

# VQY CTF "K VGTRTGVIKGRJ GP QO GP QNQI KECN'CP CN[ UKU – GZRNQTKPI "VGEJ P QNQI [ CFQRVKQP 'CPF 'EQP VKP WQWU WUG'CU'NHGY QTNF 'GZ RGT KGP EG

Pcyj cp'Ncngy . 'O kf 'Uy gf gp'Wpkxgtukf . Uwpf uxcm Uy gf gp. pcyj cp'ncngy B o kwp0ig  
Mcvtkpc'Nkpf drcf/I kf nwpf . O kf 'Uy gf gp'Wpkxgtukf . Uwpf uxcm Uy gf gp.'ncvtkpc0kpf drcf/  
i kf nwpf B o kwp0ig

## Cduwcev

*With recent rapid digital evolution and integration of technology into our lifeworld, the suitability of causal based methods to study IT-entangled everyday experiences is becoming dubious. As interpretive research methods emerge as viable alternatives, some has criticized its rigor based on its less critical stance and lack of tools to understand complex historical and environmental influences on individual experiences. Drawing upon phenomenology, we propose Interpretive Phenomenological Analyses (IPA) as potential interpretive method of enquire to understand how and why we engage with information systems. IPA provides a tool to both critical explore and hermeneutically interpret phenomena of lifeworld experiences based on users' interpretation of their own experiences. The approach also provides a means to mapping out participants' object of concern and their experiential claims using hermeneutical and critical questioning, then coherently contextualize participants' interpretation within their environmental and cultural settings. We illustrate the proposed method with empirical evidence of excerpt from a longitude study of IS usage research. Consideration is given to philosophical assumptions, different IPA approaches, and researchers' fore-structure presumptions of their field of interest. The paper intends to contribute toward the discussion of interpretive research methods in the field of information systems.*

*Keywords: Interpretative phenomenological analysis, hermeneutics, lifeworld experience, IS usage, interpretative research method*

# 1 INTRODUCTION

The study of IS adoption and continuance use is a core interest in IS research (Guinea & Webster 2013; Bhattacharjee et al. 2008; Lee 2014). In studying these phenomena, the field has traditionally been influenced by causal oriented quantitative and empirical methods that focuses on observable facts such as identifying and testing causal relationships (Wang et al. 2008), validating and extending existed/hypothesized causal variables (Kim 2012; Wang et al. 2008), and/or developing measurable scales to predict or explain IT adoption and continuance use (Sun & Bhattacharjee 2014). However, as theoretical framing such as sociomateriality and experiential computing start to hold grounds in the field, there is an increasing interest in interpretive methods of inquiry to study human-technology relationship (Yoo 2010; Tilson et al. 2010; Vodanovich et al. 2010a; Orlikowski 2010). In general term, sociomateriality and experiential computing views human-technology relationship as ‘holistically entangled’ experience of the ‘social and the material’, in which everyday life is considered as digitally mediated lifeworld experience (Leonardi 2013). These experiences are not easily abstractive, rarely have a spot-on causal relationships, hardly submit to scalable variables, and ‘vanishes if attempt is made to corner them for quantitative inspections’ (Sandelands & Buckner 1989).

Out of this milieu, interpretive research tradition is seen as a viable alternative method for researchers to study IS use (Tilson et al. 2010; Yoo 2010; Jain 2003; Cecez-Kecmanovic et al. 2014). Apart from its relevancy, though, interpretative researchers still face the question of rigor regarding their account for a number of reasons. First, even though, it is now ‘widely’ accepted that researchers’ preconceptions eventually become part of the overall research outcome (Walsham 2006), there is still little guidance on how participants’ interpretations of their relationship with technology and researchers’ interpretations of participants’ interpretation developed together to the overall research account. Second, basing critical theory argument, interpretive research account is still scrutinized for its nominal critical perspective as it is assumed to lack a means to investigate “complex historical, structural, and environmental influences upon individual experiences” (Orlikowski & Baroudi 1991). Finally, interpretive studies are assumed to be ill-equipped for explaining ‘unintended consequences of actions’ that can affect existing social structures but cannot be explained based on human intentions and their interpretations of current realities (Fay 2014).

In order to overcome these limitations, we propose Interpretive Phenomenological Analysis (IPA) as a potential method of inquiry for IS usage studies within the tradition of interpretive research methods. First introduced by Smith (1996) in the field of qualitative psychology, IPA is a “methodological approach for exploring, in depth, how individuals experience and ascribe meanings” to a particular phenomenon of interest (Clarke 2009). It considers social interactions such as human-technology relationship as a ‘mutually co-constituted’ lifeworld experiences that gradually develops and emerges dialectically with no predefined dependent or independent variables (Riemer & Johnston 2013). Basing Heidegger’s phenomenological notion, IPA develops a means to conduct interpretative analysis as a ‘double hermeneutic’ process; where the participant tries to make sense of their experience and the researcher aims to make sense of the participants’ trying (Smith 2004). In addition, it provides researchers a means to be critical and speculative in their interrogations and to explore individuals’ existing background by considering participants as a “person-in-context” (Larkin et al. 2006).

The paper is organized as follows: First, we present a brief literature review of IS use research methods and their traditional focus in their empirical evidence. Next, we introduce IPA and its theoretical foundations. After demonstrating its application to conduct both critical and interpretive IS usage research, we present IPA in the context of IS usage experiences and illustrates its fidelity with empirical work. The paper draws on an empirical case study of the implementation of new Learning Management System (LMS) called Moodle that is deployed in three campuses of a higher institution in Sweden. The authors were able to follow the implementation for more than 20 month, where they

have conducted more than 30 interviews and analyze 580 end-users' Moodle helpdesk messages. The final section discuss the contribution of proposed method of enquiry for IS usage study in general, and for interpretive research traditions in particular.

## **2 LITERATURE REVIEW**

In this paper, we use the term IS usage to imply both IS adoption and continuances use phenomena. IS continuance use symbolizes a long-term use of technology well beyond the initial acceptance and adoption. This section presents the research trend of IS usage studies in the field and how existing theoretical perspective strongly dictated our methodological choices.

