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Usage of Whatsapp in Relation to Employee Engagement in a Telecommunication Company

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Abstract
WhatsApp application, the most talk-about mobile MIM application made available for any smartphone in the market. WhatsApp allows exchanging of real time text messages either to individual or group. The usage of WhatsApp has changed the way people communicate either personally and professionally. This paper is to investigate the relationship of WhatsApp usage and employee engagement in the organization. Almost all respondents use Whatapps and believe WhatsApp is a useful communication application. The paper indicates that there is a relationship between WhatsApp usage and employee engagement. Thus, Whatapps application may be used as an effective internal communication tool to disseminate and sharing information.

Keywords: WhatsApp Application, Employee Engagement, Technology Acceptance Model (TAM), Social Media and Wireless Communication

Introduction
Background of the Study
Wireless communication makes people connected “anytime, anywhere” (Galambos and Abrahamson, 2002). Mobile phones have become such an ordinary part of life, because they are so personal and portable, we tend to misjudge the whole effect of wireless communication on society in general. Yet, in recent years, researchers in almost all social science and humanities areas wanted to study the association between mobile phone and social relationships (Qiu, 2007).

There are massive choices of Mobile Instant Messaging (MIM) applications and services on smartphone such as WhatsApp, Line, WeChat, iMessage, Viber, Skype, Facebook Messenger, KakaoTalk and Telegram. These are usually called or referred as Over The Top (OTT) application because these applications are not proprietary and independent of network provider being used (O’Hara, Massimi, Harper, Rubens, & Morris, 2014). Such applications are free and inexpensive to download and use; and offer sharing media capability like image, video, audio clips and location data. WhatsApp, an instant messaging running on most smartphone using Mobile Communication has been opted by many as the new way to communicate. Instant Messaging as
one of the most used technologies to maintain relationships with peers (Wood, 2007). Estimated that, in January 2014 there are about 430 millions active users of WhatsApp with a daily message volume estimated at 20 billions (Richter, 2014). Looking at the huge number of users and heavy usage, WhatsApp is widely known to most of smartphone users as an alternative new form of digital communication aid. Figure 1 indicates the number of WhatsApp user base worldwide.

Figure 1: WhatsApp User Base

The usage of WhatsApp as one of Mobile Instant Messaging (MIM) has become popular (Church & Oliveira, 2013) among many smartphone users. Communication using smartphone has evolved tremendously with the internet connection access and capability. Previously, when Short Messaging Service or SMS was introduced two decades ago, voice and text can be exchanged across, but now, as the mobile communication has evolved with new communication technology introduced like 3G/4G access and mobile broadband; images, video and voice clip are possible to be exchanged and transmitted. One-to-communication is not the only form of communication, with the advancement, one-to-many form of communication is possible.

In WhatsApp application, one-to-many form of communication is available via Group features. Group-based interaction has been used before in the desktop and web environment which enables organization, planning, media sharing and current discussion (Counts, 2007). WhatsApp application has a group feature which allows the same group-based interaction or one-to-many form of communication. WhatsApp is an application that allows mobile users to send real-time messages to individual. What has driven WhatsApp to be widely accepted is because of the application can be in multiple platforms; in addition to decreasing costs and convenience of mobile data plan. Besides from exchanging text messages, WhatsApp also allows user to share location, videos, contact, pictures and audio in real time. WhatsApp is more direct compared to text messaging (Church and Oliveira, 2013) application like Short Messaging System (SMS). WhatsApp users exchanged messages with their own contacts (ie contact listed in their telephone), they can be either friends, family members, or co-workers (inclusive of their managers). Via Group, the group members can do discussion related to personal or work related
matter. Via group, sharing information is easy and quick. In addition, planning or organizing can be engaged via WhatsApp Group. With Group feature in Whatapps, all members can contribute any ideas in WhatApps and can be seen and viewed by all the members in that Group. The group-based interaction on mobile devices allows the next step towards “continuous presences” or as defined by Vaananeen (2002) as “logical conclusion for social interaction on mobile devices’ (as cited by Counts, 2007).

