Facebook for e-Moderation - A Latin-American Experience

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ABSTRACT

Social Network Sites such as Facebook are being now used by many academics for learning purposes, taking into account studies that report that a majority of young students spend more time in socially related online activities when compared to time in classroom. In online education there are mature models for creating and conducting learning experiences, one of them is the 5 stage e-Moderation model. In this study we created an experience of doing e-Moderation of a learning process in Facebook. At the same time a comparison of interactions and learning between Facebook and traditional online discussion forums in a learning management system is performed. The participants of the course setting are university professors from diverse countries in Latin-America. Outlined are findings in organization of learning activities, new social motivation artifacts and intrinsic social behaviors, information exchange difficulties, enhanced and increased interaction, positive knowledge construction, critical thinking and reflection development, therefore leading the study results into creating effective e-Moderation learning activities in Social Network Sites.

Categories and Subject Descriptors

K3.0 [Computers and Education]: General; K.3.1 [Computers and Education]: Computer Uses in Education - *Collaborative Learning.*

General Terms

Design, Management, Human Factors, Experimentation

Keywords

e-Moderation, Constructivism, Scaffolding, CSCL, Social Network Sites, technology-enhanced learning, e-Learning, Facebook on education

1. INTRODUCTION

Social Network Sites (SNS), their evolution and actual leaders such as Facebook, YouTube, Twitter and others are a well-known phenomena ([3],[7]). SNS bring a set of capabilities that are very useful for online learning, but their full potential do not lie only on the application side, although it is very important and actually is what enables a communication channel, but their power is based on how socially impregnated SNS are at this moment in a large set of the population, *"Social scientists have attempted to identify and recognize the use of Facebook by the younger generation to understand how this generation interacts online, communicate and identify itself as a member of an online community."* [5]. For instance, Facebook is seen as a large commons of the society, where people can stay connected for many matters including learning, while at the same time providing a comfortable environment for richer and depth interpersonal connections, and growth [15]. Additionally web 2.0 social technologies such as blogs, wikis and others have proven to enable a truly collaborative learning experience [10].

For online learning there are well developed online conferencing methods such as e-moderation [14]. These methods are traditionally performed within monolithic learning management systems (LMS) using an online discussion forums tool, therefore the inclusion of Social Network Sites such as Facebook, for performing learning processes, becomes more interesting, not only because it has similar functionalities such as online discussion, but due the possibilities to extend the learning experience beyond the LMS traditional boundaries and features. SNS capabilities and interactions are improving learning activities within a highly social environment [16].

Recent studies have also found the adoption of Social Network Sites at all levels of education, as an example with higher education, Roblyer et al. state: *"university students are very open to the possibility of using Facebook and similar technologies to support classroom work"* [11].

In this study, we present an e-moderation process and its' findings while it was performed in Facebook and in traditional LMS discussion forums. The experience is conducted with university professors, being the students for this course, within the context of an online training program to improve professors' main competences in e-Learning. To this end, the remainder of this work is organized as follows: Section 2 presents a review of e-Moderation and introduces findings for its usage on Social Network Sites. The scenario, in which the experience occurs, is described in Section 3, and then an analysis of the experience is presented in Section 4. Finally, Section 5 and 6 end the paper with some conclusions, open questions and future work.

2. E-MODERATION

Online moderation for learning has been studied for more than a decade, for this study we will base the concept of e-moderation with the methodology and five-stage model that Gilly Salmon proposed [14]. The e-moderation shares many conceptual findings from and/or used in CSCL such as the perspective that social interaction is what matter most for cognition [17], while some of the presented stages are meant to be collaborative construction of shared understanding and knowledge [12].

2.1 The e-Moderation model

The underlying assumption on the model can be described as: "*Learning includes an intricate and complex interaction between cognitive, motivational, affective and social processes*" [1]. Other assumption of the model is that: "*Participants learn about the use of computer networking along with learning about the topic*" [18], for this specific experience of Facebook e-moderation, where the results show that is more about setting the proper environment and rules rather that learning about the tool and networking interaction, this has tremendously changed due the nature and familiarity of the students within SNS.

The model also scaffolds individual development; scaffolding is a process that moves from directed instruction to a constructivist learning approach, from short-term to long-term learning necessities, from immediate learning to a more holistic one ([9],[18]). The e-moderation model proposed by Salmon [14] consists in a 5 stage model, where the learner goes stage by stage, achieving learning through a constructivist approach, with specific expected participation and interaction along with a given amount of interactivity through the conferencing system (SNS for this experience). A brief description of the five stages, with some findings within the context of SNS, is presented:

Stage one (ST1): *access and motivation.* Main objective of the stage is to help the student to get familiar with the learning environment, (e.g. to be able to login and use the system). Strong motivation and creativity is needed to overcome any type of technical problems. For SNS such as Facebook, this stage has been proven to be less important and the role of the e-moderator at this stage will transform more in indicating how the environment, which is already familiar for most of the participants, will be used.

