

## WhatsApp Acceptance and Behavioral Intention to Use among Non-Nursing Staff in Selected Hospitals at Melaka

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### Abstract

Mobile application has become an increasingly popular way for individuals to communicate, allowing for the initiation and maintenance of various relationship types. WhatsApp can be viewed as a mobile application that allows people to access a great deal of information rapidly with one another. In this study presents the association between WhatsApp acceptance and behavioral intention to use among non-nursing staff in selected hospital in Melaka that currently used WhatsApp as the tools for office communication. The Theory Acceptance Model (TAM) which include two variables; Perceived Usefulness and Perceived Ease of Use are used to measure the association of WhatsApp Acceptance and Behavioral Intention to Use. The questionnaires were distributed and 70 of valid questionnaires were returned. The data collected were then analyzes using Pearson Correlation to test the research hypothesis and the findings indicate the positive association among two variables towards behavioral intention to use. Implications of the study are discussed.

**Keywords:** WhatsApp, perceived usefulness, and perceived ease of use

### Introduction

Technology developments in mobile communications have begun to foster new platforms for brand-consumer interactions (Shankar and Malthouse, 2007). The mobile application becomes the most popular way to communicate and sharing information among individuals. Mobile application software designed to run on the other mobile devices that allow facilitating the use of mobile devices to interact to one and another.

WhatsApp as one of mobile instant messaging application is the most popular mobile apps that used currently. WhatsApp is one of the mobile application that allows individual to interact and gain information privately or in group. The implementation of mobile application in organization is necessary for a company to shape employee's work performance and remain competitive. WhatsApp is a social networking messenger which provides a cross platform working using smartphones which enables users to send instant message, images and also videos. The application become popular and increasingly used among youth because WhatsApp was widely adopted by individuals as it allowed better accessibility, enjoyment, quick information-sharing and cost benefits (Bere, 2012; Plana, Gieno and Appel, 2013 as cited by Annie and Syamimi (2014). By April 2014, it was estimated that WhatsApp had approximately 500 million users (Statista, 2014), who send and receive more than 64 billion messages a day (Trenholm, 2014).

As the communication in organization currently are more focusing in email, the complaint always faced are the email function cannot be used effectively and be bounced once it was sent to many recipients. Employee generally highly positive about email as a communication tools but they

stressed how it enable them to collaborate with others across time and distance (Sproull and Kiesler, 1991). Employees expect email to serve an important role in the work but it is not working, due to overload of email, so employees used the mobile application such as WhatsApp as a medium for communication. Besides, WhatsApp Messenger is a 'cross-platform' messaging apps which allows users to exchange messages without having to pay for message. Therefore, this study would like to identify what are the factor that influencing the user that use WhatsApp as their office communication tool.

The objectives of this study are as follows.

1. To identify the frequency of WhatsApp usage and features that mostly use among non-nursing staff in a selected hospital at Melaka.
2. To identify the association between perceived ease of use towards behavioral intention to use of WhatsApp among non-nursing staff in a selected hospital at Melaka.
3. To identify the association between perceived usefulness towards behavioral intention to use of WhatsApp among non-nursing staff in a selected hospital at Melaka.

### **WhatsApp Usage**

Organizations using mobile applications strategically are able to integrate social more deeply into the overall organization. Palen and Salzman (2001) indicate that the level of comfort with mobile apps has an effect on how people perceived and use the technology. From the technology acceptance perspective, WhatsApp adoption record in developing countries potentially presents numerous lessons for addressing the technological poverty crisis. These applications are also useful for information generation, information gathering and information dissemination in a timely and cost effective manner. People are able to have a group chat with multiple friends on WhatsApp just like using MSN messenger. The biggest advantages of using WhatsApp is a cross-platform smartphone messenger that employs users' existing Internet data plan to help them network socially in real time (WhatsApp, 2010).

This application also will help in reducing phone costs for both parties when they are in a different location. According to Bere (2012), WhatsApp was widely adopted by individuals as it allowed better accessibility and ease of communication offering real-time messaging, empowerment sense of belongingness and sociability, enjoyment, quick information-sharing and cost benefit. Furthermore, particularly with WhatsApp, the results suggest that a combination of cost efficiency, simplicity, user-friendly features, and the ability to run on multiple platforms promotes users' attitudes and behavioral intentions to adopting WhatsApp.

