Technological Mindfulness and Work-life Balance

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ABSTRACT

This study examines the impact of technological mindfulness on work-life balance among accountants in the Klang Valley, Malaysia. Mindfulness is defined as constantly aware of what we are doing, aware of the consequences of actions, and able to observe the stimuli without reliance on the outdated category of actions that may reduce users' attention level. The power of mindfulness in information system (IS) use in the workplace should enhance the outcome of users' behaviour and work-life balance. It is fairly well understood that when work and personal life are out of balance, the stress level is likely to increase. Employees tend to bring their work home, work for long hours, and that has caused negative outcomes. For example, accountants are exposed to acute demands of services in dealing with changes and forces in business life as a result of globalisation. Underutilising the benefits of IS could impact accountants' credibility and reputation. This study intends to explore the practices of mindfulness in IS and its impact on work-life balance. In general, the qualitative methodology was employed using case study and interviews. In selecting the cases to be included in the study, attempts were made to include accountants that use IS as mandatory in IS-intensive organisations. A set of interview questions was prepared and interviews were conducted. The findings revealed that learning and practice, knowledge sharing, IS features exploration, high visualisation, reflective thinking, creative thinking, coaching and training are some of the practices of technological mindfulness. These practices have helped IS users to be more efficient and effective in the workplace, aware of what they are doing, improve work performance and more creative in utilising the benefits of IS. Indirectly, IS users able to leave the office early and spend more time for their families and other activities. Meanwhile, the contributions of the study are two-fold: i) theoretical implication - it promotes to the new rival of theories that goes beyond the theoretical tradition of IS use; ii) practical implication - the employer has the ultimate responsibility to know the virtues and abilities of workers particularly in achieving better performance and job satisfaction. It is suggested that mindfulness theory bridging is the gap in IS innovation research as the existing models are more useful for understanding users' intention and technology replacement decision.

Keywords: information system; mindfulness; technological mindfulness; information system use; user behaviour

INTRODUCTION

Recently, researchers' interest in mindfulness studies has increased steadily in psychology, science and management (Dernbecher & Beck 2017). The dimensions of mindfulness, namely alertness to distinction, openness to new information, orientation in the present, and awareness of multiple perspectives, are regarded as potential effective solutions against automatic action and routinisation of work especially when dealing with unexpected events in the workplace (Weick & Sutcliffe 2007). In this study, mindfulness is defined as the process of paying attention on what is happening, being constantly aware of what ones are doing, aware of the consequences of actions, and observe the stimuli without reliance on the outdated category of actions that may reduce user's attention levels.

In business today, globalisation has created a dynamic market that fosters new competition, demands higher level of efficiency and expertise in business operations. Organisations invested heavily in IS to help streamline the flow of information, speed up decision-making, sustain competitiveness, and improve organizational performance. However, the employees are confronted with an increase

of workload, an exhausting work-life environment, an engagement with multiple tasks, and many more. These undesirable situations can cause job stress, work conflict, negative behaviour, and low morale. The employees will bring back their work home. When the workload increased, serious adverse outcomes occurred, such as less time spend with families, poor relationship with families, in which could possibly affects children's emotional and intellectual development, and also impact their health (Wolever et al. 2012; Pocock 2003). When things become uncontrollable and tougher, they are not conscious of doing it anymore. They sometimes lose concentration and become disconnected from their job, especially when it comes to repetitive and routine process.

In addition, the evidence revealed that not all investment in IS leads to success (Hall 2016; Malinowska & Rzeczycki 2017). The failure in IS innovation is that about one-half of the system did not meet organisational expectations (Malinowska & Rzeczycki 2017). A study by Panorama Consulting Solutions in 2017 revealed that 37% of the cases received 50% or less in benefits realisation. Some studies revealed that the reasons for

failure in IS innovation were due to users' resistance to change, routinisation of work, minimal compliance, anxiousness with complex features and lack of skills (Hall 2016; Saeed et al. 2010). Therefore, the question of why certain individuals or organisations have successfully adopted and exploit the use of IS effectively and why others do not, remains a big puzzle. Can the practice of mindfulness in IS use help? How can IS users bring life back into balance when IS users maximally utilise IS in the workplace? Therefore, intrigued by the phenomena of mindfulness i.e. paying attention at the present moment (Polites & Karahanna 2012), the researcher is motivated to discover what are the practices of mindfulness in IS use and its impact on work-life balance. In this study, IS user refers to accountant or professional accountant. As the users of IS and the preparer of useful financial information for strategic decisions, accountants are exposed to acute demands of services such as the pressure to provide useful financial information including taxation and auditing. They also deal with changes and forces in business life as a result of globalisation. Due to these reasons, understanding of how accountants utilise the benefits of IS to help improve their work is beneficial. Moreover, accountants in today's context can no longer work behind the scene dealing with numbers, but they are also in a position to contribute to the development and growth of modern economy and society. The objectives of this study are twofold: i) to explore the practices of mindfulness in IS use, and ii) to understand the impact of mindfulness in IS use on work-life balance. The research questions that guided this study are: 1) what are the practices that help develop IS users' mindfulness in IS use? and 2) how technological mindfulness impacts IS users on work-life balance? The remainder of this paper is organized as follows: first, literatures on the psychological perspective in IS that includes IS adoption, IS use and continuance of use are reviewed and analysed. These literatures are believed to be the core assumptions in predicting users' behaviour in continuing to innovate with IS. Second, literatures on mindfulness are then reviewed and opportunities for new rival theories are addressed. Next, analysis and findings are discussed. Finally, conclusions are conveyed.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