Stage two (ST2): *online socialization.* Has been found that in learning technologies for online conferencing without solid socialization, scaffold is inadequate [4], in the case of Facebook environment, the experience is all about socialization. Socialization is important since to people work together, the two motivation factors are self-interest (due extrinsic factors) and common interest (that needs trust and mutual respect). The concept of this stage is to create opportunities for socialization, which are achieved more easily in Facebook (socialization is intrinsic in this environments).

Stage three (ST3): *information exchange.* This stage is about sharing information, exploring and discovering, ensuring that each student has a given role and is participating, in this stage the e-moderator helps managing the volume of information. Facebook presents a feature that brings a new possibility for participation and information exchange applied in the stage, which is the approval "like" functionality, well used by the participants previously due the nature of the social network

Stage four (ST4): *knowledge construction.* Participants begin a more exposed and participative interaction between peers. Conference/communication will unfold and expand, and some participants will engage deeply in the conversations. Learning at this stage is more a creative cognitive process of idea sharing, criticize, expand and reshape through peer discussion [13]. This stage becomes a communal constructivism by building knowledge and understanding through groups, experiences, etc. [14] "*Knowledge construction occurs when participants explore issues, take positions, discuss their positions in an argumentative format and reflect on and reevaluate their positions*" [8]

Stage five (ST5): *development.* "*Metacognition promotes integration and application of learning experiences*" [14] This stage is about critical thinking, reflection and challenging thoughts. A constructivism learning approach recalls for learners to review their own way of building their knowledge and thinking [2]. Reflection is a key concept at this stage, being one of the most productive stages of the whole process.

For all these stages the participation of the e-moderator (being the course teacher) is a key role, the description of the activities that should be performed by the e-Moderator to have a successful learning experience for the students is beyond the scope of this publication.

3. EXPERIENCE DESCRIPTION

The learning activity experience takes place within the environment of an online e-Learning training program for professors named "e-Learning Certification", which last for 6 months and is given at Galileo University, Guatemala [19].

This training program has been given for more than 4 years with over 150 graduated students, most of them being university professors, with the participation of students from different Latin American countries among which can be mentioned: Argentina, Nicaragua, El Salvador, Bolivia, Mexico, Costa Rica, Dominican Republic and Guatemala.

The training program is divided into five learning modules: *LMS Introduction; e-Learning Fundamentals; e-Moderation; e-Activities; Instructional Design.* For this training program .LRN learning management system is used, following the effective e-Learning experiences described in [6].

For the training module "e-Moderation", a set of learning activities were designed, taking into account the premises of e-Moderation described in section 2. One of the objectives was to show a comparison of learning activities between available discussion forums within the LMS and activities within SNS, specifically in Facebook.

For a total group of 30 participants, six groups of 5 randomly selected members each were formed; eight learning activities are part of the experience with a specific objective to teach the key competences in the e-Moderation 5-stages model. Learning Activities are defined to fill the most important model stages to evaluate the learning outcomes in the two defined environments (discussion forums, DF, and Facebook, FB).

The first two stages of the model (*access and motivation, online socialization*), were performed in activities within modules: *LMS Introduction and e-Learning Fundamentals.*

In the first phase of one of the learning activities, the participants should be organized as a group, electing a coordinator, secretary, and instructional designers of the activity. For the second phase, each group had a specific time to run a learning activity, acting as e-Moderators: motivating and evaluating the participants (classmates) using both environments (DB and FB).

4. ANALYSIS OF THE EXPERIENCE

The learning experience was performed with a group of 30 university professors with and 39.8 average age (n=30, σ=9.79), 44% had 6-10 years of university-level teaching experience. Gender is equally distributed (50% Female and 50% Male) and for this experience, country participation is distributed in 50% from Guatemala and 50% from other Latin America countries - Mexico, Bolivia-.

Deployment of the activities: for the activities performed on Facebook, the "groups" functionality in Facebook was used, for each activity a new group was created, where all the participants will be able to post/reply and do all the necessary interactions, this way it allows the participants to have private conversations and collaboration while not disturbing their personal Facebook account and activity. Additionally a short guide was given to the participants about how the groups will be used and how to get into them (ST1). From the LMS (main course environment) there was a link to the correspondent group/activity on Facebook.

This experience began with 30 participants, 29% of the participants didn't had a Facebook account, 15% of them created a new Facebook account expressing reluctance to sharing their personal account. Some basic interaction and socialization activities were performed. Stages (ST1, ST2) for e-moderation went fast and were easier compared to the ones on discussion forums, although is important to mention that the same stages were simultaneously performed in the discussion forums.

