Role of the educator in social software initiatives in further and higher education: A conceptualisation and research agenda

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Abstract

Higher and further education institutions are increasingly using social software tools to support teaching and learning. A growing body of research investigates the diversity of tools and their range of contributions. However, little research has focused on investigating the role of the educator in the context of a social software initiative, even though the educator is critical for the introduction and successful use of social software in a course environment. Hence, we argue that research on social software should place greater emphasis on the educators, as their roles and activities (such as selecting the tools, developing the tasks and facilitating the students’ interactions with these tools) are instrumental in a social software initiative. To address this gap, we have developed a research agenda on the role of the educator in a social software initiative. Drawing on role theory, both as the basis for a systematic conceptualization of the educator role and as a guiding framework, we have developed a series of concrete research questions that address core issues associated with the educator roles in a social software context. We have provided recommendations for further investigations. By developing a research agenda, we hope to stimulate research that creates a better understanding of the educator’s situation and develops guidelines to help educators carry out their social software initiatives. Considering the significant role an educator plays in the initiation and conduct of a social software initiative, our research agenda ultimately seeks to contribute to the adoption and efficient use of social software in education.
Introduction

Social software tools such as wikis, blogs and social networking sites are increasingly being used in the further and higher education domain and have received widespread attention. A number of reports in the last years have shown how social software tools positively contribute to a wide range of teaching and learning practices (Kieslinger, 2009). For example, students use blogs as online reflective diaries to describe their own learning experiences as well as to comment on learning logs kept by other course participants (Minocha & Kerawalla, 2010), or student teams or entire courses use wikis to collaboratively create and continuously refine course content (eg, Thomas, King & Minocha, 2009; Trentin, 2009). It is widely accepted that social software’s ability to support conversational interaction and social feedback among students and to enable social networks and relationships offers significant potential for enhancing teaching and learning practices (McLoughlin & Lee, 2007).

Introducing social software into a course environment has considerable implications for the role of the educator. Educators in a social software initiative not only take on the role of facilitators, who, as in traditional learning contexts, initiate and guide the knowledge construction process among students (Choy & Ng, 2007), but also take up new roles, such as acting as technologists who select, set up and maintain the software tools for their students (McGee & Diaz, 2007). Other accounts describe how educators act as course designers by carefully selecting and matching the pedagogy appropriate for the particular tools used (JISC, 2009), or act as online role models who demonstrate their students appropriate forms of interaction in these environments (Hurlburt, 2008).

A considerable amount of attention is placed on the different ways social software can be used and the value these initiatives can add to teaching and learning, but it is the individual educator carrying out different roles and activities who enables these initiatives. In a large number of cases, social software initiatives are not conducted by dedicated support teams but by individual educators who carefully integrate the tools into the course environment and provide the necessary student support (Minocha, 2009a). The diverse roles of the educators are, therefore, crucial for the efficient and sustainable use of these tools in a course environment.

To investigate the role of the educator in a social software initiative requires a careful conceptualization of the role phenomenon. Educators traditionally perform a considerable array of teaching, research and administrative roles (eg, course development, lecturing, marking, serving on committees, and acting as journal referees or editors). Compared with corporate environments, job roles in the further and higher education domain often lack clear definitions and boundaries (Taylor, 1999). The principles of academic freedom and self-administration allow educators to select and perform different roles with a high level of independence. This independence allows educators to integrate their expertise and creativity into their work, such as to advance teaching practices and research agendas. However, this independence can create considerable uncertainties among educators and overwhelm them with the range and diversity of tasks (Winter & Sarros, 2002). Minocha (2009b) describes a range of these uncertainties educators may experience when they are involved in a social software initiative: uncertainties about the extent to which they should monitor student interaction; uncertainties due to blurring of the boundaries between personal and academic life when interacting with students on social networking tools such as Facebook; and uncertainties about mechanisms to deal with inappropriate content (eg, pictures, text), especially when using social software tools that are openly accessible, such as the picture-sharing site Flickr.com. Educators cannot easily control the content students create as part of a course, or the content students are exposed to, and there is considerable uncertainty about the legal implications such inappropriate activities could create for the institution.

Considering the uncertainties educators experience in a social software initiative, it is necessary to develop a research agenda that focuses on the educators in these initiatives, rather than only
focusing on the tools and the pedagogical effectiveness of the tools. In this paper, our aim is to develop a research agenda to investigate the changing role of the educator in a social software environment. Drawing on role theory, both as the basis for a systematic conceptualization of the educator role and as a guiding framework, we develop a series of concrete research questions that address core issues associated with an educator’s roles in a social software context. We hope that the conceptualisation of educator roles and the research agenda will stimulate and guide future research.