INFORMATION SYSTEM USE

In the IS research, there is no specific definition of IS use. Bhattacherjee (2001) and Premkumar and Bhattacherjee (2008) described IS use as the acceptance of systems and realisation of systems' value in ensuring long-term practicability of technological innovations. Recently, Sun and Teng (2012) defined IS use as users utilising IS to carry out tasks and activities in order to support performance at work. Hence, in this case it is important to understand the relationship between IS use and users' behaviour, as this relationship will give an implication on the utilisation or performance impact (Bakar et al. 2013;

Venkatesh et al. 2012). IS is an integrated system to manage and organise business that automates many back office functions related to system, services and human resources (Romney & Steinbart 2015). As the business processes and data are integrated, users need to understand on how this integrated system helps to streamline the information and how the data processing affects all business units in an organisation, particularly during the implementation phase as it determines the success and subsequent use of IS. Implementation phase is the longest phase of the IS life cycle (initial, adoption and implementation) and it is a phase of where benefits realisation begins to accrue. In reality, users' attitude and behaviour in optimising the value of IS may improve from time to time, but it may also reduce over time as they use IS in a limited fashion, automatic pilot, and/or feeling complacent (Venkatesh et al. 2012). Therefore, IS users may encounter knowledge barriers and reluctant to accept changes of which reflect on the use of IS (Po-An Hsieh et al. 2011).

There is a significant amount of research that has been conducted to examine the influential factors of users behaviour in IIS use during the implementation phase. Among most popular area of research in IS use during the implementation phase are reflective cognitive processing (resulting from IS usefulness and ease of use) and feature-centric view (Leonardi 2013; Saeed et al. 2010). Saeed et al. (2010) studied on examining the impact of pre-implementation expectations on post-implementation use of IS in a mandatory use context. They focused on task productivity and task innovation as the key drivers of users' pre-adoption of enterprise system use intention. Yeh and Teng (2013) have extended the study of post-adoptive use in IS. Based on prior construct on perceived usefulness, Yeh and Teng (2013) have extended perceived usefulness into two components: perceived extended usefulness (effectiveness and efficiency) and perceived need fulfilment (perceived extended usefulness, relatedness and self-development). Leonardi (2013) argued that new system is hard to effectively implement unless IS users converge new system features to enact collective knowledge and shared afford. However, these studies basically have been framed around the same set of factors that lead to initial use and adoption such as perceived usefulness and perceived ease of use (Sun 2013). Users may behave differently between one person to another particularly in IS life cycle. Thus, incorporating the concept of mindfulness in IS use suggests IS users to form an idea on how future behaviour should be performed.

MINDFULNESS AND OUTCOMES

Mindfulness refers to the state of a conscious mind on ongoing events which is characterised by non-automatic action and awareness of the present moment without relying on past distinctions that may reduce users' attention levels (Weick & Sutcliffe 2007). According to Reb, Narayanan and Chatuvedi (2012 p4), to be mindful means to be continuously conscious and aware: "the

cognitive processing is fully 'here and now' and 'moment-to-moment'". Langer (1997), Langer and Moldeveanu (2000), and Sternberg (2000) characterized mindfulness as alertness to distinction, openness to new information, orientation in the present, and awareness of multiple perspectives. The dimension of alertness to distinction implies how individuals accept new ideas, ability to detect important aspects of the context and ways of looking at things differently. Individuals alert with distinction exhibit creativity in generating new and effective ideas or even suppress distracting information. In this study, mindfulness refers to the state of a conscious mind on ongoing events which is characterised by non-automatic action and awareness of the present moment without relying on past distinctions that may reduce users' attention levels.

A significant amount of studies (in psychology and management) has been conducted to understand the phenomena of mindfulness, behaviour change, and its outcomes such as work-life balance, wellbeing, self-regulation, improved resilience towards challenges, positive emotion, stress reduction, improved quality of life, improved social relationship, reliability and so forth (Allen & Kiburz 2012; Gregiore et al. 2012; Michel et al. 2014; Ndubisi 2012; Sauer et al. 2011). Allen and Kiburz (2012) have conducted a study on mindful working parents and how they manage to have a work-life balance, sleep quality, and vitality. Gregoire et al. (2012) have examined the relationship between mindfulness, wellbeing, and personal goal settings. It was found that attention and awareness lead to personal endeavour, which in turn improve wellbeing. While Ndubisi (2012) has examined the effects of service reliability, pre-emptive conflict handling, customer satisfaction and customer loyalty by incorporating mindfulness practice. It showed that service errors or failures may result in disastrous consequences such as death, customer dissatisfaction, and defection. In a recent study, Michel et al. (2014) have explored the approach for individuals to cognitively and emotionally shape their boundaries between work and private life by addressing self-training intervention. In general, these findings suggest that individuals who practice mindfulness are benefitting from it.

