Instant Messaging Usage: Levels, Motivations and Impacts at Workplace

Research-in-Progress

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Abstract

This paper highlights findings from a study on Instant Messaging (IM) usage in Malaysian service organizations. The study was carried out among seven managers in these companies to explore the usage of IM for communication in workplace. In-depth semi structured interviews were conducted, and the transcribed interviews were analyzed using the constant comparison method (CCM) to understand the usage, motivations and impacts of IM on employees in organizations. Findings of the study showed that effort expectancy. performance expectancy, relative advantage, interactivity, responsiveness and price value are the results of IM usage. In addition, communication quality, work interruption, work-life conflict, technology abuse and perceived risk have resulted as a result of IM in organization.

Keywords: Instant messaging, service organizations, usage, impact, workplace

Introduction

Informal communication is the key factor to success in organizations (Burm et al., 2018; Gerard, Overbeek, & Brinkkemper, 2018; Song, Temby, Kim, Cisneros, & Hickey, 2019). Usually, these informal communications are used for joint support, coordination, problem-solving, social learning and social bonding (Chen & Ke, 2016). This informal communication at workplace gains high support due to the emergence of new technologies. Particularly, communication-based technological innovations such as, social media networks that enable and enrich organizations to increase demand by using new marketing techniques, creating new business models, entitled new management and learning practices, improving knowledge sharing and innovations opportunities (Aral, Dellarocas, & Godes, 2013). Social networking applications such as instant messaging (IM) are vastly used in the society (Pimmer et al., 2018). To attain this opportunity, organizations adopt new communication applications that provide a repertoire uses to employees that they can focus on work as well as participate in social activities (Ali-Hassan, Nevo, & Wade, 2015). IM usage becomes controversial as it can be either a constructive or destructive way of communication (Butz & Stupnisky, 2017; Mansi & Lavy, 2013; Nkhoma et al., 2018; Wang, Zhang, Sun, Tan, & Lu, 2018). For instance, through IM usage employees can interact in real time that can improve the

connectedness that drive them to enhance their satisfaction and performance at workplace (Butz & Stupnisky, 2017; Ou & Davison, 2011; Sheer & Rice, 2017; Wang et al., 2018).

Based on the above studies, IM impacts need to be explored. The aim of the current study is to investigate the IM usage among employees in Malaysian service organizations. It examines the level and reasons of IM usage among employees. The study aims to explore the positive and negative impacts of IM usage at the workplace. Therefore, this study tries to answer the question of "how does the use of IM impact the employee's productivity at workplace?"

Theoretical Background

In organization, work information must be aligned with communication channels to enhance information richness, work efficiency and performance. To understand work related richness of information we adapt media richness theory (MRT) of communication. MRT is introduced by the organizational scientists Draft, Lengel and Trevino (Draft & Lengel, 1984; Trevino, Lengel, & Draft, 1987) originated from information processing theory. This theory explains the media hierarchy of information processing from low level to high level of information richness in organizations. Where the medium of communication/information processing hierarchy is categorized on four grounds of ability of instant feedback, capacity of languages to convey complete sense of ideas, aptitude to transmit manifold cues (such as, physical presence, body gestures, words, voice inflections and even graphic symbols) and ability to have personal focus that refers the capacity to convey specific information, feelings and emotions (Alamaki, Pesonen, & Dirin, 2019; Lan & Sie, 2010; Leek, Canning, & Houghton, 2016). Face-to-face communication is ranked at the high level of richness of information (Lan & Sie, 2010). However, a recent study of Alamaki et al. (2019) examined the multiple cues perspective of media richness theory and posits that non-verbal communication can alter the human behavior based on their logical connection. Similarly, Fernandez, Simo, Sallan, and Enache (2013) findings recommended that the changes in behavior depend over the perceived richness of medium of communication. Using media richness theory, Lan and Sie (2010) conducted a study to compare between RSS, e-mail and SMS. Their study revealed SMS as a more effective and efficient way of communication.