Central to IS usage theories and methods, we find the notion of causality as the main anchor to explain, predict, and measure IS usage. Causality, a 'relation between causes and events', aims to explore the reasoning behind sequential activities based on their effect on each other (Gregor 2006). Ortiz de Guinea and Markus (2009), for example, identified reason action models as the main theoretical bases for doing IS adoption and continuances use research. In this context, the prominent cited explanation for IS successful use is characterized as end-users cognitive and intentional decision. (Venkatesh & Davis 2000). Second to users' rational reasoning, we find behavioural reasoning such as emotions, attitudes, and affective responses as a cause for IS usage. (Karahanna et al. 1999; Ajzen 1991; Rogers 2010). Other studies focus on distinct characteristics of technology such as usefulness as a cause for IS usage. (Bhattacharjee 2001; Venkatesh et al. 2003; Agarwal & Karahanna 2000). In most of these researches, we found a consistent trend of applying quantitative analysis methods such as structural equation models, Partial Least-Squares analysis, Regressions, and other statistical based quantitative methods. For instance, it is common to see attempts of computing TAM variables (usefulness and ease of use) with authors' hypothesized variables such as personal anxiety (Calisir et al. 2014), organizational agility (Chung et al. 2014), hedonic value (Sun & Bhattacharjee 2014), or trust and cost (Escobar-Rodríguez & Carvajal-Trujillo 2014).

Parallel with quantitative traditions, we have also noticed interpretive research approach under the umbrella of qualitative research methods. Interpretive research use phenomenology and hermeneutic as their philosophical foundations, though applying them in different level (Boland Jr 1986; Cole and Avison 2007). A significant number of publications have discussed interpretative research in general (Schutz 1970; Lincoln 1995) and its potential use in the IS research in particular (Walsham 1995; Klein & Myers 1999; Walsham 2006; Orlikowski & Baroudi 1991; Boland 1985). In addition, a number of interpretative case studies covering a range of topics can be found in the literature (Boland & Day 1989; Suchman 1987).

Walsham (2006) suggested that interpretative research methods in IS originates from the position that "our knowledge of reality is a social construction by human actors". In similar notion, Geertz (1973) argued that empirical evidences collected in the field research are "our construction of other people construction" of their reality. Hence, the main idea of interpretive research is to understand these constructed meanings that are 'already existed in the social world' (Goldkuhl 2012). Interpretive research describes IS use as time-extended contextual activity, where a researcher aims to 'understand the context of IS in use and its influence on users' everyday context' (Myers & Avison 1997). Unlike fixed set of variables/factors in causal based methods, interpretive researchers try to understand users' contextual world in a back-and-forth movement between the whole context and its parts – commonly referred as hermeneutic circle (Klein & Myers 1999).

One of the core discussions relating to interpretive research has been concerned with the potential outcome of bias research (Sandelowski 1993). On the one hand, some have strongly argued that analysts should find ways to 'bracket out' their prejudice before and during research work. Schutz, one of the main figures in interpretive research, advised that analysts' position during research should resemble to that of a "disinterested observer" with a mere cognitive curiosity (Schutz 1970). On the other hand, it is widely accepted that analysts' prejudice and bias will become part of the research account (Walsham 2006). In one of their seven principles for doing interpretive research, the principle

of dialog reasoning, Klein and Myers (1999) stated that “prejudice is the necessary starting point of our understanding”. However, there is little guidance in interpretive studies on how participants’ own interpretation of their social world and researchers’ interpretations of ‘participant interpretation’ mature together toward the account of phenomena of interest.

In addition, the literature has consistently adhered to Orlikowski & Baroudi (1991) classification of qualitative research as having three separate epistemological sources: interpretive, positivist, and critical. While positivist vs interpretive research methods, their similarities and differences, and their possible integration have extensively explored (Lee 1999; Fitzgerald et al. 1985; Fitzgerald & Howcroft 1998), critical vs interpretive research have admittedly taken as diverge and sometimes a compete separate traditions (Goldkuhl 2012). The premise given for such treatment is that interpretive traditions such as interpretive case studies do not provide the means to “explain historical changes” that may affect existing and future structures – a core concern for critical researcher (Orlikowski & Baroudi 1991). We agree that critical method of research is a well-equipped tradition to conduct an ‘evaluative and transformative research of social realities’(Myers & Klein 2011). Conversely, as some points out (Deetz 1982; Doolin 1998), interpretive research methods can also be used in a reflective and critical way to study human-technology relationships. However, we find a paucity of information in IS field on how to use interpretive research to conduct a more critical and reflective inquiry.

Finally, interpretive method has been subject to critics for its ‘inability’ to consider “unintended consequences of actions” that may not be explained by human intentions (Orlikowski & Baroudi 1991). Orlikowski and Baroudi (1991) described such actions as practices that may not be visibly part of the existing social structure, but subtly result in ‘reinforcing the existing way of practices, roles, beliefs, and power relationships that potential affect individuals’ life experience’. As such, the account of interpretive research portrayed as lacking deep knowledge regarding the structure of social actions and their consequences on individual interpretation of their lifeworld experience (Fay 1987).

To address identified shortcomings, the next section presents IPA as an alternative methodological approach to explore IS usage. Interpretive phenomenological analysis (IPA), developed by Smith (2009), is holistic-oriented inductive qualitative analysis method rooted in the field of phenomenology and hermeneutic (Reid et al. 2005). Basing Heidegger’s phenomenological notion of time and space, IPA provide a philosophical background to study participants’ historical, structural, and cultural influences using hermeneutical and critical questionings. In addition, it argued for the inclusion of researchers’ interpretative account using ‘double hermeneutic’, hence provide a means to develop both users’ and researchers’ account during empirical analysis. The next section develops a theoretical foundation to lay the groundwork for our proposed method of enquiry.

### **3 THEORITICAL FOUNDATION**

Studies focused on analyzing lifeworld experience needs to conduct a detailed and nuanced analysis of empirical evidences. IPA, with its ideographic nature, deals with specific individual(s)/cases within a specific space and time. This way, it enables researchers to focus on examining one case at a time, before moving to consequent corpus of cases to conduct cross-case analysis, if applicable. Its data collection and analysis focused on exploring participants’ lived experience and how they make sense of these experiences. That is, the result of an IPA study is amounted to a third party (e.g. researcher) view of what a first person meaning making of his/her experience storyline looks like. A researcher accomplished this task by striving to reveal participants’ relatedness with the phenomena at hand. In addition, IPA provides a tool to develop a second-order interpretative account (researcher’s account) to relate the interpretive users’ account to a ‘wider context of the subject matter such as theoretical contexts or even directing toward answering a research question’(Larkin et al. 2006).

