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## **Methodological implications of Social Media as a research setting for IS healthcare studies: Reflections from an interpretative case study**

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## **Methodological implications of social media as a research setting for IS studies in healthcare: Reflections from a grounded theory study**

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### **Abstract**

*Over the last decade, social media environments have increasingly become an attractive research setting for Information Systems researchers. However, the methodological implications of this research setting for IS studies, are still not fully understood. In this paper we develop and present a framework to reflect on a recent qualitative healthcare IS study that focussed on the use of social media as a research setting. We argue that focusing on social media as a research setting in qualitative IS study can have implications for the contextualisation of the study (implications for the research paradigm), defining research setting (implications for research design), theoretical sampling (implications for data collection and data analysis), and research ethics (implications for research design). With the popularity and growth of IS studies that focus on social media as a research setting in healthcare context, we conclude by calling for an extensive re-examination of methodological practices to meet the challenge of researching of social media in healthcare.*

### **Keywords**

Social media, Research setting, Grounded theory Method, Healthcare IS, Interpretative paradigm

### **INTRODUCTION**

Traditionally, in qualitative research the phenomena under study are observed and investigated in their natural settings. This means that ordinary events and behaviors of participants are studied in their everyday social, cultural, and political contexts (Marshall & Rossman, 2011). This process generally involves identifying the boundaries where researchers can interact with participants and observe them, allowing for the gathering of sensory data such as what is seen, felt, heard, and even tasted or smelled (Given, 2008).

However, in many social contexts, the settings for data gathering, for example healthcare, pose serious and practical challenges to qualitative researchers and their research process. These challenges ranges from the difficulties of recruiting informed participants (Eide & Allen, 2008), to challenges pertaining to the interaction between researchers and their participants such as the influence of the researcher on participants responses in an interview (Myers & Newman, 2007). The ethical issues of a qualitative study, particularly during the data collections and data analysis phases, are also notable (Christians, 2011). Therefore, many qualitative researchers have sought alternative ways of collecting information to alleviate these challenges while maintaining the rigor of their studies (Stewart & Williams, 2005). Many qualitative researchers are paying special attentions to social media as a promising and fruitful source of qualitative data (Orlikowski, 2007).

A major reason that social media is gaining strong attention from qualitative researchers is due to the popularity of these technology among potential participants. In fact, the use of social media has risen drastically in many social context and, as Fichman, Kohli, & Krishnan (2011) point out, it is likely to become an increasing fact of life for millions of people around the world. According to Vaast and Walsham (2013), social media constitute a research setting that provides opportunities for accessing wide and diverse sources of empirical data. Further, social media allows participants to interact and

communicate with each other easily (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011) and enables them to rapidly generate content and easily access large volumes of information (Van Dijck, 2009). In particular, social media has become an attractive setting for IS researchers because it offers the opportunity to expand studies in electronically mediated interactions that are at the core of the IS discipline. (Urquhart & Vaast, 2012; Vaast & Walsham, 2013).

Although the characteristics of social media are unique and attractive research settings, in this paper we argue that this type of research setting does not clearly conform with the traditional requirements of qualitative research and there are some grey areas that need to be clarified. It is therefore important for the IS researchers to reflect on the type of evidence they obtain when they use social media as their research settings and it is important for them to be aware to what extent their methodological practices are altered by use of social media as a research setting.

The focus of this paper is on the methodological implications of using social media as a research setting during an empirical healthcare-IS study. Our arguments are presented through a qualitative healthcare IS study because first healthcare has become an attractive social context for qualitative researchers in many disciplines and this interest is more prominent in IS as healthcare is an under-researched area in this discipline (Fichman et al., 2011). Second, healthcare provides an appropriate context to show and highlight the implications of social media as a setting for qualitative research. The characteristic of this settings are particularly attractive for studying complex healthcare phenomenon where the dynamic interactions between the diverse groups of actors pose challenges to the researchers in terms of communicating with potential participants and collecting qualitative data (Greenhalgh, 2009).

