

Unpacking Social Media to explore professionals work practice

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Abstract. Organizations are inspired by the massive social media use in the private domain and try to filter interactions and knowledge sharing in social media also for professional purposes. Even if the interest in social media is strong in the private domain, the use is far less widespread in organizations. The trajectory of traditional information spread through web platforms into use of new and open social media platforms stresses organization's and professionals to enrich user-generated content and take part in and enhance social networking. This study explore how social media is used in organizations and how professionals' practice is challenged by use of social media of reaching out, sharing knowledge and interaction with target groups. Through illustration of two research cases; municipality-citizens' interactions and university-industry collaborations, three affordances of social media practice are emerging; incentives, perceptions and openness, where social media is constituted as the boundary object.

Keywords: Social media practice, affordances, boundary object, e-learning, municipality, higher education

1 Introduction

Social media has become part of our daily life and is continually practiced for communication and dialogue time- and space independent [1], [2]. Today, social media as Facebook, LinkedIn, Twitter, Skype, Chats etc. opens up for new virtual places where many people spend their time and live their lives [3]. The widespread use of social media in private domains also challenge use of social networking, interaction, distribution of information and knowledge sharing in organizational work [4], [5]. Meanwhile the influence of social media is widely spread in private use it is less pervasive in work organizations [4], [6]. Municipalities in the public sector develop new strategies for social media use aiming to reach out to citizens, but research show that the implications of these new social software technologies are not yet well applied in everyday work [6], [7], [8]. Also, when universities in higher education are using traditional learning management systems (LMS) for e-learning they tend to replicate traditional classroom pedagogy with knowledge delivery, instead of considering a more learner-generated content through use of more open social software [9], [10], [11]. Another aspect is that IT management in both these

organizations tend to treat social media as stand-alone applications rather than integrated systems in the regular IT infrastructure, and therefore “forget” to support professionals everyday use [7].

Social media software span over a wide range of technologies with roots in a social computing context, even before Internet entered the digital arena [11]. There is a complexity in what type of technology social media software is today and also about how to make these tools fluent and easy to use in organizational practice. Despite the vague definition of social media software (hereafter referred to as social media, including a broad spectrum of software), many scholars agree that with *Web 2.0*, both content and applications can be published and modified by many users in participation [9], [10], [11], [12], [13], i.e. that social media is built on *user-generated content* and on *social networking* characteristics [11]. The capabilities of social media as a generator of *user* content [13] is often not taken advantage of. Rather often, it is used more traditionally for broadcasting, marketing and advertising [14], causing information push, instead of take advantage of the interactive and open capabilities to communicate and reach out to a broader audience and networks of participants.

Given the complex situation of both identifying social media functionalities for knowledge sharing and learning, and the vague knowledge on how social media is practiced among professionals in organizational work, this paper outline this dual challenge. We aim to *first* unpack technological implications of social media as transformative tools applied to work practices, and *secondly*, we discuss reinforcements of how affordances of social media as a boundary object [4], [11] is progressing through a practice-based perspective [15], [16]. In two case studies we illustrate social media practice among professionals; 1) municipality public communicators interaction with citizens on Facebook pages, and 2) university teachers (docents and professors) interaction with industry participants by use of social software applications as video, Skype/adobe connect and communication channels as part of e-learning education target manufacturing employees. The overall question is: *How are social media affordances practiced among professionals in collaboration with their target audience?*

In the following a literature review on social media in public organization's and within e-learning in higher education together with theories on social media affordances and boundary objects is outlined. The cases are described along with the data collection methods. In the results we illustrate categories of social media practice related to affordances of the social media boundary object. Finally, discussions on social media practices through professionals' everyday work give insight into the complexity of using open media technology in organizational contexts.