IPA’s philosophical base thread back to two major contributors and their slightly different approaches: Edmund Husserl (1936) and his work of intentionality and bracketing (reduction) and Martin Heidegger (1927) and his notion of phenomenological hermeneutics. It is impossible to develop a

detail account of their approaches within the scope of this paper. But as IPA can be used based on both phenomenologist' approach with different results, one has to be aware of their assumptions.

In a simplified way, Husserl's (1964) understanding of reality uses human consciousness (its intentionality) as a starting and ending place where a dialogue happens between a person and the world; hence eliminates the mind-body dualism (Koch 1995). He proposes a notion of bracketing (reduction): where one (e.g. a researcher) needs to 'bracket out' his/her own preconceptions and prejudice in order to clearly understand and interpret the essence of any lifeworld experience.

Heidegger challenges Husserl's construction by calling it a purely descriptive phenomenology based on two reasons: (1) describing or retelling a phenomenon in any form is not possible without interpretation (e.g. researchers' prejudice) and (2) intentionality, though is a human activity, cannot be primarily mental. On the latter case, Heidegger suggested that consciousness is a 'derivative aspect of human engagement' with the world (Larkin et al. 2006); thus shifts the focus from mental structure or intention to an everyday human engagement with the world. He argues that such everyday engagement with the world mostly do not constitute a thoughtful relationship with the world, but reflects a 'taken-for-granted' or 'natural attitude' sort of experience. In interpreting such human relationship with the world, Heidegger also rejects the notion of reduction based on his concept of "Thrownness"—that a person is always exist in an already pre-meaningful world (Winograd & Flores 1986), hence cannot find him/herself completely neutral.

The decision we make to follow either of these phenomenologist's approach affects the insight of our IPA enquiry (Mackey 2005). On the one hand, if we were to use Husserl's phenomenological notion, we will only be interested on 'how things appear subjectively to people' (descriptive). In addition, a researcher should carefully reflect upon his/her pre-conceptions regarding the phenomenon of interest to avoid any bias. If, on the other hand, Heidegger's notion is our choice, the process of conducting lifeworld analysis demands to be both descriptive and interpretive; describing the meaning of the experience and interpreting how these meaning of experiences influences the choices we make (e.g. to adopt and continue using a particular technology) (Flood 2010). For our purpose, since we are concerned with both describing and interpreting users' IS usage lifeworld, we further discuss Heidegger's concepts of phenomenology as a base for IPA.

Heidegger's main phenomenological concept rests on his ontological analysis of our way of being-in-the-world or as he calls it Dasein (Heidegger 1962). Dasein implies that we are always "located somewhere, in amidst of and involved with some sort of context", and with no choice but continuously interact to our surroundings (Larkin et al. 2006). Our everyday interaction amounts to an average everydayness or natural attitude that does not involve conscious thought, unless faced with new challenges or breakdowns. In addition, researchers cannot escape their 'own make up world' while investigating and giving meanings to their findings. Within the concept of Dasein, we find the notion of time and space as delineators of context. That is, according to Heidegger, we can only describe and interpret experience in the context of 'person's positioning in relation to the object of interest' (space) and past situations and residuals frames affects current 'person-in-context' (time).

Basing Heidegger's ontological understanding of time and space, IPA researchers have a philosophical advantage to explore critically past historical changes and contextual residuals that affect users' current decisions. Heidegger considered experiences and pre-understandings as a base to create/anticipate current realities (Dreyfus 1990). Even 'new phenomena' can be explained in terms of what we already know (Cole & Avison 2007). Interpretive phenomenological researcher is keen to find participants' descriptions and interpretations that relates to historical changes in order to critical investigate current realities (Mackey 2005). In addition, as researchers tries to understand participants situatedness to their 'space', they are be able to see possible 'background forces' that contributes to participants' way of relatedness to the phenomenon of interest. In fact, IPA researchers are encouraged to 'listen' to remote background noises that may affect participants' interpretation of their realities (Mackey 2005). Hence, the notion of time and space provides IPA a philosophical ground to be a

critical interpretive method of inquiry that can address unintended and emergent consequences of past actions.

Finally, Heidegger stresses that any experience that involves interpretation influenced by what he calls 'fore-structure' – "individuals' background and historicity" (Lavery 2008). Simply put, fore-structure is what is understood and known in advance that await interpretation and sense making. Both a researcher and a participant brings such "historicity to a research study" (Mackey 2005). In IPA, the overall outcome a research analysis results from a 'double hermeneutic' process. IPA acknowledges that researchers' preconceptions and prejudice will be part of the research account, as we cannot have "direct access to someone's lifeworld" (Clarke 2009). As participants are trying to make sense of their world, researchers are trying to make sense of participants' trying. If we take, for example, MS word adoption and continuances use as our object of interest, our primary concern will not be the features of MS word per se (e.g. usefulness) or users' behaviours or intentions regarding the phenomenon of interest. Instead, it will be 'how users' try to understand and make sense (interpret) of their experience with MS word in terms of their relatedness to, and engagement with it' – their lifeworld experience (Larkin et al. 2006). As researchers' try to make sense of users' 'experience claims and interpretations', a dialectal interpretation of both participants' and analysts' account is continuously developed together.

Finally, IPA sees reflective interview (leading to a co-creation of meaning by a researcher and a participant) as the main data collection methods as oppose to observational quantitative methods such as surveys. Well-developed semi-structure interviews can be used to 'reflect, clarify, request illuminating examples' of users' background practices and experiences (Flood 2010). Crist and Tanner (2003) suggested that participants' inclusion criteria should be established to make sure that a homogeneous sample is obtained to understand a particular experience in particular situation. The size of the sample considered adequate, as new informants reveals no new findings.

#### **4 IPA AS METHOD OF INQUIRY TO CONDUCT IS USE STUDIES**

In an IPA context, IS usage lifeworld study typically starts with a descriptive analysis (coding) about the first-hand experience. Assuming data collection (e.g. semi structured reflective interview) and participants' selection (e.g. homogenous, relatively small, and purposive) is made in line with IPA's interest; the first step is to build a descriptive account of users' experience. Larkin et al. (2006) suggested that such account can be developed by identifying two related aspects of respondent's story: 'object of concern' and 'experience claims'. Users can report different 'objects of concern' during their interview sessions, implicitly or explicitly, while retelling their experience of IS use. A researcher will be keen to identify 'what is taken as important' for the user to adopted and continue using an IT system in a particular context.

