

THE USE OF MOBILE INSTANT MESSAGING FOR  
ORGANIZATIONAL COMMUNICATION IN THE  
MALAYSIAN ARMY

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**THE USE OF MOBILE INSTANT MESSAGING FOR  
ORGANIZATIONAL COMMUNICATION IN THE  
MALAYSIAN ARMY**

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## ABSTRACT

The adoption of a good communication strategy is crucial to ensure the efficient flow of information and to stimulate active participation in the organization. Policymaker needs to develop communication strategies by considering the fit between the richness of the media and the working environment. Mobile instant messaging (MIM) is the most favoured medium of communication in many organizations, including the military. It is immediate, low-cost, permits real-time communication, and provides group discussion capabilities. However, the use of MIM has created issues in the military work in the aspects of command function, irregularities in the flow of information, work distraction, and compatibility with military doctrine and values.

The purpose of this study is to explore the use of MIM in the Malaysian Army as a medium for organizational communication and to provide guidelines for MIM application in the service. The objectives of this study are to identify the current practice of MIM usage in the Malaysian Army, assess the suitability of usage in the Army, and recommend proper guidelines for MIM use in the Army.

To achieve these objectives, the Media Richness Theory was employed as a theoretical lens in guiding the data collection and developing an understanding of the phenomenon. The case study research method was employed. Four activities in the Malaysian Army (management, training, operation, and logistics) were selected as a unit of analysis and semi-structured interviews were performed to acquire the relevant data. Twelve respondents with vast working experiences in the Army were purposively selected for the interviews.

By using thematic analysis, several interesting findings were unearthed. First, the richness of MIM in providing rapid feedback was most effective in management and logistics, with some limitations in training and operations. On the other hand, the richness

of the technology in handling multiple cues was decreased due to the absence of non-verbal cues. The capability of MIM to utilize natural languages makes it rich in all activities. Finally, MIM as a medium is rich since it can establish personal focus during working interaction with some limitations. As a result, the Army needs to reexamine its application of MIM at the workplace and provides the guidelines for policymakers, commanders, and managers.

Keywords: Organizational communication, mobile instant messaging, qualitative research, media richness, military

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## ABSTRAK

Adalah penting bagi sesebuah organisasi mengguna pakai strategi komunikasi yang berkesan bagi membolehkan penyaluran maklumat yang lancar dan menggalakkan penglibatan aktif ahli-ahli di dalam organisasi. Pembuat dasar perlu membangunkan strategi komunikasi dengan mengambil kira kesesuaian media yang digunakan dengan suasana pekerjaan. *Mobile instant messaging* (MIM) merupakan media komunikasi yang paling popular di dalam organisasi termasuk di dalam organisasi ketenteraan disebabkan ciri-ciri penghantaran mesej dengan pantas, penjimatan kos, kebolehan komunikasi secara maya dan kebolehan perbincangan secara berkumpulan.

Tujuan kajian ini adalah untuk menghuraikan penggunaan MIM di dalam Tentera Darat sebagai medium komunikasi seterusnya memberi garis panduan penggunaannya di dalam perkhidmatan. Tiga objektif kajian adalah mengenal pasti amalan semasa penggunaan MIM di dalam organisasi Tentera Darat, menilai kesesuaian penggunaannya dan mencadangkan amalan terbaik penggunaan MIM di dalam organisasi.

Kajian ini menggunakan teori *Media Richness* sebagai panduan teoritikal bagi proses pengumpulan data dan penghuraian fenomena yang berlaku. Kajian ini menggunakan pendekatan kualitatif melalui kaedah kajian kes. Empat aktiviti utama di dalam Tentera Darat (pengurusan, latihan, operasi dan logistik) digunakan sebagai unit analisis manakala temu bual separa-struktur dilaksanakan untuk pengumpulan data. Dua belas orang responden dipilih untuk ditemu bual. Pemilihan mereka adalah berdasarkan pengalaman luas bertugas di dalam Tentera Darat.

Melalui analisis tematik, beberapa penemuan penting telah diperolehi. Pertama, kekayaan teknologi MIM di dalam menyediakan maklum balas secara pantas menjadikannya media yang sangat berkesan di dalam pengurusan dan logistik, tetapi mempunyai limitasi di dalam latihan dan operasi. Kedua, aplikasi MIM tidak mampu

mengendalikan komunikasi bukan verbal. Ini menjadikannya kurang kaya walaupun berupaya mengendalikan komunikasi secara verbal. MIM juga mampu menggunakan bahasa semula jadi di dalam semua aktiviti dan memberi fokus kepada pengguna Tentera Darat dan kaya dari aspek tersebut. Berkaitan dengan penemuan ini, Tentera Darat perlu menilai semula penggunaan MIM untuk komunikasi dalam organisasi. Panduan untuk pembuat dasar, pemerintah dan pengurus disediakan untuk tujuan ini.

Perkataan penting: Komunikasi organisasi, *mobile instant messaging*, kajian kualitatif, *media richness*, ketenteraan

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## LIST OF ABBREVIATIONS

1GFMAS	:	1 Government Financial and Management System
DEMS	:	Defence Electronic Messaging System
DKICT	:	<i>Dasar Keselamatan ICT</i>
MAF	:	Malaysian Armed Forces
MD	:	Military Doctrine
MIM	:	mobile instant messaging
MRT	:	Media Richness Theory
NATO	:	North Atlantic Treaty Organization
PAAT	:	<i>Perintah Am Angkatan Tentera</i>
pdf	:	Portable Document Format
SMS	:	Short Message Service

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Appendix A: Interview Protocol

Appendix B: Research Ethics Clearance

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## GLOSSARY

Term	Meaning
Battalion	A military unit typically consisting of 300 to 800 personnel and commanded by an officer with the rank of Lieutenant Colonel. It comprises of several companies. The use of the term 'battalion' varies by country and branch of service. Some services use 'regiment'.
DEMS (Defence Electronic Messaging System)	An electronic messaging system developed for the internal use of the Malaysian Armed Forces. The system connects all MAF establishments through a secure local Internet networking. Its function is similar to email but is unavailable on mobile.
Directorate	The headquarters of the respective corps and regiments in the Army at the Army headquarters. It is headed by the Director of Corps/Regiments. It handles the human resources aspect of officers and soldiers.
Formation	The higher level of command that coordinates the staff with various functions and comprises of several units under its command. It can be a brigade, a division, or a higher level.
Military correspondence	The written form of communication in the military to convey information in the organization such as formal reports, letters, memorandum, minutes of meetings, and written briefs.
Military doctrine	An expression of how a military force contributes to campaigns, major operations, battles, and engagement. It is a guide to action rather than hard and fast rules. Doctrine provides a common frame of reference across the military.
Military/Regimental value	The core values that are ingrained in each soldier's mind to guide their actions such as loyalty, respect, honour, integrity, and courage.
Staff duties	The responsibility of staff and military personnel in performing their actions including compliance to the service writing convention in handling documents and reports.
Staff officer	A military officer responsible for staff work at formation headquarters. A staff officer's responsibilities vary according to the functions available in the services.
Unit	The smallest element of a military organization established for a specific purpose. The number of soldiers in a unit varies depending on its roles and tasks.



## **CHAPTER 1: INTRODUCTION**

Chapter 1 contains information that introducing the background of a study, describing and identifying the problems that arise in the use of mobile instant messaging (MIM) in the military setting that leads to the formulation of research questions, research objectives, and explaining the significance of a study.

### **1.1 Background of study**

#### **1.1.1 Overview**

Communication in an organization is a dynamic process. The department and organization members are connected through the information transmitted within the organization (Locker & Keinzler, 2008). Therefore, communication is not static since it is an evolving process in the organization. It changes with the development and changes in technology, organizational directions, and people's interests. In one definition for 'communication', Simon (1997) defines 'communication' in an organization setting as "any process whereby decisional premises are transmitted from one member of an organization to another" (p. 208).

A good communication strategy is crucial to an organization to guarantee a quick and efficient flow of information. Quick and efficient flow of information is an invaluable source for an organization, especially one that is geographically dispersed in terms of the location of departments and personnel (Robbins & Barnwell, 1998). In government sectors, for communication to be successful, the way messages are communicated internally is also important besides communication and feedbacks between the organization and its stakeholders (Hofmann, Beverungen, Rackers, & Becker, 2013).

In a communication process, information may be interpreted in different ways depending on the medium used and is related to the satisfaction in communication (Byrne & LeMay, 2006). Satisfaction in organizational communication felt by employees influences job performances, productivity, organizational commitment, and job satisfaction. To achieve efficiency in communication, many current organizations rely heavily on technology that is available to the public, one of them is instant messaging, and exploiting it for work-related activities (Cho, Lee, & Kim, 2019). This modern type of communication is crucial in achieving organizational objectives.

In conjunction with that, different communication media used by employees thus offer the different richness of information that carries in the communication process (Daft & Lengel, 1986). Daft & Lengel (1986) ranked communication medium based on the capability of a media to carry rich information. They also developed the media richness concept by introducing dimensions in identifying the richness. Selecting the best media is one of the biggest challenges faced by managers in picking the best communication approach for a work environment and organizational structure. Different approaches lead to different interpretations of communicated messages, especially in the absence of face-to-face interaction.

Mobile instant messaging (MIM) is a mobile application that runs on a mobile Internet platform and can be downloaded for free (Ke & Li, 2009; Sheer & Rice, 2017). Examples of widely used MIM applications are WhatsApp, Telegram, and WeChat. MIM is an alternative for cost-effective communication and permits fast sharing of text or documents (Padmavathy, Lee, Pattusamy, Dey, & Swapana, 2018). With the availability of various communication channels and new communication methods such as MIM, managers need to formulate the best communication strategy to achieve the objectives of the organization. As organizations witness an increase in reliance on Internet-based

communication to conduct their businesses especially in the use of mobile Internet, a sensible strategy to apply is to guide the use of the communication channel by managers and employees.

Besides strategies, the development of a governance policy is significant in guaranteeing the best communication practice for an organization. The appropriate use of communication technology could be in the form of communication policies in the organization. The communication policies of an organization are meant to guide managers and employers in the use of communication channels at their workplace through the consideration of some restrictions and encouragement by the policymakers. Nevertheless, many organizations are still lacking in formulating the regulatory framework and guidelines in the application of mobile Internet communication (Linke & Zerfass, 2011).