Recently, scholars on IS have highlighted on the phenomena of mindfulness in different contexts such as IS performance (Leung et al. 2013), and IS decision-making (Beck et al. 2012). Leung et al. (2013) have developed an integrative model of information system development research (ISDR) in supply chain management (SCM). Leung and colleagues argued that past research mostly have borrowed theories from other fields (psychology and management) and later applied it in IS research context. A model of ISDR has been developed by incorporating mindfulness approach to ensure an innovative design outcome by aligning IS with firm context, fitting it with existing systems, and improving firm capabilities, instead of just relying on existing IS trends. The mindful ISDR ensures that the design will not direct to mindlessness effects in IS use, especially in the case of bandwagon,

IS misalignment effect, and adaptation effect. The result showed that ISDR improves the operational, tactical and strategic sense. Beck et al. (2012) examined the relationship between mindfulness and bandwagon decision. They studied the economic crisis situation and the bandwagon phenomena in IS in executing business. The bandwagon phenomenon is expected to spill over among financial institutions, especially when they are considering IS use as a strategy in overcoming the crisis period. In this situation, financial service providers have the propensity to innovate with IS based on IS-induced strategy or institutional pressures rather than identifying the facts and specifics of the organisation. Mimetic pressure, coercive pressure and normative pressure are identified as three types of institutional pressure in dealing with the turbulent environment. The study showed that: i) the incorporation of mindfulness approach lowers the negative influence of unexpected events on top management, ii) top management is negatively affected by the turbulent environment, iii) business realises more benefits from IS, and iv) mindful organisations have high potential to exploit high turbulent environment to a certain degree.

Based on the above discussion, the current theoretical contributions to practice in IS use is not sufficient to support practitioners on how to better exploit the benefits of IS. New approaches need to be introduced to help accountants on everyday practices in the workplace and to help boost users and organisational performance in the context of effective implementation and usage. In this regard, mindfulness practice such as openness to new information has been regarded as one of the new potential approaches that could go beyond the dominant paradigm in IS as mindfulness practice emphasises on 'adaptive of expectations in the context of the unexpected' (Fichman 2004; Swanson & Ramiller 2004).

THEORETICAL UNDERPINNING

Over the years, research in technological use has been given a lot of attention among scholars, particularly in understanding the psychological perspective of people towards intention and continuance use of IS (Bakar et al. 2013; Venkatesh et al. 2012). It comprises of two streams of research. One stream of research focuses on the psychological perspectives in understanding the relationship between behavioural change and its implication on the intention and continuance of IS use. The common predictors under this stream are classified into three: i) rational decisions such as perceived usefulness, perceived ease of use, and past experiences (Venkatesh & Bala 2008); ii) emotional decisions such as satisfaction, feelings, and motivation (Kim, Kang & Cha 2007); and iii) habitual decisions such as routine or automatic action (Cheung & Limayen 2005). Meanwhile, another stream of research focuses on understanding the microeconomic perspectives and its contribution to IS use. Researchers have employed determinants such as the competitive environment, size and structures, top management support,

compatibility and resources as the best predictors that could contribute to successful IS use (Fichman 2004; Zhu et al. 2006). The commonly used theoretical models in IS use are diffusion of innovation (Rogers 1983), Theory of Reasoned Action (Fishbein & Ajzen 1975), Theory of Planned Behaviour (Ajzen 1991), Technology Acceptance Model (Davis 1989) and Unified Theory of Acceptance and Use of Technology (Venkatesh et al. 2008).

In this study, mindfulness theory is employed to understand the holistic perspective of users in maximizing the value of IS. It explains the phenomena of IS use and how mindfulness is developed in achieving better implementation during the implementation phase. Mindfulness theory addresses on how mindful individuals or organisations increase or decrease their attention to unexpected events and how mindfulness action creates better performance or utilisation through continuously alert and aware of their environment, refinement of the categories, openness to new information, and willingness to view contexts from multiple perspectives (Langer 1989; Weick & Sutcliffe 2001). The concept of mindfulness was initially introduced by social psychologists over 20 years ago and its definition has been continuously revised and refined over time (Black 2010). In the mid-1980s, social psychologist Langer (1989) developed the mindfulness practice in order to demonstrate the relationships and determinants which have a great impact on a person's health of mind and body (Mikulas 2010). In later years, mindfulness practice has drawn the attention of scholars in various fields from psychology, science, management, sports, health, IS and more. The empirical research within this concept of mindfulness was initially conducted at the individual level of units of analysis and has been extended to the organisational level of analysis. It illustrates that a mindful individual or organisation would continuously analyse the unexpected events based on experiences, appreciation of the refinements of context and avoiding routine-based action. The quality of collective attention among mindful people enables them to minimise errors, remain vigilant and respond effectively to unexpected events (Rerup 2005).