WhatsApp messenger application is considered an innovative advancement in communication technology (Shamare, 2014). Therefore, the Technology Acceptance Model (TAM) by Davis (1989, 1993) is the most common theory used by researcher to integrate the fragmented theory and research on individual acceptance of information technology. This theory had been widely used for predicting the acceptance, adoption and use of information technology. This model has become the most comprehensive attempts to articulate the core psychological aspects associated with technology use. There are two variables used for predicting the factors of WhatsApp acceptance which were perceived usefulness and perceived ease of use. TAM is possibly the most widely-use framework in the field in information system for measuring technology acceptance. This theory is a robust but parsimonious theory and it is useful to explain a particular information system and technology. Moreover, this theory and its derivative (Igbaria, M., Schiffman, S.J., Wieckowski, T.J., 1994) has become the most comprehensive attempt to articulate the core psychological aspects associated with technology use. The variables presented by TAM were defined clearly to identify the factors that influencing the behavioral intention among user on the communication technology acceptance.

### *Perceived usefulness*

As suggested by Davis (1989), that when the individual perceives the information and communication technologies (ICT) to improve his performances, he uses them more frequently in his daily activities at work. Perceived usefulness describes the individual's subjective probability, that using a particular system would enhance his or her job performance within organizational content (Davis, 1993). This model presents, in fact, the concept of perceived usefulness as the gain in performance that an employee believes they can perform when using a technology. In other word, many researchers defined it as "the degree of performance improvement expected from using the system" and as early theory also mentioned that perceived usefulness explains the user perception to the extent that the technology will improve the user's workplace performance. This includes decreasing the time for doing the job, more efficiency and accuracy.

### *Perceived ease of use*

According to Davis (1993) mentioned that perceived ease of use was defined as the "degree to which an individual believes that using a particular system would be free of physical and mental effort." Perceived ease of use in the context of WhatsApp, refers to mobile subscribers' perceptions of the relative ease and lack of effort required to use the messaging application. Moreover, it also consists of the following determinant which is easy to use, easy to read, using understandable terms, able to link to search for related information and easy to return to previous page. This includes support, complexity and change management. Venkatesh (2000) reported perceived ease of use describes the individual's perception of how easy the innovation is to learn and to use. This study also mentioned, given that some fraction of a user's total job content is devoted to physically using the system per se, if the user becomes more productive in that fraction of his or her job via greater ease of use, then he or she should become more productive overall.

### *Association between WhatsApp acceptance and behavioral intention*

Advances in technology communication apparently positively related to successful interpersonal communications such as WhatsApp. Karrigan (2011) has claimed that "Nearly 50 percent of Techno Metrica survey respondents believe they have been able to spend more time on growing business revenues due to their use of mobile apps. WhatsApp unlock new opportunities for intimate communications that are not present in face to face and other synchronous communication channels (Turkle, 2012). Besides that, WhatsApp supported individuals in crafting highly emotional personal message, not only removing the social anxiety present in face to face (Valkenburg and Peter, 2011). WhatsApp established social practices such as the near-real-time sharing of an event with rich media enabled separated individuals to feel presenting important life events.

TAM explains the use of information technology such as WhatsApp and has been widely applied to various fields to understand the personal acceptance of information technology after Davis (1989) proposal, which was related to Ajzen and Fisbein's (1980) theory of reasoned action. Sereno (2007) stated that the organization may use WhatsApp or have modified TAM to assess user acceptance of interface agents in daily work applications. TAM states perceive usefulness will have a direct effect on user's behavioral intention and perceived ease of use affects behavioral intention indirectly through perceived usefulness (Davis, 1989). A study by Ricky Aditya and Aditya Wardhana (2016) on the Instant Messaging LINE acceptance in Indonesia, there are significant association between those two variables towards the behavioral intention. Besides, perceived usefulness was positively related to a user's behavioral attitude and intention and perceived ease of use had a significant impact on perceived usefulness (Yaobin, Tao and Bin, 2009). The rationale behind this study that if the system or application is to promote one's work that will be seen as useful and will incentive a person more to use the system or application which is WhatsApp as it helps to use as a positive relationship to gain performance.

## Methods

The research was conducted in one of the selected hospital in Melaka. This study focused on staffs who are working in department of non-nursing that carrying out the duties for management and administration and already exposed about the applications of WhatsApp also used it as one of organizational communications as a sampling frame. The total population for this study was 70 managerial staff. Convenience sampling technique was used for this study and the researcher used questionnaire method to obtain data that can answer the research objectives of this study. The questionnaire was validated by two experts to ensure the validity and reliability of the instrument.

## Results and Discussion

Table 1 shows demographic information about the respondent's gender, age, years of working, department, frequency of using WhatsApp and features that respondents mostly use. Out of 70 respondents 36 (51.4%) of them were female and the rest 34 (48.6%) of respondents were male. The highest range of age which is 25 – 30 years old (38.7%) and 30 years and above is the lowest range (28.6%) meanwhile the range of age 18 – 24 years were 23 (32.9%) of respondents. Majority of them work 1 – 3 years (40.0%) and the lowest is below than 1 year which indicated 13 (18.6%). The second highest of years were in the range from 7 years and above which indicated 21.4% and followed by 4-6 years (20.0%).