A survey by the Malaysian Communications and Multimedia Commission (MCMC) on the application of Internet technologies by individuals and organizations reveals a trend in MIM usage in the country (MCMC, 2018). According to the survey, smartphones are the most popular device among Malaysians for their daily communication and WhatsApp is one of the most popular communication and social networking platforms. The survey also discovers that most of the Internet content is shared through group messaging in MIM applications.

MCMC's survey revealed that MIM has been extensively used by the Malaysian population. The survey indicated that the Internet was used by 61.9% of users in this country to assist and complete their work-related tasks. WhatsApp has become the preferred mobile communication application with adoption by 98.1% of Internet users. MIM usage in this country is increasing in tandem with an increase in smartphone

ownership by the Malaysian population. Meanwhile, MIM usage among military personnel also is significant. The technology is used widely for social and work purposes.

### **1.1.2 Internet-based communication in the military**

Internet-based communication has become increasingly important as an internal communication channel in many organizations including the military. It can be used as a platform for internal interactions, employee engagement, sharing of knowledge, and information sourcing either in peacetime or during the conflict situation. The Malaysian Army uses Internet-based communication to deliver news and updates to Army personnel and civilians working with the military by taking advantage of the popularity of social media. Examples of Internet-based communication channels administered by the organization are its official social media such as the Malaysian Army's Twitter and Facebook accounts and the Malaysian Army's official website.

The rapid development in mobile Internet technology has transformed the way personnel communicates in military organizations. Military personnel prefers to use MIM to communicate at the workplace compared to other communication channels such as face-to-face interaction or telephone conversation. Instant messaging has become an important communication option for modern warfighters, particularly for sharing information and chatting with multiple users simultaneously. Communication channels such as WhatsApp and Telegram are becoming more popular and instant messaging becomes the favorite medium for people to communicate (Walker, 2017). In the modern era, this type of communication is accepted as an important communication medium in an organization. Meanwhile, in the military, communication is facilitated by the development of mobile phone technology with Internet capability.

Military organizations in other countries also use the mobile Internet for their organizational communication. In the United States, online collaboration tools have been developed that offer military personnel modern facilities in communication. They can communicate with any contact in the world through secure instant messaging with chat capabilities, including an ability to share documents, PowerPoint slides, photographs, and spreadsheets in their routine work. Instant messaging in the U.S. Army also integrates with the U.S. Air Force to enhance communication during training and combat operations. Instant messaging is used because of its immediacy, low bandwidth consumption, and because it permits real-time communication compared to other types of communication. At the same time, the ability to create temporary group discussions for specific operations justify the use of instant messaging (Kenyon, 2004).

There is also encouraging development in MIM usage in the Singapore military. Beginning in 2011, their soldiers using portable devices such as iPads to transmit photos and videos captured during military activities. Uploaded materials in the soldiers' mobile devices can be used later for post-mission assessment on an online platform (Santo, 2011). Officers and soldiers in Singapore also use group chat and instant messaging to communicate with their commanders by using mobile devices or tablets distributed by the Singapore Defense Ministry.

The use of instant messaging was not always benefiting the military. In mid-July 2019, the U.S Army issued a directive to its servicemen requiring them to quit WhatsApp and social media groups, including the veteran group, for security reasons. The directive was published to prevent verification of soldiers' identities through MIM channels. The military will also periodically check officers-only groups to prevent the breach of security amid security threats. The move was initiated after the organization was alerted to attempts by foreign intelligence to gather information from social media platforms. The

new policy also restrains family members from posting details and information about serving officers on social media platforms (Business Today, 2019). Security concerns remain even though the use of modern information technology is accepted in the service.

### **1.1.3 Communication in the Malaysian Army**

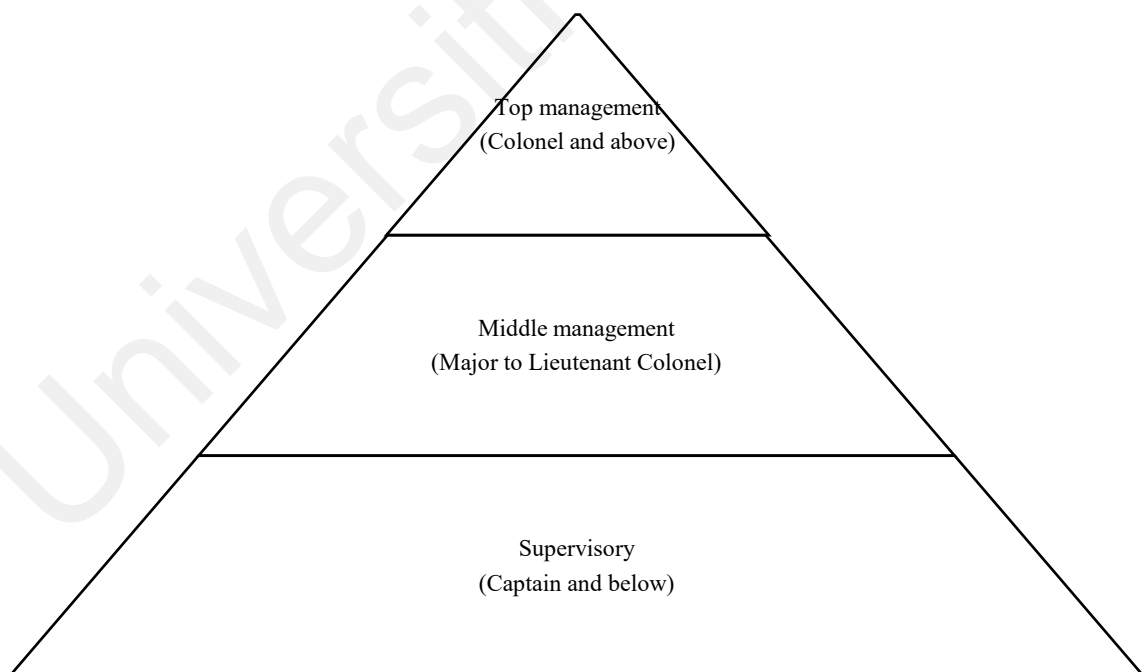
Established in 1933, the Malaysian Army currently has approximately 110,000 active personnel and 310,000 reserve personnel enlisted in the service. The Malaysian Army is currently scattered into five Divisions which are placed under the Field Army Headquarters. The disposition of the Malaysian Army for operational matters are as follows:

- a. The First Division – responsible for Sarawak state in East Malaysia.
- b. The Second Division – responsible for the northern region (part of Perak, Penang, Kedah, Perlis, Kelantan, and Terengganu).
- c. The Third Division – responsible for Negeri Sembilan, Melaka, Johore, and part of Pahang.
- d. The Fourth Division – responsible for the vicinity of Klang Valley including Selangor, Negeri Sembilan, part of Pahang, and southern of Perak state.
- e. The Fifth Division – responsible for Sabah state in East Malaysia.

Besides the Field Army formation, Army personnel are grouped under various formations with different functions and expertise, namely Army Training Command, Army Logistic Command, Army Special Group Force, Army Paratrooper Brigade, and Army Aviation. All these formations are commanded by the Army Headquarters located in Kuala Lumpur. With a wide distribution of different commands and formations, internal communication between officers and personnel is crucial to meet the Army's

mission to be “modern, credible, balanced, capable and ready to carry out its mission as part of the Malaysian Armed Forces” (Malaysian Army, 2018).

The military is administered along with a command structure. Figure 1 shows the general concept of command by ranks in the Malaysian Army. The figure shows that the rank of Colonel and above filled the top hierarchy and is responsible for strategic decision-making. The middle level of command is filled with officers from the rank of Major and Lieutenant Colonel who are responsible for the operational level of decision-making. The lowest hierarchy is the supervisory level consisting of the rank of Captain and below. This level of command is the general description by the doctrine, but there could be minor adjustments or differences in detail tasking or a special environment of work. The level of command as described in the Army Doctrine MD 0.0 TD is as follows:



**Figure 1: Army level of command**

According to the Army Doctrine MD 0.0 TD, the Army is categorized into four main activities, namely management, logistics, training, and operation. As an individual, Army personnel is subjected to one of these activities at their workplace. Below is the description for each activity in the Army:

- a. Management – administration of personnel, organizing unit events, coordinating and organizing administrative tasks, and managing support services related to personnel such as accommodation, transportation, health, and welfare.
- b. Training – conduct individual and group military competency training including outdoor combat training, classroom activities, and simulation which can be conducted either at the unit or training establishment.
- c. Operation – monitoring strategic places, safeguarding protected areas, carrying out deterrence measures towards national threats, and fight the nation’s enemies. The activities are conducted either at the battalion, headquarters, or in the operational areas.
- d. Logistics –management of assets and military capital, procurement, construction, and financial management. The activities take place at units, headquarters, and logistics establishments.

With the Malaysian Army’s wide distribution of different commands and formations, internal communication between officers and personnel is crucial to meet the Army’s objectives. The military personnel communicates through various means of communication such as their mobile phone, telephone, radio communication, video conferencing, correspondence, and face-to-face communication. The military personnel’s communication at the workplace is determined by their positions at the level of command and which activities they belong to. Different activities emphasize different approaches to use the communication channel.



In formal settings, Army personnel communicates through their chain of command in the organization. The commander regularly communicates through formal media such as directives and orders. Orders are commonly delivered verbally through written communication such as formal written directives, or through telephone conversations, radio network, or face-to-face interactions. The same mode of communication applies when subordinates communicate with their superiors.

In informal or casual settings within the same group, personnel communicates using social platforms such as chat groups or informal face-to-face discussions. These social platforms also used to share or disseminate information and ideas to organization members. The command structure in the military requires subordinates to always communicate with their superiors through formal means such as face-to-face meetings, formal correspondences, or formal reports.

Communication in the Army organization also varies according to the differences in the working activities. There has yet to be any study conducted to observe differences in the use of communication technology in these four main activities in the Malaysian Army environment. A conference conducted to discuss the use of Internet technology in the military revealed that each activity demands different approaches to using communication media based on interoperability, working environment, and security (Suri, et al., 2016).

## **1.2 Research problem**

There is an increase in the use of MIM in the Army work environment. Military personnel extensively use MIM at the workplace. The use of MIM in the Army has changed the nature of communication among commanders, officers, and soldiers. Anecdotal evidence suggests that MIM has replaced a few of the communication modes in the Army organization. The main issue of MIM usage in the Army is on the suitability

with the military working environment. Incompatibility of MIM usage might jeopardize the chain of command and give an impact on work socialization.