The next step in descriptive analysis is to pick up hints about users' experiential claims about those identified object of interest. A user may have developed a fear of adopting new technology; hence, fear can be a candidate for object of interest. Experiential claims such as fear can be expressed metaphorically like comparing the fear with real life experience events as darkness, lost in a forest, or left behind enemy lines. Experiential claims also affirm the candidacy of objects of interest, as users' starts to explain how they felt about these objects.

Such first-hand experience analysis starts with an inductive approach, allowing themes to emerge from participants' experiential claims, instead of imposing analysts' preconceptions and theoretical framings. Experiential claims assist the analyst to understand background stories, participants' situatedness in the given space, and their way of relating to the object of concern. Smith (2004) stressed the importance of applying a "hermeneutics of questioning, of critical engagement" to reach deep structure of understanding of participants' way of relatedness to the phenomena of interest, thus making IPA a more critical and interrogative method.

The second step in IPA is making sense of users' lifeworld claims, which concerns with developing an interpretive account. Sense making in IPA includes an interpretive explanation of participant's experience within a given context. The fore-structure process noted above as a 'double hermeneutic' applied to make sense of experiential claims by bringing analysts' own interpretations and theoretical conceptions. That is, the double hermeneutic circle results from researchers' initial perspective and understanding of the experiential claims and a later hermeneutic circle of open interpretation of the first circle to revisit and elaborate by the analyst (Tappan 1997). Researchers' concepts and terminologies to interpret the experience claims 'are a given set of fore-structure', but can go through modification as an attempt is made to generate participants' interpretations (Koch 1995).

IPA is flexible when it comes to the choices of procedural steps and how participants' perspective should be interpreted. A researcher can choose different tools and procedures to develop their interpretive accounts. Chughtai and Myers (2014), for example, suggested to develop an exposé of researchers' hermeneutic fore-structure before entering (thrown into) into their field of interest. Such prior familiarity, they claim, can provide researchers a complete subtle body of knowledge about participants' and their own contexts. Others gone as far as suggesting more detailed procedural steps (usually spans from 4-6 steps) in accomplishing IPA analysis (Van Kaam 1959; Giorgi 1985).

The works of Svedlund et al.(2001), for example, follow a three-step interpretive method of analysis: naive reading, structural analysis, and interpreted whole/comprehensive understanding. Inspired by Ricoeur's (1976) hermeneutical approach, the authors were able present an interpretation of their participants' life experiences that advances from a 'naive description to critical interpretation'. In naive reading, interviews were read and 'reflected upon' to get a general sense of the participants' narrations. The authors reported that their structural analysis comprised of several steps: from derivation of meaning units based on interview sentences to creating condensed phases for each meaning units and forming subthemes and themes. In their final steps, the authors' own pre-understandings and the results of the previous two steps were analyzed as a whole again to complete the hermeneutic circle. Whichever steps a researcher decided to follow, though, an IPA approach has a clear mandate – the steps should enable a researcher to make a reflective and hermeneutical interpretative analysis. In what follows, we present empirical illustration of IPA method to study the lifeworld of IS usage.

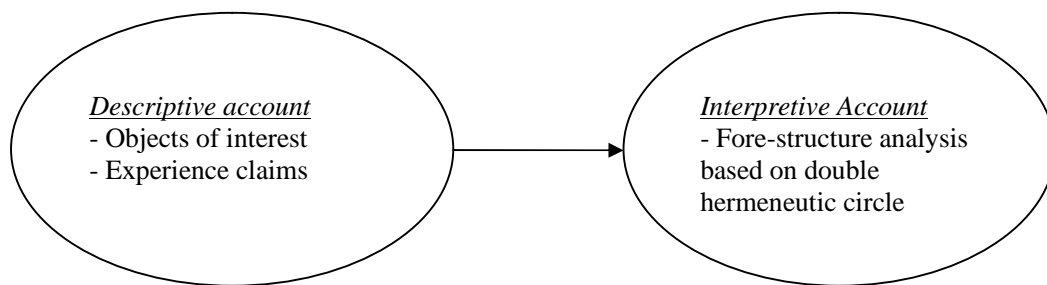


Figure 1. A simplified schematic presentation of IPA

## 5 RESEARCH METHOD

In this section, we present an interview transcript from a longitudinal case study of over a period of 20 month to illustrate the application of IPA to analyze IS usage lifeworld experience. The case study concerns with the implementation of a new Learning Management System (LMS) in a higher education institute and LMS's adoption progress over a period of time. The University in inquiry has more than 1500 teachers and 13,055 students in three campuses situated in northern Sweden. After a trial period of use in the summer of 2012, a new LMS called Moodle has adopted since January 2013; replacing previous LMS called WebCT.

In general, the data collection process involved three different methods; interviews, Diary notes, and more than 580 users' help desk messages. One of the authors' conducted an in-depth interview with the so-called Moodle champions in two different occasions – during the first three month of Moodle deployment and after 20 months mark. Moodle champions are selected focal point individuals (about 14 in number) in each department to facilitate the process of Moodle system deployment. Interview participants were purposively selected, comparatively small in numbers, and homogenous in their responsibilities: hence deemed an appropriate dataset for the purpose of IPA.

We present a brief analysis of a partial interview transcript with one of the Moodle champions, from here onwards called 'Malin', conducted during the second phase of interview. Malin is a middle-aged woman employed as senior lecturer in IT department. In the interview, she discussed the progression of Moodle adoption and continuance use within her department and her own struggle for the last 2 years with the new system. First, we study Malin's transcript with the aim of spotting what is important in her lifeworld of Moodle usage.

## **6 INTERPRETIVE PHENOMENOLOGICAL ANALYSIS IN ACTION**

### **6.1 Describing Malin's IS usage lifeworld experience – first-order account**

Malin appeared to have three major objects of concern: deployment strategy, uneasiness to adopt new routine, and feeling powerless in using Moodle. Malin was highly critical of the university's deployment pace and cited it as a major source of problem for Moodle adoption. In fact, she felt overwhelmed by the number of features that was introduced at once in the beginning of Moodle adoption. Even though this interview was conducted after 20 month of the implementation, the concern was one of her persistent IS usage lifeworld experience. In addition, Malin did not afraid to show her uneasiness toward Moodle while discussing Moodle's expectation of her to change her everyday routines. The reputation of flexibility Moodle cliques uttered about did not impress her, in fact to the opposite. Flexibility was, in a way, a source of confusion and this confusion was part of her Moodle adoption experience.

