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ON THE IMPORTANCE OF PERSONAL PROFILES TO ENHANCE SOCIAL INTERACTION IN LEARNING NETWORKS

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ABSTRACT

Nowadays, we witness a surge of online profiling communities; in them people make their profile available to others with the intention to share it and get in touch with others, find previous friends, classmates or colleagues, or look for new opportunities. Given their capacity to encourage members to be connected with other members and their growing popularity, we hold that some lessons can be learned from such communities. In this paper's initial exploration, we analyze some of the most popular profile sites to spot indications on profile composition and the affordances they use to encourage people to interact and to establish connections with other members. Based on this we discuss the importance of personal profiles depicting the characteristics and support mechanisms needed to enhance social interaction in Learning Networks.

KEYWORDS

Learning Networks, profile, social interaction, Web 2.0., profile sites, Facebook, Myspace, LinkedIn

1. INTRODUCTION

The notion of Learning Networks (LN) has been envisioned to support online, non-formal learning. These self-organized networks consist of participants and learning actions related to a certain domain (Koper & Sloep, 2002). Participants take part as learners, teachers, peer-tutors or, collectively, as institutions. They can have various roles depending on the circumstances, whereas learning actions can be any type of learning resource or events (e.g., courses, websites, blogs, etc.) that might help learners to acquire competences. In Learning Networks the learner has to take an active role, setting up her competence development plans, looking and searching for relevant resources, and finding experts and peers that can support them, but also providing resources, answers, and advices to others. Social interaction, therefore, is a key factor to turn these networks into (collections of) communities that emerge from the interaction of the participants, and evolve over time (Sloep, 2008). To find out how this interaction can be fostered is our foremost topic of research. Our main assumption is that increasing the Learning Network sociability is crucial to enhance the knowledge sharing process and, ultimately, to help members to achieve their learning goals.

In this paper we concentrate on the possible importance of personal profiles as a means of stimulating active participation in Learning Networks. We start introducing related work regarding people's motivation to contribute in online communities. Next, we analyze some popular profile sites, namely Facebook (www.facebook.com), Myspace (myspace.com) and LinkedIn (www.linkedin.com), to spot indications on profile composition and on the affordances they use to encourage people to interact and establish connections with other members. Thereafter, we discuss lessons learned from these sites and we lay out opportunities for future work on fostering the emergence of communities in Learning Networks.

2. PARTICIPATION IN ONLINE COMMUNITIES

Communities can be defined as networks of people with a specific or joint goal. Most of the online communities are related to people's interests and hobbies, or are related to work. Several theories can be found in literature that explain people's behaviour and motivation to participate and contribute in online communities. For example, the social exchange theory (Thibaut & Kelly, 1959) and the reciprocal altruism theory (Trivers, 1971) state that people will invest only when they can expect something in return. Erickson and Kellogg (2000) as well as Millen and Patterson (2002) argue that visualising people and their actions in a network can enhance members' contribution and participation, in particular when the benefits of these actions are made visible. Ling *et al.* (2005) found an increase in contribution in Movielens —a web-based movie recommender site—when the site would indicate to the members how unique they and their contributions were; whereas Lui *et al.* (2002) refer to intrinsic and external motivational factors, or personal and interpersonal factors.

Using similar lines of argument, we thus have argued before (Berlanga *et al.*, in press; Kester *et al.*, 2006) that effective learning communities depend on social space, characteristics of the members, and characteristics of the community. Affective relationships, strong group cohesiveness, trust, belonging, and satisfaction characterise social space, the emergence of which can be enhanced through social interaction. For social interaction, in particular knowledge sharing, to occur we have identified three conditions: the boundary condition, the heterogeneity condition, and the accountability condition.

