Modeling educational usage of Facebook

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ABSTRACT

The purpose of this study is to design a structural model explaining how users could utilize Facebook for educational purposes. In order to shed light on the educational usage of Facebook, in constructing the model, the relationship between users' Facebook adoption processes and their educational use of Facebook were included indirectly while the relationship between users' purposes in using Facebook and the educational usage of Facebook was included directly. In this study, data is collected from Facebook users with an online survey developed by the researchers. The study group consists of 606 Facebook users whose answers were examined by using a structural equation model. The analyses of the 11 observed and 3 latent variables provided by the model showed that 50% of educational usage of Facebook could be explained by user purposes along with the adoption processes of Facebook. It was also found that Facebook adoption processes could explain 86% of all user purposes. Finally, while Facebook adoption processes explained 45% of its educational usage, it could explain 50% of variance in educational usage of Facebook when the user purposes were added into the analyses.

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1. Introduction

Rapid development of information and communication technologies has brought changes in various pedagogical and technological applications and processes. Currently, social networks are being adopted rapidly by millions of users most of whom are students with a great number of purposes in mind (Lenhart & Madden, 2007; Selwyn, 2007a). Studies showed that social network tools support educational activities by making interaction, collaboration, active participation, information and resource sharing, and critical thinking possible (Ajjan & Hartshorne, 2008; Mason, 2006; Selwyn, 2007a). Hence, using social networks in educational and instructional contexts can be considered as a potentially powerful idea simply because students spend a lot of time on these online networking activities. While the current generation of Learning Management Systems (LMS) allows each student to have their personally chosen course(s) in which they are enrolled, many of these LMS lack of social connectivity tools and personal profile spaces that can be used by the students involved. In contrast, students today demand more autonomy, connectivity, interaction and socio-experiential learning opportunities in their learning contexts (McLoughlin & Lee, 2007). Along the same lines, integration of new technologies in existing learning contexts has brought significant changes in overall learning processes and their outcomes. Because students complain about lacking opportunities for authentic communication due to non-personalized course content even when alternative delivery methods are employed, providing informal learning contexts by integrating emerging social networks into existing learning practices becomes significantly important to attain more robust learning and teaching opportunities (Bartlett-Bragg, 2006).

Research on social networking in education is still limited although available research on social networks has focused on identity, network structures, privacy and technological issues and so the need for research on social networks in educational contexts is now recognized (Lockyer & Patterson, 2008). Hence, explaining the reasons for social networks' rapid diffusion, adoption and acceptance by individuals and users' purposes is fundamentally important to determine the factors influencing users' adoption of social networks in educational context.

Facebook, being one of the most popular and commonly used social networks is chosen in this study as the social network site to determine the factors influencing its users' adoption processes in an educational context. While determining the educational usage of Facebook, a structural equation model is constructed which examines the relationships between factors affecting this adoption process in relation to the user's existing purposes.

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1.1. Social networking in educational context

Definitions of social networks in research literature shows that although some studies focused on communication and collaboration, some others focused on structural characteristics of these tools such as the profiles, uploading photographs, comments, writing on walls, and friends' lists. For example, Bartlett-Bragg (2006) defined social networks as a "range of applications that augments group interactions and shared spaces for collaboration, social connections, and aggregates information exchanges in a web-based environment." Similarly, Boyd and Ellison (2007) defined social networks as web-based services allowing individuals to 1) construct a public or semi-public profile within a bounded system, 2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.

Ease of use, allowing for rapid updating, analyzing and sharing continuously increasing information stemming from our daily life, establishing spontaneous relationships, supporting informal learning practices by means of interaction and communication, and facilitating delivery of education are explained as the reasons why social networks such as Facebook, MySpace, Friendster, Youtube, and Flickr are adopted and accepted rapidly although they had originally emerged for sharing photos, personal information, videos, profiles and content (Ajjan & Hartshorne, 2008; Mejias, 2005).