This continuous presence may progress in establishing and maintaining emotional connection towards group member. Social psychologist indicated that there are some chemistry between emotional connection and social group which may lead to cooperation and positive feeling among group member. Sharing information goes more than just texting, Counts (2007) in his paper indicated that sharing images or photos may lead to more meaningful and desirable interaction mode which may lead to emotional attach between group members. Images or photos say more than just words, they actually the reflection of the emotional feeling of the sender that willing to be shared among the group member. WhatsApp service also serves hundreds of millions of photos uploaded daily, surpassed Instagram with 50million photos daily, the dedicated photo sharing services (Richter, 2014). Group feature can be used as the virtual or online meeting especially if a department taking the advantage of this feature. Line managers can share department information, can initiate planning and also can instruct for immediate action or response from their respective team members. Via group feature, exchanging the decision can also be done instantly thus enhance the effective communication especially in the organization.

Internal communication has been the most crucial activity in transforming communication effectiveness in an organization. Internal communication is known as the medium for effective communication towards the employee. Furthermore, internal communication is an important yet challenging area which to engage employees in an organization. Internal communication has been considered as a factor in the development of employee engagement. The usage of memo, notice board and email has been the form of internal communication used before. However, time changes and so is the organization. Despite its importance to practice, there are considerable gaps in internal communication theory and theorists have called for research on its mandates, scope and focus. Moreover, employees require information on their organization, and on how their contributions are vital to the organization. There are many forms of internal communication; however, a social media application has been widely used in an organization, as a form of internal communication either can be top-down, up-down and horizontal communication between the employees.

**Statement of the Research Problem**

Employee engagement has become very important in an organization, yet it is a challenging area to concur. The concept of employee engagement is large and huge, thus it can be easily slipped. Many organizations face an issue with engaged employees. Many organizations need to come up with a new and may be an innovative way to engage an employee, thus it is a continuous effort that need to be implemented by an organization. Believe it or not, reported by Gallup in their report entitled State of the Global Workplace (2013), only 13% of employees are engaged at work. This percentage is based on 142 countries studied by Gallup for 2 years between year 2011 and 2012. In other words, most of employees in an organization around the globe can be
labelled as “not engaged” or “actively disengaged” at work. Therefore, these employees are detached emotionally and at most they are a non-productive employees. Non-productive employee is a wastage to the organization specifically and surely for the country generally. Another report by Gallup based on workforce in the United Kingdom, reported that they are three categories of employees, “engaged” employee (17%), “non-engaged” employee (63%) and “actively dis-engaged” employee (20%).

New media or social media have become a new form of communication either personally or professionally. With the advance of mobile communication, mobile internet makes communication at everyone’s fingertips. The emergence of smartphones which allows mobile internet whereby accessing internet is now “anywhere” and “anytime”. Organizations adopt and adapt social media as one form of communication in their organization as a way to disseminate important and vital information to and from management and employees. Aberdeen Group in 2008 reported that an organization using social media can improve their employee engagement by 18% compared to 1% improvement in an organization without social media implementation (Parry & Solidoro, 2013).

Methodology

Location and subject of study
The location of the study is at Cyberjaya, Selangor. The subject of the study was the employees from two departments of the organization. These departments were chosen as the subject because these departments are the biggest department in the organization. In addition, since most of the employees from these departments are not physically at their desk, some form of communication means is needed to convey information between themselves. Communication among the employees for information and knowledge is vital and important.

Population and sampling procedure
The total population of the employee or staff from both departments are 200 people. An email was sent to both head of departments to ask for consent and permission to perform the study within their departments. The study is conducted based on simple random sampling, where emails were sent to all employees in both departments and waiting for them to respond. Grace period of two weeks was given for them to complete the online survey.

Operational definition
The questionnaire has seven (7) sections, with 59 questions in total. The sections are divided and named as such:

| Section | Description |
|---------|-------------|
| Section1 | Demography and WhatsApp Profile |
| Section2 | Perceived Usefulness (PU) |
| Section3 | Perceived Ease of Use (PEU) |
| Section4 | Social Interaction (SI) |
| Section5 | Purpose or Pattern of Usage |
| Section6 | Acceptance of Usage (ATU) |
| Section7 | Engagement Obtained |
The questionnaire is a closed ended question type where estimate time to respond will be a maximum of thirty minutes. For Section 1, respondents are asked questions like age, level of education, job position and their WhatsApp profile information. WhatsApp profile is questions like how long user has used WhatsApp application, frequency of WhatsApp usage in hours per day, is user join any WhatsApp Group, how many Group the user participate in and who are their WhatsApp Group member. This WhatsApp profile questions were asked because, the study would like to see the behaviour of WhatsApp usage especially the Group feature among employees. Section2, Section3, Section4 and Section 6 are questions related to the dependent variables of TAM, 1st Modified TAM and TAM2.