Commanders can now instantly distribute important documents to troops through smartphones and Internet media (Edwards, 2012). There are also innumerable non-tactical methods of communication through text messages with seniors (Ford, 2015). These two examples of anecdotal evidence show that MIM demolishes the barrier in the military hierarchy and chain of command when the information can be easily flown in various directions.

In the Malaysian Army, the Malaysian Chief of Army issued a directive to all units and departments as a response to a few incidents related to the abuse of Internet access among army personnel. The concern was shared with the soldiers through the directive distributed to all formation and headquarters. *Larangan Berkongsi Maklumat Tentang Aktiviti Ketenteraan Melalui Media Sosial* was published by Army Headquarters on 16 July 2019 and zeroed in on the breach of information security through social media and instant messaging such as WhatsApp.

There is also concern about the work socialization impact through the use of MIM in the organization which also affected the Army organizational environment. Despite the fast transmission of messages (Ou, Sia, & Hui, 2013), MIM raises the issue of work efficiency (Mansi & Levy, 2013), smartphone addiction, and non-work-related activities (Duke & Montag, 2017). MIM also distracts employee's focus at the workplace (Montag & Walla, 2016). However, this phenomenon is understudied in the military environment.

There is a lack of guidelines and procedures to dictate how MIM should be applied in internal communication. Even though the government and organization have published instructions regarding the use of Internet communication (PAAT Bil 1/13, PAAT Bil

1/17, PAAT Bil 2/17, DKICT 2017), specific guidelines for MIM usage is absent. This lack of specific guidelines may lead to ramifications such as conflict with military doctrine and values and information security risk. Even though the military is embracing the communication revolution, technological advancement should be combined with development in doctrine and military values to ensure its success and effectiveness (Siegl, 2008). The effects of new media on the performance of tasks is an important research topic in many organizations (Suh, 1999).

### **1.3 Research questions**

Three research questions have been developed to obtain deeper information for this study. The research questions were developed based on a requirement to understand current practices, the suitability of MIM usage, and subsequently, best MIM practices in the Army organization. The research questions are as follows:

*Research Question 1.* How and when is a mobile instant messaging communication used in the Malaysian Army for organizational communication?

*Research Question 2.* How does the mobile instant messaging application fit in organizational communication in the Malaysian Army?

*Research Question 3.* How mobile instant messaging can be appropriately used for organizational communication in the Malaysian Army?

### **1.4 Research objectives**

To answer the research questions above, the following objectives have been set:

*Research Objective 1.* To identify the current practices of using mobile instant messaging communication for organizational communication in the Malaysian Army.

*Research Objective 2.* To assess the suitability of using mobile instant messaging communication in the Malaysian Army.

*Research Objective 3.* To recommend the most appropriate use of mobile instant messaging communication in the Malaysian Army so that it will contribute to effective organizational communication.

## **1.5 Significance of research**

Organizational communication needs a comprehensive strategy based on accurate findings from an in-depth study. The comprehensive strategy on the usage of Internet-based communication especially the MIM channel should consider the strategic direction of the organization and include an analysis on the change in the environment, an internal analysis of current communication practices, which communication tool to be given priority depends on working environment, guidelines and accountability of the usage. There are needs for a comprehensive strategy based on proper study and guidelines to avoid future conflicts. This strategy needs to be well understood throughout the organization. Commander and officers will have the basis to apply the best strategy in using MIM based on the given tasks at the workplace.

The findings of this research are important in the formulation of a set of guidelines in managing MIM use toward effective communication in the Army. With proper policy and guidelines, MIM can be implemented systematically and with a clear purpose in the organization to benefit commanders and military personnel. Best MIM practices will stimulate productivity in the four main activities. With proper guidelines, awareness and enforcement can be fairly implemented across the organization.

The study also supports one of the military doctrines in the Malaysian Army. In Army doctrine MD 0.0 Command, Leadership, and Management, it is required of commanders to communicate orders to his subordinates and receive results of the actions. The communication should be conducted both ways. Commanders also need to build and maintain close relationships with their subordinates for the success of the organization. To be functioning effectively, relationships in the organization should be in a conducive environment. Commanders and subordinates must be comfortable using the best communication method for their mutual benefits. The military doctrine is a collection of military's belief system regarding how the military understands, prepares for, and conducts military activities (Jackson, 2017) and should be used as a guideline on how the military should communicate to achieve desired objectives.

At the same time, communication in the military should also be aligned with the Army Regimental Command System as a main 'code of conduct' of military personnel. As mentioned by the Malaysian Army Chief in 2018;

*“Regimental Command System, where all Army personnel need to follow the system to maintain their high discipline quality, since obedience to the rules and tradition in the Army are key indicators for success, in all related tasks in the organization, besides the empowerment of character and appearance, since each personnel mirroring the image of Army that is respectful and highly-disciplined.”*

## **1.6 Purpose of the study**

The purpose of this study is to explore the use of MIM in the Malaysian Army as a medium for organizational communication and provide the recommendation on MIM application in the Malaysian Army context. The recommendation will cover the suitability of usage in different activities, usage guidelines, and formulation of

communication strategies. The adoption of this comprehensive strategy in the Army's internal communication will become crucial for its continued success.

## **1.7 Organization of chapters**

The chapters in this dissertation are organized logically to facilitate the reader's understanding.

Chapter 1 (Introduction) explains the overview, introduces the research background, explains the research problem, and provides the research questions and objectives. The chapter also mentions the significance of the research and the purpose of the study.

Chapter 2 (Literature Review) contains the literature necessary to understand the important concepts in the research. The chapter also appraises previous studies that have been conducted on the related constructs.

Chapter 3 (Methodology) discusses the research methodology applied throughout the research process, the theoretical lens, and the ethical considerations in conducting the research.

Chapter 4 (Data Analysis) presents, discusses, and analyses the data that has been collected during the data collection process.

Chapter 5 (Conclusion) concludes the findings of the research, achievement of the research objectives, and shares the research limitations and recommendations for future researches.

## **CHAPTER 2: LITERATURE REVIEW**

Chapter 2 discusses the perspectives from the previous studies that are related to the communication issues in the organization and the application of mobile technology such as mobile instant messaging in the Malaysian Army. The literature review leads to the identification of gaps in this study.

### **2.1 Communication in the organization**

#### **2.1.1 The importance of organizational communication**

Management communication scholars have long discussed the importance of organizational communication. An ability to network through good communication is a vital source of ideas and options which is being generated through the people's interpersonal relationship with others in a work setting (Nesheim, Olsen, & Sandvik, 2017). Byrne & LeMay (2006) agree that communication inside an organization is key to the organization's success and effectiveness. Employees acquire most of the information about their jobs from communication channels such as face-to-face meetings, phone conversations, and computer-mediated channels. Good communication channels used by an organization to communicate with employees will help them perform their jobs better and comply with organizational policy and practices (Cornelissen, 2014).

Managers and policymakers have a responsibility to decide the best tools to be used in their organizational communication strategies. Policymakers need to carefully select the tools based on the type of connectivity they are aiming to enhance since the impact appears to be either positive or negative (Hage, Wortmann, van Offenbeek, & Boonstra, 2016). Mazzei (2010) suggests managers must clarify which communication behaviors to

activate, which groups of employees are supposed to be active or passive, and what managerial actions are more likely to promote active communication. The right communication tools lead to satisfaction in communication in the organization, create a positive attitude and encourage employees to reciprocate the company by being engaged in their jobs (Jalalkamali, Ali, Hyun, & Nikbin, 2016).

Communication also is an interactive process to improve collaboration among members of an organization (Welch & Jackson, 2007). Interaction in an organization is facilitated through various tools, from an informal chat among colleagues to a formal corporate communication from executives. Appropriate use of communication tools can facilitate workplace communications and enhance work performance (Ou, Davison, Zhong, & Liang, 2010). Ou et al. (2010) also stated that communication in an organization also helps to build relationships between superiors and subordinates in an organization.

The way managers communicate with employees has changed as discovered by A. Dasgupta, Suar, & Singh (2014), where employees prefer to work in an organization where communication between supervisors and employees is in a flexible arrangement. In modern organizations, employees expect bigger roles where they prefer to be involved in decision-making through participation in communication. With that expectation, promoting active communication among employees and managers is more important beyond the dissemination of information in an organization (Mazzei, 2010).

Cheney, Christense, Zorn, & Ganesh (2004) address the importance of scholarly studies on trends and changes in organizational settings concerning communication. The work environment is changing, and social life is shifting with the advancement of technology (Haeger & Lingham, 2014). The nature of work has changed due to developments in communication technology. Modern technology facilitates the quick flow of communication and is accessible by wider groups of people. Informal interaction



between members of an organization is one of the trends in organizational communication. In some organizations, discussion threads on online forums can be viewed as group communication even though it is considered informal (Gritsenko, 2016). The thin separation of formal and informal communication happens in many types of organizations in both the commercial and public sectors.

Communication, whether in a formal or informal medium, benefits the employee by saving their time, being able to stay connected, and able to rapidly respond to business partners (Sheer & Rice, 2017). Policymakers in an organization should be ready to integrate formal and informal communication. Marino & Presti (2018) suggest that adequate communication channels if integrated can become crucial platforms for concluding a transaction in business. Hedman & Valo (2015) find that even though the organization practices formal communication such as meetings, informal communication still plays an important role in facilitating competent communication practices. Informal communication plays a significant role in fostering trust among employees and developing competent communication practices in an organization. Hence, the spontaneous and informal communication style has been considered more effective in forming work relationships (Ou et al., 2010).

The quality of communication in an organizational communication process is also important. Emphasis should be put on quality rather than the frequency of communication. Liu, Chua, & Stanhl (2010) propose that the quality of communication by individuals plays important roles in interactions including the ability of employees to observe the communication norms in their organization to achieve a common understanding. Quality of communication indicates performance in the team and so, selecting the best communication channel is crucial (Marlow, Lacerenza, Paoletti, Burke, & Salas, 2018). Even though informal communication is useful in sharing work-related

information and coordinating team activities, the quality of informal communication is negatively affected by a lack of non-verbal signals when using electronic communication devices (Raišienė & Jonušauskas, 2011). Employees should be motivated to communicate face to face to achieve effectiveness and to serve many important functions in organizations, including assisting complex coordination, problem-solving, and social learning.