The boundary condition means that the community should have clearly defined goals and rules about allowable behaviours of its members. According to the heterogeneity condition, communities should be populated with participants who differ from each other with respect to at least three characteristics: experience with communities ("newbies" *vs.* veterans), being prepared to set a trend (connectors, mavens, salesmen) (Nichani, 2001), and inclination to participate (posters *vs.* "lurkers"). Concerning the accountability condition, three characteristics should be present regarding community members: 1) their identification and performance should be recognisable, 2) their past actions and behaviour should be accessible to others members of the community, and 3) they have to be able to meet again in the near future. We call these characteristics, respectively, recognisability, history, and continuity of the contact.

It turns out that the majority of these characteristics are already present in non-educational online communities (Berlanga *et al.*, 2007). Social network systems, considered as an essential part of the Web 2.0 (O'Reilly, 2005), such as profile sites (e.g., MySpace, LinkedIn, Facebook), resources sharing sites (e.g., Flickr, del.icio.us, YouTube), or Q&A sites (e.g., answers.yahoo.com, www.answerbag.com), use policies to enforce what we call the accountability condition. These communities are self-organized communities without hierarchies, whose participants share the common goal of knowledge sharing, much like in a Learning Network.

All these non-educational online communities have in common that each participant has a profile. With it, participants share with others their interests, background, motivations, friends, and so on. Profiles also enforce the continuity of commitment by letting members create links to others and comment on each other's profile. They are, therefore, indispensible for fostering interaction between community members. In the next section we explore three popular profile sites to determine what kind of information is made available in their users' profiles and how they motivate registration and stimulate contribution. Ultimately, we aim to arrive at an understanding of how profiling data may be used to promote sociability amongst participants of Learning Networks.

3. ONLINE PROFILE SITES

Online profile sites allow people to look for, contact or share information with past or new contacts (e.g., friends, classmates, colleagues, etc.). They do so allowing people to add their profile to the site. Some sites serve a rather specific aim, e.g. dating sites, networking sites, file sharing sites; others have a general social function. But, no matter what their aim is, all these sites have in common that the services they offer evolve around the members' profiles. The metaphor of these sites is to construct an online individual profile, which then can be linked to other individual profiles.

As mentioned earlier, we analyzed three popular profile sites: Facebook, Myspace and LinkedIn, to determine what kind of information is made available in their users' profiles and how they motivate registration and stimulate contribution. They all aim at maintaining and organizing relations; whereas Facebook and Myspace target friends and contacts, LinkedIn targets professionals.

These sites aim to have as many registered people as possible. Therefore, registration, is free but required to get access to other people's profile and personal information, although all sites offer public access to (parts of) the profile. They differ in how they entice people to register and vary in the way they indicate the benefits of registration, although at most sites the need for registration becomes obvious when trying to access certain areas of the site.

The homepages of LinkedIn and Facebook invite people to join the network although they offer a basic search facility for non-registered people. Myspace has an extensive homepage offering a lot of functionality, which hides the benefits of registration; they become clear when accessing certain areas of the site. The areas that only are available to registered users fade out and a message is overlaid stating that this area is available for members only; clearly, describing the benefits for registered members provides a point of entry to the registration process on the spot.

The three sites provide extensive information about the benefits of the membership and importance of the profile; they assist in compiling the profile, often already in the registration process. There is quite some variation in the data requested during the registration process. Facebook seems to have the shortest registration profile, consisting of full name, indication whether you are at school, company, high school or none of the above, email address, password and birthday. The other sites use a more extensive registration profile, distinguishing at least first name and surname, address, country, interests, school, company. Table 1 lists the common fields used during the registration process on each one of the sites ("R" means required, whereas "O" means optional). Due to space constraints the table only shows those fields that are present in more than two sites.