*M: WebCT is much, very much easier. There is a lot of opportunities to work with Moodle, more staff into it, more fun in that way to create for students. But it is too much, and I think they have implemented too much. Instead, they should start easy and upscale it as time goes by. What it seems they do is that they start all the staff and start to dimension it down. It is quite hard to work with; you have to do a lot of workarounds.*

*I: Oh, so you still use workarounds?!*

*M: (Smirk) you have too, otherwise it doesn't work the way it should. WebCT was filling the need right on the spot, but Moodle comes with a lot of features.*

*I: So you feel like, you are adapting yourself to Moodle?*

*M: I think so. Maybe Moodle is flexible enough, but as a user we don't feel it that way. We feel like you adapt the way Moodle is working. You feel like you have to change every way of working to fit in to the system. It doesn't give that impression of being flexible, even if it may be is.*

*I: Sounds like you don't feel like you are accustomed to it.*

*M: well, I must say Moodle starts to feel natural in a way. We work with Moodle every day, and for us, in informatics, it is kind of shorter time to start to feel home. Maybe we don't like our home that much, but we have to live in it. Maybe for the other department like health department, it might take longer time. They are still 'outside'. But I don't think I have an option to not resist it. I didn't like it and don't like it today either.*

Power issue is one of Malin's concerns, even though it wasn't definably expressed within her remarks. From the last comment, we can see that since the system has become the standard LMS for the university, whether she likes it or not, she feels obliged to get accustomed to it. Hence, the top down approach that is reflected not only in the Moodle features' deployment, but also in the implementation



of Moodle per se were part of her Moodle adoption lifeworld concerns. We can further see how Malin expresses her experience (experiential claims) regarding one of her object of concerns in the next remark she made.

*I: How do you, then, describe your relationship with Moodle?*

*M: It is like old marriage. We got use to each other, and we don't have to try to change each other anymore (mockingly). It makes me to scream sometimes. I think, every user has its own way of getting use to it. Still hard to work with it, but I have to work with it. I curse a lot (smiling) and I can't divorce it.*

For Malin, feeling obligated and left out without a choice was one of her main IS usage experience. She was not afraid to show her resentment regarding Moodle and its effect on her to feel powerless. She compared this powerlessness with a 'bad' marriage, where all available choices are deemed wrong choices. This makes her feel like she wanted to scream and cursed about it, but also aware that she cannot help it but continued to 'live' with these feelings. Such visible experiential claim not only central to understand users' context (their lifeworld) but also confirms the validity of object of concerns. In the following section, we turn our attention to a second-order account to interpret Malin's remarks.

## **6.2 Interpreting Malin's IS usage lifeworld experience – second-order account**

Heideggerian phenomenological framework requires researchers to not only tell 'the insider perspective' but also engage in meaning making activities—"what it means for the participant to have such perspective within their particular context" (Larkin et al. 2006). IPA is intentionally developed to allow singling out parts of users' experience to study in detail and make sense of that particular experience based on the overall context. In addition, when it comes to analysis, IPA does not require analysts to use specific kind of interpretation methods (e.g. thematic analysis, pattern recognition), thus provides epistemological flexibility.

In developing second-order account, it should be noted that the authors' fore-structure framing originates from the informatics field. That is, as we derived a second-order account our traditional understanding of IS adoption and continuance use phenomenon has interplayed with the participant's life experience narrative. In what follows, using further remarks from Malin's experience, we present an example of such interpretation.

*I: What will happen, for example, if you don't have a print option?*

*M: I would run around the corner all the evening (Mockingly laugh). I will find a way. I use print screen, and paste it to work to print alone. Here, in this department, I know, when it comes to grading most of us do that. We download to excel, because it is easier, with better overview, column colouring, and print options.*

*I: I heard you also have Gmail features included in Moodle?!*

*M: I never use it, I actually removed it. I use outlook or Skype, mostly outlook. There is an option called chat that seems to look like Skype. However, I never use it, Skype works well. I don't know if everything has to be in Moodle, or integrated to it. It works perfect this way. For example, students have a facebook account that they get together and they don't integrated it with Moodle, which actually works, because I don't want to be a member of that, and I don't think student wants me to be - ). I think it is almost impossible to make systems that cover everything.*

*I: So, people don't use advanced features?*

*M: Not much, we kind of have the same way of using here. Some want to have wiki in their course, and some people go outside to do that. It is not like you see features and say OK let me use wiki, but it is the other way round. I don't think LRC (Moodle IT department) get that. You want to use wiki and search if there is a feature supporting that. Most teachers don't have time to explore, or to test. They just build the course and happy with it, you know, once a year.*

*I: When do you think, then, you would feel like Moodle is integrated to your work systems?*

*M: well, I suppose it will just happen. You have to use it and you find out your way, because you don't*

have a choice. For example, you start to use Google, and suddenly it is Google, I am using when I search things. You don't make decisions on your own.

We have adapted some prompts from Larkin et al. (2006) to observe these extracts. As it was mentioned previously, analysts with different fore-structures could have developed a different second-order interpretations and promptings. The prompt adaption from Larkin et al. (2006) is to simply demonstrate how second-order interpretations can be developed toward a critical understanding of life world experience. The point here is to make sure that each of these interpretations will lead to hermeneutic circle analysis.

- An attempt to rationalize a particular course of lifeworld (“*I don't know if everything has to be in Moodle ... I think it is almost impossible to make systems that cover everything*”). Malin rationalize why she selectively adopt features available in the Moodle, but also why the way she thinks how to adopt technology makes sense than the way IT departments wants her to.
- Providing ‘common sense rules’ from outside world (“*It is not like you see features and say OK let me use wiki, but it is the other way round. I don't think LRC (Moodle IT department) get that. You want to use wiki and search if there is a feature supporting that*”). Malin is providing what she thinks is a good example of what an IS adoption strategy should look like from a ‘normal’ everyday IT practice. This was her way of showing why IT department’s deployment strategy failed to grasp users’ need.
- Insight into respondent’s lifeworld experiences (“*I would run around the corner all the evening ... here, in this department, I know, when it comes to grading most of us do that*”). Malin goes on making experiential claim from her own as well as other departments’ employees regarding their frustration and workarounds about specific features. Elsewhere in the interview (“*it makes me scream sometimes... I curse a lot*”) she compared such experiences with a known everyday sign of frustration.
- Insight into the interviewer’s fore-structure (“*When do you think, then, you would feel like Moodle is integrated to your work systems?*”). Clearly, the interviewer has a fore-structure understanding that might base the work of Alter’s (2011) work system theory.