With all the importance placed on having good communication, organizations have come to realize it would help them achieve their objectives and attain competitive advantages (Jalalkamali et al., 2016). Satisfaction in communication has a direct effect on job performance and contributes to the achievement of objectives. Organizations face challenges to create good communication behavior among employees since that decision should be made by managers (Mazzei, 2010) and at the same time communication is essential to maintain relationships in reaching organizational goals (Keyton et al., 2013). Simcic (2014) found that leaders see communication skills among employees as important especially in getting them involved in decision making and strategic planning. The selection of a media technology to be used by employees is motivated by the expectation that the media will fulfill their needs (Luo, Chea & Chen, 2011).

Since communication strategy is important for the performance of an organization, Togna (2014) suggests that organizations need to invest in communication to build trust among employees. Trust can subsequently be transformed into commitment and actions at work. In reality, very little attention has been given to employees' preferences of communication by their organizations (Ruck & Welch, 2012). They find that most of the assessments for communication are management-centric rather than employee-centric. Managers should focus more on the content in employee's communication rather than on the communication channel to be applied in the organization.

### **2.1.2 Communication flow in the organization**

The structure of an organization gives variations to approaches and directions of communication. The uniqueness of an organization's feature in the organization structure gives an impact on the communication process (Greenberg & Baron, 2010). In general, the structure of an organization provides communication in three different directions, namely downward, upward, and horizontal (Lunenburg & Ornstein, 2008). Examining each one enables us to better understand the barriers to effective organizational communication and the means to overcome them.

Downward communication flows from top to bottom. Canary (2011) identifies several general purposes of downward communication. First, organizations will use downward communication to implement their goals and objectives. Examples of this would be communication about specific targets to achieve and behaviors expected of employees. Second, Canary (2011) specifies the purposes of downward communication such as directives about job instructions. The third is to explain procedures and practices to staff and employees. Performance feedback from superiors to subordinates is listed as the fourth purpose of downward communication. It is also agreed by Tourish (2010) who explains that the downward flow of communication provides a channel for directives, instructions, and information to members of an organization. The downward flow of communication normally uses formal channels such as speeches, formal letters, instructions, and formal interviews.

Upward communication flows from members of an organization to a superior or from bottom to an upper level. Upward communication serves several purposes in an organization (Canary, 2011). First is the sharing of problems on work-related or personal matters by employees. Second, the upward communication allows suggestions for improvement. The third purpose is as a channel for performance reports and sharing

grievances and disputes. The final purpose of upward communication is the provision of financial and accounting information to superiors. Organizations normally use various techniques in improving upward communication processes, such as open-door policy, participative contribution, counseling, and interviews (Keyton et al., 2013). Some organizations provide a specific email as a medium to be used by their employees to send any information to the management.

Greater size and complexity of an organization will increase the need for communication laterally or diagonally across the lines of the formal chain of command referred to as horizontal communication (Canary, 2011). In horizontal communication, information is used for coordination to tie together activities within or across the departments of a single organization or within divisions in an organizational system. Horizontal communication occurs among employees at the same level, among peers, within a work team, and people sharing the same objectives.

Horizontal communication falls into one of three purposes: intra-departmental problem-solving and coordination, staff advice to line departments and to enhance coordination. This horizontal channel permits a lateral or diagonal flow of messages, enabling units to work with other units without having to follow rigidly up and down channels (Canary, 2011). Horizontal communication is used to enhance coordination and comes in many forms such as task forces, committees, liaison personnel, or matrix structures (Lunenburg, 2010). In an organization, horizontal communication normally interacts by using media such as group discussion and informal communication channels.

King & Lee (2016) agree that in developing a collaborative workforce in an organization, two-way communication should be given more emphasis on the internal communication process rather than one-way communication. In an ideal situation, communication should travel in both directions for effectiveness (Lunenburg, 2010).

Questions and feedback from employees are important to improve organizational performance. The communication practiced inside an organization will influence employee engagement where values of the organization get conveyed to all employees, involving them with the goals of the organization (Welch, 2011). Communication policy in an organization should address the communication instrument to be used in a variety of ways over time, in different settings, and among various people.

### **2.1.3 Information technology and organizational communication**

Technology's impact on communication brings about new trends in the use of communication channels. With the widespread usage of modern Internet-based communication tools at the workplace, more experimental case studies are needed (Mansi & Levy, 2013) to study the appropriateness of such usage and the practice inside the organization. The availability of the Internet also has changed the trend of communication. Hong, Lee, & Suh (2013) agree that vast numbers of Internet users will give a positive impact in terms of content availability and service utility during the communication process.

Employees in modern organizations connect through online communication. Connectivity to the online environment gives an impact on organizational processes such as internal communication and employee social well-being (Rai, 2012). Online social networking platforms are becoming an increasingly important tool for companies not only for promoting product and services, but also to support social processes inside their organization (Leonardi, Huysman, & Steinfield, 2013). Through online communication, people can share many things including documents, photos, and videos in their social interactions. In training environments, online media have a positive impact on the productivity of staff in teaching and learning processes (Tulu, 2017). Instructors should

take advantage of the availability of online communication to benefit the training environment.

Involvement in online interactions encourages employees to engage in relationship-building processes (Clark & Green, 2017). The social bonding at the workplace will facilitate teamwork and foster trust among employees. Individuals who possess positive attitudes toward online interactions also will make behavioral choices that lead to positive outcomes. Online discussion is the favourite medium used by organizational members to share advice and ideas thus will keep the focus on the positive social network's environment (Ridings & Wasko, 2010). Issa & Isaias (2016) list several positive outcomes of Internet usage including problem-solving skills, proactive study, information gathering, awareness about global and local environments, communication and collaboration with peers, and improved family ties.

Online interaction allows open and honest communication. The ability to speak openly and honestly online is another advantage claimed particularly by younger people (Oprea & Stan, 2012). The younger generation is more comfortable communicating online compared to face-to-face communication (Boyle & O'Sullivan, 2016) and believes that the use of online communication will make them closer to social relationships. Furthermore, workplace social networks aided by the Internet enable employees to overcome psychological barriers to knowledge sharing (Ou et al., 2010).

The current development of communication technology also brings with it a number of setbacks. Openness in using online media can be twisted into disadvantages such as cases of online threats of leaking information to strangers as well as misinterpretation of messages due to neglecting face-to-face interaction (Oprea & Stan, 2012). Heavy reliance on online communication in the work environment also raises issues of work interruption and work-life conflict. Workers give more attention to their online messages during work

hours and outside of work hours, get distracted in their social lives (Montag & Walla, 2016). There are also increasing negative effects, such as avoidance of physical activities, reduction of thinking and memory skills, depression, loneliness, and laziness (Issa & Isaias, 2016). People who rely heavily on online communication will confine themselves and refuse to have physical interaction. Consequently, this affects engagement and brings about exhaustion (van Zoonen, Verhoeven, & Vliegenthart, 2017).

Besides, not all employees benefit from the widespread use of modern Internet communication at the workplace. Technostress has been identified as an important unwelcome consequence of using the Internet at work for social activities, as it could negatively impact job performance (Brooks & Califf, 2017). Besides media technostress, employees may get dissatisfied, frustrated, and demotivated if they are governed by rules that are intended to restrict and structure their communication (Proctor & Doukakis, 2003). Some organizations apply strict rules regarding the use of the Internet by members of their organization.

Besides, there is a weak relationship between the use of online communication medium with the knowledge of workers in the organization. The correlation between the active use of online messaging with the transfer of knowledge is insignificant (Pimmer et al., 2019). Their argument is the media only provides a place to share information and promote knowledge exchange among users (Padmavathy et al., 2018). Online communication disregards as the main source of knowledge in an organization.

In the governance aspect, organizations should focus on initiatives and strategies for the best use of online communication (Linke & Zerfass, 2013). They need to be aligned with the directions and strategic purposes of the organizations. Organizations need to develop information technology governance structures that welcome the use of digital technologies (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013). In computer-based

communication, self-awareness is important to promote appropriate use and to avoid misuse of communication medium. If it used appropriately, online systems and social media can become strategic weapons to effectively and accurately disseminate organization ideas (Kwon, Kim, & Kim, 2013).

The centrally controlled and formal system of communication as practiced by governments does not fit the current trend in mobile communication (Meijer & Torenvlied, 2014) since it is still considered an unofficial channel. The latest communication technology used in the organization needs to be formalized before it can be used effectively. Ali (2010) opines that governments face a challenge in adopting mobile Internet communication as it is difficult to control and monitor compared to traditional media. The use of mobile Internet communication also exposes organizations to information insecurity and various control measures hinder a full optimization of online interactions in governments (Gehlbach & Sonin, 2014).

The development of information technology usage as a communication medium in organizations is also related to the culture of the organization. Kummer & Schmiedel (2016) state that culture is a complex and intangible phenomenon that guides the usage behaviour of information systems in organizations. Culture consists of norms and values that are reflected in the selection of communication medium and how the medium is used by individuals in the organization since organizations may have cultures that differ from one another.



## **2.2 Mobile communication and instant messaging**

### **2.2.1 Mobile technology and instant messaging in general**

Mobile technology has become an important tool for people's daily interactions (Gao, Krogstie, & Siau, 2014). People use mobile communication not only to interact with others as a social interaction medium but also to assist them in daily routines (Couldry & Hepp, 2017). The emergence of mobile technology, together with developments in smartphones and small portable devices, offers much flexibility and convenience for mobile users (Fujimoto, Ferdous, Sekighuci, & Sugianto, 2016). Users now have more options to communicate with others anywhere either for work on non-work activities in real-time by using the same free-of-charge applications in their smartphones (Zhang & Fjermestad, 2008). MIM offers ease-of-use that fulfills people's interests and needs (Dukic, Chiu, & Lo, 2015) and is used regularly for communication and for coordinating activities in everyday life (Ling & Lai, 2016).

There are many applications available on mobile devices including instant text messaging. Connection with others through text messages has become easier with the availability of the Internet (Andujar, 2016). Instant messaging has become a global phenomenon and with the feasibility of mobile platforms, it is replacing the traditional Short Message Service (SMS). Instant messaging provides a good interface design for convenient usage and more interactive design for frequent interactions (Gan & Li, 2015). MIM also offers a set of cues that can be utilized such as text, picture, voice, emoticons, or a combination of them (Tseng, Cheng, Yu, Huang, & Teng, 2019).