The instrument to analyse this study will be using Nominal, Ordinal and Likert Scale. The instrument for Likert Scale (for Section 2, Section 3, Section 4 and Section 6) will be using 5 scales which are: 1-Strongly Disagree, 2-Disagree, 3-Slightly Agree, 4-Agree, 5-Strongly Agree. Section 2 is to identify the Perceived Usefulness (PU) of WhatsApp technology. The questions were more on the WhatsApp application related to daily work and how WhatsApp helps individuals daily. Section 3 is to identify Perceived Ease of Use (PEU) of WhatsApp technology. Standards questions were asked related to how user to perceive easiness of usage and effortless in using WhatsApp. Section 4 is to examine the Social Interaction (SI) and how it related to WhatsApp technology. The questions asked were generally focused on WhatsApp and its contribution to user social life. Section 6 is to identify the Attitude toward Usage (ATU) for WhatsApp technology. The questions were to identify the attitude of a user in using WhatsApp as a communication tool. Section 6 is to look at the nature or the intent of WhatsApp use by the employees. Nature or intent of WhatsApp questionnaire as describe and used by Church and Oliveira (2013) is used to identify the pattern or purpose of WhatsApp usage. There were six questions related to patterns of WhatsApp usage asked, such as Chatting, Planning, Sharing, Group, Business/Work and Advertisement. Likert Scale used for choices of answer are: 1- Never, 2-Almost Never, 3- Occasionally/Sometime, 4-Almost Everytime, 5-Everytime.

Lastly, Section 7 has question related to the independent variable to be investigated in the study, which is the level of employee engagement. Dimension of employee engagement, using Gallup’s Q12 metric (State of Global Workplace, 2013), The Q12 metric contains 12 items to measure actionable and performance-related elements of an engaging workplace. These items are scored on a five-point Likert scale with 1-Strongly Disagree, 2-Disagree, 3-Slightly Agree, 4-Agree, 5-Strongly Agree. Gallup’s Q12 metric has been used widely in measuring the employee engagement for an organization.

Validity and Reliability of the Instrument
The calculated Alpha Cronbach values in Table 2 both for pre-test and data collection. The data are subjected to the main components factor analysis to identify the validity and reliability in this study. For pre-test, number of samples used is 35 respondents and for real data collection, number of samples used is 128 as stated below in Table 2.
Table 1: Reliability Test, Alpha Cronbach

| Measurement of Variable | Cronbach’s Alpha (n = 35) | Cronbach’s Alpha (n = 128) |
|-------------------------|---------------------------|---------------------------|
| PU                      | 0.844                     | 0.850                     |
| PUE                     | 0.913                     | 0.921                     |
| Social Interaction      | 0.866                     | 0.806                     |
| ATU                     | 0.929                     | 0.879                     |
| Pattern of Usage        | 0.747                     | 0.760                     |
| Employee Engagement     | 0.978                     | 0.979                     |

Since Cronbach’s Alpha values calculated more than 0.7 for pre-test, then the research instrument used for pre-test and real data collection can be concluded as valid and reliable.

**Data Collection Method**

Approached via email to the head of departments for their permission to conduct the study. Permission to conduct the study was granted by the head of department with on condition that, the study need to be implemented via online due to unavailability of the employees (as many of the employees are away from their workstation at site at customer premises). Thus, online survey was a chosen data collection procedure due to the communication technology made available like email and surely reminder via WhatsApp to all employees. Online questions were created via Google Doc. Email with the specified link to the online questionnaire were sent to the respective employees, with the help from the administrative executives of both departments. The study is conducted based on simple random sampling, where emails were sent to all and waiting for the reply. 132 employees answered the online questionnaire. However, four responses have to be disqualified from this study because there are not a WhatsApp user. As the study is about WhatsApp application, it is relevant not to include data from those who are not WhatsApp user. A duration of two weeks duration was given to the employee to respond to the questionnaire. This approach is rather easy in implementation; however, the initial number of responses was rather low. With the help from administrative executives via few follow-up emails and reminders via WhatsApp, the number of responses increases. The data then is exported from the Google Doc site into an Excel format type file for data coding before proceed for data manipulation and presentation.