The paper is structured as follows. We discuss the characteristics of social software and describe the predominant ways in which individual social software tools are used to facilitate teaching and learning in the further and higher education domain. Following this, we outline the core concepts of role theory and its predominant research approaches. We show how the theoretical propositions and research perspectives of role theory apply to the role of educator in a social software initiative and how they lead to several salient research questions. The paper concludes with recommendations for further investigation of the role of the educator and we provide practical recommendations for educators carrying out social software initiatives.

Social software
Following Parameswaran and Whinston (2007), we define social software as a category of ‘applications and services that facilitate collective action and social interaction online with rich exchange of multimedia information and evolution of aggregate knowledge’ (p. 762). Blogs, wikis, social networking websites such as Facebook, YouTube, slideshare and Flickr, and social bookmarking sites (eg, Delicious) are examples of some of the tools that are being used to share and collaborate in educational, social, and business contexts. A distinguishing attribute of social software is that the content is user-generated; hence, this content is highly dynamic with frequent and often unpredictable changes. As an example, a discussion thread in a forum is created through user interaction and the flow of the discussion often takes an unpredictable direction. Further, the mechanisms for monitoring and guarding content quality are often distributed, with fellow users reviewing each other’s contributions. A good example is the wiki-based quality control mechanism where every user is able to refine and correct contributions made by others. From a technical standpoint, social software applications are mostly lightweight tools which are accessed through a Web browser, and are thus highly portable and platform independent.

Despite their similarities, different social software tools have unique features which create distinct contributions for teaching and learning. Four core contributions of social software to the educational domain have been identified by McLoughlin and Lee (2007): (1) **build connectivity and social rapport**: students build social connections and develop supportive relationships (eg, using social networking tools like Facebook); (2) **facilitate collaborative information discovery and sharing**: students share their learning resources with each other (eg, using social bookmarking tools); (3) **support content creation**: students collaboratively create and share content with each other (eg, using a wiki); and (4) **knowledge and information aggregation and content modification**: students easily syndicate and aggregate diverse sources of content (eg, in a blog). Details on how social software tools are commonly used in higher education teaching and learning are provided in Table 1.

The diverse contributions of social software tools enable their usage in a wide range of course environments (Minocha, 2009b). Social software tools are used to augment the traditional face-to-face learning experience as well as to deliver or support distance-education courses. For example, students in regular lecture-based courses are provided with blogs or wikis so that they can engage in collaborative knowledge creation outside the lecture or seminar (Du & Wagner, 2007). On the other hand, blogs or discussion boards can be used in distance or online learning courses as a platform for facilitating peer support among students and to provide a successful
avenue for overcoming the feeling of isolation among distance students (eg, Dickey, 2004; Kerawalla, Minocha, Kirkup & Conole, 2009). While the particular contributions of social software tools might differ between different programmes of study, there is no inherent limit regarding the course context or subject areas where social software is (or can be) used.

With the literature focusing on describing the diversity of social software tools and learning scenarios, only few studies have addressed the role of the educator in these environments. Notably, studies on the educational use of wikis describe how educators and students become co-creators of learning content or partners in learning (Frydenberg, 2008), and it is recommended that educators in these environments give up their authority and instead focus on the monitoring of student interaction (Jones & Gelb, 2009). Studies on the educational use of blogs

Table 1: Social software tools and their educational uses (adapted from Franklin & van Harmelen, 2007; McLoughlin & Lee, 2007)