Table 1. Fields used during the registration process

	LinkedIn	**Facebook**	**Myspace**
Personal data			
Email	R	R	R
Password	R	R	R
First name	R		R
Surname/Last name	R	R [full name]	R
Day of birth		R	R
Zip code/postal code	R	O [city]	R
Country	R	O	R

It turns out that during registration only part of the profile is being completed. After registration, all sites offer the option to update and change the profile. The profile is far more extensive, containing additional areas and fields to complete. The sites distinguish public profiles and profiles available to registered users or "friends" only, although they differ in the level of detail and not all fields can be hidden. Figure 1 shows the fields these profiles contain. The fields are grouped in categories, and their position and shapes indicate their similarity. For instance, the category "basics" of Facebook, is more or less the same as the "basic data" category of Myspace. Therefore, in Figure 1 the same type of shape is used for these categories.

Figure 1 shows, as was to be expected, many similarities in the profile composition of these sites. Of course basic information is common, but also information as interests and "information about me" are present in all three cases. Besides the similarities between the fields, it is interesting to notice the importance of the school and work background. The three profiles contain this information. Even though Facebook and Myspace are oriented to friends, they also include work information. Obviously, such information is essential to establish users' network and to recommend possible contacts/friends.

Once the person has become a contact, a member of the community, new interaction options become available to her. Like for instance, invitations to answer questions or to participate in discussions; the possibility of sending notifications to invite someone to join your network—see Taylor (2006) for an example in LinkedIn—,or searching for people one may know using tools like the "Friend Finder" tool of Facebook.