**Data Analysis and Discussion**

Statistical Package for the Social Sciences (SPSS) version 20 is used to measure and interpret the data. The data are entered into SPSS for data manipulation with for calculation of frequency, percentages, median and standard deviation (SD). The reliability of the instrument in this study will be established through Cronbach’s alpha for pre-test data and also for the real data collection. Different statistical procedure is conducted in order to analyse the data. Descriptive statistic is an option to analyse the data via calculation of Standard Deviation (SD), mean and frequency. Descriptive statistic can explain and summarize the finding in an easy way. Pearson Correlation Test is used in this study to analyse and interpret the relationship between the
independent and dependent variables of this study which is the WhatsApp usage and the employee engagement.

**Result and Discussion**

*Demographic characteristic of the respondents*

A total of 128 employees responded to the online Survey Monkey for this study. These employees were chosen because the nature of their work requires them to be away from the office most of the time because they need to be at customer premises to do consultation and integration. Thus, with that in mind, some form of communication application such as WhatsApp is relevant for them to interact and communicate within themselves either for personal or work purposes.

Table 3 below indicated the age distribution among the employees. The number of samples is only 125 and not 128 because three of the respondents decided to keep their age a secret. The youngest is 22 years old while the oldest is 58 years old. Majority age with 42.4% or 53 respondents is between age of 32 and 41.

| Age in years, n= 125 | Frequency | Percent |
|----------------------|-----------|---------|
| 22 to 31             | 25        | 20.0    |
| 32 to 41             | 53        | 42.4    |
| 42 to 50             | 39        | 31.2    |
| 51 to 58             | 8         | 6.4     |

In addition, in Table 4 indicated that 64.8% or 83 respondents are holding a first degree especially in computer and electrical engineering because in line with telecommunication where engineering and computer related knowledge are required in order to meet the day-to-day job requirement.

| Profile, n = 128 | Frequency | Percentage |
|------------------|-----------|------------|
| Education Level  |           |            |
| STPM/Diploma/Advance | 22   | 17.2       |
| Diploma/Pre-U     |           |            |
| Bachelor Degree   | 83        | 64.8       |
| Master Degree     | 21        | 16.4       |
| Others            | 2         | 1.6        |

Table 5 below showed the WhatsApp profile of the employees. More than half (i.e. 56.3%) of the respondents have used WhatsApp for more than two years. WhatsApp has been in the market since 2011. The distribution of durations of WhatsApp usage per hour of respondents as per indicated ranges in the Table 5 are more or less at the same value, with the highest percentage of 22.7% for those who uses WhatsApp between 0.5 hours to 1 hour duration. Almost all WhatsApp users (98.4%) choose to have the Group feature activated as they find the features
are rather beneficial to them. In addition, near to 50% of WhatsApp users stated that they have joined more than five groups (Table 6).

| Subject                        | Frequency | Percentage (%) |
|--------------------------------|-----------|----------------|
| WhatsApp user for:             |           |                |
| Less than a year               | 21        | 16.4           |
| More than a year               | 35        | 27.3           |
| More than two years            | 72        | 56.3           |
| WhatsApp usage (duration in hours) per day |           |                |
| Less than 0.5 hour             | 25        | 19.5           |
| Between 0.5 to 1.0 hour        | 29        | 22.7           |
| Between 1 to 2 hour            | 22        | 17.2           |
| Between 2 to 3 hour            | 26        | 20.3           |
| More than 3 hour               | 26        | 20.3           |

The Group feature of WhatsApp allows users to actively participate in a discussion. Group feature of WhatsApp allows user to share data such as voice, text, images and video in near real time (Church & Oliveira, 2013). Different groups have its own characteristic such as the type of message exchanged, frequency of usage and the emotional feeling towards the group. Usually those groups with more emotional attach and feeling are personal type of group like family.
members or friends. The closeness of group member will make more emotional attach the group will be.

In Table 7 indicated the type of group member the employees choose to be with. Interesting enough about 39 respondents declared that they do not want to be in the WhatsApp Group together with their manager or supervisor. Not enough data to conclude such intention; however, the assumption maybe they are not happy or maybe they are not comfortable to be in the same WhatsApp Group with their manager or supervisor. Since this study was conducted online, received an email from a respondent stated that WhatsApp as communication application is only meant for personal communication and not for work or office related.

