**SoMeRe: Knowledge Media for Continuing Professional Development**

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Abstract. Recent developments in social media offer the interesting prospect that current ‘educational content methods and practices’ based on traditional media will become rapidly replaced by social knowledge interactions. These knowledge interactions are co-created, delivered and maintained by social media, and characterized by interactivity and openness, and are of a personal and/or social nature. Examples of knowledge interactions are wikis, you-tube channels, Facebook networks and groups, social plugins, social apps, and many more.

In our research, we are involved in various research and education projects in ‘Learning networks’. In line with existing research on ‘learning organizations’ and ‘knowledge-steered companies’, we are interested in learning networks as learning organizations and cover topics like ‘open innovation’, ‘co-creation’, ‘knowledge communities’, and ‘regions of knowledge’.

One of our knowledge media design projects is called SoMeRe (www.somere.nl). SoMeRe stands

1 Introduction

The use of social media is part of a rapidly growing ‘digital lifestyle’. It grows in the number of users, in the kind of applications, widgets, and apps, in the size of its resources, in the number and kinds of interaction, in the attention it gets, and also in the significance of its use in society. We consider social media as media foremost as appropriate for and shaped by social behaviour (browsing around), social actions (sending messages), social interactions (having conversations), and social relationships (being connected). By this definition social media include media like YouTube, Wikipedia and Flickr, and networks like Facebook, Twitter and LinkedIn. Social media are applied in various settings.

These recent developments in social media offer the interesting prospect that current digital and non-digital ‘educational content methods and practices’ based on traditional media will become rapidly replaced by social knowledge interactions. These knowledge interactions are co-created, delivered and maintained by social media, and characterized by interactivity and openness, and are of a personal and/or social nature. Examples of knowledge interactions are wikis, you-tube channels, Facebook networks and groups, social plugins, social apps, and many more.

In our research, we are involved in various research and education projects in ‘Learning networks’. In line with existing research on ‘learning organizations’ and ‘knowledge-steered companies’, we are interested in learning networks as learning organizations and cover topics like ‘open innovation’, ‘co-creation’, ‘knowledge communities’, and ‘regions of knowledge’.

One of our knowledge media design projects is called SoMeRe (www.somere.nl). SoMeRe stands
for Social Media Research Centre. SoMeRe as a learning network wants to study the design, implementation, use and effects of social media in organizations and society. The network consists of social media professionals, like master students, alumni, researchers, lecturers, and professionals, for instance marketers and communication professionals. Here, we consider our current students as junior professionals working continuously on their professional development.

SoMeRe, as an online environment, is designed as a social-media platform for the support of ‘social media’ education and research. Therefore, we describe SoMeRe as an example of knowledge media. Knowledge Media involves the processes of generating, understanding and sharing knowledge, using several different media, as well as understanding how the use of different media shape these processes (www.kmi.open.ac.uk). SoMeRe is set-up by researchers from the University of Twente (www.utwente.nl) and senior consultants from Sogeti (www.sogeti.nl). One of the main goals for developing and using SoMeRe is to explore and study scenarios for the future deployment of collaborative learning and continuing professionalization. How can we develop and apply social knowledge interactions successfully in our future academic education and research? In this paper we describe SoMeRe, the ideas behind it, how we employ it as an open collaborative centre in our master studies, but also as a research centre for continuing professionalization of ‘young communication professionals’ after they have finished their master study in the field of social media. Finally, we describe experiences with SoMeRe and describe our ideas about future use of social knowledge interactions in education and continuing professionalization.

2 SoMeRe: a collaborative research environment

The design of SoMeRe is based on the action-research method (see Figure 1). Zuber-Skerritt (1982) defined action research in higher education as a critical collaborative enquiry by reflective practitioners who are accountable in making the results of their enquiry public, self-evaluative in their practice, and engaged in problem-solving and continuing professional development. McNiff and Whitehead [3] offer a practical approach for practitioners to evaluate their own work with reference to criteria set by those practitioners themselves.

Clearly, practitioners rather than academic researchers conduct action research and therefore it is often referred to as practitioner-based research. Furthermore, because it involves practitioners thinking about and reflecting on their own work, it can be considered as a form of self-reflective practice (McNiff & Whitehead, 2002). Distinct competences needed to conduct action research include ‘being a reflective practitioner’ and ‘being accountable in making results public’ [6].

![Figure 1. The action-research method](image)

The major justifications for the promotion of action-research are that (a) social-media professionals have to plan the use and effects of each of social-media-based projects, (b) during a project they have to collect data about its use and effects, (c) after the project they have to reflect on this by analysing their data, and (d), by doing so, they bridge their daily professional work with broad academic theory [1]. It is expected that, eventually, social-media professionals will disseminate their findings by sharing examples of best practice, presenting their work and, if possible, publishing their research.