<table>
<thead>
<tr>
<th>Social software tool and description</th>
<th>Educational use/value</th>
</tr>
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<tbody>
<tr>
<td>Discussion forum: Discussion forums allow users to post and reply to individual messages, who together create a threaded form of discourse.</td>
<td>• To discuss course or project related questions in small or large teams.</td>
</tr>
<tr>
<td>Blog: A web page presenting posts in reverse chronological order (akin to diary entries) that allows a single or a group of authors to write and publicly display time-ordered notes or posts.</td>
<td>• To reflect, connect with others, or as an e-portfolio or journal.</td>
</tr>
<tr>
<td>Wikis: A simple web page anyone can edit that enables a group of individuals to create a collective resource (eg, wikipedia.org). Any edits can be easily reverted.</td>
<td>• To comment on important posts made by other students.</td>
</tr>
<tr>
<td>Social Bookmarking: A way to store and organize bookmarks on the web, allowing people to build up collections of classified and organised web resources, and share both the bookmarks and tags with others (eg, delicious.com).</td>
<td>• To build up a corpus of interrelated knowledge via interlinked posts and comments.</td>
</tr>
<tr>
<td>Video and Podcasting: Video and Podcasting services store user-contributed media, and allow users to search for and display content (eg, youtube.com, podcastalley.com)</td>
<td>• To produce collaboratively edited material or for documenting group projects.</td>
</tr>
<tr>
<td>Image sharing: Web-based image sharing tools allow users to upload, tag, share, annotate, and discuss images and photos (eg, flickr.com)</td>
<td>• To enable the incremental accumulation of knowledge by a group.</td>
</tr>
<tr>
<td>Social Networking: Social networking sites are integrated suites of tools allowing users to create profiles and form connections with other people. Images, status updates, event invitations, emails, and videos can then be shared with others (eg, facebook.com)</td>
<td>• To organise bookmarks.</td>
</tr>
<tr>
<td>Micro-blogging: Micro-blogging allows the posting of short notices which other users of the service can subscribe to (eg, twitter.com)</td>
<td>• To share web resources with others.</td>
</tr>
<tr>
<td>Social Networking: Social networking sites are integrated suites of tools allowing users to create profiles and form connections with other people. Images, status updates, event invitations, emails, and videos can then be shared with others (eg, facebook.com)</td>
<td>• To establish a useful collection of resources in a project team.</td>
</tr>
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highlight how educators should act as online role models (Hurlburt, 2008). Research on the educational use of discussion boards has demonstrated more focused interest in the educators’ roles and activities, primarily owing to the relatively long history of using discussion boards in learning management systems. Although students are capable of taking responsibility for the development of online discussions without significant educator intervention and participation (Kay, 2006), several studies and guidelines outline how educators should organize discussion forums, monitor student interactions, and, if necessary, re-focus discussions by posting intermit-tent feedback (Dennen, 2005; Roberson & Klotz, 2002). Clearly, with the exception of studies on discussion boards, most research on social software focuses on tools and learning scenarios, without explicitly considering the different roles an educator performs, or discussing how the diverse educator roles relate to goals and objectives of a social software initiative.

While the social software research so far has put little emphasis on the role of the educator, this topic has received a lot more attention in the wider online learning literature. Several explicit frameworks outline the considerable array of roles educators perform in online environments. Berge’s (1995) frequently referred to framework highlights how educators in an online learning context perform a range of pedagogical, managerial, social and technical roles. Hence, an educator undertakes various activities to facilitate the learning processes; to organize and co-ordinate the student interaction; to promote a community feeling among students; and to oversee the technological aspects (eg, technical support) of the online environment (see Table 2).

De Laat, Lally, Lipponen and Simons (2007) have reviewed frameworks that describe the diversity of educator roles. While most of these frameworks interpret the online educator roles as categories of activities, Heuer and King (2004) expand this notion by focusing on the expectations others have towards the educator, rather than on actual activities. Hence, their research, identi-

<table>
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<tr>
<th>Range of roles of the educator</th>
<th>Activities in the roles</th>
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| Pedagogical: facilitate learning through interactive activities, critical reflection, online feedback | • Design the learning activities  
• Provide resources and schedule for the online activities  
• Conduct training, if required, for using the online environment  
• Monitor student participation, both quality and frequency  
• Provide constructive feedback to the students and, thereby, support reflection |
| Social: facilitate the creation and growth of an online student community through frequent and positive communication | • Facilitate student to student interactions through prompts and feedback  
• Set up clear expectations for student presence: frequency and the quality of inputs  
• Set up expectations for educator presence  
• Resolve any conflicts if they arise |
| Managerial: facilitate the procedural, organizational and administrative tasks to set up and run the online learning activities | • Set up norms and protocols for student participation  
• Set up and communicate the schedule for assessment  
• Carry out regular assessment of the student performance  
• Interact with other stakeholders within the institution who are directly or indirectly associated with the online learning activity or environment  
• Track student satisfaction |
| Technical: provide technical support | • Provide technical support to students  
• Communicate technical issues and liaise with the technical support team of the institution  
• Resolve technical issues before the course activities commence  
• Develop resources such as user guides and frequently asked questions to support the platform use |
fying the online educator role from the student perspective, conceptualises the educator as a planner, model, coach, facilitator and communicator.