### Table 7: WhatsApp Group Member profile

| Subject                        | Frequency | Percentage (%) |
|--------------------------------|-----------|----------------|
| Group of Friend                |           |                |
| Yes                            | 120       | 93.8           |
| No                             | 8         | 6.3            |
| Group of Co-Workers/Colleague  |           |                |
| Yes                            | 108       | 84.4           |
| No                             | 20        | 15.6           |
| Group of Co-Workers/Colleague and Manager/Line Manager/Supervisor | | |
| Yes                            | 89        | 69.5           |
| No                             | 39        | 30.5           |
| Group of Family Members/Relatives |        |                |
| Yes                            | 111       | 86.7           |
| No                             | 17        | 13.3           |

**Level of WhatsApp usage among employees**

To understand the WhatsApp usage, this study looked at the factors from TAM, 1st Modified version of TAM and TAM2. The factors are, Perceived Usefulness (PU), Perceived Ease of Use (PEU), Social Interaction (SI) and Attitude Towards Usage (ATU).

Table 8 indicated the Mean and Standard Deviation for all the sections that is in relation to the acceptance of WhatsApp usage in an organization. The following four sections are the factor or indicator of this study as a reference to the TAM, 1st Modified Version of TAM and TAM2 as to conclude the WhatsApp technology acceptance among employee in the organization.
Table 58: WhatsApp Usage Construction

| Construct, [# item]                        | Mean | SD  |
|-------------------------------------------|------|-----|
| Section 2 – Perceived Usefulness (PU), [9 ] | 3.63 | 0.66|
| Section 3 – Perceived Ease of Use (PEoU), [7] | 4.30 | 0.56|
| Section 4 – Social Interaction (SI), [7]   | 3.83 | 0.68|
| Section 6 – Attitude Towards Usage (ATU), [6] | 4.02 | 0.61|

By comparing the mean, data shows that the most influential factor in acceptance of WhatsApp usage among employees is Perceived Ease of Use with calculated mean of 4.30.

To determine the level of WhatsApp usage, total number of questions from all sections tabulated in Table 9 are scored and the levels are determined as below:

Table 9 : Level of WhatsApp Usage

| Level   | Score    |
|---------|----------|
| Low     | 29 – 67  |
| Medium  | 68 – 106 |
| High    | 107 - 145|

The level of WhatsApp usage among the employee in the organization as tabulated in Table 10 below is high with 70.3% or 90 respondents. Thus, this show that the significant usage of WhatsApp as a form of communication among the employees in this organization to exchange and disseminate information, either for personal or work purposes.

Table 10 : Level of WhatsApp Usage among employee

| Level of WhatsApp usage | Frequency | Percentage (%) |
|-------------------------|-----------|----------------|
| Low usage               | 1         | 0.8            |
| Medium usage            | 37        | 28.9           |
| High usage              | 90        | 70.3           |

Bukaliya, Rupande and Region (2013) stated that in their research easy usage and easy access of WhatsApp via smartphones leads to make WhatsApp as a popular communication application. In this study, the same result was shown as well.

In this study, Social Interaction (SI) was scored third from the four elements of WhatsApp usage with the mean of 3.83. This proved that SI contributed to the acceptance of the WhatsApp application as indicated by Venkatesh and Davis (2000) in their research. In addition, Church and Olivera (2013) stated in their research, social interaction or influence is the main reason in adopting WhatsApp. Bukaliya, Rupande and Region (2013) claimed the same point as well, on their study indicated that most WhatsApp user hook into it after being influenced by friends in addition to smartphone is in their hand anytime and anywhere.

A study conducted by Parry & Solidoro (2013) concluded that, social media has to be cost and time efficient in promoting communication and collaboration. In this study showed that the
WhatsApp usage is scored at high level with 70.3% or 90 respondents are using WhatsApp highly either for work and personal purposes. In addition, examining the pattern of usage for WhatsApp among employees, the use of WhatsApp is used highly as a form of communication. Moreover, Perceived Usefulness of WhatsApp scored at high level with 51.6% or half of respondents. They agree that WhatsApp is cheap and WhatsApp contributed in saving time while performing their daily task or routines.

A study conducted in usage of WhatsApp as a communication tool revealed that WhatsApp method of communication is an effective method for clinical and academic purpose. The method is cheap and quick and easy to operate (Wani, Rabah, Alfadil, Dewanjee & Najmi, 2013). The same result is obtained via the highest level of PU and PEoU among the employee in acceptance of WhatsApp as a form of communication method in their departments.

