The Mutual Shaping of Social Media, Learning Experiences, and Literacies: The Methods Revisited

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Abstract

This paper is a follow up to the paper *Studying the Influence (or Mutual Shaping) of Social Networks in a Learning Experience: Methods for a Pilot Study*, which was presented in QQML 2011. It summarizes some of the developments that have taken place within this doctoral research after its pilot study, specifically, the methodological refinements done in order to conduct the final study. The research aims are to determine significant issues, challenges and opportunities that emerge when social media are integrated into learning environments in higher education. Furthermore, learning, literacies, and social media are conceived as elements that mutually shape one another during the study. The method used in this research is participatory action research. With this methodological approach, a series of learning interventions, activities, and assignments are labeled as 'Doing Online Relearning through Information Skills' (DORIS) was planned. These were comprised of three meetings and different assignments and online activities between them. The participants of the final study are sought; they have to be a group of a LIS course, divided in four teams. The instruments considered for the collection of data are: a diagnostic questionnaire, a blog, social learners' reports, a second questionnaire and semi-structured interviews. The method for analyzing data is going to be content analysis, so a framework of preliminary categories is presented. Moreover, the three dimensions of learning (cognitive, social, and emotional) and the theory of affinity spaces are powerful analytical lenses to for analyzing and discussing the data gathered in this study. The framework of DORIS can be useful for researchers, academics and librarians to develop learning interventions for learning and researching about social media. Furthermore, it can be adapted for teaching information literacy programs or other topics.

Keywords: social media, higher education, teaching, learning, participatory action research, literacies, information literacy, digital literacy, new literacies.

1. Introduction

This paper is a follow up to the previous paper titled *Studying the Influence (or Mutual Shaping) of Social Networks in a Learning Experience: Methods for a Pilot*

Study, which was presented in the 3rd International Conference on Qualitative and Quantitative Methods in Libraries (QQML 2011). This previous paper summarized the methods and preliminary findings from the pilot study conducted to test the methodology put into place to use social media (SM) for learning purposes. The present paper summarizes the methods utilized in the final study that, as the pilot study, was conducted as part of a PhD research in the Institute of Information Studies of Tallinn University.

The research aims of this study were to determine significant issues, challenges and opportunities that emerge when social media are integrated into learning environments in higher education. Learning, literacies, and social media are conceived as elements that mutually shape one another during the study.

In order to fulfill the aims and answer to the research questions of this study, the method chosen was Participatory Action Research (PAR), and so the research methodology was based on a series of learning interventions to be experienced by the participants, who are students of a Library and Information Science (LIS) master program. Following a Freirean tradition within PAR, the students who are participants in the research are referred to as the social learners (see 2 and 2.1). At the moment of writing this article, the refined methodology, which is summarized here, is finished and ready to be applied for the final study.

The learning interventions were intended at the same time to reinforce some of the courses the participants were taking and also to gather data for the present study. These learning interventions developed for this study are comprised of physical meetings and different assignments between them. The physical meetings involve participatory knowledge construction between the researcher and the participants, dealing with the subject matter of the use of SM for organizational and educational purposes. The research design was structured taking into account three core information skills: access, use, and evaluation of information (Lau, 2006). This allows for the analysis of social learners' learning processes in relation to this simple but comprehensive differentiation of information skills. The assignments use real problems for the students to solve by accessing, using and evaluating SM for such purposes, thus providing a basis to analyze the varying degree to which the social learners possess information literacy (IL) and digital literacy (DL).

1.1 Brief background theories

The activities and learning interventions planned for the social learners follow the learning theory of constructivist and social constructivist learning. Some of the bases of this research follow Vygotskian ideas of learning, as his theories stress the fundamental role of social interaction in the development of cognition (Vygotsky, 1978). Moreover, social interactions allow for learning scenarios that lead to practice.

The social dimension of learning is important within this study. However, other dimensions were contemplated, as according to Illeris (2003), learning has three different dimensions: cognitive, emotional and social. The cognitive dimension "may be described as knowledge or skills and which builds up the understanding and the ability of the learner"; the emotional dimension, which encompasses "mental energy, feelings and motivations. Its ultimate function is to secure the mental balance of the learner and thereby it simultaneously develops a personal sensibility"; and the social dimension is the " external interaction such as participation, communication and co-operation. It serves the personal integration in communities and society and thereby also builds up the sociality of the learner. " (p. 399). Probably this is a very simple but comprehensive approach to take into account. Using social media and having the social learners build something with them and using them to discuss is likely to fulfill their social dimension of learning, as they are interacting with them and with the researcher in the study, both in class and online. Also, they should apprehend some of the content of the lectures in order to reason in front of practical issues. This should be related to the cognitive dimension. The pilot study has shown that there are some emerging insights regarding the emotional dimension. For example, from observing the social learners, it was possible to see that they were having fun with one of the practical assignments and also there was a student who stated in the interview with her that she did not believe that social media were good for learning or that they were worth to use in an organizational or in a library context and for that matter she was very pleased and happy to have had such a learning experience with social media.