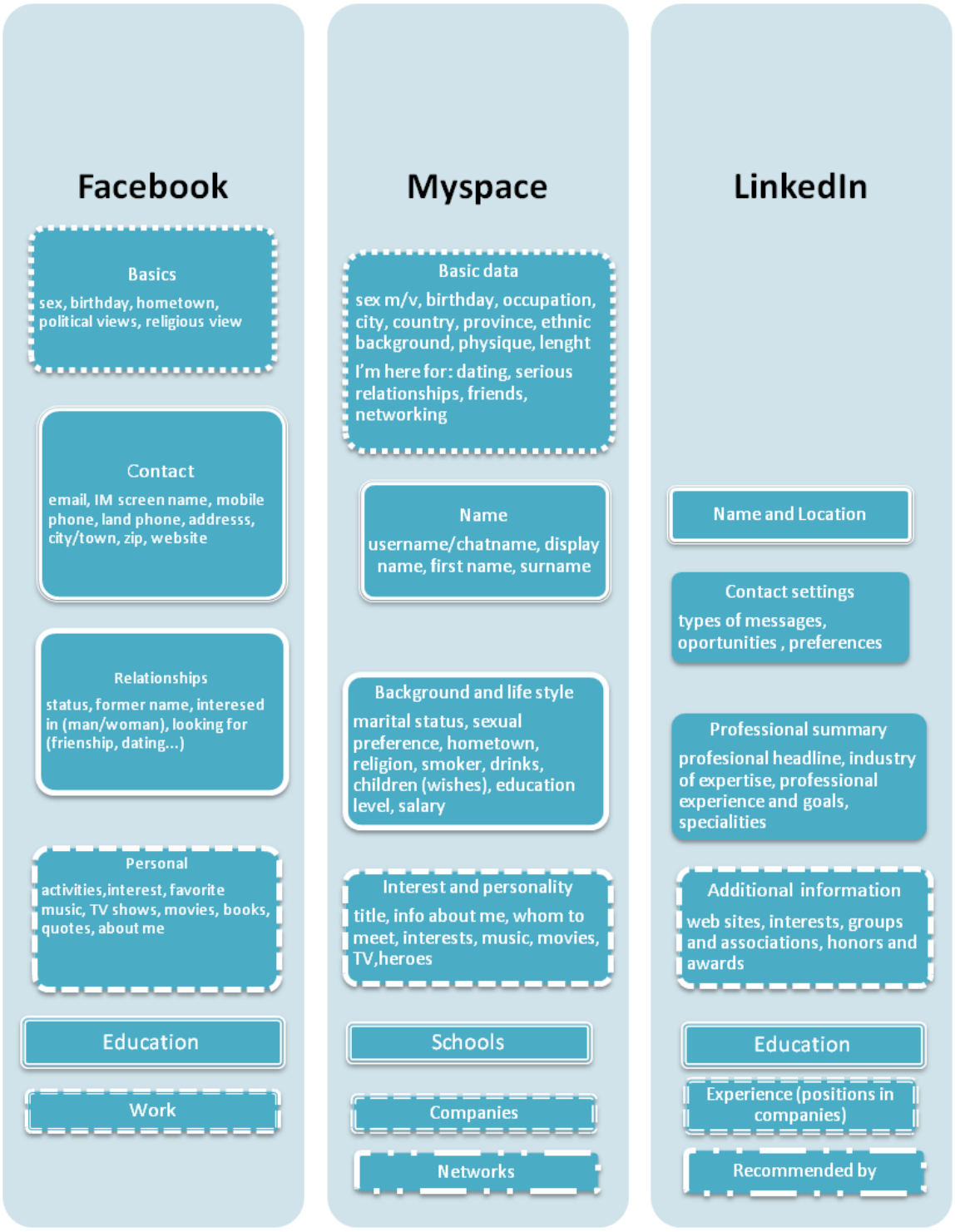

Figure 1. Information contained in the various online profiles

Indeed, the affordances these sites use to encourage people to interact and establish connections with other members are, also, very similar. Mainly they consist of providing mechanisms to find people the user might know. They all provide, for instance, matching tools that use the email address books of the user to identify the people the she knows and search for them in the site. If a successful match is made, then the site suggests inviting that person to the user's network. LinkedIn also uses the user's profile information —such as companies the user has been working on or the schools the user has been enrolled into— to advice the user of other registered users with the same characteristics, so the user can find possible connections (e.g., former collages or classmates).

Other mechanisms these sites use consist of keeping users informed about the new connections their contacts establish. By showing this information, users are aware of new contacts that they might also know. Moreover, these profile sites show the user's network by displaying the user's contacts (or friends), as well as the mutual connections between that particular user and the user that is visiting the profile. So, members themselves can look into these contacts and explore the contacts of their contacts to find mutual connections.

Finally, the sites clearly consider it important that users create a suitable profile and keep it updated and recognize the value of supporting them in the creation process. All sites send out notifications via email about changes to the site, new registrations that may be relevant, or possible new contacts. These notifications usually explain the benefit of the new additions or provide hint and tips explaining why expanding the profile is of benefit to the user and to others. LinkedIn, for example, provides extensive support and guidance to ensure that people use the profile to the maximum benefit. The site visualizes to which extent the profile is completed and provides clear hints and tips on how best to add to the profile (see Figure 2).