Eight different e-moderation learning activities were performed, at the end of the activity an evaluation instrument was presented to the participants, and with the analysis and observation of the activities, the following next results were found:

Analyzing the first stage (ST1) "*Access and Motivation*" participants were asked about the trust generated within the social network, an evaluation of (4.38/5) shows that participants feel comfortable within the social network and comments mention it helps to create trust between participants in order to start the learning activity.

A message frequency comparison of participation for activities in both environments (Discussion Forums and Facebook) (see Table 1) shows that the frequency of participation is increased using social networks.

A positive 5-likert scale result of (4.62/5) on evaluation of social networks from participants in the stage (ST2) "*Online socialization*" shows the impact in learning activities, helping with e-Moderation tasks and also shows that the Social Network Site have tools that help e-Moderation, creating a comfortable environment for socialization and further participation/ collaboration.

Table 1: Frequency between messages comparison

Frequency between messages (hours)	Mean %	Standard Deviation
Discussion Forums	6.53	1.03
Facebook	3.8	1.17

For stage 3 (ST3), *information exchange,* The effectiveness evaluation of the usage of Facebook to exchange information presents a positive score *4.23/5,* 31% of participants think that Facebook is better than discussion forums, and interestingly 62% believes it has the same capabilities, showing that the medium is not the most important element, but the learning experience can be improved through additional support tools and in relation to the context of the environment, in this case being a social environment. Additionally 77% think that multimedia in the social network enhances this stage. Participant's perceptions (3.38/5) show that the learning activity in Facebook could be affected by distracting elements and mention that is possible to have problems to focus on relevant information and with information overload. Participants finds very easy to follow the information exchange (ST3), although 15% finds it difficult sometimes to follow due the behavior of conversations on Facebook.

For the stage "*Knowledge construction*" (ST4), 77% believes that the social network works for enhancing the learning process, by sharing and scaffolding knowledge.

The usage of the approval: "I like" functionality within Facebook was evaluated, showing that the 92% of the participants use this functionality; the (2.69/5 in a 5 likert-scale) thinks that this functionality means meaningful participation either by the e-moderator or by peers, with a clear preference of comment participations rather than just a "like" approval. In contrast to traditional peer-evaluation of contributions of discussion forums, where is not usually possible to see what are the specific rates given by participants, while Facebook behavior creates a social impact into the individual in doing the "I like" to a contribution, because it simple show to all the participants in short whether *I like* the other peer contribution, enhancing motivation and general participation.

For "*Development*" stage (ST5), 69% of participants believe it's an ideal environment for critical thinking and reflection of knowledge just acquired.

As a participation summary for the six groups, a part of the experience is presented (see Table 2). Participation comparison shows how the number of messages of e-Moderation learning activities is increased in the social network (x=79.5, σ=24.66) compared to the activities performed on LMS traditional discussion forums.

Table 2: Summary of participation by activity

Participation Comparison	Mean %	Standard Deviation
Discussion Forums	44.5	4.95
Facebook	79.5	24.66

From the experience, groups found different approaches to deal with the amount of information and identified confusion with an increased number of comments. Some organized themselves to use a single post, and required all participants to reply to that initial post using answers as comments and "likes", to mimic thread functionality in traditional discussion forums. The tutor, that acts as an e-Moderator, of the experience also expressed that working with social networks sites provided a synchronous interaction, through Facebook native chat application, with a rich set of additional tools to enhance the guiding activity. The e-Moderator also states that the trained professors have now a different perspective compared to the expressed at the beginning of the module which was rather uninterested in social network sites and afraid to break paradigms of learning in new highly-social environments such as Facebook. At the end of the activity, reluctant participants gained a great confidence to run this kind of activities in their own courses.

5. CONCLUSIONS

E-moderation is proven to be successful in social network sites, specifically in Facebook, although larger experimentation is necessary to be able to determine changes of the methodology to follow due the nature of the new environment. Effective information exchange is possible, but organization hurdles still affect the process since Facebook do not provide a fully configurable communication environment to organize the participations, but still communication shows to be increased and enhanced. Knowledge construction, critical thinking and reflection were achieved successfully in Facebook.

There are changes in stage one moving from technical support to guidance and environment setup in the social network, although the technical support is not fully eliminated, is quite different as exposed. Socialization is a major component in the environment, therefore stage 2 is intrinsically achieved, further research need to give light on how to balance possible over-socialization with a learning process. Interaction and communication shows to be enhanced, or at least as good as in discussion forums, but with the important ingredient of socio-emotional impact that social network environment and its tools might carry during the interactions.

6. FUTURE WORK

A more specialized e-moderation framework based on current research has to be created in order to be able to establish a better understanding of the possibilities and challenges that are going to be faced in doing e-moderation on Facebook or other social networks. At the same time, providing an updated set of e-Activities that are appropriate for conducting learning on social networks is still something to be developed.

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