2 Literature review on social media

Social software and social computing were terms used interchangeable for social interaction and often labelled computer-mediated communication (CMC) in educational settings, long before Web 2.0 was developed [11]. Instant messaging, newsgroups, groupware etc. were tools that therefore could be considered as older versions of what we today describe as social media [11]. When the internet access

became high-speed and social networking sites as MySpace (in 2003) and Facebook (in 2004) were entering the net [13], social media were coined. In general, social media makes individuals and organisations create, share, and exchange various information; texts and video/photos in social- and computer networks. This media represent a collective of online communication channels committed to community-based interaction, sharing and collaboration

Today, Facebook (FB) dominates the internet use, and almost 70 percent of internet users check into FB at least once a week [3]. Image based networks also increases, especially among young users, where Instagram today grasp 40 percent of the internet users. Both Twitter and LinkedIn have one of five users, even if traditional e-mail and short messages dominate daily communication over internet [3], [17]. In education social media is growing to be more commonly and transform teaching and learning practices as more social, open and collaboration oriented [10].

There is no congruent definition among scholars, but social media can be defined as a wide range of network tools or technologies aiming for social interaction on internet as the digital communication channel for interaction, communication, learning collaboration, etc. Scholars agree upon three characteristics; social media are Web 2.0 internet-based application, content must be user-generated and support social networking capabilities [1], [9], [10], [12], [13], [18], [19], [20].

The technology behind social media is built on content syndication (e.g. RSS) for following specific feeds, widgets for embedding external content to the local site, sharing and bookmarking functions and mash-up applications, making it possible to mix different kind of open data into something new [18]. Accordingly, networking characteristics [1] of social media make interaction different from traditional communication technology such as websites, e-mail and e-services [21] and differs from physical meetings [22].

2.1 Social media in public organizations

Social media in public organizations is commonly applied for the potential of reaching out with information to old and new audiences, and for its two-way communication characteristics making available direct communication with target audience [17]. News and information could for instance be construction work, traffic disease, natural disaster and weather news. This implies a different networking strategy for social media use to stimulate audience to participate in decision making processes by commenting, giving feedback and discussing [17], [18], [7].

Earlier research show that when more forms of social media arise, public relation practitioners and journalists in non-profit organizations experience increased benefits of social media, especially if they find it credible [23]. Especially Facebook have been a streamline to management functions to advance their organization's mission and programs, i.e. to strengthen relations with stakeholders [24]. Facebook is an example of a social media site. It allows the user to create a personal *Facebook profile* that is by default open to those who are part of the network but closed to others outside the network. Personal profiles are mainly used by private users. Anyone can be part of a network related to a personal profile on Facebook but the connection to a Facebook profile needs to be approved by the owner. The Facebook profile allows the network

to share interests, activities and locations with help of different media such as text, image, audio and video.

The social network characteristics of social media enable people to “(1) *construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.*” [25]. Meetings on social media sites mainly take place between people who already know each other but the visibility of other peoples’ networks may result in new, not planned meetings between people who share some offline interests. Haythornthwait [26] describes these potential meetings as “latent ties”. Boyd & Ellison [1] make a distinction between ‘social *network* sites’ and ‘social *networking* sites’ arguing that social network sites best define social media sites. The term network, they reason, relates to processes of upholding a network of *people who already know each other* while the term networking points to efforts to reach out and make new contacts.

Boyd & Ellison [1] also emphasize the public aspects of social media. They claim that the distinctiveness of social media does not lie in the fact that it allows people to gather with strangers, but to emphasize on self-design and make visible their social networks to others. However, many public organizations fail to take advantage of the interactive nature of social network sites, by using old marketing strategies in new media channels [23], [24]. Macnamara and Zerass [6] further describe how government organizations and businesses fail to deal with the potential conflict between the philosophy of openness of social media, organizational strategy and management processes.

2.2 Social media and e-learning

In educational contexts social media represents a potential useful tool for learning [20], [27]. Already in the early 90’s communication among course participants and teachers were fostering a need for applications to support on-line dialogues. Interactive functionality for communication between all participants within a course, were therefor built into e-learning platforms and LMS for discussions, learning material and examinations. Though, these types of technology represented a rather closed learning environment. Within academia social media is often referred to as social software in relation to Web 2.0 [11]. Furthermore, Dabbagh and Reo [11] highlight both the social and the technical side of social media, where the social often is related to participative and collaborative aspects, and the technical enclose voice, data and video as an expansive computing environment.