This paper presents an empirical healthcare study to investigate the implications of social media for IS qualitative studies. The purpose is to understand how social media can be used as legitimate source of qualitative data in IS studies. In doing so, we present a body of literature to position the application of social media in healthcare as well as the significance of social media and healthcare in IS studies. A reflective framework is presented to critically assess and reflect on a recent empirical interpretative study of the management of chronic disease, where social media is used as major sources of data. Three research questions were formulated for the paper: *1) Does social media as a research setting support interpretative IS researchers to stay faithful to the principles of interpretative studies? 2) What are the implications of social media as a research setting for research design? 3) Does social media as a research setting support grounded theory in healthcare IS studies?*

## **REVIEW OF THE RELEVANT LITERATURE**

Recent studies show that social media are increasingly used by patients and practitioners for a variety of healthcare activities, from seeking and sharing health related information to education and getting support from peers (e.g. Hackworth & Kunz, 2010). The potential role of social media in the management of chronic disease is also highlighted in some recent studies. As Nordfeldt, Hanberger, and Berterö (2010) point out, modern management of chronic illness requires that patients and carers have access to continuous support and learning opportunities and social media has great potential in this area. A recent study by Stelfefon et al. (2013) shows that social media can facilitate novel approaches for empowering, engaging, and educating patients with chronic disease through better communication and providing opportunities for making better clinical decisions

From the IS perspective, most of these studies lack the theoretical foundations to explain the complexity of interaction between technology and people (Urquhart, Lehmann, & Myers, 2010; Whetten, 1989). In fact, despite the growing body of research that shows the potential contribution of social media in healthcare activities, as Chiasson, Reddy, Kaplan, and Davidson (2007) explain, most of these studies are based on the principles of Medical Informatics (MI) where the focus is on assisting clinical users (e.g., physicians, nurses, pharmacists) to be more efficient in delivering healthcare services. This approach not only downplays the role of patients as the major consumers of healthcare services (Davis, Schoenbaum, & Audet, 2005) and dismisses their perspectives, as Chiasson et al. (2007) argue, it also lacks the theoretical foundation to extend our understanding of the social and organizational facets of ICT in healthcare.

Agarwal, Gao, DesRoches, and Jha (2010) contend that the importance of ICT in healthcare is expanding globally as it increasingly plays a significant role in making healthcare more affordable and broadening its reach. They argue that the significant role of ICT in modern healthcare warrants more attention from IS researchers, especially in three areas: health IT design, measurement of health IT, and extending the traditional realm of health IT (Agarwal et al., 2010). They explain

that the idiosyncratic roles of online health communities and social networks in extending the traditional realm of health ICT calls for further attention from IS researchers, so they can take advantage of the opportunities that social media as a research setting for developing methods and theories in healthcare from an IS perspective. This notion is echoed by Fichman et al. (2011) as they argue for more attention from IS community to seek the opportunities and challenges that social media can offer IS researchers to understand health ICT issues.

## REFLECTIVE FRAMEWORK

The purpose of the reflective framework presented below is to provide a set of criteria to help us understand the implications of using social media as major sources of evidence for a recent healthcare IS empirical study. The framework provides a set of criteria relevant to the methodology used in the empirical study. In order to construct the framework, other studies, that were principally and methodologically similar to the healthcare IS empirical study, had to be identified and analysed. Focusing on reputable IS publications ensured that the framework is grounded in high quality literature and provides a relevant set of criteria for reflection. In other words, a *purposeful sampling* approach was taken in choosing the relevant IS publications for developing the framework.

### An overview of the empirical healthcare IS study

The purpose of our empirical study was *to gain a deeper understanding of how people involved in complex processes of the management of chronic disease could use social media to build healthcare communities that are resilient*. Our research was an interpretative qualitative study. In our view an interpretive approach to the management of chronic disease was an imperative as the object of our study, the emergence of community and the resilience of that community, are deeply embedded in actors' subjective understanding of the management process and its dynamics.

The study was designed to take advantage of the flexibility and the strong exploratory nature of the case study method (Flyvbjerg, 2011). The data collection process, and data analysis, was informed by a grounded theory method (GTM). The coding process mainly followed the three level of the Glaserian method of open coding, selective coding, and theoretical coding (Glaser 1978). Informed by the goal of the research, data was collected from social media sources, and complemented with data from focus groups and interviews. These additional source of data provided valuable insight into social media practices in patient communities. Table 1 shows the major sources of data used in the study

Table 1. Data sources used in empirical healthcare IS study

Data source	Numbers of items/participants	Types
Arthritis forum	48 stories	19 patient, 21 carer, 5 nurse, 1 physiotherapist, 1 rheumatologist
Diabetics forum	64 stories	36 patient, 13 carer, 9 nurse, 1 GP, 4 social worker, 1 allied health
Depression forum	29 stories	21 patient, 8 carer
Asthma forum	20 stories	16 patient, 3 carer, 1 nurse
Breast cancer forum	31 stories	23 patient, 4 family, 4 nurse,
Focus group	10 participants	10 Arthritis patient

