

Supporting the creation and use of Personal Learning Networks of Professionals in Social Work

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Abstract. This paper presents doctoral research work on supporting social work professionals in learning through their personal professional networks and online Personal Learning Networks. In particular, it proposes an empirical investigation into current practice in order to develop appropriate technological support for the networking activities of building, maintaining and activating personal professional networks. It proposes a rethinking of functionality and usability of domain and network analysis technology to put these more in line with the actual needs and requirements of networked learners. The research methodology is presented as well as the current stage of the project.

Key words: Personal Learning Network, expertise identification, user-centred technology design, dialogue and discussion as means of learning, social networks

1 Problem Description

Social work professionals deal with issues of health care, poverty, homelessness, migration and integration in (inter)national environments supported by governmental and non-governmental organisations (NGO). They carry out small-, medium- and large-scale projects to achieve better social conditions for a specific target group, depending highly on their advanced knowledge and competencies. As they work individually or in small teams in well-defined unique environments, they often cannot depend on traditional standardized organisational support structures for professional learning (such as in standard business processes and solutions, courses, etc.). Therefore, they need to develop non-conventional learning strategies to succeed in their goals. Learning in this context is aimed at developing the individuals' skills and abilities to deal with complex problems [1].

As a consequence, these professionals are independently responsible to continuously plan their learning in order to acquire and create new skills and knowledge to fulfil the jobs demands successfully. They develop their individual expertise through the experiences they gain along the way in different projects and through

their own reflection, thereby building up a high level of tacit knowledge [1–3]. They also greatly emphasise the importance of sharing their experiences and reflections with each other [4, 5]. In social interactions, these professionals reflect on experiences gained (individually and collectively), give meaning to them and actively create new knowledge by confronting different perspectives on a same topic [6–8].

Therefore, learning through **experience** and learning through **social interaction** in particular seem to play a prominent role in the social work professional context [9]. Learning in social work seems to take the form of building tacit knowledge through experience and reflection and sharing this knowledge through social interaction with others. In fact, individual (non-formal) learning has been shown to be supported by dialogue and discussion with peers and colleagues [10]. Furthermore, the managing of conversations (i.e. making conversations possible between people when it is needed) has also been recognised as a key enabler of knowledge creation in organisational settings [11]. Dialogue and discussion with colleagues and peers then seem to be the tool supporting and enabling learning in social work.

Such dialogues and discussions have the potential to influence the learning of a social work professional, provided the professional is sufficiently sensitive to this type of learning. Especially the learning theories of socio-constructivism and Connectivism support this, where a learner learns by internalising collaboratively created and constructed knowledge and builds on her personal ability to make connections in a meaningful way [12–14]. In this way, each dialogue partner brings their own unique input to an interaction and takes away whatever has been created in that unique interaction with others that is relevant for their own personal learning. As a consequence, the specific expertise and experience of dialogue partners in these dialogues and discussions have an effect on the quality of these interactive activities.

To create an environment in which effective personal learning can occur, social work professionals need to find the **right and most relevant dialogue partner for a given problem**, i.e. with the expertise and experience that that learner considers most appropriate. The first point of call to find these dialogue partners are their personal professional network, i.e. the network of people set up by an individual specifically in the context of her professional activities. Professionals who consider their personal professional networks as a learning resource may employ particular strategies in building, maintaining and activating that network [15], with the forethought of increasing the effectiveness of this network for learning. In other words, they may design and manage their individual network in such a way that the support offered by this personal professional network for learning increases, to include people with the relevant and required experience and expertise to have at hand when a learning need emerges.

However, little research has been conducted on this aspect of personal professional networks till date, as well as on the network of people an individual creates on and through *online* platforms specifically in the context of her professional activities to support her professional non-formal learning needs, what

we call a ‘**Personal Learning Network**’. Studying the used strategies on the content of the relation and on the process of finding and interacting with potential dialogue partners will help in understanding better how professionals create and use their personal professional networks for learning. More empirical data from practice is needed to define and develop the concept of Personal Learning Network against the background of the literature on Learning Networks [16] and Personal Learning Environments [17–19].