In this study, one of the dimensions of mindfulness, i.e. openness to new information in IS, will be the main area under investigation. Accountants are exposed to the changes and forces of global business as well as an increase in workload. In this situation, exploring and learning novel ideas in IS among accountants becomes essential (Kargin & Aktas, 2012). Mindfulness becomes important when IS users consider how to choose which process and learn from it. Learning style determines new emerging experience, which in turn determines the range of choices and decisions that users employed (Yeganeh et al. 2009). Avoiding to stay alert in utilising IS during the implementation phase will turn into a high risk, especially when users are unable to make use of the benefits of IS, and they will be experiencing more hours in the workplace, which contribute to work-life conflict. In addition, accountants tend to form an automatic or routine action during the implementation phase when

they are complacent in performing their tasks. However, this situation can cause serious problems when accountants refuse to accept changes in IS and it will give impact on the awareness in utilising IS. If openness to new information in IS is applied accordingly, the tendency to reduce threats and improve controls over uncertainty in producing useful information is promising (Muller et al. 2014).

RESEARCH METHODOLOGY

This study uses qualitative research methodology and case study approach. The strength of qualitative research method is it justifies the ability to provide a complex textual description of how experienced people respond to the issues being discussed. In this study, the qualitative data is gathered through face to face interviews with accountants in Klang Valley, Malaysia. In selecting the cases to be included in the study, attempts were made to include accountants that use IS as mandatory in IS-intensive organisations. There were five (5) accountants from several industries such as hospitality, construction and property development, consulting and IT solutions provider, and oil and gas participated in this study. The selection of the participants includes: 1) a person who is practicing accounting or an accountant in an organisation, 2) a person who is involved in designing and developing the accounting system in an organisation, 3) a person who is both expert in accounting and IS in an organisation.

The interviews and discussion with the participants were based on their perspective and experience in their organization. Table 1 shows the list of participants involved in the study. The strength of an interview is that it focusses directly on the case study topic. The key instrument used for collecting the evidence is open-ended questions. The open-ended questions are used primarily for exploratory questions to understand the awareness of IS use, the practices that help improve their work, and the impact on work-life balance when using the IS intelligently. Contact was first established with the potential participants through phone conversation, short messaging and email. With the consent of the participants, all interviews were voice recorded. Theoretical sampling was employed in this study and the researcher identified some criteria to correspond to the study. For example, the criteria for selecting the interviewees include those who are practicing accounting in the workplace, IS users and provider of accounting information to decision makers, and those who are involved in IS implementation. Theoretical sampling refers to the process of data collection directed by evolving theory rather than by predetermined population dimensions (Strauss 1987). The initial stage of data collection is largely on the issue or problem area, which is based on the analyst's general perspective of the area.

Data analysis in qualitative research consists of examining, categorising, tabulating and recombining the evidence to address the initial propositions of a study (Yin 2014). Every case study should start with a general

analytic strategy that identifies priorities and techniques to be used (Yin 2014). As the source of information is in verbal and written forms, it is important to use a systematic method that would lead to valid inferences from the texts. Data analysis includes the activity of making sense of interpreting or theorising the data (Schwandt 1997). Miles and Huberman (1994) divide data analysis into three concurrent flows of activities such as data reduction, data display, conclusion drawing and verification. In analysing the data, the interviews were transcribed based on Merriam's (2009). Since the data are meant for answering the research questions, the mining of data begins with inductively deriving a process and identifies the factors that shaped the process (Meriam 2009). The answers of the research questions are the findings of this research. Special attention was also given to all references related to mindfulness, IS, IS use, system acceptance, the role of IS at workplace and deployment of the change activities. The process begins with reading the first interview script, the first set of field notes, and the first document collected in the study. As the author read through the transcript, she jot down notes and comments. These notations are next to bits of data that strike the research question and the author foresee that the data might be useful and potentially relevant or important in this study. This process is called as open coding. This open coding process aimed to identify and label concepts and their properties and dimensions in the data. Assigning codes to pieces of data is the way the author begin to construct categories as suggested by Merriam (2009).

FINDINGS AND DISCUSSIONS

This section is divided into three subsections. The first subsection will discuss on the profile of the participants. The second subsection will discuss on the findings of the first research question and lastly, the third subsection will discuss on the findings of research question 2.

PROFILE OF PARTICIPANTS AND ORGANISATIONS

Case 1 (C1) is the Head of Revenue and Credit Department at OR_1. The nature of business of OR_1 is to provide the needs of visitors and delegates for world-class facilities such as plenary hall, plenary theatre, conference, exhibition, meeting rooms and so forth. C1 holds the position of financial controller in the company for almost 7 years. He is also an accountant and holds the title of Chartered Accountant (CA) registered under the Malaysian Institute of Accountants (MIA). His primary responsibility is to oversee revenue and credit activities as well as to ensure the efficient and effective management of the organisation's finances. Due to the challenges and complexity of tasks in the workplace, particularly in booking management, he has made attempts to look into IS innovation matters such as how to improve or upgrade the current system employed by his company. He also has the experience of using IS such as SAP, Event Booking Management System (EBMS), Sun system, FEDELIO and OPERA system (FEDELIO and OPERA systems were used for hotel and property industry). During his career at OR_1, he has actively involved in system migration as well as IS analysis and planning. In general, his valuable knowledge in accounting and IS offers opportunities to learn and explore new knowledge in technology and how the technology could help employees and management in running the business operation.