The grounded theory method allowed our study to take advantage of the flexibility of coding while still maintaining rigour (Glaser, 1978). The choice of a grounded theory approach was entirely appropriate because no theoretical studies existed in this area. As Glaser (1978) points out, grounded theory is an appropriate choice for exploring and theorising unknown phenomenon. The GTM approach allowed us to focus on the complex interaction of multiple parties involved in the management of chronic diseases, influenced by their social relations, cultural background, and technology advancements. This helped incorporate the complexities of the management process into our understanding of the concept of resilience. Table 2 provides an overview of the characteristics of our study. We used these characteristics as concepts to guide our theoretical sampling and to help us identify the most relevant IS publications that could be used to develop our framework.

Table 2. The methodological structure of the target healthcare IS study

<b>Research feature</b>	<b>Approach taken in the study</b>
Epistemology	Hermeneutical, interpretative
Research approach	Qualitative
Methodology and design	Case study design
Data collection approach	Constant comparison - informed by Grounded Theory Method
Data analysis approach	Three levels of Glaserian coding - informed by Grounded Theory Method

### Foundation of the reflective framework

Because of our qualitative interpretive approach, it was essential to make sure that the framework used for reflection provided a holistic means of assessing our study. In other words, the framework should cover the study in its entirety rather than providing only a small window for the assessment of the study. In a qualitative interpretative study, all elements and phases of the study are interdependent and therefore, partial assessment does not provide a useful insight of its quality (Denzin & Lincoln, 2011). In order for us to understand the implications of using social media as source of data, it was essential to investigate how the decision of using social media as a research setting might also affect other aspects of the study and not just the data collection process. In developing our reflective framework, literature that could provide assessment criteria for each aspect of our study was sought. Table 3 presents the methodological breakdown of the methodological characteristics of our study and the publications adopted to develop the reflective framework.

Table 3. Foundation of the reflective framework

<b>Research feature</b>	<b>Research approach</b>	<b>Source of assessment criteria</b>
Epistemology	Hermeneutics interpretative	Klein and Myers (1999)
Research approach	Qualitative	
Methodology and design	Case study	Eisenhardt (1989)
		Walsham (1995)
		Urquhart and Vaast (2012)
Data collection approach	Constant comparison - informed by GMT	Vaast and Walsham (2013)
Data analysis approach	Three level of GMT coding (Glaserian)	Urquhart and Fernandez (2013)

Mingers (1984) and Laverly (2003) classify interpretive studies into four categories of phenomenology, ethnography, philosophy of language, and hermeneutics. Among these four, hermeneutics is the closest interpretative philosophy to the way our study was conducted. Therefore, the seminal article by Klein and Myers (1999) was used as the overarching set of criteria for the reflecting on the research paradigm.

In their article, Klein and Myers (1999) present seven principles for conducting hermeneutics interpretative research in IS and provide a valuable set of criteria for assessing the quality of interpretivist studies in IS. While their seven principles are interdependent, they argue that researchers need to work out themselves how and which of the principles apply in any particular situation. Consequently we considered only those principles that we believed were the most useful criteria for assessing our study to gain a better understanding of how social media as a research setting may affect our interpretative study.

The assessment of the research methodology and design was influenced by two seminal IS articles: Walsham (1995) and Eisenhardt (1989). We were also influenced by Urquhart and Vaast (2012)'s observations on researching social media settings. Walsham (1995) is one of the seminal papers on conduct interpretative case studies. In his article, Walsham specifically focuses on the challenges and requirements of an interpretive case study and provides a set of criteria for conducting and evaluating case studies conducted within the interpretative paradigm. Some of the concepts discussed by Walsham, such as 'thick description', and some of the challenges, like the 'role of researcher' in interpretative case studies, was useful for understanding the methodological implications of social media as a research setting for the empirical study.

Eisenhardt (1989) is perhaps one of the most cited articles by those who use case study. Ironically, Eisenhardt (1989) is widely cited as a guide in many interpretative IS studies although she explicitly states her epistemological position as positivist. Therefore, many of her instructions on how to conduct a case study would not be acceptable to interpretive

researchers. However; her views on methods of collecting and judging qualitative data in case studies are widely shared and accepted by interpretative researchers. The value of Eisenhardt (1989) article to the framework is the way she explains and scrutinizes the implications of data collection (either qualitative or quantitative) for the final product (theory) in case study research.

