Social Network-based Self-Regulated Learning for Engineers: Is it possible?

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Lifelong learning gained more importance as the Accreditation Board for Engineering Education and Technology (ABET) criteria require that engineering programs demonstrate that their students attain "*a recognition of the need for, and an ability to engage in lifelong learning*". Universities across the nation are implementing modules, projects, case studies, and online set-ups to meet the lifelong learning criterion. The concept of lifelong learning differs than the traditional in-class learning in being self-regulated and voluntary. These two characteristics of lifelong learning make it hard to teach the concept in a traditional classroom environment. The implementation of technological tools into traditional set-ups provide instructors the ability to share the course material online, send e-mail reminders to their students and notify students about their academic progress; however, the set-up still requires the presence of students and faculty. Even with these technology-enhanced classroom environments which involves an instructor, an online course environment, a teaching assistant and interaction with other students, students may not be able to gain the necessary skills to become lifelong learners.

In an effort to provide students with the necessary skills and experience, it is important to educate them with the set-up that promotes not only traditional learning but also offers meaningful experience in self-regulated learning. With the extensive availability of online resources, and students' interest in social-networking, a social network-based learning approach will be discussed in this study. With the tools social-network set-ups provide, such as a wall to share links, events, news, etc…it is now easier for engineering students to keep in touch with each other even after graduation. As students transform to professionals, they also are likely to share materials that are relevant to their professions and majors through their social networks. And as one student shares an information, another student might benefit from it as they read/listen/watch the material, resulting in self-regulated learning, which would last lifelong. Following this idea, in Fall 2011 semester, a social network-based self-directed learning process is implemented in a senior level undergraduate engineering course in the Plastics Engineering Department at University of Massachusetts. Facebook is selected as the social network platform to implement a self-directed learning process, where the relevant material and links are shared with the students.

This study will review the implementation process of incorporating social network-based learning, while highlighting the encountered challenges and will provide a discussion on whether social networks can be used in the future for educational purposes.

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