Case 2 (C2) is the Head of Finance and ICT (Information Communication Technology) at OR_2. He is an accountant by profession (CA) and he holds the position of Head of Finance and ICT for more than 8 years. His primary responsibility is to assist the Chief Executive Officer (CEO) more or less as a strategic partner in business where he needs to provide information for decision making. In general, his task is to focus on the financial development of the company and IS related matters. OR_2 is one of the successful property development companies in Malaysia. Due to the nature of competitive business environment, the company perceived IS as an important tool in achieving performance because the technology integrates organisational systems and facilitates error-free transactions. Indeed, OR_2 has deployed several IS applications in running their business. For example, SAP system is used for general business activities including project management, IFKAR system for property business, and FEDELIO for hotels. C2 responsibilities include providing vision and leadership for developing and

TABLE 1. List of the Participants

Participant / Case	Job Position	Organisation	Major Industry	System Used
Case 1 (C1)	Head of Revenue and Credit	OR_1	Hospitality	SAP, Events Booking Management Systems (EBMS)
Case 2 (C2)	Head of Finance and ICT	OR_2	Construction and Property Development	IFKAR, SAP
Case 3 (C3)	Assistant Manager Finance	OR_2	Construction and Property Development	IFKAR, SAP
Case 4 (C4)	Project Manager (Accounts and IT)	OR_3	Computer	SAP
Case 5 (C5)	Accountant	OR_4	Oil and gas	SAP

implementing IS initiatives that align with the mission of the company. He also involves in directing the planning of the implementation of IS to support the company's business operations in order to improve cost effectiveness, service quality and mission development. In addition, he is responsible for all aspects of the company's IS. C2 has also involved in system migration and upgrading from SAP version 4.6 to version 7.2, which is known as ECC6, and for IFKAR from Plus 101 to the web version which known as IFKAR.net.

Case 3 (C3) is the Head of Section of Financial Accounting Department at OR_2 (a property development company). She holds the position for almost 2 years and has been working with the company for more than 10 years. Her main responsibility is handling OR_2's financial accounting and reporting as well as reviewing financial accounting for subsidiaries accounts. She is also responsible in formulating and implementing effective and efficient finance operational processes with appropriate accounting and financial controls for the company. In general, C3 has been practicing accounting for more than 10 years. C3 has directly involved in using SAP system in performing her tasks in the workplace. Most of accounting tasks that she performed require the use of SAP system for preparing financial information and reporting to the management. She is also involved directly in the system migration and upgrading from SAP version 4.6 to version 7.2, which is known as ECC6. She is actively involved in collaborating with system analysts or IS project engineers to ensure that the system accommodate essential services such as data management, information storage, and data exchange that help maximise the company's business efficiency. The system migration has helped her to improve her understanding of the process of utilising the benefits of IS as well as her routine tasks.

Case 4 (C4) is the Project Manager of Business and IT at OR_3 (a consulting company based in Kuala Lumpur). She holds the position of accountant (CA). To greater enhance her knowledge in IS and accounting, she has obtained a necessary qualification in the ISIT field to perform her current tasks. Currently, her primary responsibility is managing projects from IS-related to non IS-related. Specifically, her tasks is to manage IS project related to finance (such as software development), manage a team responsible for providing analytical and tactical support for all financial but limited to SAP system. Support activities include clients and end user assistance, application design, master data maintenance, report development and system testing. Additional responsibilities involved with all financial system enhancement, maintenance and upgrades as well as assisting clients in ensuring the IS development and maintenance priorities align with financial strategies and initiatives.

Case 5 (C5) is an accountant at OR_4. The nature of business of OR_4 is providing technological services to oil and gas companies. She holds the position of accountant for almost 3 years and has been working with the company for more than 4 years. Previously, she also had work experience with other oil and gas companies. Her main responsibility is handling inventory accounts for Middle East and Asia Pacific region. She also involved in general ledger and payroll for OR_4, analysing and preparing reports to the top management. In general, C5 has been practicing accounting for more than 5 years. In terms of IS experience, she was well exposed to the SAP system. C5 is an active user of the system and rely heavily on the technology to help her in providing useful information to decision makers. She has been exposed to the SAP system while working with other oil and gas companies. In addition, C5 had also involved with system migration and upgrading processes, and collaborated with IS experts to ensure that the system provides essential services to help her in daily work processes. The system migration processes have helped her to improve her understanding on how to better optimise the benefits of IS.

PRACTICES OF MINDFULNESS IN IS USE

The data analysis focused on identifying the practices of mindfulness in IS use and how it impacts work-life balance of accountants. The data support the interpretation between IS, openness to new knowledge and experience and work-life balance. From the analysis, learning and practice, knowledge sharing, IS features exploration, high visualisation, reflective thinking, users' creativity, and coaching and training are the most popular answers given by the participants in developing IS users mindfulness in IS use.

