highlighted how teaching and learning can benefit from the inclusion of Web 2.0 applications in education but there are opportunities and challenges in using Web 2.0 technologies in educational settings. Web 2.0 tools provides collaberative, interactive and dynamic learning environments that students can learn from each other and supports self-efficacy by providing peer interaction and evaluating each other's work. Cognitive flexibility and representation of knowledge in many forms can lead to deeper understanding if those learning environments structured appopirately. Students who are not independent learners may experience chaos instead of understanding because learning from web requires having self-regulatory learning strategies. So that planning web based interactive learning environments need to support metacognitive, motivational and behavioral aspects of self-regulated learning. Web 2.0 tools make easier scaffolding self-regulation and directing the learning process of students easier.

Desinging web based learning environment scaffolding self-regulated learning accurately is one challenge and teacher's adoption of Web 2.0 applications as educational tools is another. To prepare teachers for using Web 2.0 in their classroom its application in teacher education programs for both preservice and inservice teachers is necessary. Improving teacher self-regulation is also a necessity to educate independent learners. More research and interventions are needed to optimize the self-regulated learning processes and evaluate self-regulatory skills in web based learning environments .

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