Today, online-learning, e-learning or distance education in higher education is emerging towards openness and personal learning environments circling knowledge sharing, peer-learning and active participation [20], [27], [28]. Universities have acknowledged this differently, e.g., in US, Facebook, YouTube and video are most frequently used [29], while other emphasize an aggregation of web 2.0 tools, e.g. wiki, blog, microblogging, etc., [30], [31]. Social media tools as wikis, media sharing applications and social networking trigger pedagogical change for teachers and learning to encourage informal conversation, dialogue, collaborative content generation and the sharing of knowledge independent of physical, geographic,

institutional and organizational boundaries [9]. In particular, social networking tools are viewed as able to support a distributed and networked process of knowledge building through the connection and the promotion of networks and social interaction [32] [10]. Consequently, through the opportunities and the flexibility of social media, the landscape of e-learning applications is somehow blurred where boundaries are continuously reconstructed. [20], [32]. In line with Dron and Anderson's [32] broad categorization of social software, this study analyse use of in-built *chat forums* and *file sharing* in LMS, *video* (interactive learning content), and web-meeting applications as *Skype* (with in-built chat-functionality) and Adobe Connect.

In this section we have described the social media software and the technology behind it, as transformative tools. This will further be illustrated through the cases in section 4. Below social media as a boundary object between professionals and target audiences, and the affordances that are progressing for work practice, is theoretically outlined.

3. Theory

Gaver [33] describes affordances as properties of the world that are compatible with and relevant for people's interactions. Also, affordances are perceptible, and offer an interlink between perception and action. To study interface technologies, affordances can provide a useful tool for user-centered analyses of technologies [33]. Gibson [34], known as one of the founder of the concept of affordances, developed an interactionist view of perception and action and focused processes of agent-situation interactions. Both the concept of *affordance* and *ability* are key ideas in an interactionist account for socially organized activities [34].

Today, many researchers have taken up on affordances, especially around social media. Treem and Leonardi [4] argue that present definitions of social media are either too application-focused, too narrow focused, or too broad, which is complicating how technology may influence behaviours. They present four affordances of social media for organisations; visibility, persistence, editability, and association that can be used in various combination to bring light into changes in organisational communication.

Majchrzak et al. [5] argue for social media to facilitate *knowledge sharing* and how individuals as knowledge worker, should be engaged across organizations by its use. Metavoicing, triggered attending, network-informed associating, and generative role-taking are their suggestions for online communal knowledge conversations, to shed light on the people-technology relations to understand changes to engagement in knowledge conversations. In a case study of engineering, Gibbs et al. [35] concentrate on organisational members' tensions and ambiguity for openness on-line. They both recognize that social media affordances may encourage open knowledge sharing, but also strategic affordances among participants that show ambiguity and selective self-presentation to conceal or limit, rather than share knowledge. Researchers tend to focus on affordances with respect to social relations and construct.

In this paper we consider both the social nature of social media software but also technical affordances of social media constituted as a boundary object in and in and

between divers practices. Nicolini et al. [36] frame that objects can perform at least three types of work to support cross-disciplinary collaboration: “*they motivate collaboration; they allow participants to work across different types of boundaries; and they constitute the fundamental infrastructure of the activity.*” [36] (p. 3). Also, objects alone cannot explain cross-organizational work and learning, but they can play an active role to unpack our knowledge [37]. Boundary objects are defined by their capacity to serve as bridges between intersecting social and cultural worlds, can be both abstract and concrete, and thus give different meanings [38].

The everyday use of social media in relation to what practice it establishes among practitioners, in groups and over time, relates to the concept of practice-based studies [16]. Here, we interpret the term *use* and *practice* with different meaning. By framing a *practice lens* we view peoples’ actions as they interact with and through social media in their daily *use*, as part of “...*a process of enactment that enables a deeper understanding of the constitutive role of social practices in the ongoing use and change of technologies in the workplace.*” [15] (p. 404). A practice perspective is a richer concept than everyday use, and relates to coordinated activities of individuals and groups when they are performing their real work informed by their situated context [16].

With a focus on knowledge sharing, interactions and affordances, we draw on a social medias particular characteristics of user-generated content and open networking in relation to how real use in practice are co-constructed in and outside organizations. The aim is to find a categorization that are sprung out of two cases presented below. The first case aim to raise the quality of citizen information and relations and the other on open up for collaboration and learning between industry and higher education.