Some of recent IS publications turn their attention to more contemporary issues of case study design in IS studies. Urquhart and Vaast (2012) discuss the major challenges of building theory for social media and provide recommendations and guidelines on how IS researchers could address those challenges. For example, they provide clear and useful insights on the theoretical basis of social media studies in IS discipline. Their article makes contributions in the development of the framework on three fronts. First, the focus of their article is building theory for social media data. Second, they discuss the challenges of case study design for social media theory building studies in IS. Third, they provide insight into the nature of the data that IS researcher can obtain from social media as a research setting.

The development of the framework was an endeavor to find useful criteria for reflecting on our approaches to data collection and analysis. This led to a recent and interesting papers by Vaast and Walsham (2013) and Urquhart and Fernández (2013). The most interesting aspect of the Vaast and Walsham (2013) paper is the way they discuss how grounded theory and social media as a research setting can be integrated into a qualitative IS study. They describe social media as electronically mediated social contexts in which interactions and activities of actors are largely or completely computer-mediated. Vaast and Walsham (2013) argue that social media constitute research settings that are especially important and intriguing for IS researchers. The specific focus of their article is on the opportunities and challenges that social media as a research setting can bring to IS studies, specifically for those researchers who employ grounded theory for their method of data collection and analysis. By analysing a number of important IS studies that uses social media settings as sources of their data, Vaast and Walsham (2013) develop a set of guidelines and recommendation for IS researchers to maintain the quality of their studies when they combine social media as a research setting and grounded theory method.

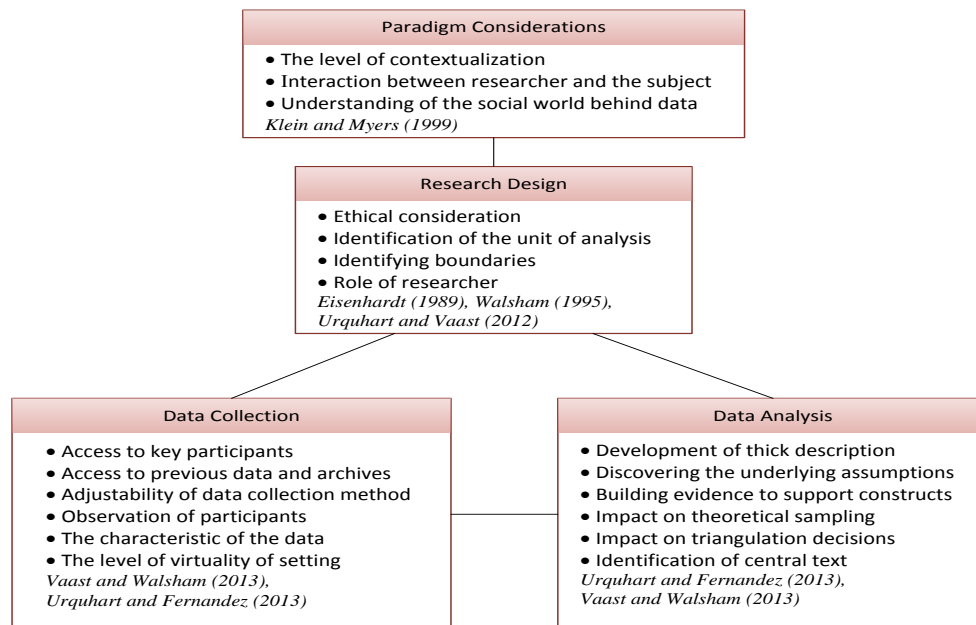


Figure 1- Reflective Framework

Urquhart and Fernandez (2013) provide clear and structured guideline for IS researchers on how to use grounded theory in their studies and how to avoid misconceptions about grounded theory method. Urquhart and Fernandez (2013) explain the characteristics of a rigorous grounded theory approach and discuss how IS researchers can assess the quality of their study by understanding misconceptions about the grounded theory method. These two articles provided a useful set of criteria to assess and reflect on the data collection and data analysis approach and to understand the implications of social media as a research setting for a grounded theory approach.

This section presented the foundation of our reflective framework and demonstrated how a theoretical sampling approach assisted in laying the foundation for the framework. While the theoretical sampling used in this paper was not exhaustive and other seminal IS publications (e.g. Cavaye, 1996; Darke, Shanks, & Broadbent, 1998; Orlikowski, 1993) could also be used. Nevertheless, we argue that the framework has a strong and reliable intellectual and methodological basis which allows us to make contributions to a better understanding of the implications of social media as a research setting in healthcare IS studies.