The literature provides us with a range of descriptions on the different roles educators perform in a (general) online learning environment but it is not clear to which extent these roles apply to educators in a social software context. Although social software tools to some extent constitute an online environment, their particular characteristics create a distinct context for educators. Integrating these tools into a learning context provides students with a high level of independence for creating, consuming and sharing of content (Greenhow, Robelia & Hughes, 2009). While in traditional online-learning environments the educator provides the learning materials, social software tools position the students as both a content consumer and a content creator, thereby challenging the educators’ established roles. The fact that social software tools are often publicly accessible and not owned and operated by the educational institutions constitutes an important point of distinction with traditional university-operated and controlled online learning environments. The opportunities for controlling public social software environments and the respective student interaction are clearly limited, requiring the educator to perform different tasks to guide the learning activities. Also, while online teaching is based on a distance education paradigm, social software is often used not for replacing, but to supplement face-to-face interaction, requiring the educators to perform both online and offline roles. Furthermore, often, it is the individual entrepreneurial educators who carry out social software initiatives (Minocha, 2009b), where the initiatives are not the result of a strategic course development (as online learning courses generally are) or an institution-wide strategy. Consequently, the educator has to carry out additional tasks and perform a variety of roles.

Social software research to date has made considerable progress in understanding how social software can add to teaching and learning practice. However, studies specifically focusing on the role of the educator in social software initiatives are still very scarce. With the individual educator being the driving force behind the majority of social software initiatives, understanding his or her roles and tasks in these environments is critical. In the remainder of this paper, we focus on conceptualizing the role of the educator in a social software initiative and mapping out a research agenda for future investigations. In the next section, we illustrate role theory as a viable theoretical underpinning to understand and systematically investigate the educator roles.

**Role theory and its underlying concepts**

Biddle (1979) defines a role as ‘those behaviours characteristic of one or more persons in a context’ (p. 58). Role theory summarizes a body of sociological research that focuses on identifying the circumstances and mechanisms under which individuals perform particular social or organizational ‘roles’, such as the role of a friend or the role of a supervisor. Role theory is defined as ‘a triad of concepts: patterned and characteristic social behaviours, parts or identities that are assumed by social participants, and scripts or expectations for behaviour’ (Biddle, 1986, p. 68). Research on role theory encompasses ‘socio-cultural and anthropological investigations, which pertain to the way people are influenced in their behaviours by the variety of social positions they hold and the expectations that accompany those positions’ (Barker, 1999). Social groups often formalize these expectations as rights and privileges, and also norms or obligations, specifying how a person should behave in a social position in relation to persons occupying other positions in the social structure (Ashforth, 2001).

The behaviours of an individual, his or her social position, and the expectations towards the individual form the core concepts of role theory and conceptualise the different dimensions of the role phenomenon (Biddle, 1986). Role behaviour, social position and role expectations are not independent concepts, and, in fact, their relationships have been intensively examined. Role
behaviour is often at the centre of the investigation, and studies have focused on how social position and expectations of others influence the behaviour of an individual. Especially the impact of one’s social position or social status has received considerable attention, with studies confirming how aspects of gender, ethnicity, sexual orientation, and social class shape individual behaviour (Lopata, 1995). Furthermore, studies demonstrate the importance of others’ expectations in shaping a person’s behaviour in a workplace context (Mantere, 2008). In addition to investigating the relationships between behaviour, social position and expectations, role theory also focuses on how these different role aspects relate to the context in which an individual is situated. Work-based studies have especially shown how the organizational context shapes both the expectations individuals have towards a role (Dierdorff & Morgeson, 2007) and the actual role behaviour of an individual (Wickham & Parker, 2007).

Conceptualising a role as a triad of behaviours, social position and expectations opens up opportunities to understand a range of issues people experience as part of their social or work life. Within role theory, the mismatch between different role aspects is considered a major source for stress and conflict (Sieber, 1974). Role conflict occurs when diverse expectations impinge simultaneously, resulting in ‘dissonance’ for the individual who attempts to actively combine dissimilar roles. Role conflict can also occur when there is a mismatch between the expectations of others and the actual role behaviour. For example, a mismatch between a superior’s role expectations and one’s own actual role behaviour can become a source of ‘role strain’ for the individual, often leading to role conflict and perhaps dispute (Lynch, 2007). Role overload describes a situation where a person is faced with a set of roles that are too complex and demanding, leading to stress and anxieties. Role overload can also occur when a person is faced with too many expectations. Role ambiguity describes a situation where the expectations and descriptions for adequate role performance for a given position are unclear (Davis, 1997), or incomplete or insufficient to guide behaviour (Biddle, 1986). Each of these conditions has been identified as a source of stress and anxiety for the individual. The concepts of role theory not only explain individual behaviour, but also allow for the analysis of interactions between individuals, and can provide explanation of several social or workplace-related issues.