The mobile communication landscape that has witnessed the ubiquity of smartphones and Internet usage has led MIM to become a platform for leisure, commerce, and work (Oghuma, Libaque-Saenz, Wong, & Chang, 2016). This is due to the capability of MIM

applications such as WhatsApp and Telegram in allowing interaction either one-to-one or in a group and offer a variety of multimedia functions (Anderson, 2016). Besides the main function of text chats, other functions available are voice and video calls, exchanging pictures, emojis, audio, and video messages (Church & de Oliveira, 2013). The features of MIM have also improved over time and enable users to receive real-time information through text messages and multimedia with the availability of the Internet and share them with their contacts individually or in groups (Marino & Presti, 2018; Kaufmann & Peil, 2019).

The central qualities of MIM that make it popular are temporal, ease-of-use, affordability, and multimodal features (Tang & Hew, 2017; Anderson 2016). MIM was developed as a free alternative to conventional messaging services offered by telecommunication services such as SMS texting, and require a small amount of Internet data. Even though MIM provides rich text and multimedia functionality, its latest feature allows users to manage the privacy implication through the deletion of messages, thus increase confidence in usage (Schnitzler, Utz, Farke, Popper & Durmuth, 2020). The user-friendly characteristic of MIM along with its affordability makes it attractive to users (Li, Chau & Lou, 2005). The availability of the languages, figures, and symbols in MIM makes the user better able to express meaning and encourage mutual understanding with others (Tseng et al., 2019).

Instant messaging also offers a benefit in the aspect of social interaction. Mobile text messages have modified interpersonal interactions, as more people use text-based communication rather than face-to-face encounters to get up to date with their colleagues on news and social issues (Aharony & Gazit, 2016). The use of instant text communication gives a positive impact on interpersonal communication and relationship development among youths (Bakar, Rashid, & Aziz, 2014). Through social interaction,

information also can be easily shared (Padmavathy et al., 2018). Ogara, Koh, & Prybutok (2014) find that the perceived richness is one of the important drivers for social presence and user satisfaction in MIM. Users perceive a high level of richness when they have good relationships with their communication partners.

On socialization, Song & Wang (2011) in their study argue that the use of MIM for enjoyment is an important factor that ensures continuing usage in social settings. The enjoyment experienced by MIM users is often related to the application of additional signs together with text messages. Li et al. (2005) argue that MIM is a better alternative to face-to-face communication than other technologies in presenting the emotions of a user during communication. Facial expression is important for the success of communication since it indicates the emotion of a user (Aldunate & Gonzalez-Ibanez, 2017).

Emotional expression in text messages significantly affects the recipient's emotional intensity and acceptance of the message (Kwon et al., 2013), thus contributing to the success of mobile communication not only in interpersonal interactions but also inter-group relationships (Iyer & Leach, 2008). Two of the most frequent features used to represent expression in MIM are emoticons and photos (Wang, Fang, Han, & Chen, 2016). Perceived enjoyment also indicates user loyalty in using MIM (Oghuma et al., 2016) and the casual way of communicating with MIM enhances the social connectedness that supports the personal focus in using the media (Hsieh & Tseng, 2017).

Instant messaging tools have many risks in terms of security, but the risks can be mitigated through technical and managerial control measures as studied by Kim & Leem (2005). Since users are connected through the Internet communicating in real-time while doing file transfers with other users, they are vulnerable to risks such as information leakages and intrusions. This may negatively impact their organizations. Even so, organizations can still avoid this through various control measures. Several managerial

controls can be applied such as policies and procedures, security awareness, and media controls (Kim & Leem, 2004). Besides, there has been an improvement in the security and privacy features of instant messaging tools for secure communication (Lebbon & Sigurjónsson, 2016). These security features make it convenient for the instant messaging user including communicating in a dynamic group (Vijayakumar, Chang, Deborah, & Kshatriya, 2018).

### **2.2.2 Mobile instant messaging at the workplace**

Hong & Tam (2006) find that the adoption of mobile communication technology for work use is different according to the nature of the workplace and the usage context. Different activities require different approaches in the use of mobile communication to achieve their objectives and the same applies to MIM. Appropriate use of instant messaging has become an effective tool for organizations to disseminate ideas (Kwon et al., 2013). The organization needs to find the best approach to apply the use of MIM at their workplace so that it can be enjoyed comfortably by managers and employees.

Mobile Internet communication such as MIM has transformed the way people communicate and collaborate with others. People prefer to work with their devices, reducing the use of face-to-face interaction (King & Lee, 2016). Employees at the workplace having the option of online interaction. Tong & Bradshaw (2020) suggest that modern mobile technology such as MIM offers options for collaboration among work teams where employees prefer to interact online rather than face-to-face. Interactive tools such as instant messaging empower work teams through social networks that were shaped through communication.

MIM is regarded as informal communication due to the casual nature of its interaction, making it suitable for private communication (Staudacher & Kaiser-Grolimund, 2016).

Good personal communication and socialization at the workplace help individuals to better perceive other users' responses in MIM communication, thus increasing focus during interaction (Tseng et al., 2019). There is a critic however by Cameron & Webster (2005) stating that users normally regard MIM as informal communication and therefore is only suitable for social purposes, but other scholars felt that this media is beneficial since it offers a range of benefits to the organization.

Besides facilitating communication, MIM is also used for knowledge dissemination in the workplace, thereby improving team performance (Ou et al., 2010). They claim that workers engage in instant messaging because of information and interactions that are easily accessible. Ou et al. (2010) agree that organizations that are increasingly having to deal with complex tasks consequently require a more efficient communication and knowledge-sharing platform for problem-solving. Taking advantage of the instantaneous nature of instant messaging, interaction among team members for knowledge, and information sharing can be made much smoother.

The capability of MIM in providing real-time interaction instills a sense of social presence at the workplace (Kim, Song, & Luo, 2016). This good social relationship occurring at the workplace through real-time communication assist in the completion of tasks. Karapanos, Teixeira, & Gouveia (2016) reveal that the capability of MIM such as WhatsApp to provide intimate conversation goes beyond other social media channels. Karapanos et al. (2016) find that the intimate relationship that takes place throughout a conversation makes it a favorite channel to be used for social interaction at the workplace. Concerning social interaction, MIM creates a sense of presence during the communication process by the user's availability status or responsiveness (Zhang, Law, Wang, & Lau, 2009). Online social presence afforded by MIM in a discussion forum

created more appealing group discussions. MIM is particularly suited to promote expression of emotions thus make the interaction more effective (Tang & Hew, 2020).

Nicholson (2002) suggests that the use of MIM stimulates a stronger sense of being in the workplace community and provides a venue for social communication with others. Cameron & Webster (2005) suggests that employees use instant messaging as an additional means to reach other members of an organization due to the capability of MIM to provide real-time sharing of information. This changes the contemporary work environment by enabling engagement in many activities simultaneously (Pazos, Chung, & Micari, 2012). In this case, MIM is usually used for multiple purposes such as for updating work tasks, updating news, and at the same time maintain social interaction with others.

Now even though it is regarded as social and personal, developments in technology have witnessed MIM becoming a tool for work purposes. Besides interaction purposes, employees use MIM to keep records of their work for future references (Sheer & Rice, 2017). Many work-related materials are kept in their mobile devices including messages, reports, and files received through MIM communication. The development of mobile technologies and MIM allow the medium to be used as a working diary with capturing tools since it is cost-effective and user-friendly (Kaufmann & Peil, 2019). These are the examples of another purpose of MIM besides communication among managers and employees.

However, there is a concern about MIM use at the workplace regarding socialization with some employees unable to draw a clear line between MIM usage for work and personal use (Li et al., 2005). Employees will use MIM simultaneously with other non-work-related activities such as browsing the Internet and using social media, potentially creating interruptions at the workplace. Even though MIM can be applied as a tool for

decision-making at the workplace, organizations still need to be careful of interruptions from frequent use of this media for work (Lebbon & Sigurjónsson, 2016). Frequent interruptions as mentioned by Lebbon & Sigurjónsson (2016) is similar to the concern raised by Li et al. (2005) when employees spread themselves in too many online activities when using MIM at work. This engagement in many online activities at once will lead to interruptions that may affect the decision-making process in the organization.

There are also negative implications of MIM for managers and employees as found by researchers. For socialization, MIM communication is not necessarily the best choice for use at workplaces. The issues of work inefficiency arise with the use of mobile Internet communication during working hours. Mansi & Levy (2013) find that tasks that are repeatedly interrupted by instant messaging communication will normally take longer to complete and have a significant impact on worker productivity. Social interaction through message texting contributes to interruption in communication and can stretch conversations, making them lengthy, even though the actual message is short (Lundy & Drouin, 2016). A greater amount of time spent on the smartphone during working hours may bring about smartphone addiction and participating in non-work-related activities, resulting in reduced productivity (Duke & Montag, 2017). Duke & Montag (2017) claim that users continue to be engrossed in their smartphones even though they are aware of its negative consequences.

Concerning that, most interactions that occur during working hours are not work-related, distracting workers from their work (Lebbon & Sigurjónsson, 2016). The bulk of non-work-related activities and information results in information overload and hinders job satisfaction (Yin, Ou, Davison, & Wu, 2018). In learning environments, common criticisms regarding MIM usage also include information overload and unfocused discussion especially when the media need to carry a lot of information (Tang & Hew,

2017). The use of short and simple ways of writings is recommended when using MIM for work to avoid lengthy information being ignored by the user (Kuyath, Mickelson, Saydam & Winter, 2013).

Since MIM is used together with mobile phones, mobile phones also can take focus away from work when the employees are spending more time on them (Montag & Walla, 2016). Employees who are using MIM with their smartphones constantly paying attention to incoming messages (Pielot, Church & de Oliveira, 2014). These are the reasons why recognition of MIM as a formal communication channel in an organization should be carefully implemented to guarantee the best return in terms of employees' performance and productivity (Dukic et al., 2015).

### **2.2.3 Mobile communication in the military environment**

In the context of the military workplace, when an electronic meeting was first introduced, the military personnel were able to share many of its resources because electronic meetings were easier to arrange than face-to-face meetings (Johansen, Vallee, & Spangler, 1979). Subsequently, developments in communication media paved the way for better communication in organizations including in the military and there is increasing use of mobile communication such as MIM in the Army working environment. The shifting and development in the military environment witnessed the usage of various media communication in the military organization including modern mobile technologies (Corner & Parry, 2016).