It can be expected that professionals make considerable investments to conduct these strategies. This investment can be specified and studied with different perspectives, such as a social capital perspective, game-theoretical perspective (return on investment made), cost perspective (time and effort needed to identify and contact relevant others), etc. Naturally, the more effectively and efficiently professionals can build, maintain and activate their Personal Learning Network, the easier it will be to find relevant dialogue partners within this network to support their learning. Professionals use various technologies to support these activities. Particularly, domain and network analysis technology offers various solutions to increase the effectiveness and efficiency in gaining insight into the experience and expertise present in existing networks (recommender systems and social matching systems [20–22], expert systems [23–25], network visualisations [26–29]). However, it is unclear if the extracted information is relevant to professionals and if this information is presented in a suitable way; in other words, does the functionality and usability of this technology effectively match the professionals needs?

2 Research Questions and Hypotheses

The focus of this research project will be on investigating how social work professionals create and use their Personal Learning Networks and how the technology they use for supporting these networks can be optimized to help them in doing this more effectively and efficiently. The research question is ‘what is the relationship between the functionality and usability of network analysis technology and its effectiveness and efficiency in optimizing the investment needed (among others costs such as time, effort, etc.) in building, maintaining and activating a Personal Learning Network to find relevant dialogue partners?’The sub-questions are:

- What are the guiding principles in building, maintaining and activating a Personal Learning Network that maximize the quality of such a network as a source for relevant dialogue partners?
- To what extent does existing network analysis technology effectively reduce the investment required (such as transaction costs incurred) for building, maintaining and activating a Personal Learning Network?
- How can the effectiveness and efficiency of existing network analysis technology in reducing the required investment be improved with regards to the relevance of the information provided and the method in which it is provided (functionality and usability of the technology)?

As the quality of dialogues and discussions with dialogue partners is influenced by their specific expertise and experience, a better view on their expertise and experience might enable better and more effective personal learning networks. The hypothesis is that a different approach to functionality and usability in network analysis technology, which offers more relevant information in line with the needs of professionals and presents this information in a more suitable way, will increase the effectiveness and efficiency of this technology by reducing the investment costs incurred in designing and using Personal Learning Networks. In turn, this will enable professionals to create and use Personal Learning Networks of higher quality in less time.

3 Research Methodology

This research project has a conceptual and a technological aim. Conceptually, it aims to define the concept of a Personal Learning Network more closely in relation to the concepts of Learning Networks and Personal Learning Environments, by basing it on data on how these networks are built, maintained and activated in practice. Technologically, it aims to gauge the usability and usefulness of domain and network visualisations of a personal learning network in order to improve the efficiency and effectiveness of these technologies for individual users through the addition of value-adding personalising features. The project consists of three phases:

1. Exploring Phase: in this phase, more insight will be gained into the practice of learning in personal professional networks. The notion of 'quality of personal networks' and criteria to assess this will be defined in this phase on the basis of exploratory open-ended interviews. Through a structured survey and possibly some selected in-depth interviews, a working framework on Personal Learning Networks will be created and user requirements for technology will be defined.
2. Design and Development Phase: in this phase, the defined user requirements will be translated into the design and implementation of a technical artefact.
3. Experimental Phase: in this phase, experiments will be conducted with the developed artefact to investigate the influence of functionality and usability on learning in professional networks.

4 Current Phase of Research

At the time of writing, the doctoral research is in the first phase. A literature study was taken as a starting point to identify the factors influencing the building, maintaining and activating of personal professional networks. However, as the projected outcome of this literature study is low, 6 exploratory, semi-structured and open-ended interviews with selected interviewees will also be conducted. These interviewees are people in the development sector who have

set up concrete projects from scratch: they have gone through the process of identifying and understanding a complex problem and of devising a solution for this problem. As learning through networks seems to be a skill to be learnt, there will be 3 novices (under 5 years experience in the sector) and 3 experts (more than 5 years experience) in these interviews. A survey will be developed and conducted on 100 participants, who will be a representative sample of professionals working in social work. The criteria to select these participants are to be defined, but will include the extent of their experience in the sector and the level of their proficiency in using their personal networks for learning.

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