## **ANALYSIS AND KEY FINDINGS**

The reflective framework is applied to our healthcare IS study to answer the research questions posed by this paper. Figure 1 provides an overview of this framework. In applying the framework, the focus was not only on participants, but also the process of gaining evidence and the means by which those processes led to the next step of study. For example, in examining whether social media as a research setting could help to contextualise the empirical study, it was also interesting to explore the extent to which this contextualisation is possible and whether it assists in producing a 'thick description' to deal with the sheer volume of data. A similar process was carried out to examine each question against the relevant criteria within each category of the framework in order to understand not only the impact of social media as a research setting in each category, but also to delineate its influence on other aspects of the our study based on other categories of the framework.

To reflect precisely on the empirical study, it was also necessary to have a clear understanding of the unit of analysis used in the study and to know what the characteristics of the unit of analysis are. Urquhart and Vaast (2012) argue that in a social media setting, what researchers actually use as the unit of analysis is 'digital text'. According to Urquhart and Vaast (2012), a digital text has nine major characteristics of being digital, contained on a web, co-produced, ephemeral, embeds other discourses, contains image, contains video, lack of context, and linguistic innovative.

Following Urquhart and Vaast (2012) we argue that in the context of healthcare, a digital text exhibits two additional characteristics of 'emotional' and 'high degree of intricacy'. Our empirical study of patients and carers online forums and social networking sites shows that most of the posts and chat threads can be seen as digital texts loaded with 'emotions' where patients and carers mainly express their angers, their sense of frustrations, uncertain feelings, and show their sadness in their exchanges. This is in fact a genuine and effective strategy used by patients and carers to attract other people's attention and support.

The empirical study also shows that most of the messages posted on the online forums, as well as the chat threads, were multi-faceted with high level of details. This characteristic was more or less identifiable in almost all of the digital texts we collected. In some of those text participants were talking about two, three or more things that were distinguishable but some of the posts were hard to understand as they were convoluted.

These characteristics of the digital text in healthcare social media settings can be attributed to a number of reasons including the level of uncertainties related to disease (Wagner et al., 2001), medical jargon that is not easily understandable to lay people (Schouten, Meeuwesen, Tromp, & Harmsen, 2007), and the impact of technology on the ways people engage in a virtual social environments (Orlikowski, 2010). The methodological implications of these two characteristics for our healthcare IS studies will be discussed in the following section.

### **Key findings**

*Research setting (Reflection on the research design):* In our empirical healthcare IS studies, we noticed that the traditional concept of 'research setting' for qualitative studies is blurred. Identifying the boundaries within which participant could be observed was a difficult task as many of the social interaction in virtual environment were permeable to the real world settings. Besides, it was hard to get a deep understanding of the influence of social, cultural, and political behavior of participants on the construction of their meanings as it was nearly impossible to gather sensory data that would help us to have a more accurate and clearer interpretation of events and interactions in social media settings.

*Contextualisation (Reflection on the research paradigm):* As Klein and Myres (1999) point out, contextualisation requires that the subject matter be set in its social and historical context so that the intended audience can see how the current situation, which is being investigated, emerged. They argue that contextualisation is the necessary element of an



interpretative study as researchers should observe and acknowledge the constantly changing patterns of the relationships between people and technology.

The experience in our study shows that it is nearly impossible to position the subject of study in its social and historical context based on the data collected from social media as a research setting. Two aspects of our social media as a research setting were the major contributors to this challenge. First, the setting exhibits a high level of virtuality. Second, many of the messages and chat threads were highly intricate and the research setting would not afford ways to unwrap and demystify those digital texts.

*Interaction with participants (Reflection on the research paradigm):* Klein and Myers (1999) argue that participants are interpreters and as they interact with researchers, they alter their horizons by the appropriation of concepts used by researchers. According to Walsham (1995) when researchers do not interact with participants to a sufficient degree and only rely on historical secondary data, the impact of their view on participants' perspective will be weakened and therefore, it is unlikely for alternative viewpoints be formed.

Our experience shows that there are a number of challenges when it comes to the interaction between researchers and participant in social media research settings. First, due to the virtuality of the environment, it is difficult to establish a trust relationship between researchers and participant. We found patients and carers felt uncomfortable in sharing their feelings and talking about their conditions with people they had never met in the real world and are not "part of their club". Second, social media settings used in the study offered limited tools for interaction, and most interactions were in the form of plain texts. Third, on most occasions the researchers had only access to historical data and archives as many of online interactions were taking place in different time zones.