Learning and practice refers to the continuous act of rehearsing or engaging in IS activities for the purpose of improving or mastering the IS. Learning and practice promotes the achievements of the intended learning outcome, recognise the relevancy of IS and improve the value of time on tasks. According to Langer (2014), there is no reason that a person could not achieve better performance unless he or she is discovering information and knowledge with fun and excitement. In supporting this statement, C1, C4 and C5 addressed that:

"We do send our staff because we still have to keep up, although you might know, for you to learn what are the new steps or methods, you learn shorter method" – C1

"You need so many views, but your current system can give you only two views. But if you have this to be implemented right, you will get those views that you need. And when you need to use these views, you need to learn on how to use the tools. So for me, I think the root cause for mindfulness is to understand why you have IT in the 1st place, the tool that you used" – C4

"Learning is very needed. Like myself, I moved to the company that offers us to keep learning. The company itself has the initiative to make sure that all the employees will equip with knowledge. At least, everybody will have the same level of knowledge. I think that is one of the ways to utilise the system" – C5

These opinions are in agreement with Kargin and Aktas (2012) when a person is open to novelty, new ideas and action, they will have better sensation of thinking particularly to information and knowledge seeking of new or unusual experiences.

Knowledge sharing refers to an activity through which knowledge (i.e. information, skills or expertise) is exchanged among IS users and how the sharing of knowledge helps improve IS users' performance at work. Knowledge sharing is important in creating new ideas, innovation, and creativity in the workplace. Some people may refuse to share of what they know as they feel others will steal their ideas or may also feel that their jobs might be threatened, which could result in defensive attitude. However, knowledge sharing is not about blindly sharing everything, but sharing the ideas or being open about anything related to maximising the benefits of IS. For example, C1, C3 and C5 shared their views by addressing that:

"Accountants can probably tell you better ideas. If you share the idea, then they will share you more ideas. If you stop one way you will never going to get. They will share more ideas if there is two-way communication involved. They might be better ways than you will tell them" – C1

"Last time we focus on RFBILA, which is the standard of reporting. Now it has been enhanced. When we look at that the report, it seems not ok. So this IT people will give some ideas and they together with our input, they come out with the new features that is more advance" – C3

"He or she will share the general information to anybody that people can use, regardless of his or her roles or job functions. All the things must be there". C5 added, "It is a good thing if we have friends from other companies, not from the same company. Maybe he or she can exchange knowledge. For example, different company will use different codes, but sometime we can absorb and see whether our company will have the same access or not. If our company does have the same codes, we can try to learn. Like companies almost doing the same thing" – C5

The initiative to explore IS features includes the ability of IS users to learn, see things in a different way, explore new paths or features that are available in the system, and give an effort to give it a try in solving problems, especially in aligning complexity of tasks and technology. C2, C3, and C4 shared their views and stated that:

"The person must have the initiative to explore. What the system can provide to make life more easier" – C2

"Let say, we begin with educating and guiding them ways of doing in a better way. So if you want to continue in that level, we can see people change once you have given them new things. They feel like they want to know more and we have to give them space to think from their usual way of thinking". C3 added, "Whenever we have got task, sometimes no matter how we need to solve the tasks with an effective way. Like what I always do, when we have different tasks I will let them to think first. Then later I will guide a little bit" – C3

"What they do is they actually try to explore and try to solve it themselves until they really cannot investigate the root cause. Because they can even call the support and say, "Oh, this is the problem. Tell me what is the solution". C4 added, "They actually have to explore if there is any other SAP module that can cater to their requirement" – C4

High visualisation refers to the ability of IS users to think in advance or predict the future when doing something related. According to C3, a mindful person must have high visualisation to think in advance, have a clear view on what they want and what is happening, and able to solve critical problems. She addressed the importance of having high visualisation so that IS users know the importance of visualising the future relating to IS and businesses in their mind before they actually do in reality. C3 stated that:

"Actually to me being aware and have a person to do the tasks, he or she must have high visualisation so that they can see future. So let say we give something to the person, they have the initiative to think beyond the expectation or think more than other people who cannot see. To me it is important and they become aware or alert on what to expect". C3 added, "When a person have the courage to visualise, they will think more so that they can see what other people cannot see" – C3

Reflective thinking was also being discussed by C4 during the interview. C4 pointed out on the importance of how people think and solve problems in instilling IS users' mindfulness in optimizing the value of IS. Reflective thinking refers to the process of analysing and making judgement on what is happening or has happened. It also shows IS users' ability to think in term of multiple causes rather than single causes and to think outside the box. C4 stated that:

"We constantly look at what system can do best. Always think on how systems can facilitate the job performance so that we will never be left behind until to certain extent our subsidiaries who also use SAP do not know on how to upload journal into the system". C4 added, "We always see the difficulties or problems. Whereby our expectation at least we try to configure each of the report or configure new features. We try to go through with the assistance of the consultant, but sometimes the information that we want is not there. Sometimes it will disrupt everything. If we have put everything right at the first place, it will be ok" – C4

Engaging user creativity allows users to explore, discover and identify any possibility for improvement and enhancement in the workplace. According to C1, he will always think of what would be the best way to improve his tasks at work. C1 stated that:

"If web based, I can do a lot of things. I can export it out, that is how EBMS is currently taking. Same goes to SAP, you can go to dashboard. You can transfer your data to dashboard. It is a difficult part to do a dashboard. It is a matter of how to transform the information. We have the information and how link it into a dashboard" – C1