Methodology

In achieving the objectives of the study, we conducted in-depth semi-structured interviews among IT Managers of seven different organizations in Kuala Lumpur where most of services organizations reside. This enabled us to extract flexible and in-depth information regarding different aspects of IM in organizations. Interview protocol was prepared after reviewing the literature on Instant Messaging, social media usage and impact studies. However, a separate list of various antecedents and impact factors were gathered from the literature and a checklist was prepared. The factors mentioned by the interviewee were ticked on the list and any new factors specified by them were added to the list as well. We interviewed seven IT managers that have a work experience of at least more than five years. The motive of selecting managerial level employees is that they are responsible for both interpersonal and business communication related to employees. Particularly, the reason to choose IT professionals is because they deal with technology related policy and are able to tighten the information technology security in useful manner for their organizations. Moreover, the project has also planned to cover the IM governance policy where only IT professional are able to provide interesting insights. Each interview lasted between 45 to 90 minutes and was conducted at the convenience of the participants. We used social science query approach proposed by Spradley (1979) to extract themes and sub themes from the interviews transcription. Due to the powerful techniques of the approach, it qualifies us to concentrate on the specific topic of the study. The respondents' profiles are shown in Table 1.

Table 1: List of study respondents' profile

Organization	Sector	Operating Since	Position	Overall work experience
	Organization and Respondents' Profiles			
A	Information Technology	1992	Manager	6 to 8 years
B	Information Technology	1996	Manager	Above 12 years
C	Property Developer	2012	Assistant Manager	6 to 8 years
D	Government Ministry	1990	Departmental Head	Above 12 years
E	Information Technology	1991	Vice President	Above 12 years
F	Health Care	1998	Departmental Head	Above 12 years
G	Information Technology	2016	Senior Manager	9 to 12 years

Analysis and Discussion

The interviews were transcribed into word documents and used for analysis. After identifying the themes, the process of unitizing and categorizing was carried out to make sense of the data and to identify the appropriate themes. Constant comparison method (CCM) was used to create the categories (Parveen, Jaafar, & Ainin, 2015). According to the objectives of the study, the following themes on IM usage level, reasons for IM usage, the positive and negative impact of IM at workplace are extracted.

Instant Messaging Usage level

Recently, Instant Messaging (IM) usage becomes a crucial phenomenon and the study wanted to find about the degree of employee's involvement in IM usage. For this purpose, we asked a question regarding the level of IM usage in organizations. Some of the participants replied the use of around two hours daily.

"*On instant messaging, may be around 2 hours*" (R_C)

While, other participants say that they use cumulatively around 3 to 4 hours a day either for personal or official use at workplace.

"*Maybe it is commutatively maybe 3 to 4 hours on WhatsApp, because every single time it is like few minutes and few seconds. So, commutatively 3 to 4 hours I think*" (R_A)

This shows that the level of IM usage among workers differs in organizations and depends upon the commitments to their family and social settings (Quan-Haase, Cothrel, & Wellman, 2005).

Reasons that motivates IM usage at workplace

There are reasons that motivate employees to use IM. In the study we extracted and explored different dimensions of IM usage at workplace like, official and social/personal usage. IM as an official use allows employees to quickly communicate with boss or peers regarding planning, controlling, decision making, operational use. For planning purpose, employee use IM for certain activities e.g. scheduling of meeting, change or replacement of meeting.

"*…If it is related to work purpose then of course it will be for work purpose. For example, sometimes scheduling of meetings, change of meeting time certain tasks that are not completed so wanted to check on the status*" (R_A)

Similarly,

> *"I mean easily connect with our colleagues. Usually for us, like we want to rectify any problem, I mean related to property land" (R_C)*

Likewise, IM usage for the official purpose regarding decision-making and operational purpose is also defined as more helpful to deal with quick decision-making, operational purpose, job rotation purpose and business-related purpose.