3. Case descriptions and data collection

In the cases we draw on findings of social media practice in two different cases in Sweden. The first case handles public communicators social media interactions with citizens on Facebook. The other case handles teacher-course participants’ interaction and learning on chat forums in LMS, in web meetings, and various learning material as video and file sharing.

3.1 Case municipalities-citizens’ interaction

This case includes three Swedish municipalities’ public servant communicators, further referred to as ‘professionals’, at the municipal city hall department of communication. They are accountable for the external communication with the citizens on each municipality’s Facebook page. Social media is part of the communication strategy in all three municipalities and is supposed to complement other communication channels for external communication with citizens and organizations such as websites, online forms, telephone, e-mail, e-services and physical meetings. Eight professionals at the three respective city hall communication departments were interviewed; two in one municipality, and three in each of the other

two municipalities. The eight professionals had, to some extent, different functions and tasks. Five of them were either managers or communicators responsible for the overall internal and external communication including a general responsibility for social media activities. They have all been using Facebook professionally for about 2-4 years respectively.

The interviews took between 40 minutes to 90 minutes each and were transcribed verbatim and continually analyzed. The interviews were followed up by a participant-observation in a reflection workshop with communicators from seven different municipalities in the same region. A total of 16 people participated in the workshop. Three of the interviewees were also participants in the workshop. Both interviews and workshop focused on social media regarding the organizations driving forces, visions and challenges, the start-up process, and present and future use. The interview themes concluded 1) Organizational purpose, strategy and vision 2) Content (what and how) 3) Target group/audience 4) Technology “view” and experience.

3.2 Case university-industries collaboration

The case included in this paper is part of a longitudinal action design research project [39] between one university in collaboration with about 15-20 industry companies. The overall aim in the project is to explore learning needs in manufacturing, and accordingly design blended e-learning courses to reach for competence development among engineering employees. In total, 15 courses of 2.5 ECTS with about 150 industry course participants were designed and run during 2013-2015. Up till now the project in total comprise a huge amount of qualitative data from interviews and activities with stakeholders as manufacturing industry managers, teachers, project group participants and industry course participants. The case in this paper circle data from mainly teachers (the professionals) and course participants. First an interview study in 2014, with five engineering teachers, PhD and professors, within industrial automation (robotics), machining and logistics. They are also part of the project group. Secondly, a continual follow up study of the 15 courses. We include content and discussions in the LMS and the one-two web meetings in each courses and finally, the 15 focus group session with course participants (last course day) at the end of each course comprise.

In the courses, a blend of learning technologies with LMS and web meeting systems as well as other social media (video, chats, blogs), are designed and used. The pedagogical approach is on work-integrated learning real cases to emphasize both theory and practice mixed with on-place lectures and e-learning technologies available in the workplace or at home.

3.3 Data analysis

The cases are not being analysed in comparison to seek for similarity or differences, rather they both complement to our understanding of how various social media technology are framed and how social media affordances of the social media boundary object is practiced in organizations.

All data were continually documented, interviews and focus group meetings audio-taped, and verbatim transcribed and analysed [40]. *Qualitative content analysis* was used to interpret the text data as an inductive approach [41]. This method is useful when the boundaries between phenomenon and context are not clearly evident in case study research [41]. Through a systematic classification process, we were reading excerpts of interview data from the interviews and also logs from social media, such as Facebook and Skype chats etc. We iteratively searched and identified patterns of behaviour and situations as a process in relation to the research questions. This included coding and recoding categories to a final decision on the result. In the following the cases are outlined and the specific data used in this paper are presented and analysed.

4. Results - Social media in practice

The technology behind social media use in organizations is tinged by strategies and shaped by the organizational culture, the professionals' habits, experiences and skills of social media. The characteristics of social media as such is influencing how use is becoming and the consequences it leads to. We explored how social media affordances are practiced among professionals in relation and collaboration with their target audience. The following mutual themes and categories within and between the two cases were found consistent to reciprocal results, presented in table 1. Both cases share mutual concerns, but also some differences, due to the various contexts and their diverse social media tools. The aim is not to compare the cases, rather to exemplify how social media use progressed within their different practices.

Table 1. Categories and activities of social media practice in two cases.