To summarise, role theory with its well-established framework and research perspectives, offers a sound theoretical basis for understanding behaviours and activities in a social and workplace context. By conceptualising the role as a multi-dimensional concept, role theory helps to systematically analyse and explain patterns of behaviour and possible sources of conflict. Hence, we will use the frameworks and research perspectives of role theory to conceptualise the role of the educator in a social software initiative and develop an agenda for future research.

Conceptualising the role of the educator and developing a research agenda

We will now conceptualise the role of the educator in a social software initiative by following the established frameworks and research perspectives of role theory. Our conceptualisation commences by first applying Biddle’s (1986) core concepts, that is, behaviour, social position and expectation, to the role of the educator in a social software initiative. The discussion of each of these dimensions raises a number of research questions that should be answered to gain a deeper understanding of the educator role. In addition to focusing on the educator roles and their interaction, our conceptualisation recognizes the particularity of the social software and educational context. As social software tools provide unique affordances and are introduced for specific pedagogical objectives, it is of interest to identify how the choice of tools and implementation objectives impacts on the educator role. Figure 1 displays our conceptualisation of the educator role and its individual dimensions are further discussed in relation to the research questions derived below.
The role behaviour of the educator

Discussions on the role of the educator in the social software literature are largely focused on the behavioural aspects of the role concept. Studies describe how educators in these environments monitor student interactions (Jones & Gelb, 2009), or act as online role models (Hurlburt, 2008). However, the descriptions of the behavioural changes are mostly limited to illustrating a few, selected behaviours without consideration of the wide range of role behaviours an educator carries out in a social software initiative. This focus on the behavioural aspects is equally predominant in the online learning literature where the role of the educator is conceptualised through specific pedagogical, managerial and technical behaviours (e.g., Berge, 1995), as discussed earlier (see Table 2). While the existing online learning frameworks show the diversity of role behaviours within an educator role, there are additional roles that an educator may perform in a social software environment. In order to investigate the role of the educator in a social software initiative, it is critical to identify the range of behaviours educators perform. Therefore, emanating from the concept of ‘role behaviour’ in the conceptual framework, is the first research question:

Research Question (RQ) 1.1: What are the behaviours that educators perform as part of a social software initiative?

The social position of the educator

The social position is another important facet which is required for the systematic description of the role of the educator. Formal aspects such as rank, job title, and committee memberships and the status of this formal position, but also informal aspects such as reputation and relationships with other stakeholders are important characteristics that define the social position of an educator. As social software initiatives are commonly initiated and carried out by individual educators (Minocha, 2009b), their involvement is not likely to be part of their formal job descriptions. Consequently, in the case of a social software initiative, the status and the reputation and relationships of the individual educator with other stakeholders in the institution (e.g., policy makers, technical support team, direct supervisors) are of primary importance. The educator’s reputation and relationships are likely to provide access to expert advice, institutional support and possibly even funding for the social software initiative. For an educator, the social position and status may facilitate support and resources (e.g., manpower, time, funds) for conducting the social software initiative and the associated activities that others may have to carry out themselves. Hence,
considering the effects of the social position on the educator’s behaviours and activities can give important insights into the reasons for success and failure of social software initiatives.

RQ 2.1: How does the social position of the educator influence role behaviour in a social software initiative?

The relationship between social position and role behaviour is an important area of investigation as any mismatch between these two facets of an educator role may result in role overload. In the educational context, the risk of such a mismatch lies in the extent to which additional roles are not formally recognised as part of the educator’s pedagogical and administrative responsibilities and the social position of the educator. Not having these additional roles formalised in job descriptions may result in role overload in which the capacities of the educator are exceeded. The introduction of a social software initiative requires a large number of additional activities (McGee & Diaz, 2007). Failing to get a recognition for these additional efforts in the job description and, in addition, if there is lack of institutional support to the initiative, it may create considerable stress and anxiety among educators in balancing the formalised responsibilities and the activities involved in carrying out a social software initiative. Such scenarios give rise to the following research question.