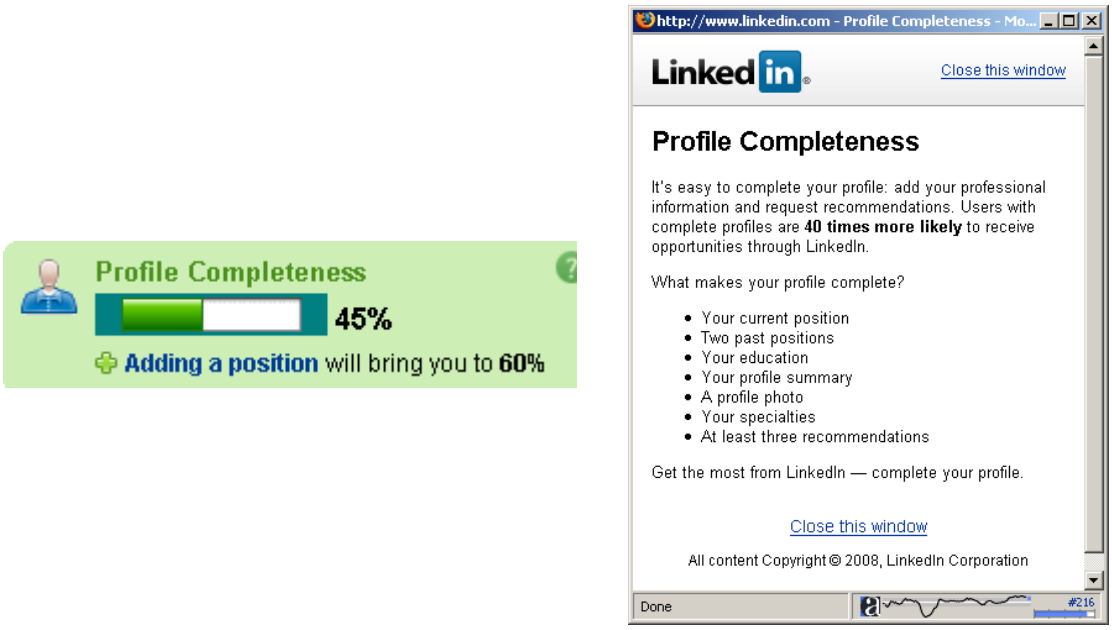

Figure 2. LinkedIn advice to complete the user's profile

4. PERSONAL PROFILES IN LEARNING NETWORKS

For various reasons, Learning in a Learning Network is a social activity. It takes place in interaction with peers, both people and resources distributed across cyberspace. Contrary to cohort-based classroom teaching neither the study route nor the learner's peers are known before. As mentioned before, the learner herself has to find her way in the learning community to achieve her goals. The Learning Network should make provisions to enhance social

interactions, thus enabling a learner's own learning process and affording help for other community members by sharing her expertise. Knowing this, our research focus has been on finding out the crucial factors that trigger social interaction for effective community development in Learning Networks. It is important to stress that, as Bouman *et al.* (2007) hold, functionality *per se* does not imply socialization. The secret is to find out what are the mechanisms that trigger social interactions. In this paper we have focused on what is commonly used in profiling oneself in successful online profile sites.

Andrews (2000), Berlanga *et al.* (in press), Kester *et al*. (2007), and Preece (2000) emphasize that engagement and active participation in communities does not emerge automatically; personal profiling presumably is an important driver for commitment to a community, which can be deduced from the immediate requests issued by social networking sites to register, become a member, and acquire additional facilities to acquaint oneself with others and become active member of the community. The user profiles of the online sites that we analyzed all offer presentation options to profile oneself, using basic identifiers such as name, age, city, etc. Next, they give registered users additional options to enrich both their way of expressing and positioning themselves by presenting more personal background information and contact preferences. The existing options for presenting oneself to the other community members (e.g., via invitation, friend of a friend, email searchers, friend finder, etc.) present a crucial pre-condition for interactions with others. As they give the member an identity and makes her both recognizable to and accountable for contributions to the dialogues in the community.

The exploration of the characteristics of successful online profiles presented in this paper, confirms what we argued before (Brouns *et al.*, 2007), i.e. that people should right from the start be able to present their identity both to present themselves and to get in touch and interact with other participants. Moreover, as it is clearly of importance to ensure that participants create a suitable profile, the site should support them in the creation process. Later on, mechanisms or tools that help users to find new connections are also essential. They provide the means to easily connect to other people, so they foster participation in and registration for these sites because users know they will benefit from it. Support for building social relations requires however that one feels comfortable to get engaged. This implies that profiling also enables understanding of the participant's context (Brouns *et al.*, 2007; Daniel *et al.*, 2003; Preece, 2000), gives security to build up trust between peers, and provides safety within the conventions and boundaries of the community.

For Learning Networks, the process of creating a personal profile could be supported providing a template that contains those required fields that are imperative, such as first name, surname, email, but also background information about reasons for participating in the network, preferences, interest, competences to be developed, favourite resources and people.