Coaching involves observation, listening and asking questions to get a deeper understanding of any situation that happens at hand. Coaching has become an essential component in developing IS users' mindfulness in IS. According to participants, coaching is another strategy that could help boost IS users' awareness in maximising the value of IS. IS users will seek assistance from experts in taking an action and developing their personal growth and change. C1, C2 and C3 stated that:

"That is why IT department is there to brief us, what is the latest market. All people can do but IT people need to understand what are all the people needs" – C1

"You must convince them to engage with those software providers. The management asks the users or inform them that other reputable company are using it" – C2

"To change their mindset with 10 years of doing the same work and then you change them, eventually you will see that users will share their ideas. Previously my staff is doing the job for more than 10 years. I asked her why can't you do this way instead of following her previous habit. For example PIP project. During auditing, let say you want to produce audit information, why you have 3 different pages of that item to key in one by one and add one by one manually instead of she can come out or produce in one, of where you can let the system do it for you. So when I talk to her, she seems digesting and can see the effectiveness of utilizing that approach. I think in order to change people behaviour, you have actually to educate them". C3 added, "Let say, we begin with educating and guide them ways of doing in a better way. So if you want to continue in that level, we can see people change once you have given them new things. They feel like they want to know more and we have to give them space to think from their usual way of thinking" – C3

Finally, IS training refers to the process of bringing a person to an agreed standard of proficiency by practice and instruction. IS training has specific goals of improving one's capability, capacity, productivity and performance with the purpose of maintaining, upgrading and updating skills throughout working life (Kum & Cowden 2014). IS training is important in order to ensure that IS users have the relevant job knowledge. In this study, seeking for opportunities to expand the knowledge base in IS is important. Through training, IS users could strengthen their skills in IS as well as greater enhance their willingness to learn and explore more on IS. This is supported by C1, C2, C4 and C5 by addressing that:

"You have to give full training on the use of the computer and you have to encourage them. See what report they can come out what they can do we must listen to them". C1 added, "Training is important for continuous improvement. Whoever attend whatever courses, when they come back and see what can you do, you see. What can you do and how can they apply" – C1

"Training, we always provide for our people. They can go for technical training or leadership training or any of this type of systems. They are required to go for the training and all that. I think it is not so much on formal training. Even formal training when they come back, they might forget. But it is more on informal training for you to practice in doing your job. So that is also very important. When they do more, then they will explore more what are the options" – C2

"So far I would say that in using IT and whatever technology we implemented training is important because without proper training, proper education and proper awareness there will be no use". He added, "When we talk about training, basically is how to use the system, how to delegate the system, how to turn up the report and things like that. So, what I think should happen is that the effectiveness of training should be the best" – C4

"All the training was helpful. Especially even the company provides the infrastructure for the training. Like I said earlier, how the employee has the same knowledge with the rest. If let say company does not involve, the company will provide to them the training because for them it's very good for all users to get to know the current level of knowledge in IT and to what extent. Employees will have the knowledge and at the same time they can utilise the systems" – C5

In view of the above, most of the participants have addressed that openness to new information and knowledge, through learning and practice, knowledge sharing, exploring IS features, high visualisation, reflective thinking, users' creativity, and coaching and training, do help to improve IS users' awareness in maximising the benefits of IS. These findings appear to validate the theoretical expectation that individuals with openness to novelty often exhibit mindfulness through curiosity of different contexts, immediate respond to challenging ideas, enhance visibility and offer ideas to others (Muller et al. 2014).

THE IMPACT OF MINDFULNESS IN IS USE AND WORK-LIFE BALANCE

The participants have shared several points on mindfully utilising IS and how it improves IS users' work-life balance. Some of the impacts highlighted by the participants are reduced wasted time in the workplace, improved efficiency, improved work performance, and increased creativity in the workplace. The findings suggest that mindfully utilising IS contributes to having a work-life balance.

First, the impact of mindfulness in IS use is reduced wasted time in the workplace. For example, almost all accountants have explicitly highlighted how being mindful in IS can reduce wasted time in the workplace in preparing the information needed by the management. Despite the extended work demands, challenges in the business environment and the rapid development in IS, they are experiencing longer working hours in the workplace that contributes to work-life conflict. Work-life conflict can come in many forms such as unable to meet unrealistic deadlines, unable to leave the office early for family matters, and so forth. This is supported by C1, C2 and C3 by stating that:

"We have to innovate and explore the technology. In fact, staff can work from home. It will save costs and we even get a healthy life. We will have a work-life balance" – C1

"The system can provide me with these and these. So the person must have the initiative to explore more. What the system can provide to make our life more easier" – C2

"If let say you want to make your life easier, for example you want to go back home at 5.30pm and you want to produce a valid and accurate report, you need something right? And it is a tool so use the tools accordingly" – C3

Second, they become more efficient and effective. For example, the participants know what they are doing and adequately prepared to do something. C4 highlighted that despite extended work demands in today's working environment, he needs to be more efficient in order for him to have a work-life balance. He added that in order to achieve a work-life balance, IS users must always be aware of what they do, do the right things and be creative.