RQ 2.2: What are the effects of a mismatch between the formally recognised roles and actual role behaviour of an educator in a social software initiative?

The expectations towards the role of the educator

The third major concept of role theory is related to role expectations. In the context of social software initiatives, this aspect is of particular interest. To the best of our knowledge, there has been no research in the systematic analysis of role expectations. However, there are studies that suggest, as anecdotal evidence, expectations students have towards the educator in a social software context. Choy and Ng (2007), for example, highlight how students expect the educator to actively use the wiki environment to raise important questions and initiate discussions. As the students are the main stakeholders of the educator’s activity, identifying their expectations towards the role of the educator in these environments helps in understanding the network of expectations in which an educator is situated. These expectations could range from expecting feedback on every student contribution (eg, educator’s comments on student blog posts), regular interventions by the educator in the dialogue in discussion forums, and the educator being available to address any technical support queries that the students may have.

RQ 3.1: What expectations do students have towards the role of the educator in a social software initiative?

Identifying the student expectations will help in understanding the role behaviour facet of the educator role and in avoiding role ambiguities. Role theory has clearly identified how others’ expectations influence the range of roles a person performs (Biddle, 1986). With the students being the main stakeholders of the social software initiative, their expectations are likely to have a strong influence on the behaviour and prescribe activities of the educator, that is, the behaviours that ought to be performed by the educator. Investigating how students’ expectations influence the educators’ role behaviour would clarify the range of educator role behaviours in a social software initiative.

RQ 3.2: How do the expectations of students influence the role behaviour of the educator in a social software initiative?

Students may have used social software before entering the higher education system. Therefore, they may have formed expectations about specific communication norms and practices of interacting with certain social software tools. Consequently, educators often find themselves overwhelmed by the quantity of student communication and the rise in their expectations for immediate response (Anderson, 2008), for example, instant response to queries raised in microblogs (eg, in Twitter). Following role theory, the mismatch between role expectations and role...
behaviour constitutes a major source of role strain for the educator. Considering the potential implications that are created by the discrepancy between students’ expectations and educators’ behaviour, a dedicated investigation of the impact of this discrepancy is warranted.

RQ 3.3: What are the effects of a mismatch between student’s role expectations and the educator’s role behaviour?

The relationship between social software initiative and educator role

Role theory, as we have seen, enables a conceptualisation of the different facets of the educator role and their inter-relationships. Role theory also emphasises that the role of an educator should be investigated in a particular context. A social software initiative is a multi-dimensional phenomenon that can be characterised by its pedagogical aims, the technologies employed and the stakeholders involved. To conceptualise the impact on the role of the educator, we need to focus on contextual aspects of the social software initiative: particularly, the choice of social software tool(s) and the specific teaching and learning objectives (see Figure 1).

A considerable variety of social software tools with distinct affordances are used to support teaching and learning. For example, blogs allow people to create content individually and communicate with others via commenting; in contrast, wikis enable people to create content collaboratively as well as engage in discussions about the content; social bookmarking sites enable the aggregation of learning resources; image-sharing sites enable the display of student work. Although it can be expected that an educator in a blogging environment might be more focused on providing social support than in a wiki environment, the social software literature so far has not investigated how the different tool characteristics influence the role behaviour of the educator.

RQ 4.1: How do the characteristics of the social software tool influence the role behaviour of the educator?

The different social software tools are not only characterised by their affordances, but also the way these tools are used and associated with on the Web. Whereas tools such as discussion boards or wikis are largely used in the context of thoughtful deliberation, students use social networking sites (e.g., Facebook) and micro-blogging applications (e.g., Twitter) largely for socialisation and networking. Hence, students’ prior experiences in using these tools are likely to create distinct expectations regarding the range of activities educators should engage in when using these tools.

RQ 4.2: How do students’ prior experiences with particular social software tools influence role expectations?

In a blended teaching and learning context, students interact with educators in face-to-face settings and in a social software environment. Students, therefore, develop particular expectations towards the role of the educator based on the interactions in a traditional teaching and learning set up. However, the expectations in a face-to-face setting are likely to be different from the expectations in the context of a social software environment. Consolidating these different expectations is a particular challenge for the students as well as the educator.

RQ 4.3: What are the effects of a discrepancy between the expectations students have towards the educators in a face-to-face environment and in a social software initiative?