Mayer (2004) proposes learners should be "cognitively active" during learning and that instructors use "guided practice." It is important to mention that this study involves the social interaction in different scenarios, such as the learning interventions

in class, assignments and the socialization through SM. The impact and efficiency of each scenario will provide interesting points for comparison.

The epistemological assumptions forming part of the basis of this study can be summarized as follows:

- The concepts of learning and knowledge are closely connected

- Knowledge is created through socialization (Vygotsky, 1978; Nonaka & Takeuchi, 1995) and can be discovered (Whitehead & McNiff, 2006), as people possess tacit knowledge within (Polanyi, 1958).

- Teachers are capable of generating personal theories by systematically studying their practice (Whitehead, 1989)

Finally, the theory of affinity spaces is also relevant for this study, as it seeks to account for both content and interactions. Gee (2007) offers the concept of affinity spaces, as a conceptual tool for thinking about and researching learning. He highlights its importance for the future of schooling. Further, it offers a powerful way of thinking about teaching and learning processes mediated by different technologies, such as social media (blogs, wikis, Facebook, Twitter, among others) or videogames. Within this research, it shapes and focuses data collection and analysis.

1.2. Social Media

The working concept of social media (SM) used throughout this research is: Web based applications that allow the publication or posting of user generated content and interactions between users. Kaplan and Haenlein (2010) set the genesis of these computer based SM on 1979, when Tom Truscott and Jim Ellis, both from Duke University, created Usenet, establishing it in 1980. Usenet allowed its users to post and read messages into categories or newsgroups, resembling a bulletin board system. However, they claim that the age of "social media" as we know it, probably started "when Bruce and Susan Abelson founded 'Open Diary' in 1998: an early social

networking site that brought together online diary writers into one community" (p. 60).

The importance of the consumption or the use of multimedia information in the era of SM is high. However, it can be argued that textual information is very much used everyday in SM, for example in the form of links for our friends, comments, products reviews or blog posting. Perhaps there is more text produced now than ever.

To use SM in a learning experience is a good opportunity to see how students can use these tools that they usually use for entertainment and communication, with the purpose of learning. The literacies needed to use these tools for entertainment purposes might not be enough for achieving learning goals, but each individual might reshape them. For example, while attempting to evaluate a piece of information only for entertainment purposes can be clearly different than to evaluate a piece of information that might enrich a person's knowledge or to contribute to learning outcomes. Also, an individual with poor digital literacies might find challenges in using social media. It is one aim of this study to find out how much it can affect learning, what opportunities this issue pose and finally how this can be alleviated.

1.3. Literacies

The concept of literacies was chosen in this research to be used instead of just IL based on the point that there are an almost indeterminate number of literacies, depending on the field where the different researchers that have used a literacy associated concept come from; such as: new literacies, digital literacy, media literacy, numerical literacy, scientific literacy, musical literacy and so on. What all these and other sorts of literacies have in common is that they define the ability to handle a certain kind of information object or technology. As such, different literacy based terms may come together under the umbrella term of literacies, and be partly related to the term of IL. The working definition of IL used in this research is defined as the varying degree with which an individual possesses or has mastered competencies or skills for handling information of different nature or information, mostly in paper or traditional media and formats (working definition inspired by Zurkowski, 1974;