The military organization embraces the use of Internet technology for its communication. Historically, some of the communication media that were first introduced for military purposes such as video chat and online discussion forums became general-purpose technology for public use (Naughton, 2016). Social media and instant



messaging are fast becoming an integral part of contemporary life not only for civilians but also for military use. The study on the Ukrainian Volunteer Battalion shows that online interaction influences daily communication in the military where most of the military personnel now prefer to chat online (Kaihko, 2020).

The communication among military personnel is affected by the intelligence requirement (Brunet & Claudon, 2015) where the exchange of huge amounts of data was concerned. The management in the military should emphasize the need for secure communication including in group chats or one-to-one communication. Military organizations need secure networks to maintain confidentiality and security of information in more pervasive and ubiquitous environments (Vijayakumar et al, 2018). Information security is a major concern when communicating with others. In some military in the world, they develop their mobile communication system to ensure secure transmission during conflict or operation (Lukas, 2015).

In the military organization, each activity demands different approaches of using the communication medium according to the interoperability, working environment, and security (Suri, et al., 2016). Communication technology for military use should able to interoperate with other types of communication devices and suit the environment besides protecting the security of information. In the military education and learning process for combat training, the use of Internet technology and online training are currently in trend in the organization (Tung, Huang, Keh, & Wai, 2009). Training experts in the military innovate their approaches in the training by applying modern communication. However, Tung et al. (2009) also realize that the suitability of communicating through that technology with the learning methodology needs to be studied to achieve the desired training requirements.

During operation, a modern military organization needs a collaboration tool to support small teams' interaction and work collaboration among team members (Seymour, 2007). Good internet communication technology used as a tool that can be applied for decision-making. Communication in the military environment should accommodate the increasing speed of information flow and situational awareness among military personnel at the workplace (Maseng, Landry & Young, 2010). An effective flow of information leads to organizational success in the military. The capability of modern military organizations in performing their duties also has been increased through the development in military communication especially instant messaging communication by using mobile devices (Sterling, 2008).

The use of MIM technology as modern communication aids should be combined with doctrine in the military. Cambridge English Dictionary defines doctrine as “*a belief or set of beliefs, especially political or religious ones, that are taught and accepted by a particular group.*” (Cambridge Dictionary, 2018). Used in the Army context, the North Atlantic Treaty Organization (NATO) defines doctrine as “*fundamental principles by which the military force guides their actions in support of objectives. It is authoritative but requires judgement in application*” (Spencer, 2016). With that understanding, any policy to be implemented in the military must be embedded with and support the doctrine in the services. Each activity is managed and executed by following its doctrine to achieve their respective objectives.

### **2.3 Summary of literature review**

The review on the literature captured three main areas of discussions which are related to communication development and the use of mobile communication, specifically MIM for organizational communication purpose. There is a significant development in the

communication used by the organization with the emergence of a modern communication platform. The invention of Internet-based and mobile communication transforms the way peoples communicate at their workplace. With the popularity of MIM due to its affordability, convenience of use, and the rich of functions and features, managers and employees comfortably use MIM socially and professionally for their work.

Scholars have extensively discussed the importance of selecting a good communication platform for organizational use to ensure success and to assist the employees to increase their performance. MIM is unlimited to sharing ideas and knowledge but it is also having valuable roles in the decision-making process. As a social platform, socialization at the workplace resulted from MIM communication lead to mixed consequences. MIM increases employee's motivation through social connection and maintains their engagement on work through interaction with other organization members. Contrarily, it also creates issues of distraction and interruption. The managers facing a challenge to balance between social behaviour and the goals to be achieved by the organization.

In the military context, the use of modern communication technology such as the Internet and mobile communication embraced by the military organization. Scholars identify several issues in the application of MIM in the military environment such as intelligence requirement, security issue, interoperability, suitability with the military working environment, and compatibility with the doctrine. From the literature, two important gaps were defined. Firstly, the MIM usage for working communication is understudied in the context of the military environment. Secondly, the suitability of MIM usage in different working environments has not been considered. To bridge the gap, the study proposed the selection of respondents from different working environments and different types of activities as a unit of analysis.

## CHAPTER 3: METHODOLOGY

Chapter 3 describes the Media Richness Theory (MRT) as a theoretical lens, the operational definition, research design, and the process of data collection in the study. The chapter includes the method of analysis that was conducted. The triangulation process and ethical considerations were discussed.

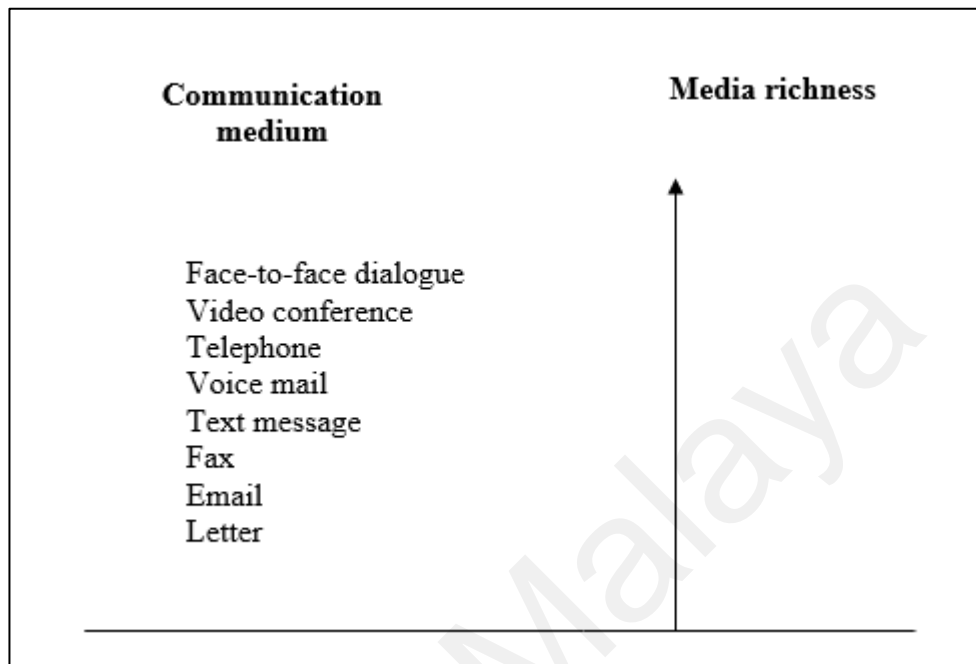
### 3.1 Theoretical Lens: Media Richness Theory

This study uses Media Richness Theory (MRT) as a theoretical lens to develop an understanding of the phenomenon throughout the research process. Daft & Lengel (1986) developed a media richness model to explain the choice of media in communication. The selected media should match the need to reduce the ambiguity of any communication task with the richness of a medium. In this theory, ambiguity refers to the difficulty of interpreting or understanding a message while media richness refers to the capability of media to effectively convey the information.

MRT was originally developed to explain and evaluate communication media within the organization. Thus, the theory will help organizations handle the communication challenges such as the circulation of unclear and uncertain messages or conflicting interpretation of messages. As suggested by Sheer & Chen (2016), this theory is important in the study of media selection in communication. Managers in organizations who are motivated by achieving the instrumental goal of task efficiency, choose media based on the matchup of message equivocality and media richness.

The theory is applied by giving the ranking through the evaluation of the media richness offered by a range of communication media such as face-to-face conversation, phone calls, text messaging, video conferencing, and email. For example, a phone call

and text message cannot produce visual cues such as gestures, and that makes it less rich communication media compared to video conferencing and face-to-face meetings.



**Figure 2: Media Richness Theory (Daft & Lengel, 1986)**

Information richness is described as the ability of information to change understanding within a time interval (Daft & Lengel, 1986). The theory proposes that different types of media could be placed on a scale that quantifies their media richness level. As shown in Figure 2, several forms of media were arranged on a scale in descending order from most to least rich. Face-to-face communication offers the highest richness level, followed by telephone conversation, written, addressed documents, and unaddressed documents.

The factors of feedback capability, communication channel, information source, and language are important to establish a better media richness level (Daft & Lengel, 1986). As an evolution of that theory, they expand the concept of media richness to the detailed judgement dimension of the media richness. Media richness is judged by using certain dimensions, namely the ability to facilitate rapid feedback, handle multiple cues

simultaneously, utilize natural language, and establish a personal focus (Lengel & Daft, 1989).

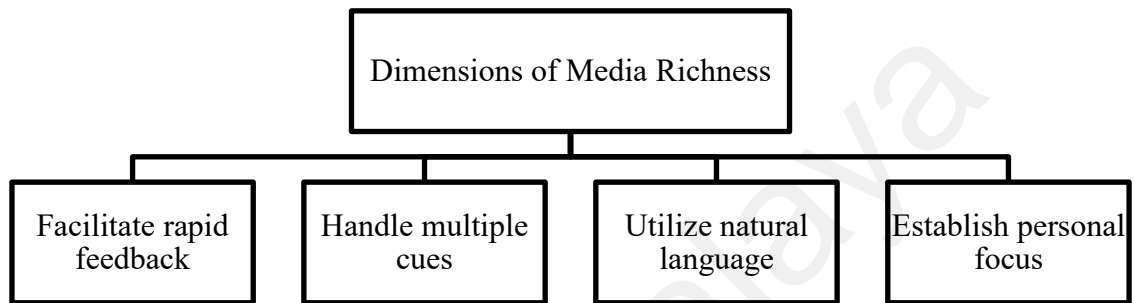
According to MRT, rich information is provided by the media that allow immediate feedback during the conversation (Daft & Lengel, 1986; Daft, Lengel, & Trevino, 1987). Communication is considered complete when necessary feedback is transferred. Feedback is important so that any mistake in the transmission can be corrected immediately. The user can immediately respond during the communication and the medium should support two-way communication to reduce equivocality and uncertainty.

In conveying multiple cues, the cues can either be visual or auditory. Communication that has multiple cues possesses a high level of information richness that will reduce equivocality and uncertainty (Daft & Lengel, 1986; Daft et al., 1987). For example, in explaining a flight safety procedure, a combination of cues can be used such as video and physical demonstration. A sole dependency on the in-flight manual might give a different understanding to travelers.

The third dimension, the utilization of a variety of languages, refers to the range of meaning that can be conveyed using language symbols or the use of natural language. Natural language helps the effective transmission of various concepts and ideas where the audience has a common understanding of the messages (Daft & Lengel, 1986). Information richness would be increased through the availability of a wide range of symbols that can be used in the conversation capable of reducing equivocality and uncertainty (Daft & Lengel, 1986; Daft et al., 1987).