"To me there is a lot of thing you know. Another thing I can say, you promote your work efficiency. One thing about accounting is you take time to spend a long time in office. I used to stay back late at night, I have got no life. Nowadays, you got to be creative in your life. Yes! my work is not nice and it sucks. I have a life, I have a family. I don't want my maid to bring out my children. I am the parents, I suppose to feed the kid not my maid. Come we have to do something. You have to think on how to make your life easier. Think from where you get the data source and from who. Why not you tell them that I need this way then you get the right things done. I come out with accounting system that is flexible enough. Like sales department, they only know how to make sales. At the end of the month, they can go back on time, they made good sales, get good commission. But you get nothing in accounts department. Reporting is wrong and many more. Your children are waiting for you at home, you have conflict with family. You know that why I am saying, you need to think of what can do best" – C4

Third, mindfully utilising IS can improve their work performance. For example, IS users seek for ways or alternatives if they cannot find a solution to a problem such as looking for new codes or new paths in the system to match with tasks that they are performing. According to the participants, if they are mindful, they will be able to look for options like searching for SAP codes using Google. This actually helps them to improve work performance and make their life easier. This is supported by C3 and C5 by highlighting that:

"For your information, last time we do posting journals that are something recurrence every month. Recurrence, sometimes you just need to change the figures. The GL accounts are all the same, cost centre are all the same. So I said, what are the ways to help them do posting in easiest way without any errors. After, I realised there is no need for journal posting key-in debit credit. It means we can upload directly from Excel by just clicking a button into SAP" – C3.

"I think awareness, when someone know what he is doing, know what is lacking, he initiates for an improvement, give heads up to the management, we can investigate and we can improve. So I think from year to year the work become easy as we simplify to make it easy and more detail" – C5

Forth, increase creativity among accountants in maximising the benefits of utilising the IS. This implies the ability of IS users to utilise the skills and experiences to make the work faster and easier. C2, C3 and C4 stated that:

"Last time problems occur when we try to link and the figures changed, then we have to do the link process again and that is troublesome. So what we do, we extract from excel and then we just put the figures in. We don't have to key-in again but the system will pull out the information from the excel. So it is creative and make your job easier. That is what I can see" – C2

"If I don't have the code or FBL3N for reporting, I'll ask my colleague or I can actually google. There is a lot of T-code, at least you can get like two or three access to it. So we just get use to it" – C3

"Let say when we look at the systems, usually people will think on how to become more creative in the sense that you try to get a way that can facilitate you or make your life easier. For example, as for me, I want a system to support me for everything. But not all systems can do that. It has some restrictions. So what we can do, we will take the figure and link to the Excel like vlookup, it helps us to come out with a fast reporting. So we have to become more creative" – C4.

In conclusion, the above discussion provides rich information about the impacts of mindfulness in IS use that contributes to work-life balance. Most of the participants have reached to the same conclusion that when users mindfully utilise IS, it will help them reduce wasted time in the workplace, improve work performance and efficiency, and increase creativity, which indirectly have an impact on their work-life balance.

IMPLICATIONS AND CONCLUSION

In this study, the researcher has explored the concept of mindfulness in IS use. This paper begins with reviewing articles on the dominant paradigm of IS lifecycle (initial, adoption and implementation) and the issues in employing existing theoretical models in IS use. It is argued that applying the same theoretical framework in IS use lifecycle could cease users from successfully exploiting and utilising the value of IS innovation. Indeed, this phenomenon would give an impact to long-term effectiveness of the technology. The articles on mindfulness from the psychological and management literatures are reviewed. New opportunities are highlighted. It has demonstrated that it is possible and meaningful to incorporate the concept of mindfulness in IS use as to open the 'black box' of dominant paradigm in IS adoption and use. It complements and extends the

current literatures in IS behavioural intention or use. The theoretical development describing the phenomenon of interest has encouraged the researcher to further investigate and examine the development of mindfulness in IS use.

The primary goals of this paper is to explore the practices of mindfulness in IS use and understand the impact of mindfulness of IS use on work-life balance. The contributions of the study are two-fold: 1) theoretical implication - it promotes to the new rival of theories that goes beyond the dominant paradigm in IS innovation; 2) practical implication for the industry which is worth to consider: i) It would be valuable to the organisation to examine how IS users develop mindfulness in exploiting the benefits of IS efficiently. Spending huge amount of investment in IS is not worthy if users do not take advantage or maximise the full value from IS. Indirectly, the issues or problems in long-term survival as well as underutilising IS would deploy. Businesses provide products or services to its clients. Therefore, the company has the ultimate responsibility to know the virtues and abilities of workers particularly in achieving better performance at work; ii) The findings have contributed to strategic use of IS to practitioners. In this research, it reveals that mindfully optimising the benefits of IS help IS users to perform task tactically and strategically. The evidence also revealed that to be more effective at the workplace, IS users need to change their old habits or behaviours. IS users aware on what they are doing, explore available features, improves productivity, improve work performance and boosts the job satisfaction. It is clearly understood that some habitual behaviours are undesirable as they lead to carelessness and negligence; iii) It could be done by educating and coaching users, encourage them to attend training, promotes knowledge sharing and reflective thinking, and engage their creativity. Modern accountants should no longer work behind the scene but they are obliged to contribute in term of making good judgement. If they do not take the full benefits of IS in keeping up with accounting information intelligently, it will give impacts on accountants' professionalism.

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