Zuber-Skerritt, and McNiff and Whitehead [7, 3] have discussed the methods, guidelines, techniques and instruments used in action research. More specifically, action research offers a systematic approach to introducing innovations in teaching and learning [4]. Usually, action research is iterative and distinct phases include problem identification, action planning, implementation, evaluation and reflection. Based on the results of reflection, a revised plan of work can be developed and an additional action-research cycle begins. However, in practice it is not easy for social-media professionals to carry out action research, especially if an academic-research attitude and corresponding research quality are expected. Social-media professionals have to develop their competences in ‘scientifically grounded’ action research. In addition, performance support for action-research is needed in order to enable social-media professionals...
to conduct their own action research. For this purpose, we designed *SoMeRe*.

The main research cycle in our method is the action-research programme. The programme consists of four phases. The first phase is called *Exploration*, in which *research themes* are explored; a social-media professional chooses a specific theme and produces the action plan for a research project. The second phase involves conducting the *Research Project*; there are four basic stages: *Problem analysis*, *Data collection*, *Data analysis*, and *Reporting* - these form an additional, nested, research cycle. An action-research programme can include one or more research projects. The third phase in the research programme is *Reflection*. It is expected that in this phase social-media professionals engage in connecting the research project’s results with existing knowledge or earlier findings. For example, it is expected that social-media professionals will produce a description of examples of best practice, based on their findings and experiences. In the fourth phase of *Sharing*, social-media professionals offer the results of their personal reflection - that is, insights, conclusion and products - to other users and professionals. For example, social-media professionals may present, discuss and re-use their work. In the action-research method, *Sharing* leads to new interesting research themes to be explored in future research projects.

The distinction that we make between a research programme and a research project as research cycles is based on the professional practice and competences of involved social-media professionals. We consider collaboration between social-media professionals in action-research programmes as one of the requirements for successful action research. Additionally, in general it is not possible for social-media professionals to carry out full collaborative research project cycles due to practical considerations - such as time issues, organizational constraints, planning problems and resources, and social-media professionals’ competences. Therefore, it is possible to ask a group of social-media professionals to develop a research programme together for one year, but to give individual social-media professionals the opportunity within such a programme to decide if, when, with whom, and how to carry out their own research projects. After conducting their specific action-research project, social-media professionals reflect together on their work and findings and share their findings and insights with others.

Based on this action-research method, we developed the conceptual design of *SoMeRe*. This design is presented in Figure 2. The different shapes in this figure represent the different types of process involved in the implementation of the system. *SoMeRe* consists of the portal, the project communities and research services like the instrument editor.

![Figure 2. Conceptual design of SoMeRe](image)

*SoMeRe*’s homepage gives access to projects and, through these projects, *SoMeRe* modules. However, for the purpose of this paper it can be conceptualised as an information *Portal* for action research in social media and access to the results of this research as carried out by the members of *SoMeRe*. Social-media professionals can become a member of *SoMeRe* and get access to the projects and research services.

The *SoMeRe* community is the platform for continuing professional development of social-media professionals through action research. The community offers a range of services through *SoMeRe*. Social-media professionals can set up or join research projects. They can share their experiences and they can use a forum to help them in solving problems quickly.

*SoMeRe*’s *Projects* is a collection of action-research projects. These provide access to the *Instrument Editor*, the *Data Collector* and the *Data Analyser*. The *Instrument Editor* allows social-media professionals to develop their online or offline instruments for data collection and, if they wish, add these to the collection of available instruments. The *Data Collector* offers functionality for the online gathering of data. The *Data Analyser* offers functionality for online data analysis and data export facilities to, for instance, SPSS™.

One of the main features of *SoMeRe* is that it includes a repository of psychometric scales stored in the *Database*. Scales are managed and can be re-used in *Projects*. The psychometric properties of scales are monitored and social-media professionals...
can select a psychometrically validated set of scales. SoMeRe records the history of the maintenance and use of items and scales in the Database. Social-media professionals can re-use existing scales or items in their projects and, at different project stages, examine, for instance, trends in the motivation of their users. Social-media professionals can also use scales (for example, a user-motivation scale) and benchmark their findings with those of other social-media professionals using the same scales. The use of trend analysis and benchmarking add to the quality of action research carried out by social-media professionals. SoMeRe’s functionality and Database also allow the developers of SoMeRe, as academic researchers, to re-analyse data across projects and produce new findings. Figure 3 shows the portal of SoMeRe. The design is simple and straightforward. The menu at the top gives access to general services. The ‘tab menu’ is personalised, based on the role of the SoMeRe member/user who is logged in. Therefore, the projects shown are those to which a particular user has access.