The fourth dimension mentioned by the theory is the establishment of personal focus. Every medium has its level in achieving personal focus. In general, messages get better conveyed when it is incorporated with personal feelings and emotions and the message is

tailored to the needs and situation of the receivers (Daft et al., 1987). The richness of the information would be increased through the increment of personal focus provided by the media (Daft & Lengel, 1986; Daft et al., 1987). Figure 3 shows all four dimensions in the MRT.



**Figure 3: Four dimensions of Media Richness Theory**

Lengel & Daft (1989) explain that in selecting suitable media for use by an organization, managers should match the media with the message routines. Effective communication is achieved when lean media that are low in richness match the routine and simple messages and rich media are used for non-routine and complex messages. For example, lean media such as email and memorandum are suitable for the transmission of daily reports, but a face-to-face meeting is required to discuss special occasion arrangements. If rich media are used for routine messages, it will cause data glut that will lead to confusion and surplus meaning. Conversely, when lean media are used for non-routine messages, it will lead to a lack of understanding or data starvation. The manager should utilize a range of communication media depending on the message to be communicated.

Empirical studies by other researchers have also contributed to developing the theory through the addition of new components such as symbolic cues, situational factors, social influence within the organization, and the impact of technology (Stein, 2006). This is relevant to the invention of new media, especially computer-based communication. Symbolic cues are words, signs, symbols, or gestures that communicate verbally and have a meaning. Different and unique situations will require different communication media to be applied while social influence can be seen through the different hierarchy in an organization or social status that influence the communication process.

Media richness does not only refer to the degree of facilitating shared meaning (Daft et al., 1987), but also the ability to increase rewards in social interactions. When users perceive higher media richness, they derive more pleasure and satisfaction from interpersonal interaction (Jiang, Heng, & Choi, 2013). The pleasure and satisfaction in using a medium also will predict the future use of the medium (Shim, Shropshire, Park, Harris & Campbell, 2007). The user will prefer to use the medium that gives the most satisfaction to them.

Information richness is not rigid. When they first introduced the media richness concept, Daft & Lengel (1984) concluded that the success of an organization was associated with the balance of information richness in the organization. Organizations needed to manage the richness of the information according to the organizational environment. An organization is a complex social system working in an uncertain and changing environment. The process of maintaining the richness of information is not rigid.



## **3.2 Operational definition**

In conducting this study, a conceptualization of the concept is undertaken to produce an operational definition for each dimension of the MRT. The operational definitions are essential as they permit the researcher to measure abstract concepts and constructs of the theory for observation.

### **3.2.1 Ability to facilitate rapid feedback**

Trevino, Lengel, & Daft, (1987) in their early definition of media richness, explain that the ‘rapid feedback’ dimension refers to the capability of a medium to allow questions to be asked during the conversation for corrections to be made instantly. The concept has been expanded by Kahai & Cooper (2003) through their agreement that the media that permit rapid bidirectional communication, which allows rapid interpretation and clarification of messages, possess ‘rapid feedback’. Lee, Kozar & Larsen (2009) use a straightforward explanation in which ‘rapid feedback’ is the extent to which a medium allows users to provide rapid feedback on the communication they receive, and this has been used by Ogara et al. (2014) by adding that ‘rapid’ also refers to speed.

The operational definition for ‘rapid feedback’ in this study is *‘the ability of mobile instant messaging to allow immediate feedback, allowing questions to be asked as well as correction, rapid interpretation, and clarification to be made.’*

### **3.2.2 Ability to handle multiple cues**

Trevino et al. (1987) suggest that ‘multiple cues’ refer to an array of cues that might be part of the message including physical presence, voice inflection, body gestures, words, numbers, and graphic symbols. Media that possess the capability to use multiple information channels such as voice inflection and body gestures along with verbal

messages are capable of handling multiple cues (Kahai & Cooper, 2003). In a later explanation of this dimension, Lee et al. (2009) agree that in communicating information, the media can exploit the availability of verbal and non-verbal cues. The capacity of multiple cues for the media is related to the use of different cues such as body language and facial expressions (Ogara et al, 2014).

For this study, 'multiple cues' is operationalized as *'the ability of mobile instant messaging to handle verbal and non-verbal cues such as text, voices, graphic symbols, body gestures, facial expressions, and voice inflections.'*

### **3.2.3 Ability to utilize natural language**

At the initial stages of the formation of this theory, Trevino et al. (1987) suggest that 'utilization of natural language' for a medium is described as the range of meaning that can be conveyed with language symbols to achieve a broader understanding of a concept and ideas. This definition was similarly used by Kahai & Cooper (2003) and later by Lee et al. (2009) in their studies. Ogara et al. (2014) emphasize the use of a variety of signs and symbols in written form such as numeric data and pictures as part of a sent message along with an ability to use different language formats.

The operational definition for 'utilize natural language' is *'the ability of mobile instant messaging to convey natural language or language variety by using signs and symbols including numeric data and pictures, and in a different language format, to convey a range of meaning of any broader concept or idea'.*

### 3.2.4 Ability to establish personal focus

Trevino et al. (1987) mention that a message will be conveyed more effectively when personal feelings and emotions are infused in communication. The message can be tailored to the frame of references, needs, and current situation of a receiver. This explanation is used by Kahai & Cooper (2003) and later Lee et al. (2009) propose that the media can establish personal focus when the sender can personalize the message before sending it. Ogara et al (2014) suggest that ‘personal focus’ refers to the degree to which a conveyed message is perceived to be personal and the presence of the sender is felt by the receiver.

The dimension of ‘personal focus’ is operationalized as *‘the ability of mobile instant messaging to establish personal focus by personalizing messages according to the frame of references, needs, and situation of a receiver and the workplace, infusing the personal feelings and emotions during the communication to a level that personal presence is felt’*.

### 3.3 Research design

This research was conducted using a qualitative approach. The qualitative approach enables me to perform an in-depth study on the phenomenon of mobile instant messaging in the Malaysian Army through this approach. The case study research was chosen since it is an interpretive study on the phenomenon of computer-based information systems in an organizational context and the investigation carried out by looking at people’s life experiences (Walsham, 1995). The Malaysian Army was selected for this study since there are plans to integrate developments in communication technology with the doctrine, organization, and tactics of the Army work environment.

The case study uses the four main activities in the Army as a unit of analysis. They are management, training, operation, and logistics. The study explores the trend of using

MIM in the Army organization in these four types of working environments. According to Walsham (1995), the need for a thick description is important in understanding the complex computer-based information system in human interactions such as the use of MIM in the Army working environment. The interpretive study also preserves the considerable degree of openness on the data.

### **3.4 Data collection process**

The data collection began with three initial interviews to observe the ability of interview protocol to acquire the relevant findings. Subsequently, the remaining respondents were interviewed using the same interview protocol when the researcher agrees with the reliability of that protocol in collecting adequate information. The interviews were semi-structured and recorded by way of recording devices with the informants' consent. During the interview process, the informants were treated with utmost respect since they were highly experienced military officers in their fields.

Besides testing the reliability of the interview protocol as an instrument to be used, the initial interviews were used to identify initial codes in a constant comparison process before the following interviews were conducted. Constant comparison is the subsidiary instrument to identify variations in the pattern of data that have been collected (Corbin & Strauss, 1990). Initial codes were important to be used as a coding dictionary for the subsequent interviews. From the three initial interviews, all relevant information was successfully acquired during the interview process. All four main themes identified at the beginning of the data collection process correspond with the main dimensions in the MRT.

### 3.4.1 Respondents

Data have been collected through semi-structured interviews from twelve respondents selected from different types of activities in the Malaysian Army. For this study, purposive sampling was used to collect rich data (Yin, 2015) from the selected participants. The participants in this research were recruited by contacting units or departments in the Malaysian Army to obtain their superior's consent. Consent is important as an ethical consideration in the research process.

A minimum of fifteen years of working experience was set as a condition to select the respondents to guarantee good feedback on the questions asked during the interview. The selected participants possess wide experience in the internal communication processes of the management, logistics, training, and operation activities in the Army. They are also users of MIM in their respective work environments.

In collecting plentiful and rich data, the interviewees for this study were chosen from different working environments. Multiple respondents from each activity were chosen to avoid subjectivity and bias since the technique allows the cross-checking of responses (Eisenhardt & Graebner, 2007). The ranks of Major and Lieutenant Colonel were purposively selected as a respondent since they are positioned at the middle of the rank hierarchy in the Malaysian Army. The frequency of communication they experienced at the workplace is higher compare to other rank categories. This is to ensure the rich data collected from the interview sessions.

The list of respondents is shown in Table 1.

**Table 1: List of respondents**

Informants	Job description	Working activity
Officer A	Senior Instructor at Logistics Training Centre	Training
Officer B	Head of Administration Department	Management
Officer C	Staff officer at Army IT Department	Management
Officer D	Second in Command of Armour Regiment	Training
Officer E	Chief Instructor at Artillery Training Centre	Training
Officer F	Company Commander at Infantry Battalion	Operation
Officer G	Staff Officer at Army Logistic Headquarters	Logistics
Officer H	Staff officer at Human Resource Department	Management
Officer I	Senior Ammunition Technical Officer	Logistics
Officer J	Staff Officer at Operational Signal Directorate	Operation
Officer K	Operational Officer at Infantry Battalion	Operation
Officer L	Head of Project Team at Engineering Service division	Logistics

The respondents need to answer questions about current practices of MIM technology at the workplace, the suitability of usage, and measures to improve usage in the organizational context. The questions emphasize the experiences and observation of the respondents on MIM usage in their respective activities. The semi-structured interview has the advantage of being objective, but at the same time allowing a more thorough understanding of the respondents' opinions and the reasons behind them (Borg & Gall, 1983). A semi-structured interview allows the researcher to ask any relevant questions and seek further clarification on the given answers, which is not the case with structured interviews.

This study involved a limited number of respondents. The interview with a limited number of respondents was used to explore and understand the complexities of management communication rather than produce a certain amount of data (Hedman & Valo, 2015). During the data collection process, personal awareness as a researcher and the respondents on the importance of a study is important to ensure the reflexivity. I have assured the respondents that their knowledge, experiences, and opinions were significant. At the same time, I have ensured that my usage of MIM would not influence the judgement and analysis in this study. The reflexivity in conducting this study was crucial to guarantee rigor in the interview process and ensure that the data obtained was reliable and valid (Palaganas, Sanchez, Molintas & Caricativo, 2017).