Pattern of WhatsApp usage among employees

The WhatsApp pattern as asked in the research instrument under Section 5 is to determine and examine the pattern and purpose of WhatsApp for chatting, planning, sharing (information), group (discussion), business/work and advertisement. The data on WhatsApp pattern of the employee are being tabled out in the Table 1 below.

| Statement                  | Mean | SD  |
|----------------------------|------|-----|
| WhatsApp is used for CHATTING | 4.08 | 1.02|
| WhatsApp is used for GROUP  | 4.05 | 0.89|
| WhatsApp is used for SHARING| 4.00 | 0.96|
| WhatsApp is used for BUSINESS/WORK | 3.31 | 1.27|
| WhatsApp is used for PLANNING | 3.02 | 1.13|
| WhatsApp is used for ADVERTISEMENT | 2.30 | 1.05|

Six patterns or purposes of WhatsApp are identified in this study such as chatting, planning, sharing, group, business/work and advertisement. From the data collected from the respondent, Chatting is identified as the most used patterns or purpose of WhatsApp among employee with mean scored at 4.08. The least used pattern or purpose of WhatsApp among employee with mean score of 2.30 is advertisement. Skierkowski and Wood (2012) in their study revealed that text messaging has become the most depend on forms of communication to communicate with the peers.

Table 12 detailed out the pattern and purpose of WhatsApp usage among the employee in the organization. Chatting or texting is the most used patterns of WhatsApp and to use for advertisement is the least favourite pattern of usage. The group fell in second most used WhatsApp application. As indicated in Table 5 above, 126 out of 128 used Group featured. Group features allows the group member to actively participate in the discussion which allows sharing and communication at work and also planning. Interesting enough there were 15 respondents indicated that they NEVER used WhatsApp at work. Not much data can be retrieved why such responses, however, what can be drawn here is they solely agree that WhatsApp is only meant for personal usage and not for work-related purposes.
| Subject     | Frequency | Percentage (%) |
|-------------|-----------|----------------|
| CHATTING    |           |                |
| Never       | 5         | 3.9            |
| Almost Never| 1         | 0.9            |
| Occasionally/Sometime | 29 | 22.7 |
| Almost Everytime | 37 | 28.9 |
| Everytime   | 56        | 43.8           |
| PLANNING    |           |                |
| Never       | 16        | 12.5           |
| Almost Never| 15        | 11.7           |
| Occasionally/Sometime | 64 | 50.0 |
| Almost Everytime | 16 | 12.5 |
| Everytime   | 17        | 13.3           |
| SHARING     |           |                |
| Never       | 3         | 2.3            |
| Almost Never| 2         | 1.6            |
| Occasionally/Sometime | 34 | 26.6 |
| Almost Everytime | 41 | 32.0 |
| Everytime   | 48        | 37.5           |
| GROUP       |           |                |
| Never       | 0         | 0.0            |
| Almost Never| 5         | 3.9            |
| Occasionally/Sometime | 33 | 25.8 |
| Almost Everytime | 41 | 32.0 |
| Everytime   | 49        | 38.3           |
| BUSINESS/WORK |      |                |
| Never       | 15        | 11.7           |
| Almost Never| 12        | 9.4            |
| Occasionally/Sometime | 50 | 39.1 |
| Almost Everytime | 20 | 15.6 |
| Everytime   | 31        | 24.2           |
Church and Oliveira (2013) in their study concluded that, the nature or intent of WhatsApp is perceived as more conversational intention, which is why chatting is the most used patterns of usage. The same result also obtained in this study.

**Level of employee engagement in the organization**

Table 13 indicated the Mean and Standard Deviation of all statements of Section 7 in the research instruments. There are twelve statements related to Employee engagement. These statements try to study the primary need in an organization, to determine the employee contribution is being recognized and noticed, to validate employees feel of belonging in the workgroup and last but not least to determine employee seek of improvement and innovation. These 12 statements or questions are from the Q12 developed by Gallup International, which focused highly on employee engagement studies worldwide. The highest and lowest mean is calculated at 2.87 and 2.50 respectively.