> *"Most of the time. I mean most of the time, when it comes to decision making, that we need to…I mean need to make our decision fast. So instant messaging is one of the way. And once we have the consent of the management, … or we ask them to actually reply back. So actually we have it in black and white for our own keeping ……. operational purpose of course yes. For like, meeting arrangement, or any job rotation purpose, or any leave purposes" (R_D).*

On contrary to the official use, employees also use IM at workplace for their social/personal purpose. Employees want to catch up their friends for gathering, information or leisure purposes. As employees in organization have their social life related to friends and family, they need some efforts to allocate time for keeping in close personal communication.

> *"For personal purposes, it will be more commonly like continuously catching up friends, like messaging sometimes friend for lunch, for dinner, asking what you do after work for example, which means it is like messaging through IM plays bigger role in day to day as compare to phone calls…."* *(R_A)*

In Table 2, the list of reasons of using IM in organizations are extracted from the interviews.

Table 2: List of reasons/motivations of IM usage

Themes	Sub Factor	Factors
scheduling of meetings, change of meeting time (R-A); for details, meeting arrangement, (R-D); to replace a meeting, to call a meeting (R-E)	Planning	Official Use
uncompleted tasks, check on the status (R-A); boss wants to get an update, status of the works, rectify any problem (R-C); any leave purposes (R-D); for clear directions (R-E); Task of the day, target (R-G)	Controlling	
decision making, fast decision, urgent decision (R-D); making quick decisions, place a discussion (R-E);	Decision making	
easily connect with our colleagues, clients contact (R-C); operational purpose, job rotation purpose, business related purpose (R-D); communicate among the co-workers, clients (R-F); asking about the staff (R-G)	Operational use	
catching up friends; friend for lunch, for dinner; discussing personal stuff (R-A);	Social	Social Use
prices of goods, elections, sharing certain news (R-A);	Informational	
gossips, lunch, dinner foods (R-A);	Leisure	
use for personal only (R-B);		Personal Use

Positive Impacts

In general, IM usage is considered as a constructive (Butz & Stupnisky, 2017; Wang et al., 2018) as well as destructive activity at workplace. In our study, participants perceived IM usage as a positive phenomenon from certain dimensions at work place. Based on the interview data analysis, various themes were extracted. The result shows that effort expectancy, performance expectancy, relative advantage, interactivity, responsiveness, price value are the positive factors that motivate IM usage among employees.

> *"…… I think the near question should be which one is more convenient! So, WhatsApp is convenient, because it is running natively with the phone. You turn on the phone, it is already running….." (R_G)*

IM usage also helps employees in different ways to improve their performance. Participants explained performance expectancy as to save time, expedite the decision-making process, expedite their routine works, facilitate at work, timely, broadcast.

> *"….. For me I think it is very useful. Especially when we have is to expedite our routine works. And then as far as my organization is concerned, so we all are really looking forward to using instant messaging. I mean it helps to reduce papers that is used to facilitate at work" (R_D)*

Likewise, participants elaborated how IM has relative advantage over other sources of communication tools at workplace such as phone calls can be longer, direct questions, real time communication, more focus, instantaneous nature, seamless, precise, straight forward, more real, personalize, not inclusive, multipurpose and brief. The relative advantage also demonstrates the benefits of using IM at workplace over other medium of communication in term of cost and time efficiency.

> *"…So the benefit I could say first is real time communication real time communication, that definitely. But need to define that clearly what kind of real time communication you allow people to communicate with instant messaging….. that this instant messaging is purely as communication to verify something or to quick check of something….." (R-B)*

> *"….Actually I know instant messaging, it is like WhatsApp. Something like communication that easily can, I mean easily connect with our colleagues. Usually for us, like we want to rectify any problem, I mean related to property land……" (R_C)*

Comparing to others communication technologies, IM is more efficient in term of instant response and interactions (Lan & Sie, 2010; Ogara et al., 2014). Interactions themes are extracted from the participants' responses where we defined as connect with people at different countries at same time, courtesy, better communicate, helps in building relationships, instant interaction, break the ice and have a better understanding.