Virkus, 2003; Tuominen, Savolainen, & Talja, 2005; Lau, 2006). The main interest of this research regarding these concepts lies in information handling as a general-purpose skill and also in the handling of information and communication technologies (ICTs) they include SM. Hence, the scope of this research regarding different literacies is limited to information literacies and digital literacies. It might be useful to include the concept new literacies, although problematic in its nature that gives uncertainty regarding when something is new and when it is not. In summary, the term literacies is used as an umbrella term to refer to the sum of different literacies, as stated before: information literacies, digital literacies, and new literacies. IL refers to the skills used to handle information, or an individual's capacity to handle information, mostly within traditional media; and DL refers to the skills used to handle, or an individual's capacity to handle ICTs (working concept inspired by Shapiro & Hughes, 1996; Eshet-Alkalai, 2004). Finally, the term New Literacies (NL) (Lankshear & Knobel, 2007) would go beyond DL, as there are DL skills that are helpful to develop NL, but there are new activities that involve unique skills that might not correspond to traditional DL.
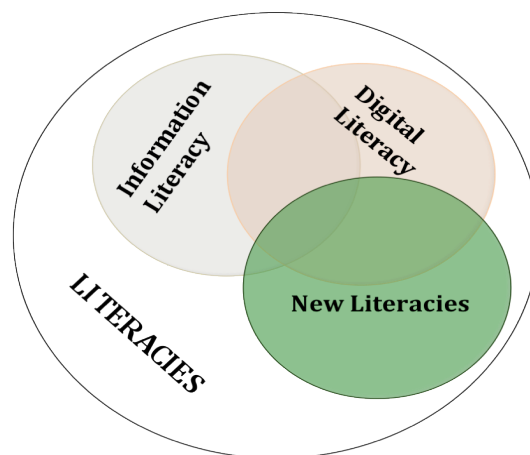

Figure 1. Articulation of literacy related concepts

Figure 1 above represents the articulation of literacy related concepts mentioned in the previous paragraph. The term literacies contains the other three concepts. Some ILs are translated to the digital world (ICTs). NLs are less intersected with IL and more with DL, as in their majority they imply the use of newer technologies, frameworks or workflows. Some NL might be the ones related to the content creation and curation using SM (as they might not be considered established skills).

Obviously, DL and NL are related with one another because of technology, but at the same time, they would be somehow related to IL, as this technological side is related at the same time with the ICTs.

1.4. Research Questions

Research questions of this study are:

What significant issues, challenges and opportunities emerge when social media are integrated into learning environments in higher education?

a) How do social learners' experience learning when they are engaged in a learning activity that integrates social media?

b) In what ways are social learners' experiences of engaging in the learning activities dependent upon their literacies?

c) In what ways do learning, literacies and social media mutually shape each other?

2. Methodology

The methodological approach taken is qualitative. It involves the collection of in depth data related to: social learners' experiences and interactions when using social media, their performance of learning activities, the emergence of issues according to their literacies, and their learning processes. Data gathered is bound to be highly diverse and subjective. The methods and design of the methodology follow a participatory action research (PAR) perspective. This form of research builds on the action research and "group dynamics" models developed by Lewin (1958). Its focus lies on the effects of the actions of the researcher on within a participatory community in order to discover or improve practices. McTaggart (1997) implies that PAR is a dialectical process, one that changes the participants, the researcher, and situations in which the action takes place. Additionally, McIntyre (2008, p. 1) claims that the aims

of these studies "are achieved through a cyclical process of exploration, knowledge construction, and action at different moments throughout the research process."

This method is applied to education within this work. Hence, other pertinent literature that associates PAR with education was followed. Freire's (1990) approach emphasizes the active participation of students and collapses the teacher-student dichotomy. Furthermore, Freire advocated for an active participation of the researcher and the participants to plan and implement processes to achieve knowledge co-construction and co-learning, and the promotion of critical awareness leading to individual, collective, and/or social change. Fals-Borda is also of relevance, from his incorporation of the community action into research plans (1973).

The methods planned for the collection of data in the final study are: a diagnostic questionnaire, a blog, social learners' input, social learners' reports that are related to the assignments, and by the end of the study a second questionnaire and semi-structured interviews. Many methods were chosen for collecting data to be able to triangulate the data obtained using each of them, in order to achieve a comprehensive analysis of the content, interactions and experiences that occurred along this study.

2.1. Participants

The whole research involved one group of international students from LIS master courses. This group participated in the pilot study, while another group is sought in order to conduct the final study. Having LIS students as participants ensure that many participants were familiar with relevant LIS concepts like literacies, information needs and information practices. Most of them also use social networks in their everyday practices and many are readily available for interview. These participants are labeled as 'social learners' throughout the rest of this paper. According to the logic of Participatory Action Research, the researcher is a participant as well. This is opposed to different paradigms demanding the researcher to remain as a 'fly on the wall' during the study. The role of the researcher is to plan the learning interventions and the devices throughout the study. Furthermore, the position of the researcher is to participate, intervene and interact with the social learners. Moreover, the researcher

prepares, explains and mediates themes and shared meanings, which is discussed in the next section. The researcher as participant is labeled as 'lead social learner' throughout the rest of this paper. When referring to both the lead social learner and the social learners at the same time, and for the sake of brevity, the phrase 'all participants' is used. At the moment of writing this paper, the final study has not been conducted, as a suitable group of social learners has been sought.