*Ethical issues (Reflection on the research design):* Vaast and Walsham (2013) and Urquhart and Vaast (2012) argue that IS grounded theorists who use social media as a research setting for their data collection face some ethical dilemmas. The dilemma is that IS researches enjoy the opportunity of open access to online interactions but at the same time this opportunity can blur the perception of what is private and what public information is.

The major ethical challenges in the study were twofold. First, it was necessary for the researchers to make sure that the privacy and anonymity of participants were protected. In doing so, not only the identity of participants had to be protected through conventional methods, it was also necessary to protect their identity through the anonymity of the setting itself. These would made the report on our research less traceable to the readers as it was not possible to create a 'thick description' of the research context, and as Walsham (1995) puts it, the report was facing the risk of ending up with reporting 'soft' human issues.

The second ethical challenge was that there was no means to know whether the participants expect privacy from their exchanges and what level of privacy they might expect. For example, on many occasions after data from a participant was collected, the participant decided to withdraw from the research setting and her posts disappeared. Considering the sensitivity of health related data, the question was whether data already collected from that participant could be used in the study or not.

*Theoretical sampling (Reflection on the data collection and analysis):* As Urquhart and Vaast (2012) and Urquhart and Fernandez (2013) contend, social media as a research setting offers new and unique opportunities as well as new challenges for theoretical sampling especially when the researchers employ grounded theory as their method of sampling and analysis.

We believe that the 'emotional' characteristic of digital texts provided an interesting opportunity for theoretical sampling. We noticed that the emotional aspect of digital texts represent extreme situations and as Eisenhardt (1989) puts it, make the phenomenon "transparently observable". As such, many of digital texts used in the study provided us with a fruitful way of filling theoretical categories.

However, as Glaser and Strauss (1968) point out, theoretical sampling is about giving depth to the understanding of constructs and investigating the underlying assumptions that led to the creation and interpretation of those constructs. The study shows that the high level of virtuality of the research setting together with the limited possibility of effective

interaction with participants put significant constraints on the ability of deepening the investigation of participants' perspectives.

## **DISCUSSION**

The analysis for this study was carried out with three major questions in mind. In answering the first question; 'Does social media as a research setting support interpretative IS researchers to stay faithful to the principles of interpretative studies?', we argue that IS researchers who choose to study healthcare related problems through social media settings can still conform with the principle of an interpretative study. However, they have to face two challenges of 'contextualisation' and 'interaction with participants'. This is consistent with Urquhart and Vaast (2012) as they highlight the issue of contextualisation in social media research settings by stressing that the lack of context in social media research settings is an important issue that social media researchers have to address. They argue that without context in social media, researchers can still infer patterns but they need to search for 'central texts' to set meaningful boundary around their subject.

Many studies show that social media facilitate the interaction between participants (e.g. Boyd, 2010) but in the context of interpretative research Hara and Hew (2007) also note the issue of interaction between the researchers and their participants, an online community of nurses. They mention that in their study it was necessary for them to interact more effectively with their participants as they needed to get a deeper understanding of the difficulties of the nurses' workplaces. To get such an understanding, Hara and Hew (2007) argue that researchers can still interact with their participants by engaging asynchronously and synchronously in participants' linguistic behavior (what is said and how) through various kinds of computer-mediated communication.

The second question to answer was 'What are the implications of social media as a research setting for research design?' To answer this question, we argue that the most significant issue we noticed concerned research ethics. Stewart and Williams (2005) discussed this issue in detail and argued that the speed, ease and low cost of social media make it an appealing setting for researchers. However, they believe that the ethical complexity of virtual settings requires that old ethical guidelines and procedures to be revisited. They argue that the time has come to reframe our ethical guidelines in the styles of data collection and also anticipate those guidelines to be carefully integrated in the design stage of the research.

The third question was 'Does social media as a research setting support grounded theory in healthcare IS studies?' In answering this question the focus turned to theoretical sampling as one of the tenets of GTM (Glaser & Strauss, 1968). We argue that social media as a research setting pose both opportunities and challenges for IS grounded theorist who choose healthcare contexts. The opportunities are more related to the nature of the data that can be collected from healthcare social media settings. Da Cunha and Orlikowski (2008) study of an online forum shows how an emotionally rich message posted on the forum by one of employees led them to further explore the dimensions of one of the themes emerged through their grounded theory approach. They explain how that single message posted on the forum helped them to deepen their theoretical understanding of their phenomenon and provided them with threads to investigate it further. We also contend that relying solely on data from a social media setting cannot necessarily fill the theoretical categories as in most cases in-depth understanding of a theoretical category can only be gained through interviews with participants. This is consistent with O'Mahony and Ferraro (2007) study of the governance of socially collective actions in organisations. They initially used online forums as sources of data to develop their theoretical model, however; because the data was not rich enough to provide them with depth about their constructs, they conducted 48 interviews to reach theoretical saturation.