Any of these interpretations can lead into a hermeneutic circle of analysis. The process of hermeneutic circle in this particular case, however, is expected to revolve around Malin’s lifeworld experience, what these experiences mean to her, the fore-structure of the interpreter, and the context of IS usage. Apart from pure descriptive form, interpretive phenomenology gives space for interpreters to intentionally manipulate meanings of experiences and present them as connoting ‘completely something else’ (Larkin et al. 2006). In Malin’s case, for example, it can be reasonably argued to infer that when it comes to IS usage, habit was a central issue. Malin was strongly determined to prove what she thinks is the ‘right habitual way’ of IS adoption progress. She defended this habitual way using outside ‘common sense’ examples. With such strong defence feelings, one can also infer that Malin might have been threaten with the change comes with the new technology; hence raising fear as an issue. IPA’s such epistemological openness enables analysts to ‘follow new paths as they emerged during interpretations’ (Chughtai & Myers 2014).

## **7 GENERAL DISCUSSIONS AND CONCLUSION**

As IS designers are increasingly keen to ‘hide’ technology features deep into users’ experiences, accessing those features obliges us to consider an experience itself as intelligible empirical evidence. Our contribution in this paper has been focused on discussing a methodological enquiry to explore such experiences in the IS usage field of research. We proposed a non-causal interpretive methodological inquiry to analyze IS usage experiences. IPA provides an interpretive research tool to explore users’ everyday IT practice without skeletonized it into list of intentions, behaviours or technical characteristics.

In the beginning of this paper, we have raised some concerns in which interpretive researchers are still obliged to address as critics to their choices of methods. Interpretive research method, though considered relevant to study lifeworld experiences, is criticised for the lack of tools to study deep social structure and critical stands. In addition, the role of a researcher during data analysis and interpretation has been the subject of debate. We have demonstrated that IPA complements such 'sought' shortcomings in number of ways.

First, IPA is established on Heidegger's phenomenological conception that sees the notion of 'time and space' frames as a pillar to understand lifeworld experience. The concept of time relates to one's historicity and pre-understandings that individuals usually based to make sense of existing/new realities. It was evident from our brief empirical material that old ways of relating to technology are being used to develop a relationship with the new technology. In addition, Malin stated that her environment (being in the informatics department) has assisted her to catch up easily with features when it compares to other departments. While gather descriptive exposé (discussed above as first-order account), IPA analyst can be critical by using hermeneutics of questioning to understand historical, structural, and environmental influences on users' lifeworld experience and how they related to the object of interest.

Second, the notion of space or participants' situatedness in IPA emphasizes the importance of perceiving the unacknowledged information existed in the background and its influence in lifeworld experience. For Malin the structure of power and her resentment has expressed as background information. In addition, we can also observe how LMS's action to introduce too many features and its unintended result on Malin's lifeworld experience, which is expressed as powerlessness and resentment. Even though, the main goal of an interpretive research is to analysis and makes sense of existing situation, IPA allows analysts to observe 'behind the scene' structures that contribute to the existing realities.

Finally, it was evident from the second-order account that IPA allows fore-structure co-creation between participants and analysts. While the analyst brings some sort of work system (Alter 2011) preconceptions, Malin has her own pre-understanding of what a system adoption should look like based on her experience with other technologies in the past. Each interpretation, then, can further developed to a 'double hermeneutic' analysis basing participants' interpretation of their experience, the fore-structure of the analyst, and the overall context of IS usage. Thus, on the one hand, we find a developed exposé of participants' experiential claims and interpretation of these claims resulting from 'hermeneutical' and interrogative questioning. On the other hand, analysts are trying to interpret participants' interpretation, which will ultimately be influenced by analysts' fore-structure such as their own pre-understandings and experiences. In achieving a double hermeneutics analysis, IPA leaves the choice of analytical strategies (such as pattern recognitions, discourse analysis) for analyst to decide based on their expertise, research questions, and the overall analysis process.

The introduction of IPA to the field of IS research can also bring different advantages over causal based methods of inquiry, and that this is consistent with other interpretive methods of inquires such as interpretive case studies (Walsham 2006). First, studies have shown that adoption and long term use often involves continuous and random users' tailoring, context based intended-use revising, users' unfaithful engagements (manoeuvring technologies), and adaptation to emerging constrains of technology features (Lapointe & Rivard 2005; Leonardi 2011; DeSanctis & Poole 1994; Boudreau & Robey 2005). Thus, the IS field has explicitly recognize the contextual and emergent nature of IS usage phenomena and argued for 'replacing causal based explanation with a more holistic notions such as socio-materiality' (Riemer & Johnston 2013). In particular, as it is recently noted by Cecez-Kecmanovic et al. (2014) the field can greatly benefit from methodological enquires that aims to study "how the social and the material entangled and produce our life-world". IPA has developed with 'core ideas' (e.g. phenomenology, holistic notion, interpretive analysis) that enables a researcher to understand and interpret such a continuous, random, and emergent IS usage phenomena (Larkin et al. 2006).

Second, lifeworld framing based methodology freed analysts from the need to make causal relations for each of their new emergent insights; hence provide flexibility to formulate new theoretical explanations. Third, IPA does not oblige researchers to trim down and polish users' experience into instrumental questions and answers. As a result, the analyst would have access into rich empirical evidence and potentially avoid losing important details and seemingly unnecessary information such as everyday 'natural attitudes'. Forth, lifeworld framed method such as IPA guard studies from misconception and erroneous interpretations of non-straight forward causal events, as any given phenomenon can be explained as a result to myriads of causes. Most importantly, though, such a bottom-up inductive methodological approach can greatly contribute for new IS usage theoretical frameworks. Fawcett (1978) observes that, unlike theory-testing, new theory-building research relies heavily on inductive and emerged data analysis strategies. As a non-causal bottom-up approach method, IPA can provide not only new ways of analyzing empirical evidence, but also catalyzed new theoretical advances in the IS usage field.