2.2. Research Design: The Learning Interventions

The research design for the final study is labeled as 'Doing Online Relearning through Information Skills' (DORIS). It is comprised of different learning interventions, and it is divided in five stages. Figure 1 below indicates the sequence and contents of the different stages planned for DORIS. Each of them has a series of topics that all participants are to discuss in the classroom. Before each of the themes, the social learners discuss what they already know, think and believe. Then, the lead social learner explains the topics from that input, in order to mediate a mutual understanding of the topics. At the end of stages 1 to 4, the social learners are encouraged to discuss or comment on the blog created by the lead social learner both as a dialog space and content hub. After Stage 3 social learners have to create social sites. These sites are other spaces to dialog and discuss among all participants.
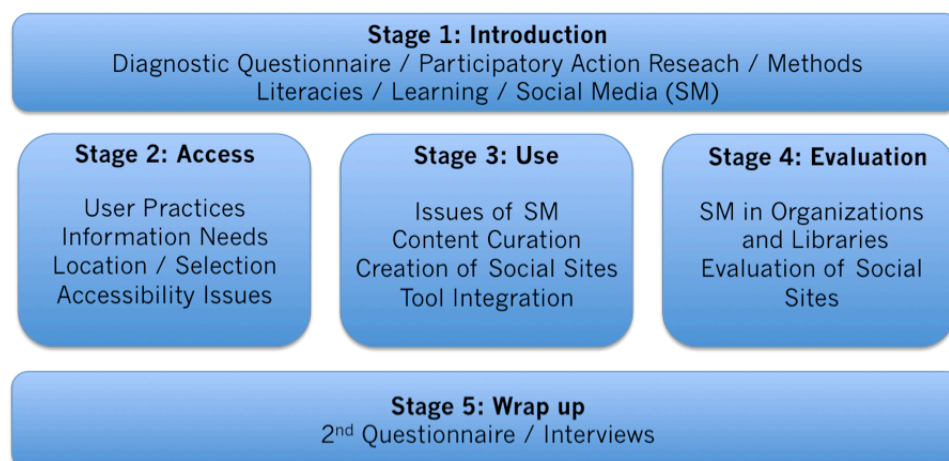

Figure 2. Design of the Learning Interventions for the Final Study or 'Doris'

Stages 2 to 4 were thematically organized after core information skills. These different skills are: access, use, and evaluation. Lau (2006) states that these dimensions of information skills are commonly found in the works of different educators as Byerly, Brodie, and Kuhlthau. Furthermore, they appear in standards prepared by library associations, such as AASL, ACRL, SCONUL and the Australian and New Zealand Institute for Information Literacy.

The results of the pilot study pointed to the need for greater coherence and uniformity in the research design. The organization of DORIS addresses this by clustering the three main stages of the design after the core information skills. This provides a more effective framework for determining how social learners' literacies mediate their learning and engagement through the use of social media. The stages of DORIS and the assignments are briefly summarized in the following paragraphs.

- Stage 1 Introduction: the lead social learner introduces the social learners to PAR, the research methods, addressed privacy and ethical concerns, handed out the privacy statement and the ways he intended to conduct the study. According to the tradition of PAR, all participants must have all the information possible concerning the research. Under the positivist tradition, this would carry a bias in the research. However in PAR, the issue of bias, trustworthiness and ethical issues are different. After gaining the consent of the social learners, the researcher introduces the concepts of literacies, the three dimensions of learning (Illeris, 2003), and SM.

- Stage 2 Access: the topics to explore in this stage are related to the users' practices, information needs, location and selection of information, and accessibility issues. At this stage, the social learners have their first assignment: to write a short report by reflecting on their own practices as users of SM.

- Stage 3 Use: the topics explored in this session involve the issues of SM, tool integration, content curation, the creation of SM sites, and tool integration. In this stage, the social learners have to develop their second assignment: create a social site for a fictional information service and hand in a written report about what they did, and the challenges and issues they faced.

- Stage 4 Evaluation: the themes addressed in this session are the use of SM in organizations and libraries and the evaluation of social media sites. This session is purposively located after the stage related to the use, because the third assignment was to evaluate one social site of a library or information service and. As they have to develop one site for themselves in the previous stage, this arguably gives them a better understanding on the development, evaluation and quality of such sites. It is hypothesized that this way of ordering the stages and hence the assignments, would bring a learning dissonance which would help social learners gain better insights into the themes researched. The written report for this assignment has to include the evaluation of the social site. Furthermore, the social learners are asked to revisit their second assignments (their own social sites) to say if they would change something after analyzing and evaluating a real social site.