Table 6 : Section 7 – Employee engagement

| Statement                                                        | Mean | SD  |
|-----------------------------------------------------------------|------|-----|
| With Whatapps, I have a best friend at work                     | 2.87 | 1.18|
| With Whatapps, I know what is expected of me at work.           | 2.77 | 1.10|
| With Whatapps, My opinions seem to count                        | 2.71 | 1.12|
| With Whatapps, I have opportunity to do what I do best every day (at work) | 2.66 | 1.08|
| With Whatapps, My supervisor/line manager/team leader or someone at work seems to care about me as a person | 2.66 | 1.14|
| With Whatapps, I have opportunities at work to learn and grow   | 2.66 | 1.19|
| With Whatapps, Someone at work has talked to me about my progress | 2.62 | 1.14|
| With Whatapps, There is someone at work who encourages my development | 2.60 | 1.11|
With Whatapps, I have the materials and equipment I need to do my work right 2.59 1.08
With Whatapps, I have received recognition or praise for doing good works 2.59 1.14
With Whatapps, My associates or fellow employee are committed to doing quality work 2.57 1.17
With Whatapps, I know the mission or purpose of my company makes me feel my job is important 2.50 1.16

To determine the level of employee engagement, each statement is scored between 1 and 5. Total score for each respondent will be divided into levels as tabulated in Table 14. Lowest score and highest score for employee engagement are 12 and 60 respectively.

Table 14: Level of Employee Engagement

| Level    | Score  |
|----------|--------|
| Low      | 12 – 27|
| Medium   | 28 – 42|
| High     | 43 - 60|

Table 15 below summarized the level of employee engagement, it is indicated that 42.2% or 54 respondents are in the low level of engagement; however, only 23% or 29 respondents reported at high level engagement. As reported by Gallup, the number of highly engaged employees in an organization in 142 countries is low, thus the data showed the same level of engagement. There are many factors that lead to low engagement in an organization. As an example of such factor could be retrenchment exercise, re-organization and high turnover. During this study being conducted, was been told by the administrative executive, there was a high turnover in the organization, many integrators and also manager opted to leave the company. This can and may lead to some feeling of not happy which can affect the level of engagement of employees.

Table 15: Employee engagement

| Employee engagement | Frequency | Percentage (%) |
|---------------------|-----------|----------------|
| Low engagement      | 54        | 42.2           |
| Medium engagement   | 45        | 35.1           |
| High engagement     | 29        | 22.7           |

Gallup International conducted a research in 142 countries on employee engagement and the result showed that, engaged employee is recorded with the smallest percentage, while the highest percentage is recorded for low engage employee. In this study the same outline is
identified as well. The number of high engagement employee is scored at 22.7%, and low engagement employee is scored at 42.2%

Relationship between WhatsApp usage and employee engagement
A Pearson correlation coefficient was calculated to evaluate the connection between the WhatsApp Usage variable and Employee Engagement variable. There was a positive correlation between the two variables, \( r = 0.671, \ n = 128, \ p = 0.000 \), as referred in Table 16. Overall, there are medium and positive correlation between WhatsApp usage and Employee Engagement.

| Variable                  | WhatsApp Usage |
|--------------------------|----------------|
|                          | \( r \)  | Sig Value |
| Employee Engagement      | 0.671   | 0.000      |

An increase in WhatsApp usage were correlated and may slightly increase in employee engagement. It is not too ambitious to mention that, if some effort to increase the usage of usage at work, such as a head of department or unit to emphasize the usage of WhatsApp, it may lead to an increase in the level of engagement among employees or at least among the staff within the department or unit.

Recommendation and Implication
The study is conducted with a telecommunication company based in Cyberjaya, thus it cannot be used to portray WhatsApp usage and employee engagement of an industry. Many observed studies have found that TAM consistently explains a significant proportion of the variance (typically about 40%) in usage intentions and behaviour (Venkatesh, Davis, & College, 2000). There are many other contributing factors from the technology or in this paper the WhatsApp application itself that has not been studied, for example choice of smartphones and choice of internet access (such as fixed access like WiFi or Mobile Broadband via specific internet provider) are not part of this study. In addition, the comparison between other forms of MIM application is not part of this study. Acceptance toward WhatsApp might be different if there is comparative study done between other MIM applications. To name some of the MIM such as WhatsApp, Line, WeChat, iMessage, Viber, Skype, Facebook Messenger and KaKoa Talk and Telegram. Different choice of MIM with its different interface may lead to different acceptance towards communication application.

This study combined the WhatsApp usage for both personal and for work. There is no specific section that defined what is required for work and what is for personal. The term for both personal and work are very general. Therefore, the measurement for WhatsApp usage either for personal or work related cannot be scored and measured accurately. Specific study based on usage of WhatsApp at work, such as changing information with colleagues and manager may lead to different acceptance of WhatsApp as a form of communication application in an organization.
There is also no specific definition to identify the WhatsApp pattern. What is defined as chatting is not clear, if I chat with my manager can it fall under chatting or under work criteria. An employee sending a text or sharing of information under Group, will that be Group functionality or Chatting or Sharing. Such definition is vague and need to be firm up. Pattern of WhatsApp is different if its usage is for personal and for work.