### **7.1 Potential limitation of IPA**

One of the main issues that repeatedly highlighted in IPA literature is the length of time it takes to do the detailed analysis. The process can be very demanding and lengthy that may need extended period of time and a strong commitment from analysts (Clarke 2009). In addition, such lengthy process may also result in different narrative reporting from participants as their attitude and experience may changed because of a variety of internal/external factors. The lack of advice on how much time an analyst should commit for 'hermeneutical questioning' can also lead to variation of research qualities. As the approach has only been extensively used in the field of psychology and is a fairly new approach, it is difficult to evaluate its effectiveness on different research settings. Finally, IPA, naturally, is unable to provide any causal explanations for any phenomena of interest.

Despite some limitation, IPA's distinctive "advantage is best captured in terms of its approach" – an approach that combines both interpretive and critical traditions, provides epistemological openness, and a more 'exploratory development of interpretive account' (Larkin et al. 2006). We have shown that the approach bases Heidegger's notion of phenomenology and hermeneutics, and that is consistent with other qualitative interpretive research approaches (Myers 1997). In doing so, interpretative researchers can easily grasp IPA's methodological positioning, but also embraces the rage of flexibility and clarity it brings to the research field.

### **7.2 Conclusion**

As the world of computing increasingly aim to create an embodied technology experience, the IS field has started to pay attention to the notion of 'IS usage as an everyday lifeworld practice' (Vodanovich et al. 2010b; Tilson et al. 2010; Jin & Li 2012). In this paper, we have demonstrated that, IPA can provide an alternative methods of inquiry to both critically explore and interpret users' IS usage lifeworld experience. In addition, it is intentionally developed with the aim of giving researchers an epistemological flexibility during interpretation, thus allowing them to easily present emergent knowledge. Consequently, IPA can contribute toward new theoretical advancement for the IS usage field that seemed to 'unduly focus on minor tweaking of existing IS use theories' (Venkatesh et al. 2007).

We acknowledge that our work has some limitations. Our illustration of IPA is based on only one particular individual empirical data. In addition, in this particular case, only one of the authors' was involved in communicating with the participants. Finally, as in any new research method proposals, this paper is a preliminary effort to introduce IPA to the field of IS research, and hence further works are needed to validate and enhance its effectiveness. Future works with a more complete case study can compliment and refine these deficiencies.

## References

- Agarwal, R., & Karahanna, E. (2000). Time flies when you're having fun: cognitive absorption and beliefs about information technology usage 1. *MIS Quarterly*, 24(4), 665-694.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Alter, S. (2011). The Work System Method: Systems Thinking for Business Professionals. *Proceedings of the 2012 Industrial and Systems Engineering Research Conference, Orlando, Florida*.
- Bhattacharjee, A. (2001). Understanding information systems continuance: an expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370.
- Bhattacharjee, A., Perols, J., & Sanford, C. (2008). Information technology continuance: A theoretical extension and empirical test. *Journal of Computer Information Systems*, 49(1), 17-26.
- Boland, D. (1985). *Information systems research methodology: An introduction to the debate*.
- Boland Jr, R. J. (1986). *Phenomenology: a preferred approach to research on information systems*. Paper presented at the Trends in information systems.
- Boland, R. J., & Day, W. F. (1989). The experience of system design: a hermeneutic of organizational action. *Scandinavian Journal of Management*, 5(2), 87-104.
- Boudreau, M.-C., & Robey, D. (2005). Enacting integrated information technology: A human agency perspective. *Organization Science*, 16(1), 3-18.
- Calisir, F., Altin Gumussoy, C., Bayraktaroglu, A. E., & Karaali, D. (2014). Predicting the Intention to Use a Web-Based Learning System: Perceived Content Quality, Anxiety, Perceived System Quality, Image, and the Technology Acceptance Model. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 24(5), 515-531.
- Cecez-Kecmanovic, D., Galliers, R. D., Henfridsson, O., Newell, S., & Vidgen, R. (2014). The sociomateriality of information systems: current status, future directions. *MIS Quarterly*, 38(3), 809-830.
- Chughtai, H., & Myers, M. (2014). Ethnographic Field Research: Interpreting One's Entrance into the Field as Thrownness.
- Chung, S., Lee, K. Y., & Kim, K. (2014). Job performance through mobile enterprise systems: The role of organizational agility, location independence, and task characteristics. *Information & Management*.
- Clarke, C. (2009). An introduction to interpretative phenomenological analysis: a useful approach for occupational therapy research. *The British Journal of Occupational Therapy*, 72(1), 37-39.
- Cole, M., & Avison, D. (2007). The potential of hermeneutics in information systems research. *European Journal of Information Systems*, 16(6), 820-833.
- Crist, J. D., & Tanner, C. A. (2003). Interpretation/analysis methods in hermeneutic interpretive phenomenology. *Nursing research*, 52(3), 202-205.
- Deetz, S. A. (1982). Critical interpretive research in organizational communication. *Western Journal of Communication (Includes Communication Reports)*, 46(2), 131-149.
- DeSanctis, G., & Poole, M. S. (1994). Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory. *Organization Science*, 5(2), 121-147.
- Doolin, B. (1998). Information technology as disciplinary technology: being critical in interpretive research on information systems. *Journal of Information Technology*, 13(4), 301-311.
- Dreyfus, H. L. (1990). *Being-in-the-world: A Commentary on Heidegger's Being and Time, Division I*: Mit Press.
- Escobar-Rodríguez, T., & Carvajal-Trujillo, E. (2014). Online purchasing tickets for low cost carriers: An application of the unified theory of acceptance and use of technology (UTAUT) model. *Tourism Management*, 43, 70-88.
- Fawcett, J. (1978). The relationship between theory and research: A double helix. *Advances in Nursing Science*, 1(1), 49-62.
- Fay, B. (1987). *Critical Social Science: Liberation and its Limits*: Cornell University Press.
- Fay, B. C. (2014). *Social theory and political practice*: Routledge.