> **"…***It allow…from my perspective, it allows us to interact faster. Getting things done faster. In my line of work, usually the IT people, sometimes, they don't, some of the people does not really explain well. If you ask them. But they can write well [laugh]. So I am using it as a medium to get to them, checking messages across [laugh]"(R_G).*

The next prominent positive reason of IM usage is the responsiveness that is expected to be achieved. Usually, respondents used IM at workplace when they need to get quick response for official activities. Responsiveness is defined as get faster response, quick update, want immediate action, for quick check, urgency, faster, urgent, quick decision.

> "Aaa…to be honest now…it is now the major mode of communication. Email is still slow, because it is slow. Unfortunately, people has forgot that we still have phone calls, so quick everything now is IM….. especially in enterprise business. Serious decision for example, decision, something that really make people jam, so the first thing that people do basically is use IM…..." (R_E)

This study also explores the unique aspect that motivates employee for IM usage. Price value is a positive aspect of using IM at workplace. Generally, the term price value refers to the comparative advantage of concept over other tools based on their utilities. Employees in an organization prefer IM because of its cheaper price, and defined as reduced papers, cheapest, affordable.

> *"….. Either you are communicating with coworkers or you are communicating with the patients. IM to me is, if you use it proper than the use can be very good in marketing and customer service,*

> *reaching to public and obviously clients. It is very efficient...... So you can do your own branding, in that sense you can do your own marketing while reaching out to the people......" (R_F)*

Table 3 shows the various themes and the associated positive impact factors identified in this study.

Table 3. Positive Impact of IM at Work Place

Themes	Factors
easier to ask people, convenient (R-A); more easier (R-D); easy (R-E); easy, convenient (R-G); efficient (R-F)	Effort Expectancy
save time, Enables people (R-A); Less time consuming, expedite the decision making process, expedite our routine works, facilitate at work (R-D), good way to express themselves, (R-E); efficient, timely, broadcast, decision faster (R-F); Improves communication, Getting things done (R-G);	Performance expectancy
phone calls can be longer, direct questions, more personal solution (R-A); real time communication (R-B); more focus, timely to rectify any problem (R-C); Straight to the point, value (R-D); instantaneous nature, seamless (R-E); precise, straight forward, instantaneous, more real, personalize, not inclusive, multipurpose (R-F); brief (R-G);	Relative Advantage
other person is busy, not ready to answer, one point of time communicate with few people, connect with people at different countries, courtesy (R-A); communicate better (R-E); building relationships, communicate better (R-F); interact faster, break the ice, engage more, understand more (R-G),	Interactivity
get faster response, quick update (R-A); want immediate action, for quick check, urgency, faster (R-B); on the spot; quickly, Responsive (R-C); Faster, urgent, quick decision, (R-E); fastest, timeliness (R-F); fast (R-G);	Responsiveness
phone call is quiet expensive (R-A), Free, (R-C); reduce papers (R-D); cheapest (R-E); cheap, affordable (R-F); free (R-G);	Price Value

Negative impacts

Literature affirms the good quality of communication among employees play an essential role in the organization growth (Paulraj, Lado, & Chen, 2008). From the participants' responses, this study viewed quality of communication as deficiency in appropriate word's selections, lack of expressions, seems very strict, miscommunication, misunderstanding, not that interactive, interpreted differently.

> *"......But IM won't able to deliver that. So sometimes, the disadvantage of that would be...it might create miscommunication and misunderstanding that would be the disadvantage. I mean, me personally have seen few as well that sometimes it actually cause misunderstandings when someone use instant message to say something but the receiver taking suddenly becomes very defensive, for example. Or may be receiver actually feels that too strict that he don't want to reply for example. So that is the challenge with IM....."* (R_A)

IM usage can also cause work interruption specially when they are too social in their lives. We define work interruption as the factors that affect the productivity, loose focus, and work is affected, become an obstacle, additional load, people created groups, disruptions, distract and disturb business process. For example, (R_C) said that employees are too much engaged with friends and family that they cannot focus on their work, but this is seldom the case.

> *"Sometimes, yes because there are personal messages from friends or family, sometimes it's like a bit, actually a bit distract our work purpose. But usually when we have lots of work, then we actually are not looking at personal...." (R_C)*

IM usage may also lead towards technology abuse that adversely affect employee's performance at workplace. For instance, (R_E) said that employees may misuse IM that may disturb the whole business process such as to click on the irrelevant links, which cause attacks from virus or hackers. Moreover, (R_C) raised an issue that IM is sometimes used for bad purpose such as harassment.

> "…..*But as I say, sometimes this kind of communication, people misuse it or inappropriate use this channel which make it even worse.…" (R_E)*

> "…..*You know, people use it for wrong reason. You know, it could be an harassment in a workplace. It could be set of racism or harassment for that matter.…" (R_C)*

Perceived security risk is the prospect threat for organizations. This is more relevant and can be under the head of technology abuse. Organization's important news is shared with others or classified as having high risk to hackers. In this study, perceived security risk is defined as the possibility of data leakage, security risks, sharing to unauthorized users, backup.

> "*Negative effects… I think being a consumer base kind of software, there are lot of risks associated if you try to access it while at workplace. One is obviously is the security risk. You know, because hackers. They love to use the customer base channel and then distributing the virus, Trojan and whatever you know.…" (R_E)*

Table 4 shows the various themes and the associated negative impact factors of IM identified in this study.

Table 4. Negative Impact of IM at Work Place

Themes	Factors
careful with the choice of words, lack expressions, seems very strict, miscommunication, misunderstanding (R-A); not that interactive (R-D); No feedback, interpreted differently, wait for response, (R-E); don't see people's reaction	Communication quality
affect the productivity, loose focus, work is affected, become an obstacle (R-A); no focus, additional load, people created groups, disruptions (R-B); cannot concentrate, distract (R-C); group, disturb business process (R-E); groups (R-F);	Work interruption
disturb personal life (R-C);	Work-life conflict
abuse the usage, people misuse it, inappropriate use (R-E): harassment (R-F); misuse	Technology abuse
possibility of data leakage (R-E): security risks, sharing to unauthorized users, backup (R-F); security	Perceived risk

Conclusion

In conclusion, services organizations in Malaysia acknowledge the rising usage of IM among employees for personal, social and business purposes. While there are benefits of using IM for communication in the organizations, the fact that it is used as instant communication application renders a few challenges for organizations. Malaysian services organizations agreed that effort expectancy. performance expectancy, relative advantage, interactivity, responsiveness and price value are the results of IM usage. In addition, communication quality, work interruption, work-life conflict, technology abuse and perceived risk have resulted as a result of IM in organization. The study findings exhibit that employees in organizations prefer to use social media with easy and fast communication which confirm the hierarchy factors of media richness theory by illustrating IM as high responsive and less effort expectancy than other social media networks. Our study contributes to the literature by identifying new insights regarding IM usage raisons and consequences (positive/negative) through in-depth interviews. This will help organizations to properly

govern and monitor IM usage to avoid negative impacts and enhance positives aspects. For the generalizability, the study themes can be extended to investigate quantitatively hypothesis testing. Moreover, we also have planned to cover the IM usage governance policy to avoid security risks related to organization confidential matters.

Acknowledgement

References

Alamäki, A., Pesonen, J., & Dirin, A. (2019). Triggering effects of mobile video marketing in nature tourism: Media richness perspective. *Information Processing & Management*, *56*(3), 756-770.

Ali-Hassan, H., Nevo, D., & Wade, M. (2015). Linking dimensions of social media use to job performance: The role of social capital. *The Journal of Strategic Information Systems*, *24*(2), 65-89.

Aral, S., Dellarocas, C., & Godes, D. (2013). Introduction to the special issue—social media and business transformation: A framework for research. *Information Systems Research*, *24*(1), 3-13.

Burm, S., Boese, K., Faden, L., DeLuca, S., Huda, N., Hibbert, K., & Goldszmidt, M. (2018). Recognising the importance of informal communication events in improving collaborative care. *BMJ Qual Saf*, bmjqs-2017.

Butz, N. T., & Stupnisky, R. H. (2017). Improving student relatedness through an online discussion intervention: The application of self-determination theory in synchronous hybrid programs. *Computers & Education*, *114*, 117-138.

Chen, C. H., & Ke, H. R. (2016). A study of informal communication among fishery scientists. In *Proceedings of the 79th ASIS&T Annual Meeting: Creating Knowledge, Enhancing Lives through Information & Technology* (p. 83). American Society for Information Science.

Daft, R. L., & Lengel, R. H. (1984). Information richness: A new approach to managerial behaviour and organizational design. *Research in Organizational Behaviour*, *6*, 191-233.

Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management Science*, *32*(5), 554-571.

Fernandez, V., Simo, P., Sallan, J. M., & Enache, M. (2013). Evolution of online discussion forum richness according to channel expansion theory: A longitudinal panel data analysis. *Computers & Education*, *62*, 32-40.

Gerard, W., Overbeek, S., & Brinkkemper, S. (2018). Fuzzy artefacts: Formality of communication in agile teams. In *2018 11th International Conference on the Quality of Information and Communications Technology (QUATIC)* (pp. 1-7). IEEE.

Lan, Y. F., & Sie, Y. S. (2010). Using RSS to support mobile learning based on media richness theory. *Computers & Education*, *55*(2), 723-732.

Leek, S., Canning, L., & Houghton, D. (2016). Revisiting the task media fit model in the era of web 2.0: Twitter use and interaction in the healthcare sector. *Industrial Marketing Management*, *54*, 25-32.

Mansi, G., & Levy, Y. (2013). Do instant messaging interruptions help or hinder knowledge workers' task performance?. *International Journal of Information Management*, *33*(3), 591-596.

Nkhoma, C. A., Thomas, S., Nkhoma, M. Z., Sriratanaviriyakul, N., Truong, T. H., & Vo, H. X. (2018). Measuring the impact of out-of-class communication through instant messaging. *Education+ Training*, *60*(4), 318-334.

Ou, C. X., & Davison, R. M. (2011). Interactive or interruptive? Instant messaging at work. *Decision Support Systems*, *52*(1), 61-72.

Parveen, F., Jaafar, N. I., & Ainin, S. (2015). Social media usage and organizational performance: Reflections of Malaysian social media managers. *Telematics and Informatics*, *32*(1), 67-78.

Paulraj, A., Lado, A. A., & Chen, I. J. (2008). Inter-organizational communication as a relational competency: Antecedents and performance outcomes in collaborative buyer–supplier relationships. *Journal of Operations Management*, *26*(1), 45-64.

Pimmer, C., Brühlmann, F., Odetola, T. D., Dipeolu, O., Gröhbiel, U., & Ajuwon, A. J. (2018). Instant messaging and nursing students' clinical learning experience. *Nurse Education Today*, *64*, 119-124.

Sheer, V. C., & Rice, R. E. (2017). Mobile instant messaging use and social capital: Direct and indirect associations with employee outcomes. *Information & Management*, *54*(1), 90-102.

Song, A. M., Temby, O., Kim, D., Cisneros, A. S., & Hickey, G. M. (2019). Measuring, mapping and quantifying the effects of trust and informal communication on transboundary collaboration in the great lakes fisheries policy network. *Global Environmental Change*, *54*, 6-18.

Trevino, L. K., Lengel, R. H., & Daft, R. L. (1987). Media symbolism, media richness, and media choice in organizations: A symbolic interactionist perspective. *Communication Research*, *14*(5), 553-574.

Wang, Z., Zhang, Y., Sun, J., Tan, C. D., & Lu, M. (2018). The Influence of IM use on job satisfaction in cross-organizational projects. In *2018 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)* (pp. 646-650). IEEE.