The impact of the implementation objectives on the role of the educator

The objectives for integrating a particular social software tool are also likely to influence the range of roles an educator performs. McLoughlin and Lee’s (2007) catalog of contributions of social software indicates the diversity of objectives for implementing particular tools: for example, to build social connectivity, to facilitate collaborative information discovery, to support content creation, and to encourage knowledge aggregation. An educator who introduces a blog to create social connectivity among students is likely to perform different and much more supportive role behaviours within these blogs than an educator who ask students to use a blog as project-diaries. The educator’s interventions in a wiki activity where students are collaboratively developing an
essay will be different from a situation where the students are using wikis as a means to record their team’s progress and meeting notes in a group project. The extent to which an educator performs social and motivational roles and interventions will be considerably different depending on the objectives of adopting social software within the course or a learning activity. Therefore:

RQ 5.1: How do the teaching and learning objectives of the social software initiative influence the roles of the educator?

The research agenda for investigating the role of the educator in a social software initiative constitutes the questions RQ1.1 to 5.1. The research agenda focuses on the inter-relationships between the concepts of the role theory (Figure 1): role behaviours, social position and role expectations. The research questions differ in their underlying focus by concentrating on the factors that impact on the educator role: investigating the educator role in terms of role behaviours and expectations towards the educator, considering the influences on the educator role, and assessing the consequences of mismatches between the various concepts of the role theory on the educator role.

Table 3 summarizes the research questions and groups them in accordance with their underlying focus to highlight the diverse range of research questions in the research agenda developed in this paper.

Discussion
There is little doubt about the value of incorporating social software into teaching and learning practice. Social software tools can provide significant support to both traditional teaching and distance education programs by facilitating interaction, collaboration, and the formation of social networks among students (e.g., McLoughlin & Lee, 2007; Minocha, 2009a). Although the tool characteristics offer tremendous opportunities, these are hardly brought to fruition without educators who embed the tools in a larger learning context, who ensure the suitability of the tools, and who monitor the student engagement with the tools. Unlike other educational innovations such as the introduction of course management software (or virtual learning environments), or the creation of institutionally driven online learning courses, social software initiatives are largely created by individual entrepreneurial educators who seek to use the potential of these tools to enhance teaching in the courses they are responsible for (Schroeder, Minocha & Schneider, 2010).

<table>
<thead>
<tr>
<th>Focus of research question</th>
<th>Summary research question</th>
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</thead>
<tbody>
<tr>
<td>Investigating the educator role</td>
<td>RQ1.1: investigating educator behaviour</td>
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<tr>
<td>Considering the influences on the educator role</td>
<td>RQ3.1: investigating expectations towards the role of the educator</td>
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<td></td>
<td>RQ2.1: influence of social position on role behaviour of the educator</td>
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<td></td>
<td>RQ3.2: influence of student expectations on role behaviour of the educator</td>
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<tr>
<td></td>
<td>RQ4.1: influence of social software tool characteristics on educator behaviour</td>
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<td></td>
<td>RQ4.2: influence of students’ prior experiences on role expectations</td>
</tr>
<tr>
<td></td>
<td>RQ5.1: influence of teaching and learning objectives on educator role</td>
</tr>
<tr>
<td>Assessing the effects of mismatches on the educator role</td>
<td>RQ2.2: mismatch between social position and the actual role behaviour of educator</td>
</tr>
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<td></td>
<td>RQ3.3: mismatch between student’s role expectations and the actual role behaviour</td>
</tr>
<tr>
<td></td>
<td>RQ4.3: mismatch between student expectations in different interaction environments (e.g., face-to-face and within a social software tool)</td>
</tr>
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</table>
Although educators initiate and drive a social software initiative, their roles within such an initiative are under-conceptualised. The application of role theory has enabled us to conceptualise the diverse dimensions of an educator’s role. The conceptualization has led to the development of a research agenda and a range of research questions that are salient for the future investigation of the educator’s role in a social software initiative. The conceptualisation and generation of the research agenda are relevant for educational researchers but also show the range of practical implications for educators involved in social software initiatives. Helping educators to disentangle their complex roles as behaviours, social positions, and expectations not only provides an awareness of their situation and the constraints in which they operate but also helps to explain some of the problems they encounter. Several of the difficulties educators experience can be identified as symptoms of role overload, role ambiguity or role conflict, which we now elaborate.