- Fitzgerald, B., & Howcroft, D. (1998). Towards dissolution of the IS research debate: from polarization to polarity. *Journal of Information Technology*, 13, 313-326.
- Fitzgerald, G., Hirschheim, R. A., Mumford, E., & Wood-Harper, A. T. (1985). Information systems research methodology: An introduction to the debate. *Research methods in information systems*, 3.
- Flood, A. (2010). Understanding phenomenology: Anne Flood looks at the theory and methods involved in phenomenological research. *Nurse Researcher*, 17(2), 7-15.
- Geertz, C. (1973). *The interpretation of cultures: Selected essays* (Vol. 5019): Basic books.
- Giorgi, A. (1985). *Phenomenology and psychological research*: Duquesne Univ Pr.
- Goldkuhl, G. (2012). Pragmatism vs interpretivism in qualitative information systems research. *European Journal of Information Systems*, 21(2), 135-146.
- Gregor, S. (2006). The nature of theory in information systems. *MIS Quarterly*, 611-642.
- Guinea, A. O., & Webster, J. (2013). An investigation of information systems use patterns: technological events as triggers, the effect of time, and consequences for performance. *MIS Quarterly*, 37(4), 1165-1188.
- Heidegger. (1962). Being and Time (translated by Macquarrie, J. and Robinson, E.). *Oxford: Blackwell*, 288, 387.
- Heidegger, M. (1927). Being and Time. 1927. *Trans. John Macquarrie and Edward Robinson. New York: Harper*.
- Husserl, E. (1936). The crisis of European sciences and transcendental phenomenology: An introduction to phenomenological philosophy: Northwestern University Studies in Phenomenology & Existential Philosophy.
- Husserl, E. (1964). *The idea of phenomenology*, tr.
- Jain, R. (2003). Experiential computing. *Communications of the ACM*, 46(7), 48-55.
- Jin, B.-H., & Li, Y.-M. (2012). Analysis of emerging technology adoption for the digital content market. *Information Technology & Management*, 13(3), 149-165. doi: 10.1007/s10799-011-0113-6
- Karahanna, E., Straub, D. W., & Chervany, N. L. (1999). Information technology adoption across time: a cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly*, 183-213.
- Kim, B. (2012). The diffusion of mobile data services and applications: Exploring the role of habit and its antecedents. *Telecommunications Policy*, 36(1), 69-81.
- Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly*, 67-93.
- Koch, T. (1995). Interpretive approaches in nursing research: The influence of Husserl and Heidegger. *Journal of Advanced Nursing*, 21(5), 827-836.
- Lapointe, L., & Rivard, S. (2005). A Multilevel Model of Resistance to Information Technology Implementation. *MIS Quarterly*, 29(3), 461-491. doi: 10.2307/25148692
- Larkin, M., Watts, S., & Clifton, E. (2006). Giving voice and making sense in interpretive phenomenological analysis. *Qualitative research in psychology*, 3(2), 102-120.
- Laverty, S. M. (2008). Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations. *International journal of qualitative methods*, 2(3), 21-35.
- Lee, A. S. (1999). Rigor and relevance in MIS research: beyond the approach of positivism alone. *MIS Quarterly*, 29-33.
- Lee, W.-K. (2014). The temporal relationships among habit, intention and IS uses. *Computers in Human Behavior*, 32, 54-60.
- Leonardi, P. M. (2011). WHEN FLEXIBLE ROUTINES MEET FLEXIBLE TECHNOLOGIES: AFFORDANCE, CONSTRAINT, AND THE IMBRICATION OF HUMAN AND MATERIAL AGENCIES. *MIS Quarterly*, 35(1), 147-168.
- Leonardi, P. M. (2013). Theoretical foundations for the study of sociomateriality. *Information and Organization*, 23(2), 59-76.
- Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. *Qualitative Inquiry*, 1(3), 275-289.
- Mackey, S. (2005). Phenomenological nursing research: methodological insights derived from Heidegger's interpretive phenomenology. *International Journal of Nursing Studies*, 42(2), 179-186.

- Myers, M. D. (1997). Qualitative research in information systems. *Management Information Systems Quarterly*, 21, 241-242.
- Myers, M. D., & Avison, D. (1997). Qualitative research in information systems. *Management Information Systems Quarterly*, 21, 241-242.
- Myers, M. D., & Klein, H. K. (2011). A Set of Principles for Conducting Critical Research in Information Systems. *MIS Quarterly*, 35(1), 17-36.
- Orlikowski, W. J. (2010). The sociomateriality of organisational life: considering technology in management research. *Cambridge Journal of Economics*, 34(1), 125-141.
- Orlikowski, W. J., & Baroudi, J. J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research*, 2(1), 1-28.
- Ortiz de Guinea, A., & Markus, M. L. (2009). Why break the habit of a lifetime? Rethinking the roles of intention, habit, and emotion in continuing information technology use. *Management Information Systems Quarterly*, 33(3), 3.
- Reid, K., Flowers, P., & Larkin, M. (2005). Exploring lived experience. *Psychologist*, 18(1), 20-23.
- Ricoeur, P. (1976). *Interpretation theory: Discourse and the surplus of meaning*: TCU press.
- Riemer, K., & Johnston, R. B. (2013). Rethinking the place of the artefact in IS using Heidegger's analysis of equipment. *European Journal of Information Systems*.
- Rogers, E. M. (2010). *Diffusion of innovations*: Free press.
- Sandelancls, L. E., & Buckner, G. C. (1989). Of art and work: Aesthetic experience and the psychology of work feelings. *Research in organizational behavior*, 100, 105-1031.
- Sandelowski, M. (1993). Rigor or rigor mortis: the problem of rigor in qualitative research revisited. *Advances in Nursing Science*, 16(2), 1-8.
- Schutz, A. (1970). *Alfred Schutz on phenomenology and social relations* (Vol. 360): University of Chicago Press.
- Smith, J. A. (1996). Beyond the divide between cognition and discourse: Using interpretative phenomenological analysis in health psychology. *Psychology and health*, 11(2), 261-271.
- Smith, J. A. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative research in psychology*, 1(1), 39-54.
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*: Sage.
- Suchman, L. A. (1987). *Plans and situated actions: the problem of human-machine communication*: Cambridge university press.
- Sun, Y., & Bhattacharjee, A. (2014). LOOKING INSIDE THE "IT BLACK BOX": TECHNOLOGICAL EFFECTS ON IT USAGE. *Journal of Computer Information Systems*, 54(2).
- Svedlund, M., Danielson, E., & Norberg, A. (2001). Women's narratives during the acute phase of their myocardial infarction. *Journal of Advanced Nursing*, 35(2), 197-205.
- Tappan, M. B. (1997). Interpretive psychology: Stories, circles, and understanding lived experience. *Journal of Social Issues*, 53(4), 645-656