There are hundreds of social networks with various technological applications serving to a wide range of interests most of which support the maintenance of pre-existing social relations, however, many others help strangers to connect to others' profiles with shared interests, needs, political views etc. (Boyd & Ellison, 2007). Social networks include various people both as authors as well as readers, nonetheless personalized content, information sharing and collaboration are the socializing dimensions of these tools (Bartlett-Bragg, 2006). As Lenhart and Madden (2007) postulate, 55% of teenagers use social networks in their daily lives most of whose purposes are limited to communicating with friends, making new friends and sharing personal information and materials. On the other hand, beside this socializing entity, social networks are suggested to help users re-situate learning in an open-ended social context by providing opportunities for moving beyond the mere access to the content (*learning about*) to the social application of knowledge in a constant process of re-orientation (*learning as becoming*) (Mejias, 2005).

Social networks, consisting mostly young people as users, are highly informal environments which play an important role in continuing the interaction outside the classroom. While it is expected that social networks will increase interaction related to formal educational purposes, young people also use these applications to continue their informal education such as by following and commenting on academic and social issues, dilemmas and disappointments faced while pursuing university education (Selwyn, 2007a). Thus, using social networks in an academic context is attractive for these young users, will be given a chance to acquire new knowledge through subliminal, effective and smooth learning processes while taking part in enjoyable interactive situations mediated through interesting and motivating tools and content (Gillet, El Helou, Yu, & Salzmann, 2008).

1.2. Facebook

It is known that, social networks started with Six.Degrees.com in 1997 followed by other social networks sites such as Livejournal, Friendster, LinkedIn, MySpace, Last.fm, Flickr, YouTube, and finally Facebook launched, attracting great numbers of registered users in a short span of time (Boyd & Ellison, 2007). In this study, the Facebook is handled among other social networks. Facebook is defined as "a social utility that helps people share information and communicate more efficiently with their friends, family and coworkers" (facebook.com). Despite the fact that Facebook was launched in 2004 as a Harvard-only Social Network site, it expanded to include other high school students, professionals inside corporate networks, and eventually everyone who have access to the online world (Cassidy, 2006).

Facebook provides a personalized profile to the user while allowing for communication, information sharing, creating a friends list, photo albums, forming or applying to social interest groups, and different kinds of online games. In short, as members of Facebook, people can share their photos, send messages, chat, tag themselves or others on photos, write on friends' walls, join groups, create new groups, share ideas in group discussions, add kinds of applications, and play games in Facebook. Facebook has been accessed by millions of users in a short time while becoming a part of users' daily lives. Similarly, it has attracted researchers' interest in different subjects such as users' patterns of offline and online activities, online identities, technological capacities of social connections and cultural patterns (Ellison, Steinfield, & Lampe, 2007; Selwyn, 2007a).

Facebook is being considered as an educational tool because of its beneficial qualities such as enabling peer feedback, goodness of fit with social context, and interaction tools (Mason, 2006). Because most Facebook users are between 18 and 25 years old, they mostly are university students (Bumgarner, 2007). Hence, it can easily be deduced that it can be a useful educational tool especially by providing active participation and collaboration.

The variables influencing adoption of Facebook are located and users' reasons for using Facebook are interrogated in order to explain the educational usage of Facebook by constructing a model as the end product of this study.

2. Research model and hypothesis

The model constructed to shed light on the educational usage of Facebook, consists of 3 latent variables and 11 observed variables. Adoption as a latent variable was explained by 5 observed variables; usefulness, ease of use, social influence, facilitating conditions and community identity. The items developed for the Facebook adoption scale were prepared having completed a thorough literature review on existing adoption, diffusion, acceptance and usage models and theories. While developing the scale items about Facebook users' purposes and views on educational usage of Facebook, the relevant literature on social networks was reviewed and Facebook's potential features were examined. Hence, related or similar themes were classified under some tentative categories (Fig. 1).

2.1. Adoption of Facebook

There are different constructs, theories, and models prepared to explain the acceptance, adoption, diffusion, and usage of technological innovations. While some of these have been investigated at an individual level with a focus on individuals' internal decision processes