Figure 3. A sample screen of SoMeRe

SoMeRe serves as a knowledge medium as the following analysis shows. SoMeRe offers support for clusters of non-recurrent skills [2] in the following areas: the design of (questionnaire) instruments, the administration of instruments and the analysis of collected data. By providing existing instruments as templates (in the Database), SoMeRe supports the task of designing instruments. This allows different social-media professionals to design instruments at different levels of their own contribution, from complete re-use of existing instruments to re-use with modifications (using the Instrument Editor). This is similar to the use of different levels of scaffolding, as in the completion strategy used in instruction for learning computer programming and other subjects [2]. By providing the Data collector, SoMeRe supports the task of administering (questionnaire) instruments by automatic means, with some degree of control over the way these instruments are presented. The Data analysis function supports different levels of scaffolding in data analysis. In the current version of SoMeRe, there are two levels. First, social-media professionals can analyse data stored in the Database by using ready-made analyses, with results in the form of frequency tables, descriptives and graphs. Second, social-media professionals can export data into a format that can be used to conduct their own analysis, using specialist statistical packages (e.g. SPSS®) and/or general-purpose analysis packages (e.g. Excel®).

In addition, the communication facilities in the Research Community allow social-media professionals to share their results and experiences, as a means for collaboration and developing the knowledge of individual social-media professionals and the community at large.

3 Social knowledge patterns

As described here, SoMeRe offers a range of social, educational and research services. One main feature of these services we want to mention here concerns the topic of ‘social media interaction patterns’, or more specific here ‘social knowledge patterns’. These interactions are characterized by:

- computer interactions, for instance research projects, games, quests, and challenges;
- human communications, using for instance (micro-) blogs and chats to communicate with other professionals, mentors, developers, and experts;
- continuous support, for instance by means of instruction, examples or scaffolding techniques;
- personalisation, for instance by including notes, reflections, assessment results, mentor’s comments, and social-network profiles;
- co-creation, for instance being continuously ‘under development’ as wikis, rankings, or by means of news services; and
- maintenance, including current affairs and latest developments.

These patterns are expected to replace the current ‘educational content’ like chapters, articles, more and more. A basic social knowledge patterns model we apply refers to the interaction types and to
the relationships that are involved. This model is presented in Table 1.

Table 1. Basic social-knowledge patterns model

<table>
<thead>
<tr>
<th>Interactions</th>
<th>Collect Information</th>
<th>Relate Communication</th>
<th>Create Innovation</th>
<th>Manage Organization</th>
<th>Donate Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self</td>
<td>Wiki</td>
<td>Games</td>
<td></td>
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<td>Group</td>
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<td>Project</td>
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<td>Organization</td>
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<td>Network</td>
<td>Internal Social</td>
<td>Network Service</td>
<td></td>
<td></td>
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<tr>
<td>Community</td>
<td>Instrument</td>
<td>Warehouse</td>
<td>Blogs</td>
<td>E-Journal</td>
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</tr>
</tbody>
</table>

The interaction goals are based on Shneiderman [5]. His description of interaction types reflects the main goals of ‘research’ interactions. The relationships are expected to vary based on the educational or continuing professional context. The cells describe social knowledge interactions. Six examples are included in Table 1, but the choice of applicable interactions depends on the context of use.

4 The use of SoMeRe

The online centre SoMeRe opened in spring 2009. The first group of users consisted of five communication master students of the University of Twente working on their final master thesis in social media. The students were supported by their lecturers and external coaches. In the spring of 2010 we had 25 master students doing their final master thesis, about 20 students working on social media assignments in their master courses, about 15 researchers and about 30 external social-media professionals from diverse companies.

We are developing SoMeRe as a social medium applied in an educational setting. The topic of SoMeRe is also social media. A few examples of research themes are for instance: the use and effects of a social-media platform in a large Dutch bank in transition, the use of a social-media platform in a large competitive Finnish publisher, the effect of social-media marketing techniques on a web shop, and the use of social media in distance education in China. Clearly, the themes are quite broad, but social media is the central focus of all. In our studies we are working with a limited set of communication theories that play a central role in our communication curriculum. A few of them are: the adaptive structuration theory, uses and gratification, sense making, and the social learning theory. Experiences, discussion threads, FAQ, articles, online resources, and many more artefact types with respect to the topics and theories and models are shared amongst the members.

5 Conclusions and discussion

The goal for developing and using SoMeRe is to explore and study scenarios for future deployment of collaborative learning and continuing professionalization. How can we develop and apply social knowledge interactions successfully in our future academic education and research?

At the time of writing this paper, we have not yet carried out formal evaluations of the method and the use of SoMeRe as part of the projects. Furthermore, we are constantly working on the improvement and extension of SoMeRe’s services. The comments from users, the ongoing monitoring of the use of SoMeRe and formative evaluations provide us with input for the continuing development work. As an example, a recent development is the realisation of SoMeRe’s research support for qualitative research. Based on the first users’ remarks, however, it appears that SoMeRe is greatly assisting students in their ‘development’ and young professionals in their continuing professional development.

Interviews with members from co-operating organizations indicate that the SoMeRe network is highly appreciated as an important means for their innovations in the use of social media.

In conclusion, the use of SoMeRe can empower social-media professionals to conduct action research and thereby innovate in relation to the way in which they work. If we succeed in the integration of action research in the daily work of young professionals, it might contribute to a further quality improvement in higher education and the realisation of sustainable innovation in organizations.

References:


