



UNIVERSITI PUTRA MALAYSIA

**IMPACT OF ORGANISATIONAL CULTURE, SOCIAL INFLUENCE AND
FACILITATING CONDITIONS ON WHATSAPP'S OFFICIAL USAGE
AMONG UNIVERSITY ACADEMICIANS IN MALAYSIA**

RANA MOHSIN ALI

GSM 2019 15



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UNIVERSITY ACADEMICIANS IN MALAYSIA**

By

RANA MOHSIN ALI

**Thesis Submitted to Putra Business School in Fulfilment of the Requirements
for the Degree of Doctor of Philosophy**

August 2019

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DEDICATION

I dedicate this thesis to my father, Mr. Rana Anwar Ali, my beautiful wife Esha and my beloved sisters Ainee, Nazia, Sadia and Hira for the sacrifices they have made to make me achieve this success. A special dedication to my late grandmother, whom I lost while I was pursuing my doctoral studies abroad. Also I would like to dedicate this thesis to my other family members, and my friends who have always been there to support me and prayed for me.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

IMPACT OF ORGANISATIONAL CULTURE, SOCIAL INFLUENCE AND FACILITATING CONDITIONS ON WHATSAPP'S OFFICIAL USAGE AMONG UNIVERSITY ACADEMICIANS IN MALAYSIA

By

RANA MOHSIN ALI

August 2019

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Faculty : Putra Business School

The advancements in communication technology have changed the way and pattern with which people communicate and disseminate information. Especially the integration of mobile communication technologies and social media in people's daily lives, have impacted the traditional way of communication. Among these technologies, social media and social networks carry significant place for communication and sharing of knowledge within the organisation. New social media, such as WhatsApp, have seen dramatic growth with reports suggesting an increase of up to 1 million users per day, reaching some 1 billion users with a daily engagement higher than the industry standard. Despite of high usage of WhatsApp within organisations, a little is known whether these channels are formal or informal and information passed through these channels is legitimate or otherwise. Since many factors affect the adoption/usage of these new technologies within organisations, culture is one of the most important factor for this reason as recognised by researchers. Also organisational culture is the main factor to adopt a formal or informal channel of communication. So this study sees the impact of organisational culture (involvement, consistency, adaptability and mission), social influence, and facilitating conditions on WhatsApp's official usage by Malaysian academicians with the help of technology acceptance model (perceived usefulness, perceived ease of use, WhatsApp's official usage).

In a sample of 328 academicians, the results of the study state that consistency, adaptability, social influence and facilitating conditions show significant impact on perceived usefulness, however mission and involvement did not show significant relationship with perceived usefulness. On the other hand, that involvement, consistency, mission and social influence show significant relationship with perceived ease of use, however adaptability and facilitating conditions did not show any

significant relationship with perceived ease of use. The study also confirms that antecedents of TAM (perceived ease of use and perceived usefulness) mediate the relationship between endogenous and exogenous variables of this study.

These findings confirm the relationship between organisational culture social influence and WhatsApp's official usage in Malaysian universities. However, facilitating conditions does not show strong relationship with the whatsapp's official usage. These findings have implications for research and practice. These implications, as well as the limitations and recommendations for future research of the study, are discussed.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KESAN BUDAYA ORGANISASI, PENGARUH SOSIAL DAN KEADAAN
MEMUDAHKAN KE ATAS PENGGUNAAN RASMI *WHATSAPP* DALAM
KALANGAN AHLI AKADEMIK UNIVERSITI DI MALAYSIA**

Oleh

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Kemajuan teknologi komunikasi telah mengubah cara dan corak antara manusia berkomunikasi dan menyebarkan maklumat. Ini terutama sekali melibatkan integrasi teknologi komunikasi mudah alih dan media sosial dalam kehidupan seharian manusia, telah memberi kesan ke atas kaedah berkomunikasi secara tradisional. Di antara teknologi ini, media sosial dan rangkaian sosial telah membawa perubahan ketara untuk berkomunikasi dan perkongsian pengetahuan dalam sesebuah organisasi. Sosial media baharu, seperti *WhatsApp*, telah memperlihatkan pertumbuhan dramatik dengan laporan menunjukkan bahawa berlaku peningkatan sehingga satu juta pengguna setiap hari, malah mencecah satu bilion pengguna dengan keterlibatan setiap hari yang lebih tinggi berbanding piawaian industri. Walaupun penggunaan *WhatsApp* yang tinggi dalam organisasi, namun tidak banyak diketahui bahawa saluran-saluran ini adalah formal atau tidak formal dan maklumat yang disebarkan menerusi saluran-saluran ini sah ataupun sebaliknya. Memandangkan banyak faktor yang mempengaruhi penerimaan/penggunaan teknologi-teknologi ini dalam organisasi, budaya merupakan salah satu faktor paling penting bagi tujuan ini yang diiktiraf oleh penyelidik-penyelidik. Budaya organisasi juga merupakan faktor utama untuk menerima saluran komunikasi formal atau tidak formal. Oleh sebab itu, penyelidikan ini akan mengkaji kesan budaya (penglibatan, ketekalan, kebolehsesuaian dan misi), pengaruh sosial dan keadaan memudahkan ke atas penggunaan rasmi *WhatsApp* dalam kalangan ahli akademik Malaysia dengan bantuan model penerimaan teknologi (peranan anggapan kebergunaan, peranan anggapan keselesaan penggunaan, penggunaan rasmi *WhatsApp*).

Menerusi sampel seramai 328 ahli akademik, keputusan kajian bagi ketekalan, kebolehsesuaian, pengaruh sosial dan keadaan memudahkan menunjukkan kesan yang ketara ke atas peranan anggapan kebergunaan. Namun demikian, misi dan penglibatan

tidak menunjukkan hubungan ketara dengan kebergunaan. Sebaliknya, penglibatan tersebut, ketekalan, misi dan pengaruh sosial menunjukkan hubungan ketara dengan peranan anggapan keselesaan penggunaan. Bagaimanapun, kebolehsesuaian dan keadaan memudahkan tidak menunjukkan sebarang hubungan ketara dengan peranan anggapan keselesaan penggunaan. Kajian juga mengesahkan anteseden TAM (peranan anggapan keselesaan penggunaan dan peranan anggapan kebergunaan) menjadi perantara hubungan antara pembolehubah endogenus dan eksogen bagi kajian ini.

Dapatan ini mengesahkan hubungan antara budaya organisasi, pengaruh sosial dan penggunaan rasmi Whatsapp di universiti-universiti Malaysia. Bagaimanapun, keadaan memudahkan tidak menunjukkan hubungan yang kukuh dengan penggunaan rasmi WhatsApp. Dapatan ini mempunyai implikasi-implikasi untuk kajian dan amalan. Implikasi-implikasi ini dan juga pembatasan serta cadangan untuk kajian akan datang dibincangkan.

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Last but not the least, thanks to Higher Education Commission of Pakistan, for funding this journey of five years.
Love you all.

I certify that a Thesis Examination Committee has met on 28 August 2019 to conduct the final examination of Rana Mohsin Ali on his thesis entitled “Impact of Organisational Culture, Social Influence and Facilitating Conditions on WhatsApp's Official Usage among University Academicians in Malaysia” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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LIST OF ABBREVIATIONS

TAM	Technology Acceptance Model
PE	Performance Expectancy
EE	Effort Expectancy
SI	Social Influence
FC	Facilitating Conditions
OC	Organisational Culture
PU	Perceived Usefulness
PEOU	Perceived Ease of Use
CMC	Computer Mediated Communication
ICT	Information and Communication Technologies
IT	Information technology
IS	Information Systems
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UTAUT	Unified theory of acceptance and Use of Technology
IM	Instant Messaging

CHAPTER 1

INTRODUCTION

1.1 Introduction

The information and communication technology and its application have become key tools and had a revolutionary impact on how we see the world and how we live and have been in existence. This impact makes information and communication technology easy to access work especially to disseminate the information irrespective of location and time (Osoba & Aderibigbe, 2019).

The Malaysian government, in its development plans, has been focusing much on making Malaysia into a major hub of Information and Communications Technology (ICT), by promoting e-commerce and R&D activities on soft factors of ICT developments and upgrading ICT infrastructure. The government has been investing heavily in the country's ICT sector, enabling the organisations to utilise their resources to optimise efficiency (Mahomed, McGrath, & Yuh, 2017). In particular, the Higher Educational Institutes (HEIs) in the country, being the hub of knowledge, innovations and social change, have the responsibility to lead in developing a work culture based on ICT (Ministry of Higher Education of Malaysia, 2007). ICT has a central role in maintaining the quality of higher education in Malaysia, and it will be a basis for a competitive advantage of the universities (Maznah & Hussain, 2004). In spite of the wide-ranging efforts and massive investments made by the Malaysian government to promote ICT in HEIs, literature has pointed out that Malaysian HEIs are not very consistent with the adoption of these technologies (Mahomed et al., 2018). Among these technologies, Social media and social networks carry significant place for communication and sharing of knowledge within the organisation (The Malaysian Public Sector ICT Strategic Plan, 2016). As a result of the digital technology revolution and massive growth of smart phone usage, over 66% of world's population (4.92 billion) is using mobile phones and over half of them are using social media. Mobile social networking (MSN) becomes one of the key communication tool, new trend, necessity and lifestyle (Wan et al., 2019).

New social media, such as WhatsApp, have seen dramatic growth (Karapanos, Teixeira, & Gouveia, 2016) with reports suggesting an increase of up to 1 million users per day, reaching some 1 billion users with a daily engagement higher than the industry standard (WhatsApp.com, 2019). A study of 254 WhatsApp users by Karapanos et al. (2016) found WhatsApp to unlock new opportunities for intimate communication, to enable the creation of micro-communities, and to richly support social practices such as collective lifelogging and reminiscing, contrasting the popular view of WhatsApp as a mere instant messaging tool.

Another recent study by Telenor Research (2016) states that 97 percent of the Malaysian mobile user population is using WhatsApp regularly; the rest 3 percent use it less than once, monthly. This stat makes Malaysians as Digital frontrunners, compared to other nations. The term “digital frontrunners” refers to digitally-advanced young people who use the Internet on their mobile phones. The survey, covering 16-35-year-old digital frontrunners in Malaysia, Thailand, Pakistan, Serbia, Hungary, Sweden and Norway, found that a resounding 62 percent of respondents in Malaysia consider mobile apps the “most important” communication service available to them on a mobile phone. The Telenor Group study was carried out in the fourth quarter of 2015 on a sample of 5,600 people (Star, 2016).

Although these social networks have replaced the traditional channels of communication within organisations because of their swiftness yet organisations have formal channels, and they are still investing in the traditional channels e.g., e-mail. It is still ambiguous that the messages being communicated through social networks should be considered as formal or informal. However, since the use of social networks like WhatsApp is dominating other formal channels of communication, the purpose of the study is to recognize the factors affecting the adoption of WhatsApp by academicians of Malaysian private and public universities.

The study attempts to examine the organisational culture of Malaysian public and private sector universities to gain an understanding of whether or not a specific style of organisational culture, as determined by the leaders, have a relationship with the WhatsApp usage within an organisation for official communication. In addition to that, this study also analyses whether WhatsApp messages are considered formal or informal within an organisational culture. The other factors, which may affect WhatsApp usage, have also been analysed and assessed.

This chapter starts with the background of the study and discusses the Malaysian government and Higher Education Ministry’s initiatives to boost the ICT usage in organisations nationwide in general and HEIs in particular, then a brief introduction about WhatsApp and organisational culture. The next section talks about the research problem and rationale of conducting this research. Further, a theoretical framework having organisational culture model, Technology Acceptance model and variables of UTAUT, is proposed for the study. The chapter then discusses the aims and scope of this research and ends with the summary of the thesis.

1.2 Background of the Study

In vision 2020, the Malaysian government has focused much on the expansion of ICT to make Malaysia a developed country by the year 2020. To achieve this goal, the Government has developed ICT infrastructure in the form of Multimedia Super Corridor (MSC) in the year 1995, introducing the Malaysian Communication and Multimedia Act 1999 and creating ICT as a serious priority in all Malaysian plans. Some achievements of its 10th Public Sector ICT Strategic Plan 2011-2015 are; 83

percent of service made available online, 31 Malaysian agencies are using DDMS (Digital Database Management System), 200 agencies are using MyMesyuarat (an online meeting management and monitoring system), and four (4) big pilot projects for big data analytics have been started. The targets, which were set in 10th ICT Strategic Plan, 95 percent of them have been accomplished (The Malaysian Public Sector ICT Strategic Plan, 2016).

The Malaysian Public Sector ICT Strategic Plan 2016-2020, focuses on empowering Malaysian Administrative Modernization and Management Planning Unit (MAMPU) as ICT transformation center for public sector. It recommends adoption of the whole of a government approach via Enterprise Architecture, creating CIO (Chief Information Officer) as a permanent post, relooking at JITIK (Government IT and Internet Committee) – members role, terms of reference, establishing ICT agency to enable holistic planning and establishing standard ICT Operating Model for Ministries and agencies (The Malaysian Public Sector ICT Strategic Plan, 2016).

The focus of the Malaysian government regarding usage and implementation of social media within the organisation can be seen from the fact that very recently, MAMPU has published detailed social media rules for Malaysian officials. Malaysia's public sector reform unit has urged agencies to set up social media teams to monitor and respond to comments in recently published guidelines. The Malaysian Administrative Modernization and Management Planning Unit (MAMPU) has written this document. In addition to that, agencies are advised to set up teams that can continuously monitor social networks and immediately respond to comments. They should pick the right social media platform to reach their target audience - particular networks may be more popular among certain groups of people. Agencies have also been advised to stay updated on the latest social media trends and use plain language so that people are always engaged on the channel (The Malaysian Public Sector ICT Strategic Plan, 2016).

Today, 54.4 percent of the population of the world is using the internet (internetworldstats.com, 2018) and, 2.32 billion people are using smartphones (Statista.com, 2018). In Malaysia, the number of smart phone users is 20.96 million in the year 2018, and 83 percent of the Malaysian population is using the internet daily (Statista.com, 2018). In the year 2015, personal computer sales decreased, and tablets took over most of its share. Further, the sale of smartphones has beaten the sale of computers by six ratios one. Considering the high pace of internet growth, experts believe that in the near future, seventy-five percent of the world population will have access to the internet (World Economic Forum, 2015).

The Global Information Technology Report 2016 features the latest iteration of the Networked Readiness Index (NRI), which represents a key tool in assessing countries' preparedness to reap the benefits of emerging technologies and capitalise on the opportunities presented by the digital transformation and beyond. More particularly, the report assesses the factors, policies, and institutions that enable a country to fully leverage information and communication technologies (ICTs) for increased prosperity

and crystallizes them into a global ranking of networked readiness at the country level in the form of the NRI (Baller, Dutta, & Lanvin, 2016).

The composition of the group of top 10 NRI performers is unchanged from previous years. The group consists of a mix of high-income Southeast Asian (Singapore and Japan) and European countries (Finland, Sweden, Norway, the Netherlands, Switzerland, the United Kingdom, and Luxembourg) as well as the United States. Networked readiness, therefore, remains highly correlated with per capita income (Baller et al., 2016).

In the NRI, out of 143 countries, Malaysia's overall position has remained largely stable in recent years, with the country climbing one spot to 31st position in 2016. This strong performance continues to be supported by a government that is fully committed to the digital agenda, and that is seen to be ahead of its peers regarding adopting the latest technologies. With approximately two-thirds of the population online, individual usage is growing further (47th, up to ten spots); in particular, the uptake of mobile broadband has taken off and reached almost 60 percent. An agile business sector (26th for business usage) is using ICTs to its advantage.

The businesses nowadays are using these technologies for stronger business performance. They are using these technologies for refining business models and corporate structures and online consumer interaction. In addition to that reduction in internet broadband prices (ranked 110th) with an increase in bandwidth (ranked 81st) would act as a catalyst for the Malaysian digital economy (Baller et al., 2016).

Furthermore, advancements in technology with the introduction of computers and digital transmission networks, new forms of organisational and personal information and communication technologies (ICTs) have arisen, diffused, and been incorporated into organisations and people's lives (Rice et al., 2017). These new technologies continue to have the potential to propel societies, help the business to grow innovatively and efficiently and assist governments in addressing critical policy concerns (World Economic Forum, 2015).

With this accelerated growth of ICT worldwide has allowed the development of new social platforms, including social networking sites and mobile apps, which have become popular among individuals as a way to interact and connect with others (Calderón, López, & Peña, 2017). The results of a study by Burson Marsteller state that, for their marketing activities and communication, Malaysian firms use social media. Further, the Malaysian, Thai, and Filipino organisations have invested actively in social media, among the Southeast Asian organisations (Burson-Marsteller Asia Pacific Report, 2011). The reason for that being the increasing importance of effective use of information and communications technology (ICT) in business success.

Similarly, even Higher Education Institutions (HEIs) are facing the same rapidly changing technological advancements and hence cannot afford to lag behind these developments as these can provide valuable insights to the academic community. Therefore, there is a need that academic community in HEIs should plan to address these uncertainties from volatility in the external environment, by adopting new ways and processes to enhance learning, performance, and satisfaction with ICT.

Social media has proven to be a game-changer in academics. Therefore, this irresistible popularity of social media has led to a proliferation of studies that examine its role in HEIs (Dumpit & Fernandez, 2017). The working environment in universities, nowadays, is dynamic and is experiencing changing situations with the change in environment (Peach, & Bieber, 2015). Therefore, it is crucial that universities adopt and be aware of the latest trends to be successful (Tracey, 2014). Adopting new technologies to stay up to date and competitive is the backbone of success in the working world. One of the major shifts in humans' interaction, habits and behaviour are extensively reliant on the usage of social platforms (Waheed, Farrukh, Zameer, & Khan, 2019).

To increase the level of online communication and knowledge sharing, universities and HEIs use mobile devices (Amry, 2014). Therefore, for the same purpose, many HEIs are using WhatsApp for the development of communication through discussion forums, knowledge sharing through text messages and mobile social networks and web-based learning (Mistar & Embi, 2016). The use of technology in communication has proliferated in the last decade, more so with the advancement of mobile technology which has made information dissemination and reception more instantaneous. With the advancement of mobile communication technology, platforms have come up and have been adopted by many who find them appealing. One of these platforms is WhatsApp, whose adoption rate has enormously grown from its inception in 2009, with the current number of users is surpassing 1 billion in over 180 countries (WhatsApp.com, 2019). In Malaysia, 97 percent of mobile users use WhatsApp. Therefore, with the current growth rate, the need to understand the usage and the satisfaction that users are getting from it cannot be overlooked. WhatsApp is one of the most commonly used social media nowadays with user number of more than 1 billion around the world (WhatsApp.com, 2019), where 97 percent of Malaysians are using WhatsApp daily (Star, 2016).

Although most contemporary organisations already use WhatsApp groups as a fast and efficient means to disseminate vital information, and also to coordinate and delegate tasks, yet there is a clear business case to take this one step further, and build a model that helps organisations to connect with their team members at an individual level, thereby bolstering employee engagement.

Today, the highest reach messaging app is WhatsApp, compared to any other channel. Undoubtedly, the top messaging platform, WhatsApp today has more than a billion users who are actively exchanging messages, communicating over voice and video, sharing documents and pictures, sharing their stories like other social media apps

(Facebook, Snapchat, Instagram) around the world, free of charge. Facebook took over the company, and the messaging app is entirely free to use (WhatsApp.com, 2018). Initially, WhatsApp was a phone-number based app for simple communication; however, it took to the internet like a storm. The popularity of the free messaging app has the developers to keep upgrading more and more features on WhatsApp. And now it can be used on desktop also (WhatsApp.com, 2019).

The popularity of WhatsApp is not away from educational institutes as well. To increase the level of online communication and knowledge sharing, universities and HEIs use mobile devices (Amry, 2014). According to Amry (2014), the use of mobile tools in learning is also a form of informal learning practice. It not only aids in learning but also presents the students with a convenient online activity. As a result, smartphones and applications like WhatsApp are widely in use. Therefore, for the same purpose, many HEIs are using WhatsApp for the development of communication through discussion forums, knowledge sharing through text messages and mobile social networks and web-based learning (Mistar & Embi, 2016). Being the primary stakeholders of Malaysian universities, it is essential to study the usage of WhatsApp among academic staff for organisational communication. However, this study focuses only on academic staff's interaction through WhatsApp among themselves and not between academics and students or others.

Many factors affect the decision to adopt a technology or a new network of individuals and organisations. Studies show culture as one of the most critical barriers in adopting new technologies. Literature suggests that there is plenty of research in Information System area in which researchers have worked on factors, which influence the process of accepting and adopting new technologies. One of the most influential factors recognised by researchers was culture (Ebrahimi et al., 2010; Anouk, 2017; Salehan, Kim, & Lee, 2018).

1.3 Problem statement

Firstly, Email is considered as a formal mean of communication in organisations. However, nowadays it is a common observation that most of the staff use WhatsApp for official communication. The issue seems to be whether or not messages communicated over WhatsApp should be considered formal or informal while having an official communication (Vusparatih, 2018). The nature and intent of WhatsApp messages tend to be more social, informal and conversational (Church & Oliveira, 2013). However, studies show that these informal channels are now being used for formal communication within organisations because of cost, social influence, nature/intent, immediacy, sense of connection and reliability (Church & Oliveira, 2013).

To have flexibility in day to day working, people prefer to use WhatsApp at work (Berghaus & Back, 2014). WhatsApp has notably changed people's behaviour, how they communicate. It provides more effective and faster communication between

people (Regina et al., 2017). WhatsApp is the most famous tool for technology communication (Pinto, Garcia, & Tenório, 2017), consultation and medical emergencies (Gulacti, Lok, Hatipoglu, & Polat, 2016), universities (Panekham, 2014), high schools (Bouhnik & Deshen, 2014; Mingle & Adams, 2014.), HEI's (Watson et al., 2014), libraries (Anderson, 2016; Caplan & Lam, 2014) and in various industries (Regina et al., 2017). Though the medium has numerous beneficial uses, WhatsApp has been cited for having some issues as well. For example, Church and Oliveira (2013) observe that contacts can see if messages are delivered and read as well as the time of last access, which causes a privacy issue. Although users have the option of privacy settings, the voluminous incoming messages and the extent of interruption they cause often force them to put the phone on silent mode (Church & Oliveira, 2013), which may hinder effective communication within the network. Also, the platform requires one to have the internet to use it, and one can only chat with friends who have smartphones and WhatsApp installed. While there is a vast body of research on traditional text messaging practices, little is understood about how and why people have adopted and appropriated instant mobile messaging applications (Church & Oliveira, 2013).

The more the social media like WhatsApp are penetrating in organisations for communication purposes, the more conflicts are arising (Vusparatih, 2018) to whether consider these channels as formal or not. For example, if a boss assigns a task to his subordinate over WhatsApp, and the subordinate, ignores it, where the official channel of communication is E-mail, then what will be the consequence? Will the subordinate be held responsible for his negligence? It is huge confusion in the organisational context nowadays. With the growing penetration of smartphones and the accompanying applications, it is important to know how they are used in formal or informal communication within organisations. Organisational culture defines the organisations to follow formal or informal communication (Hendrith, 2018). This study aims to address this issue.

Secondly, social media usage among organisations is growing tremendously. Most of the social media studies are from perspective of personal usage. There are few studies from the organisational perspective too. However, there are very limited studies which examined the organisational usage of social media (Parveen, Jaafar, & Ainin, 2014). Considering the ubiquitous nature of social media and its potential to impact the workplace, it is surprising that there is a paucity of research on its use in the workplace and as a form of communication (Holland, Cooper, & Hecker, 2016). Organisational usage of social media is changing organisational communication and public relations (Tajudeen, Jaafar, & Ainin, 2017). The growing trend of social media has also encouraged many authors to research in this field. However, most of the studies on social media are conducted based on an individual perspective (Agarwal & Mital, 2009; Genova, Barbara, & Barbara, 2008; Pelling & White, 2009). Social media have become one of the most powerful communication tools both inside and outside of the workplace. Even though most of the focus has been given to the potentially destructive and negative effects of social media at work, less attention has been given to the harnessing of social media in a constructive ('smart') way (Holland et al., 2016). The use of social media for organisational communication is quite new (Akar & Topçu,

2011) and also there is a lack of literature regarding the field of organisational usage of social media, which makes a research gap. There are very limited studies regarding the adoption of social media for organisational communication. Academic research on social media remains less complete in the context of insightful investigations into the various purposes of social media usage and its subsequent impacts on organisations (Parveen et al., 2014). This study intends to fill this gap.

Thirdly, the great and rather recent impact of WhatsApp as a form of communication is triggering academic research on the speech that characterizes this instant messaging (IM) system (Sánchez-moya & Cruz-moya, 2015). Berghaus and Back (2014) suggested that there is a lack of research about the adoption of mobile technology in organisational context. Even though WhatsApp provides different advantages, it is rather important for us to explore the level of acceptance on WhatsApp as a tool to communicate and collaborate (Raman, Sani, & Kaur, 2014). Past studies about computer-mediated communications, which discussed their pros and cons, have focused mainly on email, instant messaging and text messaging. Mobile text messages have changed the interpersonal communication as more people are using text-based communications rather than face-to-face communications (Aharony & Gazit, 2016). However, less attention has been given in the literature to the newer CMC technologies such as WhatsApp (Sultan, 2014). Studying usage of WhatsApp in organisations as means of internal communication will fill in this gap and understanding the impact of organisational culture on WhatsApp usage will make this study a unique one in its nature.

The next issue is that with a huge focus on adopting ICT infrastructure, the Malaysian government allocated one-fifth of its budget for Higher Educational Institutes (HEIs) in the year 2016 and 2017. Ministry of Higher Education (MOHE) is channeling most of its money to 20 public universities with RM 7.4 billion and scholarships with RM4.3 billion. The then minister of Higher Education, Dato Seri Idris Jusoh, at the opening of Malaysia Higher Education Forum 2017, addressed, “Ultimately technology is a tool. People come first. Its purpose should be centered on humanity and public interest. Where tolerance, respect, care and compassion come into play. Eventually, it boils down to culture and values. With the 4th industrial revolution ushering a new cultural renaissance. It needs collective wisdom”. HEIs are the center point of education, and this is the place, where young leaders are born. Academics teach these people and how they behave in their day to day life, impacts their student. It is very important to understand the uptake of latest trends and advancements in technology.

Further, as mentioned earlier, the Government spends a lot of money in HEIs to make them up to date with the latest trends. The higher education is one of the sectors where the hype of WhatsApp has been acknowledged, and consequently, students and lecturers continue to embrace this technology (Nyasulu & Chawinga, 2019). Moreover, previous studies state that there is the difference in levels of adoption of the technology in public and private institutes (Elewa, Hassan, & Banan, 2019;

Mahomed et al., 2018). So, this study intends to examine the WhatsApp adoption in Malaysian public and private universities.

Last but not the least, by now, it is evident that social media has had a tremendous impact on the culture, in business, on the world-at-large. Social media channels are some of the most popular haunts in the world of technology and communication. They have reformed the way people communicate and socialize with each other. Technology is, to a considerable extent, socially and culturally constructed (Schwarz & Thompson, 1990) and cannot be separated from human beings (Hendriks & Zouridis, 1997). Out of many factors that affect the adoption of social networks, culture is one of the major ones. Online social networks have become a cultural phenomenon. They have witnessed a rapid growth in their membership, and with the increase in popularity of social networking websites, it is safe to say that the world is becoming “smaller,” and people are now inter-connected more than ever (Pookulangara & Koesler, 2011). Organisational culture plays a vital role in how people share ideas, values, and information with each other and the culture defines how the people in one organisation communicate with each other. A very recent review of literature by Olaniran (2018) identified the need to do empirical research on social media and culture because of the limited amount of literature about the impact of culture on social media deployment within organisations. Organisational culture is one of the more important phenomena which drives people’s behaviors in various organisations, including higher education institutions. HEIs differ from one another with their organisational culture which, in turn, is the factor determining their ability to adapt and react to the changes occurring in the market of higher education. Amry (2014) concluded that mobile devices are used at universities and higher educational institutions to enhance online interactions through discussions and to share knowledge. With the increased usage of social networks, it is important to understand the influence of culture on the usage of social networking especially with the widespread popularity of this technology (Pookulangara & Koesler, 2011). A study of 185 staff members by Mahomed et al. (2017) analysed the impact of culture on email usage in organisations and found a significant impact of culture on email adoption. Many authors have confirmed the relationship between culture and technology (Dasgupta & Gupta, 2015; Ebrahimi et al., 2010; Anouk, 2017; Salehan et al., 2018), however concerning social networks in general, and WhatsApp in particular, a very little known research is available. This study aims to contribute to the impact of culture on WhatsApp usage, in Malaysian universities (Ali, Mahomed, and Yusof, 2017).

Lastly, to study culture and Technology together, the researcher finds the Technology Acceptance Model (TAM) as the suitable model for this study. Majority of the researchers agreed that TAM had an important impact on Information System field and has been used widely in numerous areas (Taherdoost, 2018). WhatsApp usage also has many pros and cons like any other channel of communication and the choice to use this medium as a communication channel within organisations, depends upon many factors which may be culture (Ali et al., 2017), Social Influence (Church & Oliveira, 2013; Lorenz & Buhtz, 2017), Facilitating conditions (Venkatesh et al., 2003; Khan 2018).

Numerous studies have found that antecedents of TAM i.e, perceived usefulness and perceived ease of use mediate the relationship between external variables and system usage that also directly affect the system usage.

For example, Mahomed et al. (2018) tested the mediation effect of perceived ease of use and perceived usefulness on national culture and organisational culture on email usage and found PU and PEOU to have strong mediation relationship between the two constructs.

Similarly, Fang et al. (2019) used perceived usefulness and perceived ease of use as mediators between system characteristics, computer-self efficacy, self- directed learning (Independent variables) and Learning Management system usage (dependent variables) and found that PU and PEOU mediate the relationship between the endogenous and exogenous variables among Malaysian university graduates.

Literature review of technology acceptance model from 1986 to 2013 by (Granic & Marangunic, 2015) also confirms that perceived usefulness and perceived ease of use are significant mediators of external variables and the system usage.

This makes the researcher look into WhatsApp usage within Malaysian universities from the viewpoint of theories on culture and technology adoption. In the area of management and information system, there are so many theories which explain how any user will decide to adopt a certain technology. Some of these theories are the Theory of Reasoned Action (TRA) (Ajzen & Fishbien 1980), Theory of Planned Behavior (TPB) (Ajzen 1985) and Technology Acceptance Model (Davis 1989). Based on the proposed study, the researcher believes TAM to be the most suitable model for this study since it has been studied for three decades and has been proven as a firm and effective model with reliable backing in information system research (Chuawatcharin & Gerd Sri, 2019; DuPree, 2015; Granic & Marangunic, 2015).

According to Davis et al. (1989),

“The goal of TAM is to explain the determinants of computer acceptance that is general, capable of explaining user behaviour across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified.”

A majority of researchers agreed that TAM had an important impact on Information System field. In the present research, Technology Acceptance Model has assumed an accepted theory (Ebrahimi et al., 2010; Taherdoost, 2018).

The research background has charted the importance and current usage of WhatsApp. This study on WhatsApp usage seeks to explore the level of WhatsApp adoption and usage in Malaysian public and private universities. The study also intends to explore the role of organisational culture in determining the WhatsApp usage among academicians of these universities. So, to address this question, the study intends to produce a holistic framework integrating the theories of culture and technology acceptance. This will be achieved by integrating the Technology Acceptance Model (TAM) (Davis 1989) with organisational culture (Denison & Mishra, 1995), social influence and facilitating conditions from UTAUT (Venkatesh et al. 2003).

1.4 Research Questions

To further progress the research agenda, the following questions are the primary research questions to be asked for this study.

- 1) Does organisational culture affect WhatsApp's official usage among academicians in Malaysian universities?
- 2) Does social influence affect WhatsApp's official usage among academicians in Malaysian universities?
- 3) Do Facilitating Conditions affect WhatsApp's official usage among academicians in Malaysian universities?
- 4) Do Perceived Usefulness and Perceived Ease of Use mediate the relationship between culture and WhatsApp's official usage among academicians in Malaysian universities?
- 5) Do Perceived Usefulness and Perceived Ease of Use mediate the relationship between Social Influence and WhatsApp's official usage among academicians in Malaysian universities?
- 6) Do Perceived Usefulness and Perceived Ease of Use mediate the relationship between Facilitating Conditions and WhatsApp's usage among staff in Malaysian universities?

Other questions, expected to be answered from this study will be:

- What is the rate of WhatsApp official usage amongst the staff of Malaysian universities?
- If there are differences in WhatsApp usage across staff in Malaysian universities?

1.5 Research Objectives

The primary objective of the study is to determine the effect of culture on WhatsApp usage among Malaysian public and private universities and developing a holistic framework integrating cultural model and Technology Acceptance Model and two of

UTAUT's variables. In order to answer the above research questions, the study follows a systematic research process with the following objectives, guiding each stage of research. The specific objectives are to:

1. Investigate the effect of organisational culture on WhatsApp's official usage among academicians in Malaysian universities.
2. Investigate the effect of social influence on WhatsApp's official usage among academicians in Malaysian universities.
3. Investigate the effect of facilitating conditions on WhatsApp's official usage among academicians in Malaysian universities.
4. Analyse the mediating role of Perceived Usefulness and Perceived Ease of Use in culture and WhatsApp's official usage among academicians in Malaysian universities.
5. Analyse the mediating role of Perceived Usefulness and Perceived Ease of Use between Social influence and WhatsApp's official usage among academicians in Malaysian universities.
6. Analyse the mediating role of Perceived Usefulness and Perceived Ease of Use in Facilitating conditions and WhatsApp's official usage among academicians in Malaysian universities.

1.6 The significance of the study

This research contributes in two ways. One is a contribution to the existing body of knowledge by providing theoretical contributions, and another one is by providing practical contributions to the industry.

1.6.1 Theoretical Significance

This study contributes to the literary body of knowledge in the following ways:

1. Providing evidence of the level and pattern of WhatsApp's official usage in the Malaysian universities.
2. Providing evidence to determine the extent to which organisational culture influences WhatsApp's official usage in Malaysian organisations.
3. Providing evidence to determine the mediating effect of Perceived Usefulness and Perceived Ease of Use between organisational culture and WhatsApp's official usage.
4. Developing a holistic framework integrating cultural model, Technology Acceptance Model, social influence and Facilitating conditions to determine the level of WhatsApp's official usage among academicians of Malaysian universities.

5. The original TAM model has been extended with external variables of cultural mode, social influence and facilitating conditions. As many researchers have recommended to add external variables in TAM to improve its explanatory power (Davis, 1989; Chandio, 2011; Karahanna & Limayem, 2000; Moorthy, Sann, & Ling, 2014; Abbasi et al., 2011; Venkatesh et al., 2003; Wu & Wang, 2005; Trivedi & Kumar, 2016)..

1.6.2 Practical Significance

Regarding practical contribution, this study can foster the development of ICT use in Malaysian universities, by providing useful insights about WhatsApp usage among staff. Particularly this research intends to make a practical contribution by:

- Providing valuable information on the factors, which influence WhatsApp's official usage among staff.
- Providing knowledge that might allow WhatsApp.com to provide customised services for internal communication for businesses, like a Centralized communication system, e.g., email or internal network and can lead to a particular business' competitive advantage.
- Contributing to the informed decision when it comes to WhatsApp usage and possibly other mobile technologies within the organisation.
- Providing useful knowledge that may allow Malaysian Government and/or other stakeholders to increase the adoption of WhatsApp usage, for official communication and knowledge sharing which will be very fast compared to other traditional channels of communication.

1.7 The scope of the study

Just like each research project, this study also defines the following clear boundaries of this research study.

Firstly, the academic staff working in the Malaysian public and private sector universities are chosen as the population of this study. Academic staff working in colleges and schools and other affiliated colleges is excluded from the scope of this study. Furthermore, the staff of another cadre in these universities just like the non-academic staff (finance, marketing, HR, etc.) and other contractual staff is also excluded from the scope of this study. One justification for this inclusion and exclusion is that to contain the professional identity of academic staff, and secondly, they are representing the primary stakeholders of the Malaysian universities. So basically this study considers WhatsApp communication only among academicians of HEIs.

The second limitation is that the study focuses on actual WhatsApp usage by the individual rather than its intention, assuming that if someone intends to use, he will use the WhatsApp. Thirty years ago, when TAM was introduced by Davis (1989), the adoption of internet and related technology was very new and selective. Davis developed the TAM, by studying intention to use email among staff of some organisations that time which was logical as internet and email were quite new so only intention to use was measured. However now when technology is so much accessible to everyone and is so volatile that it is logical now to assume that if a person intends to use a technology especially a handy (mobile) technology, he or she will be more likely to use it. Many authors in the past have also used actual usage instead of intention to use, considering the same concept (Al-Sukkar, 2005; Huang, 2003; Mahomed et al., 2018; Ramayah, Ignatius, Aafaqi, & Pinang, 2005; Tarhini, Hone, Xiaohui, & Tarhini, 2016; Hart & Porter, 2004)

1.8 Research Design

The following figure explains the research process involved in completion of the intended study. The first step is to go through the relevant literature to find out relevant theoretical gaps and issues, which can help in defining research questions, and hypothesis. Then comes the empirical research with the target population. For this purpose, the survey method is used for pilot testing before the real survey. Finally comes, data analysis, followed by interpretation of results and review for final discussions and conclusion.

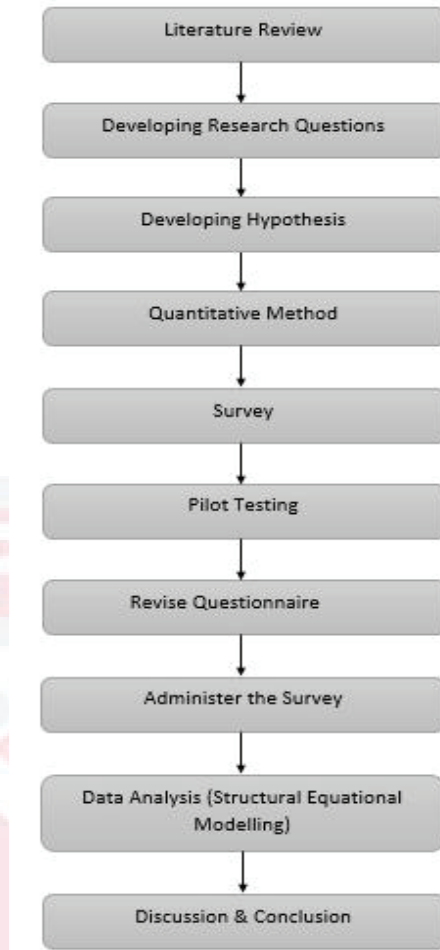


Figure 1.1 : Research Design Overview

1.9 Definition of Key Terms

The definition of key variables, used in this study are stated below:

1.9.1 Organisational Culture

The deeply held beliefs about an organisation, its coworkers, its customers, its competitors or its industry. These beliefs and assumptions and their associated behaviour determine the culture of an organisation (Denison & Mishra, 1995). It has four traits, two flexible (Adaptability and Involvement) and the other two stable (Mission and Consistency).

1.9.2 Social Influence

“The degree to which an individual perceives that essential others believe he or she should use the new system” (Venkatesh et al., 2003).

1.9.3 Facilitating Conditions

“The degree to which an individual believes that an organisational and technical infrastructure exists to support the use of the system” (Venkatesh et al., 2003).

1.9.4 Perceived Ease of Use

“The degree to which a person believes that using a particular system would be free from effort” (Davis, 1989).

1.9.5 Perceived Usefulness

“The degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989).

1.9.6 WhatsApp’s Official Usage

For the purpose of this thesis the term WhatsApp’s official usage refers to the actual usage of whatsapp for official communication within Malaysian public and private universities.

In this thesis WhatsApp’s usage is used interchangeably with WhatsApp’s official usage.

1.10 The organisation of the Study

This thesis is organized as follows:

Chapter one briefly presents the introduction, research background, followed by problem statement, research questions, research objectives, significance and scope of the study, research design and definition of the key terms.

Chapter two provides a synopsis of communication within organisations focusing on the importance of the internet, technology and WhatsApp usage for organisational communication. In addition to that, some statistics regarding internet, WhatsApp and

mobile technologies around the world as well as of Malaysia are also discussed. It also discusses past literature about WhatsApp usage in Malaysian organisations.

Chapter three briefly presents the underpinning theories of the conceptual framework of this study. An extensive literature review of relevant theories of technology adoption has been done to identify theories that can address the technical aspects and cultural factors of users towards WhatsApp adoption. For this sake, this chapter incorporates the Technology Acceptance Model (Davis 1989) with the theory of organisational culture (Denison & Mishra, 1995) and two of UTAUT's variables (Venkatesh et al., 2003) to build a conceptual framework. Resultantly a list of hypotheses is produced for testing with the help of empirical data analysis.

Chapter four presents an overview of the methodology used in this study. This chapter includes a discussion of the ontological, epistemological and methodological, which then guide the adopted method in line with the research questions. Further, it justifies the choice of research method, followed by population, sampling and measurement scales. Finally, this chapter discusses the importance of pre-testing, pilot testing, and reliability test and ends with a selection of statistical tools for data analysis.

Chapter five presents the results and findings of this research extracted from the analyses of data in SPSS and SMART PLS software. This chapter starts with analysis of the demographic profiles of the respondents and the current level of WhatsApp usage among staff in Malaysian universities. The chapter then discusses the correlation, measurement model analysis, and structural model analyses and finally ends with the results of each hypothesis.

Chapter six finally concludes the thesis with the discussion of the findings of the data analyses. The discussion part describes the results of the data analysis in relation to research objectives. The chapter then leads to the practical and theoretical significance of the study and ends with the limitation and recommendation for future research.

1.11 Summary

This first introductory chapter has delineated the entire focus and the expected contribution of this study by describing the research background, problem statement, and purpose of the study, research questions, and objectives of the research. Then it talks about the theoretical and practical significance of the study, scope and research design. The chapter then explains the organisation of this proposal and ends with operational definitions of key terms.

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