- Stage 5 Wrap up: this stage starts after the previous ends. It is intended to finish collecting the data to analyze. All social learners are to fill the questionnaire and the researcher makes appointments with the team leaders to have the interviews.

The Assignments are intended as role-playing types of activities, these types of hands-on activities are effective in the way that they "can equalize the relationships between the literate and illiterate, between the marginalized and the self-confident" (Mikkelsen, 2001, p. 118.) McIntyre (2008) states that because "PAR is context specific means that practitioners draw on a variety of quantitative, qualitative, and creative-based methods to engage participants in the construction of knowledge" (p. 49). In DORIS, social learners contribute their own different abilities to do the assignment. The reports they have to write are a reflection of these abilities, the challenges and issues they found by doing the assignments. It is important to note, then, the limitations individual social learners may have, which is something the individual questionnaires hope to address. The assignments are three, one per each main stage (2, 3 and 4). As stated above, the first assignment involves an individual reflection on the social learners' practices as users of SM. The second is to create a social media site for a fictional information service. The third assignment is to evaluate an existing social site for an information service. For each assignment they have to hand in written reflection reports and at the end they had to reflect given the

whole experience, if would they change anything in their way of doing the second assignment.

2.4. Ethical Considerations

A privacy statement was created to get the social learners' informed consent, although no personal information is needed for the purposes of this research. This privacy statement asserts, among other things, that no information that could be used to identify these individuals, will be used in the final work and that no personal information will be given to third parties. The lectures and the class discussions are to be recorded in audio and video after receiving consent from all participants. All questionnaires are made anonymous. All interviews are recorded in audio format, with consent from the participants and then they have to be transcribed for analyzing the raw data derived from them. For this final study, the researcher created an agenda in the form of DORIS, which is tailored after the time and availability of the social learners.

2.5. Methods for the Analysis of the Data

The method chosen for the analysis of the data was content analysis, as Pickard (2007) puts it, "is [used] to present an explanation of those shared meanings and assumptions." (p. 241). This refers to the shared meanings and assumptions of the participants. For the analysis of the data, it was coded and a framework of categories was created to present it in a certain order.

The categories that were created given the data from the pilot study are:

- The identification of the most important issues of web 2.0 and SM that are faced by users within a learning environment

- A look at some of the challenges and opportunities of using SM in higher education instruction related to the social learners' literacies

- A look at the most useful activities for learning, within this study

- The topics social learners learned about throughout the activities of this study

Additionally, the refinement on the methodology in respect to the one for the pilot study, and the addition of new objectives and research questions, brought other set of categories, which are as follows:

- Insights into the mutual shaping phenomenon between SM, the learning experience and social learners' literacies.

- The challenges and opportunities of using SM in higher education instruction related to social learners' literacies.

- Social learners' reflections on their practice based on the learning dissonance created by the order of the assignments.

- The researcher/practitioner's reflections on his practices between the two studies conducted within this research.

Furthermore, the learning that is taking place in DORIS will be analyzed by using Illeris (2003) three dimensions of learning (see 1.1) as an analytical lens. Moreover, as content and interactions are a very important part of all the participants' experiences in DORIS, the theory of affinity spaces (Gee, 2007) is used as it allows for the following two different dimensions or heuristics to shape and focus the data collection and data analysis.

a) On the function of its content: this is an analysis of the content organization or design. In the case of blogs or other social media sites, the content organization and design emerges initially from whoever designed the space, but then its users (that is all participants in DORIS) shape it.

b) On the function of how people interact with the content and/or with one another: this analysis points to the interactional organization, contextual and social interactions, and the organization of people's opinions, comments and actions.

4. Conclusions

This methodology represent an improvement in organization compared to that of the pilot study. It added two research questions to the pilot study and a more solid philosophical background. One of the most important changes done in the methodology was to better the research design by taking the framework of core information skills. This resulted in the construction of an orderly action research learning intervention in the form of DORIS. This offers the possibility to better differentiate literacy skills the social learners may be using per stage of DORIS. In this manner, it is expected that the role of social learners' literacies would emerge and would be possible to better analyze it. The research design DORIS is proposed in this paper as a powerful way to organize action research based on blended (physical and online) learning interventions through the structure of information skills. Other researchers, librarians or educators can adapt this model in order to develop learning interventions for learning and researching about social media. Furthermore, DORIS framework can be adapted for teaching information literacy programs or other topics, by changing the themes discussed in the different stages. This could result in a powerful framework to teach different topics by going step by step through different information skills needed to research and use the information, resources or devices relative to almost all disciplines.

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