Category (what)	Activity (how)	Description
Incentives	Strategizing	Strengthen democracy Information sharing Promotion and reach out
Perceptions	Co-designing	Design of content Use of new technological functions User-generated content
Openness	Networking	Spread and flexibility Open knowledge sharing Control aspects

4.1 Incentives - Strategizing

The incentives relate to strategizing of social media use in both organizations, perceived by the professionals' experiences when planning for how to interact and communicate with their target groups. Some examples illustrate this.

Municipality interest was to increase democratic processes. Most of the communicator emphasized the importance to make citizens voices heard and to ventilate opinions and feelings in Facebook. *“Providing the citizens with fast civic information is one way of creating loyalty and trust.”* *“Sometimes the discussion continues by itself in the social media and citizens reply to each other.”*

University interest was to increase knowledge needs of industry and to recruit new company members. When talking about mapping competence needs one manufacturing manager says: *“We should have more relations and develop courses together.”* This refers to strategic relations university – industry companies and how they ought to increase their communication in order to co-produce knowledge needs before designing new courses.

Promote municipalities’ means to shed light on news, make citizens feel proud of their region and to make outsiders want to work and live in the municipality region. *“It’s about external communication and a little bit of marketing”*

Promote university means to open up learning opportunities and research collaboration to a broader audience. Also to find mutual knowledge needs. *“We want to be in the technology lead within our product segment, but is still struggling”*. The knowledge needs are diverse including both a broad spectrum versus specific engineering subjects.

We saw that both organizations strengthened and also discussed their relations to their target groups through boundary crossing activities that led to processes of new activities. Social media, the media artefact, was seen as a *boundary object*, between the organizational sites and a tool for promoting the respective organizations and their activities. The interrelations were constructed through professionals’ work, aiming for ease at use, but rendering some practical problems of identifying new specific work tasks when aiming for reaching out through new social media technology.

4.2 Perceptions – Co-designing

When professionals are designing social media practice, their own perspectives on previous use is crucial. The organizational incentives affect their perspectives but also the closest colleges’ values and cultural traditions are influencing use. When new technology and media is implemented it seems easy to transform communication to “just another channel” but earlier perspectives have crucial influences on the design and practice. Professionals in both cases see opportunities as well as limits with social media for their work but their views differ in character.

The municipality communicators view social media as an approach to reach out and inform widely, to get feedback on their work, to build networks for different reasons, and to take control on how to design communications in Facebook. Social media is a *“boundary object forming a positive response”* from citizens. One communicator says: *“there is no difference between a public servant working with a case [off-line] and a conversation with the citizens in social media. Policies related to correct treatment involves even social media work”*.

Teachers and course participants negotiating in e-learning courses. Teachers as designers, are not so enthusiastic about designing for on-line communications, as they see hard work to get it all going. They rather relate to established learning

technologies with in-built social media functions, for instance chat-functions in Skype and/or general discussion forums in LMS. They have trouble viewing learning as a social cultural process in an on-line setting. Rather, some teachers view interactive technologies only as another way to listen to teachers' lectures and not so much as a forum for discussions between course participants.

In a focus group session, when interviewer and participants discuss open forums in the LMS, the interviewer asks: "*Have you used the in-built discussion/chat function in the LMS?*" One participant replies: "*No, I do not have Facebook, ha-ha.*" More laughter occurs among the other participants. The interviewer continues: "*But there are also other open on-line channels for communications?*" Another participant replies: "*No I have not used any other media channel. My college and I are sitting next to each other and can talk daily anyway.*" This refers to an immature way of using social media software.

4.3 Openness - Networking

To network and to open up to audiences outside the own organization was analyzed into aspects of spread and flexibility, open knowledge sharing and control aspects.

Spread and flexibility was in the university practice explored as follows:

Increase industry competences. The motivation to use social media was to contribute to network building between employees and to intensify university-industry relations to motivate individuals to can share knowledge and best practice of industry related work. Discussions among participants in e-learning courses established a "glue" for collaboration and created a learning opportunity to a *growing network* of company collaborators. One manufacturing manager stated: "*It is hard to find right competences in electrical engineering and product development*".

Open knowledge sharing handled the level of open up information and knowledge to a broader audience. **Control aspects**, seem to be its opposite, due to professionals' own attitude towards information spread, what and how to share and build mutual knowledge with their respective target audience. The professionals showed aspects of personal treatment and control aspects in their use.