**Suggestion for Further Research**

For improvement and for solid data representation, the following can be suggested to improve the study related to WhatsApp usage and employee engagement:

1. The next study needs to have a clear definition and a well-defined on how to measure the pattern of WhatsApp. For example, what is chatting comprises of, is there a chatting of personal compared to chatting for work purpose.

2. A separate study on the use of WhatsApp for personal and work may lead to more in-depth outcome. There are many factors and contributor towards ways of communication for personally or professionally (i.e. for work purposes). If study conducted purely on WhatsApp usage at work, maybe type of message can be part of the factor in accepting WhatsApp at the workplace. The way a message is constructed, the choice of wording, the intention of the message will be totally different between messages to friends, messages to co-workers and messages to supervisors or managers.

3. Study solely on the relationship between manager and employee in the usage of WhatsApp application. This study might lead to better usage of WhatsApp in enhancing the relationship between manager and employees; thus, can enhance the employee engagement in an organization.

4. To suggest study or examine WhatsApp purely as an internal communication tool, such as disseminating office memo and office circular to the employee. Smartphone with data connection allows maybe all employees to get the information in real time, thus to get updates or response from employees would be in real time too, compare to presently memo or circular that might not reach to all effectively. This may lead to an effective internal communication in an organization.

5. Images or emoticon carries more than just testing, they carry feeling and emotion. Suggested to conduct a study to examine the effect of emoticon and images in WhatsApp usage. Images can say more than just a word, images or photos lead to sharing of emotions and feeling of users. Sharing of images or photos may leads to closeness and connected among the group and can maintain or increase group cohesiveness.

6. Last but not least to focus on the initiative on employee engagement. There is no specific employee engagement model can be for an organization. Suggestion to build such model in an organization prior to the usage WhatsApp application as the communication application or tool for the organization per say. With this, the effect of WhatsApp usage and employee engagement can be fully extended. Since employee engagement is a vast concept, require a thorough and specific approach, in addition to a continuous program to enhance employee engagement not just from the top management, but from all employees regardless of job position.
Conclusion
WhatsApp application without any doubts has changed the way people communicate nowadays. This is proven by many studies before. WhatsApp users surely is increasing even there are many other MIM in the market to compete in term of usage and functionalities. Above all, WhatsApp is an application that allows users to communicate in real time and to be actively participating in any conversation made via WhatsApp regardless it is one-to-one or one-to-many (i.e group) conversation. Data provided from the study showed such behaviour of WhatsApp usage among the employees. WhatsApp usage among the employee has been identified as high usage. Perceived Usefulness, Perceived Ease of Use, Social Interaction and Attitude Toward Usage the indicator based form TAM, 1st Modified TAM and TAM2 play a significant role in influencing the employees in acceptance of WhatsApp as a communication technology. Pattern of use for chatting is identified highest form, followed by four groups, for sharing, for business or work, for planning and last used pattern identified is for advertisement. This again shows the pattern of WhatsApp use among employee either it is for personal or work purposes. Employee engagement is a very huge concept and not easily to be grasped. There are many studies conducted dealing with how to make employees to be engaged in an organization. There are many factors in contributing to employee engagement which among all are via well-defined and well-design internal communication. In addition, effective communication can also enhance such feeling of engagement in an organization. This study concluded with data made available that level of engaged employee is still low with 42.2%. Even so, the relationship between WhatsApp usage and employee engagement via Person Correlation Test indicated that there is a positive and a medium strength relation between both variables. If there is an increase in usage of WhatsApp among employee such as more interaction between manager and staff in an organization might lead to a small increase in Whatsapp usage. WhatsApp can create the form of group cohesiveness if not for the whole organization at least for the department level. Communication and sharing information within the group member not just make the member become close to each other it also can create build trust and confidence among the group member. It is not too ambitious to say that if WhatsApp to be adopted as part of internal communication tolls in an organization, there can be a positive increase but medium in level of self-belonging, self-connected and social support in the organization. After all, being engaged in an organization is part of having such feeling in and out the office. Employees comes in many groups, roles, knowledge and cultures; and they have expectation and need. Organization need to tackle such issue, but to reach the optimum level of employee engagement best suited an organization is still ongoing.

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