Table 1 Demographic Information (n=70)

		Frequency	Percent (%)
<b>Gender</b>	Male	34	48.6
	Female	36	51.4
<b>Age</b>	18-24 years old	23	32.9
	25-30 years old	27	38.6
	30 years old	30	28.6

As far as the frequency of usage was one of the objective of this study (Table 2), the finding listed that 21 (30.0%) used WhatsApp in range from 1 -3 hours and 7 – 9 hours respectively. The rest was 14 (20.0%) was used 4 – 6 hours per day and over 10 hours per day. The result also show the mostly features used among the user was text messages (50.0%), send information (28.6%), sending photos (14.3%) and the lowest was sending videos (7.1%).

Table 2 Frequency and features mostly used in WhatsApp

		Frequency	Percent (%)
<b>Frequency of usage</b>	1 – 3 hours per day	21	30.0
	4 – 6 hours per day	14	20.0
	7 – 9 hours per day	21	30.0
	Over 10 hours per day	14	20.0
<b>Features mostly used</b>	Sending text messaging	35	50.0
	Sending photos	10	14.3
	Sending videos	5	7.1
	Sending information	20	28.6

The correlation analysis was designed to answer the two objectives of this study. Pearson Correlation Coefficient was used to assess the correlation between independent variable and dependent variable. Table 1.3 below describes the correlation between the variable. This study found that there was a positive (weak) association between Perceived Ease of Use and Behavioral Intention ( $r=.285$ ,  $p=.017$ ). It shows that perceived ease of use affects behavioral intention indirectly through perceived usefulness (Davis, 1989). Study by Venkatesh (2000) reported perceived ease of use describes the individual's perception of how easy the innovation is to learn and to use, this result

found that WhatsApp not easy to learn and use by the non-nursing staff as one of the tool for office communication. Besides, this result also supported the study by Yaobin, Tao and Bin (2009) perceived ease of use had a significant impact on perceived usefulness. There was also positive association between Perceived Usefulness and Behavioral Intention ( $r=0.616$ ,  $p=0.000$ ). This result supported the theory of TAM that mentioned that perceived usefulness explains the user perception to the extent that the technology will improve the user's workplace performance. This includes decreasing the time for doing the job, more efficiency and accuracy. It can be found that user used the application because they perceived that the efficiency of the application can improve their work performance and its associate to their behavioral intention to use the application for office communication. This study supports the findings by Ricky Aditya and Aditya Wardhana (2016) on the Instant Messaging LINE acceptance in Indonesia, there are significant association between those two variables towards the behavioral intention.

Table 3 The association between Perceived WhatsApp and behavioral Intention

		<b>Behavioral Intention</b>
<b>Perceived ease of use</b>	Pearson Correlation	0.285*
	Sig. (2-tailed)	0.017
	N	70
<b>Perceived usefulness</b>	Pearson Correlation	0.616**
	Sig. (2-tailed)	0.000
	N	70

## Conclusions

This study was conducted to identify the association between WhatsApp usage and behavioral intention among 60 of non-nursing staff in one of the selected hospital at Melaka that currently using WhatsApp as one of office communication in their daily task. It found that there is strong significant association on behavioral intention of WhatsApp usage on perceived usefulness. However, the perceived ease of use also found significantly associate with behavioral intention but in weak relationship. The theory used TAM is the best theory to measure the information system and technology acceptance especially to the new mobile instant messaging application like WhatsApp.

The results from this study support the findings by Davis (1989) that perceived ease of use indirectly associated with behavioral intention and perceived usefulness directly impact the behavioral intention to use because it contributed to the job performance of the employees. However, this study can be concluded that both of variables associated with the dependent variable. It was suggested that the organization should promote the use of WhatsApp as an official medium of communication among the employees. The creation of group WhatsApp among the department members and team members can improve the productivity of work and they can share information easily, fast and efficient. Like study by Bere (2012), WhatsApp was widely adopted by individuals as it allowed better accessibility and ease of communication offering real-time messaging, empowerment sense of belongingness and sociability, enjoyment, quick information-sharing and cost benefit. This study also can help the openness of organization and learning institution to use mobile application in communication which can easily reach to people and give an impact to their performance and productivity.

WhatsApp messenger application is considered an innovative advancement in communication technology (Shamare, 2014), as our country are strived towards Vision 2020 and TN50, the use of technology for communication should be the implemented to get more benefit on it. However, this study only limited to the specific group of sample and hope in the future this study will open to bigger group and other sampling frame. This study also can extend to the mediating variable like age and gender because as stated in Gefen and Straub (2000), the mode of communication maybe

perceived differently by the sexes. The usage of WhatsApp in organization can make employees enjoyed with their work and increase their skill in information technology.

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