Being social and open up for **public communicators** means to balance a personal and a professional content and tone. However, activities with a neutral content and voice don't get much attention on Facebook. Instead postings with a more personal content and tone that reveals the person behind posts tend to be more 'liked'. The activities with the highest level of interactions are 'spontaneous postings'. *They [the citizens] like when they see that we also are humans, eating lunch like anyone*" one communicator describes a 'check in' at the lunch restaurant a posting in Facebook. However, the professionals also emphasize the importance of a neutral and authoritative voice. "*The citizens should feel that it is the public servant that is the municipality's voice and that there is a thought behind the posting that is neutral*", one communicator argues.

Some **professional teachers** initially showed *lack of control* when using social media channels as discussion forums or alike, and they neither push this use to the course participants for instance in Skype or in blogs. One experienced teacher (ass. professor) says: *I have been using synchronous connections like sharing screens.*

When you have online communication in real-time, that's really hard... The technique may fail the first time or even during the course." This teacher feared that the technology would fail in a learning situation with many people involved and is eager to *control* a high teaching quality with the situation.

Both professional groups, i.e. communicators and teachers, were challenged of how to handle the balance of open up knowledge content and to use social media as a fully transparent approach. In sum, the importance of building a network to reach out with information and to strengthen interaction and communication was a view shared by the professionals but there was a general uncertainty about how to maintain a network and strive for a proper openness.

5. Discussion

We have drawn on a social medias particular characteristics of user-generated content and open networking in relation to how real use in practice are co-constructed in and outside organizations. The reinforcements of how affordances of social media as a boundary object [4], [11] can provide as a useful tool for user-generated content and networking have supported the analyses of reaching out, for knowledge sharing and interactions. Though some challenges are still to be encounter. We discuss the categories as we thought of as affordances; Incentives, Perceptions and Openness as agencies for a social media practice.

Findings show that **incentives for strategic work** highlight the need more planning work and collaboration among the professionals, and also to learn from each other social media use. When *teachers* are designing for on-line learning situations and for on-line discussions, they need to reach out to a new target group, with low academic knowledge but with high practical experience. Teachers and employees are both using social media sparsely in private life, and that makes implementation of chats on-line harder to achieve. Communicators work are stressed by using Facebook in communication work, and such work means changing the social media strategy from push of content to pull of feedback and to a more persuasive networking approach. For communicators the social media activity needs to afford the citizens to catch an interest of the municipality activity, discuss and make sense of the activities and act on them in their own social media channels and in the physical world.

The two professional groups did not use social media to its full potential as strived for. As teachers are simultaneously acting as a professional collaborating researcher with company employees and also is teaching the same employees they have to renew their insights into what the diverse practices concern. The **perception of design work and co-designing** learning content, was to some extent not finalized and need to be further developed.

Not all communicators shared the view of separating private and professional profiles. They thought it was difficult and perhaps not doable or relevant. Hence, while some participants seemed to manage to separate private and professional profiles in the social media, meanwhile there were some participants that didn't think it was easily done. To **share knowledge to a network** of "unknown" audiences is both about be open and relate to control aspects. In both cases we detected hesitations

that we argue are slowing down the development of the practice. However, many of the professionals expressed that they didn't have time neither to learn about social media nor to develop the social media channels as they would like to. The social media work seems to have been added on top of other working tasks with no reorganization of work.

6. Conclusions

Professionals work in social media means to constantly work on the boundaries between diverse groups. Social media practices can be experienced as a hard work because systems and personal roles, are constantly moving when the professionals need to change their use and open up their knowledge. We have presented three affordances; Incentives, Perceptions and Openness to shed light on how these together contribute to an understanding of professionals use and perhaps future adoption in organizations. The **incentives** included organizations overall work practice through social media use, thus, to reach out to target groups in digital channels, easy and flexible. The **perceptions** included professionals' work of both their roles as communicators and teachers, how to interpret boundary objects, i.e. the othering process, viewing the audience through negotiations meaning to struggle to balance personal and neutral posts. Openness and networking are issues that constantly need to be worked on. There is a further need for a new type of social media skills among professionals in their communication work target their audiences.

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