It has been also argued before (Brouns *et al.*, 2007) that the pEXPi (abbreviation for *personal expertise inventory or personal identity and expertise profile*) can be used as such template. It has been tested in several learning communities, e.g. several virtual company environments (Westera & Sloep, 1998), in which students have to collaborate to create authentic products like, for instance, OTO, a virtual software company for Computer Science students and European Virtual Seminar (EVS), a community of international students in environmental sciences that collaboratively work on European sustainability issues (Schoonenboom *et al.*, 2004). A survey (N=34) on the experiences with pEXPi and dialogue structure in the EVS reported that students and tutors indicated that using the pEXPi at the start of the project explicitly helped them getting to know each other and, in particular the exchange of personal information, helped them to develop a sense of belonging and successfully assisted them in creating the community (Ogg *et al.*, 2004).

The pEXPi template contains similar areas as seen in the profiling sites (see Figure 3). Position, knowledge and expertise are also found in LinkedIn, Myspace and Facebook. Interests and hobbies are important in Facebook and Myspace, while LinkedIn provides more attention to work-related interests and expertise. In contrast to the profiling sites that contain many fields for a user to complete around these themes/subjects, the pEXPi only distinguished the main categories and allows users to enter in free text their description. This, however, could be problematic if mechanisms to find people, such as those the profiling sites include, are implemented in Learning Networks, since these mechanisms normally need structured data to find and match people's information.

Additional data contained in the pEXPi are contextualised categories, i.e. those data relevant to the particular purpose of the learning community: indication of availability and the mindmap of expertise. While the profiling sites ask the users to give a general description, the pEXPi is intended for the particular situation in the learning community, so should only contain contextualised relevant data.

pEXPi

Personal data
First name:
Surname:

Position within OTO
[[Briefly describe your objectives and which tasks you have within the team.]]

Availability for OTO
[[Which hours (date/time) are you available for OTO; at which moments are you active in eRoom?]]

Mindmap
[[Make a Mindmap. This serves a twofold objective: make a mindmap indicating your expertise; you practise mindmapping technique. Place here a reference to the location of your mindmap.]]

Knowledge and expertise domains
[[Indicate your areas of expertise (programming languages, methods, techniques, skills, competences, etc.). And describe how other can contact you for your expertise.]]

Work-related interest
[[Indicate your interests. Also those for which you have no to limit experiences, but you like to expand.]]

Study and work-related experiences
[[Briefly describe your study and work history.]]

Other interest and hobbies
[[Provide other interests and hobbies that are not related to your job.]]

My relevant links
[[Links to website you consider important for learning and working within OTO.]]

Figure 3. Original pEXPi template intended for the OTO virtual software company

One issue that has not been explored yet for the pEXPi is the support learners might need to complete the profile. As it has been identified in the online site profiles analyzed, this support seems to be important. Thus, for Learning Networks, during the registration process learners should be provided with sufficient information that explains the objective of the various fields and the importance of filling in true data. The optimal operation of, for instance, learner support services for assisting them in finding peers and experts, resources and get recommendations only perform adequately with accurate data.

Privacy is also important; the analyzed sites allow people to decide what personal data is shown to others. Motivating people to provide as much information and more importantly the relevant data in their profile, is equally necessary. Furthermore, to motivate learners to complete their profile, visualization of peers' profiles could be restricted until the learner completes their own profile. Finally, another important aspect is to keep learners informed when the personal profile of someone they know, has changed. This visualises the actions of the learner and enhances her recognisability.

Further research into the actual use and user perception of user profiling for Learning Networks is needed. After all, here we only have established the likelihood that user profiling will be useful in that context. Such research has to provide evidence for the validity, in the context of Learning Networks, of the assumptions described in this paper about both the functions and the effects of user profile characteristics on social and learning interactions. In particular, it has to show that user profiling leads to the emergence of communities within the larger Learning Network; communities which subsequently contribute to the overall goals of Learning Networks-based learning.

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