## **CONCLUSION**

The focus of this paper is on the methodological implications of using social media as a research setting for qualitative research where we examined the implications of such settings for an empirical healthcare IS study. This paper argues that social media offers unique opportunities for IS researchers to extend analyses into areas that have been at the core of healthcare IS studies, for example, the social issues related to information technology based activities and the complexity of their associated interactions (Vaast & Walsham, 2013). Evidence was also provided from IS literature to argue that healthcare is still an under-researched area in IS and it needs more attention from IS researchers.

In the light of these arguments, a reflective framework was developed to assess a recent healthcare IS study and it was used to reflect on the implications of social media as a research setting for qualitative studies. The framework, was used to analyze our qualitative healthcare IS and draw important lessons that were discussed in this paper.

We believe this paper makes two contributions: First, a reflective framework that is well-grounded in the IS literature and provides an analytical tool to assess qualitative IS studies that use social media settings as their sources of evidence. Second, this framework extends our understanding of the implications of social media as a research setting for qualitative healthcare IS studies. While the focus of this paper is on healthcare context, it is also important to highlight that the findings of this study are transformable to similar contexts where exploring the implications of social media settings can be seen as new opportunities for future research.

This study also shows that with the prevalence of social media in people's daily life and the attraction of these electronic social contexts for researchers, there is an urgent need for the IS community to revisit and refine the notions of 'research settings' and 'research ethics' as issues that are at the core of IS research. Social media is relatively a new way of collecting evidence in IS research. It needs more collective attentions from IS researchers to build better IS theories and methods in this area. So, we hope what we presented here can create fruitful discussions among IS researchers.

## REFERENCES

- Agarwal, R., Gao, G., DesRoches, C., & Jha, A. (2010). Research commentary—The digital transformation of healthcare: Current status and the road ahead. *Information Systems Research*, 21(4), 796-809.
- Boyd, D. (2010). Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications. In Z. Papacharissi (Ed.), *Networked Self: Identity, Community, and Culture on Social Network Sites* (pp. 39-58).
- Cavaye, A. (1996). Case study research: a multi-faceted research approach for IS. *Information systems journal*, 6(3), 227-242.
- Chiasson, M., Reddy, M., Kaplan, B., & Davidson, E. (2007). Expanding multi-disciplinary approaches to healthcare information technologies: What does information systems offer medical informatics? *International journal of medical informatics*, 76, S89-S97.
- Christians, C. (2011). Ethic and Politics in Qualitative Research. In Norman K. Denize & Yvonna S. Lincoln (Eds.), *The SAGE Handbook of Qualitative Research* (2nd ed., pp. 61-80). Thousand Oaks, CA: Sage.
- Da Cunha, J., & Orlikowski, W. (2008). Performing catharsis: The use of online discussion forums in organizational change. *Information and Organization*, 18(2), 132-156.
- Darke, P., Shanks, G., & Broadbent, M. (1998). Successfully completing case study research: combining rigour, relevance and pragmatism. *Information systems journal*, 8(4), 273-289.
- Davis, K., Schoenbaum, S. C., & Audet, A. (2005). A 2020 Vision of Patient-Centered Primary Care. *Journal of General Internal Medicine*, 20(10), 953-957.
- Denzin, N. K., & Lincoln, Y. S. (2011). Introduction; The Discipline and Practice of Qualitative Research. In Norman K. Denize & Yvonna S. Lincoln (Eds.), *The SAGE Handbook of Qualitative Research* (2nd ed., pp. 1-20). Thousand Oaks, CA: Sage.
- Eide, P., & Allen, C. B. (2008). Recruiting transcultural qualitative research participants: A conceptual model. *International journal of qualitative methods*, 4(2), 44.
- Eisenhardt, K. M. (1989). Building Theories From Case Study Research. *Academy of Management. The Academy of Management Review*, 14(4), 532-550.
- Fichman, R. G., Kohli, R., & Krishnan, R. (2011). The role of information systems in healthcare: current research and future trends. *Information Systems Research*, 22(3), 419-428.
- Flyvbjerg, B. (2011). Case Study. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (4th ed., pp. 301-316). Thousand Oaks, CA: Sage.
- Given, L. (2008). *Natural Setting*. *The Sage Encyclopedia of Qualitative Research Methods*. Thousand Oaks, CA: SAGE Publications, Inc.
- Glaser, B.G. (1978). *Theoretical Sensitivity: Advances in the methodology of grounded theory*. Mill Valley, CA: The Sociology Press.