One of the core problems educators face during the introduction of social software tools is related to the concept of role overload: as social software initiatives are largely initiated by educators in addition to existing course commitments (Minocha, 2009b), these initiatives carry a high risk of over-exerting the resources available to the individual educator (McGee & Diaz, 2007). Unfortunately, the necessary institutional support, for example, providing technical and administrative assistance to the educator, is often not available. Adding to the risks of role overload is the fact that the educational community to date has very little experience in the efficient use of these tools. For the majority of these tools, a high level of role ambiguity exists, as little research and guidance is available on the roles and activities an educator should perform to achieve the expected benefits. In addition to formal research, one way to address this uncertainty is through sharing of the experiences by those educators who have already used these tools in a course environment. Fortunately, those educators are often very willing to share their experiences, as can be seen in the growing number of reports and blog-entries (for example, see http://scienceoftheinvisible.blogspot.com), although, the focus of these publications to date is largely focused on the tool use and less on the associated educator roles.

Another important issue is related to the expectations of students in these environments and the potential for conflict between student expectations and the actual educator behaviour, particularly with regards to the immediacy of educator responses and their level of engagement (Anderson & Elloumi, 2008). There is no doubt that educators will need to adjust their behaviour to the particular circumstances of these social software environments; however, in order to avoid such role conflict and misunderstandings it would be advisable to educate the students about what kind of interventions they can realistically expect from the educator (Anderson & Elloumi, 2008). While some issues, such as the lack of institutional support cannot easily be solved by the individual educator, other issues, such as the unrealistic expectations from students can be addressed. Educators who are involved in a social software initiative are advised to take these and other role issues into account and actively focus on addressing them for the success and sustainability of the initiatives.

The role issues that we have highlighted in this paper are significant as they can result in the dissatisfaction of an individual educator (e.g. role overload) and can inhibit the adoption of social software into the teaching and learning contexts. By developing a research agenda for the future investigation of the role of the educator, we also hope to contribute to raising the awareness of managers and policy makers about the diverse roles that an educator performs as part of a social software initiative, the support an educator requires, and the consequences of the institutional support on the transferability and sustainability of the social software initiatives. The research questions may also sensitize the policy makers of the potential change management challenges that they may face in the deployment strategy of social software initiatives.
Conclusions
Our present work contributes to the growing body of research on the educational use of social software in three important ways: (1) we have highlighted the importance of focusing on the role of the educator. While the current literature nearly exclusively focuses on the characteristics and contributions of social software tools, we argue that the roles of the educator are an important element in a social software initiative. (2) By drawing on role theory, we have introduced a well-established framework from the sociology literature into the social software discourse in the educational domain which allows for a systematic conceptualisation of the educator role. (3) We have developed a research agenda. Based on the insights from role theory, we have identified several salient issues concerning the role of the educator in a social software environment and have developed an agenda for future investigations.

Although our application of role theory has highlighted a number of core issues and critical research questions, we have by no means exhausted the potential areas of research the body of theory presents us with. For example, further conceptualizations could integrate the impact of other contextual factors, such as the effects of: course discipline, course content (online or otherwise) in conjunction with the social software initiative, study format (part-time or full-time study, face-to-face or distance education), student characteristics (under-graduate or post-graduate, level of social software skills), or the combination of one or more social software tools that may be used in an initiative. Future research could also consider the impact an educator’s individual personality has on the range of roles he or she performs. Another very important and promising research endeavour is the question of how these different educator roles influence the success and sustainability of the social software initiative. Such an investigation would provide insights into the significance of particular role behaviours and lead to the development of guidelines for educators. Role theory and its range of concepts and frameworks, as proposed in this paper, provide the appropriate basis for such investigations.

The educator is critical for the successful and sustainable use of social software for teaching and learning. Although the social software tools are readily available, it is the educator who purposefully introduces these tools into the context of higher and further education. The decision of adopting a particular tool, the development of matching learning activities, the skills of the educator in using the tool and training the students, and the moderation and facilitation within these tool environments are all roles and activities that directly contribute to the success of a social software initiative. It is very important for future research on social software to consider the importance of the educator as part of a social software initiative and to recognize the diversity of roles educators perform in this context. Although we have focused on further and higher education in this paper, the issues that we have raised are also applicable for a teacher’s role in school education where social software is being increasingly integrated and research has been commissioned to investigate the potential benefits (social software) technologies and how their use can be effectively and safely realised.

References