- Glaser, B.G., & Strauss, A. (1968). *The discovery of grounded theory; strategies for qualitative research*. London: Wiedenfeld and Nicholson.
- Greenhalgh, T. (2009). Patient and public involvement in chronic illness: beyond the expert patient. *BMJ*, 338. doi: 10.1136/bmj.b49
- Hackworth, B., & Kunz, M. (2010). Health care and social media: building relationships via social networks. *Academy of Health Care Management Journal*, 6(1), 55-68.
- Hara, N., & Hew, K. (2007). Knowledge-sharing in an online community of health-care professionals. *Information Technology & People*, 20(3), 235-261.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241-251.
- Klein, K., & Myers, D. (1999). A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems. *MIS Quarterly*, 23(1), 67-93.
- Laverty, S. M. (2003). Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations. *International Journal of Qualitative Methods*, 2(3).
- Marshall, C., & Rossman, G. (2011). *Designing Qualitative Research* (Fifth ed.). Thousand Oaks: SAGE.
- Mingers, J. (1984). Subjectivism and soft systems methodology - a critique. *Journal of Applied Systems Analysis*, 11, 85-10.
- Myers, M., & Newman, M. (2007). The qualitative interview in IS research: Examining the craft. *Information and Organization*, 17(1), 2-26.
- Nordfeldt, S., Hanberger, L., & Berterö, C. (2010). Patient and parent views on a Web 2.0 Diabetes Portal-the management tool, the generator, and the gatekeeper. *Journal of medical Internet research*, 12(2).
- Orlikowski, W. (1993). CASE tools as organizational changes: Investigating incremental and radical changes in system development. *MIS Quarterly*, 17(3), 309-340.
- Orlikowski, W. (2007). Sociomaterial practices: exploring technology at work. *Organization Studies*, 28(9), 1435-1448.
- Orlikowski, W. (2010). The sociomateriality of organisational life: considering technology in management research. *Cambridge Journal of Economics*, 34(1), 125-141.
- Schouten, B. C., Meeuwesen, L., Tromp, F., & Harmsen, H. (2007). Cultural diversity in patient participation: the influence of patients' characteristics and doctors' communicative behaviour. *Patient education and counseling*, 67(1), 214-223.
- Stellefson, M., Chaney, B., Barry, A. E., Chavarria, E., Tennant, B., Walsh-Childers, K., . . . Zagora, J. (2013). Web 2.0 Chronic Disease Self-Management for Older Adults: A Systematic Review. *Journal of medical Internet research*, 15(2), e35.
- Stewart, K., & Williams, M. (2005). Researching online populations: the use of online focus groups for social research. *Qualitative Research*, 5(4), 395-416.
- Urquhart, C., & Fernández, W. (2013). Using grounded theory method in information systems: the researcher as blank slate and other myths. *Journal of Information Technology*.
- Urquhart, C., Lehmann, H., & Myers, M. (2010). Putting the 'theory' back into grounded theory: guidelines for grounded theory studies in information systems. *Information systems journal*, 20(4), 357-381.
- Urquhart, C., & Vaast, E. (2012). *Building Social Media Theory from Case Studies: A new Frontier for IS Research* Paper presented at the International Conference of Information Systems 2012, Orlando.
- Vaast, E., & Walsham, G. (2013). Grounded theorizing for electronically mediated social contexts. *European Journal of Information Systems*, 22, 9-25.
- Van Dijck, J. (2009). Users like you? Theorizing agency in user-generated content. *Media, culture, and society*, 31(1), 41.
- Wagner, E., Austin, B., Davis, C., Hindmarsh, M., Schaefer, J., & Bonomi, A. (2001). Improving chronic illness care: translating evidence into action. *Health affairs*, 20(6), 64-78.
- Whetten, D. A. (1989). What Constitutes A Theoretical Contribution? *Academy of Management. The Academy of Management Review*, 14(4), 490-491.

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