#### **3.4.2 Interview process**

During the interview process for this study, I encouraged the respondents to elaborate on the 'why' questions. This elaboration on 'why' questions were successfully achieved through person-to-person interviews. A person-to-person interview is the best technique for obtaining in-depth opinions, particularly when it involves knowledge and experiences (Guest, Namey, & Mitchell, 2013). During the session, respondents are remarkably honest and frank when they were asked about their thought within a context that is properly structured.

Before the launching into the interview questions, the informants were asked to fill a consent form and their demographic details. All the informants in this study voluntarily put their consent to participate in the interview. The respondents have been properly introduced for the interview, the questions properly worded and complete anonymity was guaranteed. In this research, at least two days of prior notice were given to the potential

respondents together with the scope of the questions to ensure their preparedness in giving responses.

Since this is a study on the use of technology at the workplace, interviewees' own offices were chosen as venues for the interviews. Besides taking into consideration the interviewees' comfort, the choice was also perhaps most logical since there would probably be additional documents or references in the informants' offices which would be helpful in this study. The participants were allowed to freely give their opinions and views on the topics within the guidelines of the interview protocol. On top of that, the interviews were conducted in a confined space to pre-empt interruptions since the interviews were recorded by using the recording device.

The interviews were conducted in Bahasa Malaysia since a good interview approach is to use the participants' language on top of being conducted at the participants' place of comfort (Myers, 2013). An interview ceased when the researcher begins to hear and collect redundant data in the interview process (Grady, 1998).

### **3.4.3 Interview protocol**

The interview protocol was carefully drafted and self-structured to meet the requirements of the study. The purpose of the researcher's interview protocol is to act as an instrument of inquiry for collecting information related to the objectives of a study (Patton, 2015). Twelve questions were posed to the participants. In a semi-structured interview, the interview script is prepared beforehand (Myers & Newman, 2007) as a guide to the interviewer. All questions were covered during the interview session and as a researcher, I have played an important role in asking for elaboration. **Appendix A** shows the protocol used for this interview.



As mentioned, for this study, the interview protocol was self-constructed by the researcher. All the constructed questions were linked with the research objectives and the dimensions in the MRT to ensure the validity of the protocol and the reliability of an instrument for data collection. All the questions in the interview script are designed to meet the requirement of the study. At the same time, the questions were asked to get the informants' views through their experiences and observation at the workplace. These questions in the interview protocol are all related and important to achieve the richness of data subsequently, the objectives of this study. Table 2 describes the questions used in this interview.

**Table 2: Information acquired from Interview Protocol**

Question Number	Information acquired	Link to research objectives and theoretical lens
1	Informant's background (current position, roles in the organization and activities he/she belongs to)	
2	MIM application in the organization	Identify current practices
3	Utilization of MIM in communication with superiors, peers, and subordinates	Identify current practices
4	Situations where MIM proves useful in organizational communication	Identify current practices, assess suitability. Related to all dimensions in MRT
5	The situation where MIM proves ineffective in organizational communication	Identify current practices, assess suitability. Related to all dimensions in MRT
6	Type of information and materials shared through MIM communication	Identify current practices, assess suitability. Related to 'handles multiple cues' & 'utilizes natural language' dimensions in MRT

**Table 2, continued: Information acquired from Interview Protocol**

Question Number	Information acquired	Link to research objectives and theoretical lens
7	Restrictions on MIM usage in the organization	Identify current practices, assess suitability. Related to all dimensions in MRT
8	Possibility of MIM replacing other modes of communication	Assess suitability. Related to all dimensions in MRT
9	Advantages of using MIM in the work environment	Assess suitability. Related to all dimensions in MRT
10	Disadvantages of using MIM in the work environment	Assess suitability. Related to all dimensions in MRT
11	Awareness of control measures imposed by the authority on MIM use	Assess suitability, recommend guidelines
12	Recommendation to improve MIM usage in the organization	Recommend guidelines

For example, one of the questions posed to the respondents was:

*“What type of information and materials do you share through instant messaging in your work environment?”*

The purpose of this question was to acquire the information about the information, documents, and materials that were usually shared through MIM.

*“What are the disadvantages of using instant messaging in your work environment?”*

This question tries to dig relevant information on the difficulties faced by the user in using MIM at their workplace. By using a semi-structured interview, the researcher can ask additional related questions for more information

#### **3.4.4 Transcribing of interview recordings**

According to Braun & Clarke (2006), the first stage in data analysis is to familiarize oneself with the data through transcribing. In this case, the transcribing process is the transcription of the interview recordings by the researcher by listening to the recordings. All the interviews were transcribed verbatim and the process was conducted manually. The transcribing process was repeated more than once to increase the reliability of the transcripts and to minimize the mistakes in the process.

#### **3.4.5 Interview transcript review**

The process called 'Interview Transcript Review' was conducted as a technique for enhancing the rigours of interview-based qualitative research (Hagens, Dobrow & Chafe, 2009). After transcription, the interviewees were provided with a copy of their interview transcripts to correct errors and inaccuracies, verify the content, and providing clarification. An email was used as a medium to send the transcripts to the interviewees and the feedbacks was compiled to improve the validity of the transcripts.

This process of 'Interview Transcript Review' will increase the validity and reliability of data that have been collected through the interview process. After the amendment, the transcriptions were read several times to familiarize themselves with the content. The important points and thoughts were jotted down. All the interviewees' feedbacks have been recorded. Some emails did not receive any reply that was considered as no change required for those transcripts. The feedback received from the informants is shown in Table 3.

**Table 3: Result of transcript review**

Informants	Feedback	Researcher's action
Officer A	"everything is in the transcript"	
Officer B	No feedback	
Officer C	"please do the correction of few inaccuracies in technical terminologies"	Do the correction as suggested
Officer D	"the transcription is perfect"	
Officer E	No feedback	
Officer F	No feedback	
Officer G	No feedback	
Officer H	No feedback	
Officer I	No feedback	
Officer J	"please do the correction on a few words and some spelling errors"	Do the correction as suggested
Officer K	No feedback	
Officer L	No feedback	

### **3.5 Method of analysis**

In the process of developing and refining the analysis of qualitative data, thematic analysis was applied. Thematic analysis is a technique for breaking up text into basic themes, organizing themes, and global themes to come up with the thematic networks. In this analysis, the constant comparison is essential as a subsidiary instrument to build the theory and identify variations in the patterns of the data (Corbin & Strauss, 1990).

According to Braun & Clarke (2006), six different phases guide the data analysis process. The summary of the process is shown in Table 4.

**Table 4: Thematic analysis process**

Phase	Description
1. Familiarisation with data	Transcribing data, reading and re-reading data, noting initial ideas
2. Generating initial codes	Coding interesting features of data in a systematic fashion across the entire data set, collating data relevant to each code
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each theme
4. Reviewing themes	Checking the themes work with the coded extracts (Level 1) and the entire data set (Level 2). Generating a thematic 'map' of the analysis
5. Defining and naming themes	Ongoing analysis to refine specifics of each theme and the overall story told by the analysis, generating clear definitions and names for each theme
6. Producing report	The final opportunity for analysis. Selection of vivid, compelling extract examples, the final analysis of selected extracts relating analysis to research questions and literature, producing a scholarly report of analysis

The next stage of the thematic analysis process is generating the initial codes from the transcripts. The process is to code interesting features of the data systematically across the entire data set. This stage and subsequent stages in the thematic analysis was performed using a qualitative data analysis software called NVIVO. NVIVO is a software used for qualitative data analysis that assists the researcher in systematically conducting thematic analysis, from the beginning which is the coding process to collating into potential themes to producing the tabular and graphical form of data and production of the thematic map.

### **3.6 Triangulation**

In qualitative research, the triangulation of data is important to increase validity and to reduce subjectivity (Jonsen & Jehn, 2009). The triangulation of data was applied in this study through the triangulation of subjects. Even though the study has been conducted within the military environment, the subjects' opinions were triangulated since the participants work in different work activities in various departments and units. This study uses the same protocol for different subjects from the four main work activities in the Army (management, logistics, training, and operation), allowing a breadth of opinion on the use of mobile instant messaging to be collected.

### **3.7 Ethical consideration**

Informed consent is an important ethical consideration in this research. Potential informants have been informed earlier about the study through their organization. The unit commander or the head of the department has been contacted before the interview to obtain their consent on the participation of the officers in the study. At the same time, consent was acquired in retrieving information in printed documents. Besides obtaining permission from the interviewees and their superiors, the ethics approval was obtained from the ethics committee (Myers & Newman, 2007). The ethical clearance for this research is attached as **Appendix B**.

Treating participants with respect is important in interviews. A researcher shall respect a participant's position and knowledge in the organization (Myers & Newman, 2007). Their knowledge and experiences are important for the study and it should be acknowledged ethically. In addition to that, the interview process has to be conducted using a voluntary approach and the informants are not to be forced to participate. Recording devices are only used after permission is granted from the interviewee. The

confidentiality and security of information are to be preserved accordingly throughout the research. Throughout the analysis, all the respondents are known by pseudonyms to preserve confidentiality.

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## CHAPTER 4: DATA ANALYSIS

Chapter 4 explains the process of generating codes by using thematic analysis from the transcription. The findings of this study were presented, analyzed, and discussed according to the dimensions in the Media Richness Theory.

### 4.1 Generating codes

Using the thematic analysis method, codes were generated from the interview transcripts of all twelve respondents. In the thematic analysis method of data analysis, codes are important as a coding dictionary for the subsequent analysis to be conducted (Braun and Clarke, 2006). The generated codes will be processed to become themes that will be used for further analysis.

The coding process was performed using a qualitative data analysis software to generate the basic codes. Subsequently, all the basic codes were collated into related themes. I used NVIVO software for data analysis. NVIVO enabled the researcher to perform the analysis systematically from the beginning of the coding process to collating into potential themes. Subsequently, data were produced in tabular and graphical form and finally coming up with the analysis summary.

In this study, the descriptive coding technique was applied to generate the codes. The descriptive codes were assigned by summarizing the data into a word or short phrase that represents the meaning of a coded text (Saldana, 2013). The process began with synthesizing the operational definitions of four dimensions in the Media Richness Theory to develop the codes from the text. In the process of reducing data from the transcript, a method proposed by Attride-Stirling (2001) was used by determining pre-established



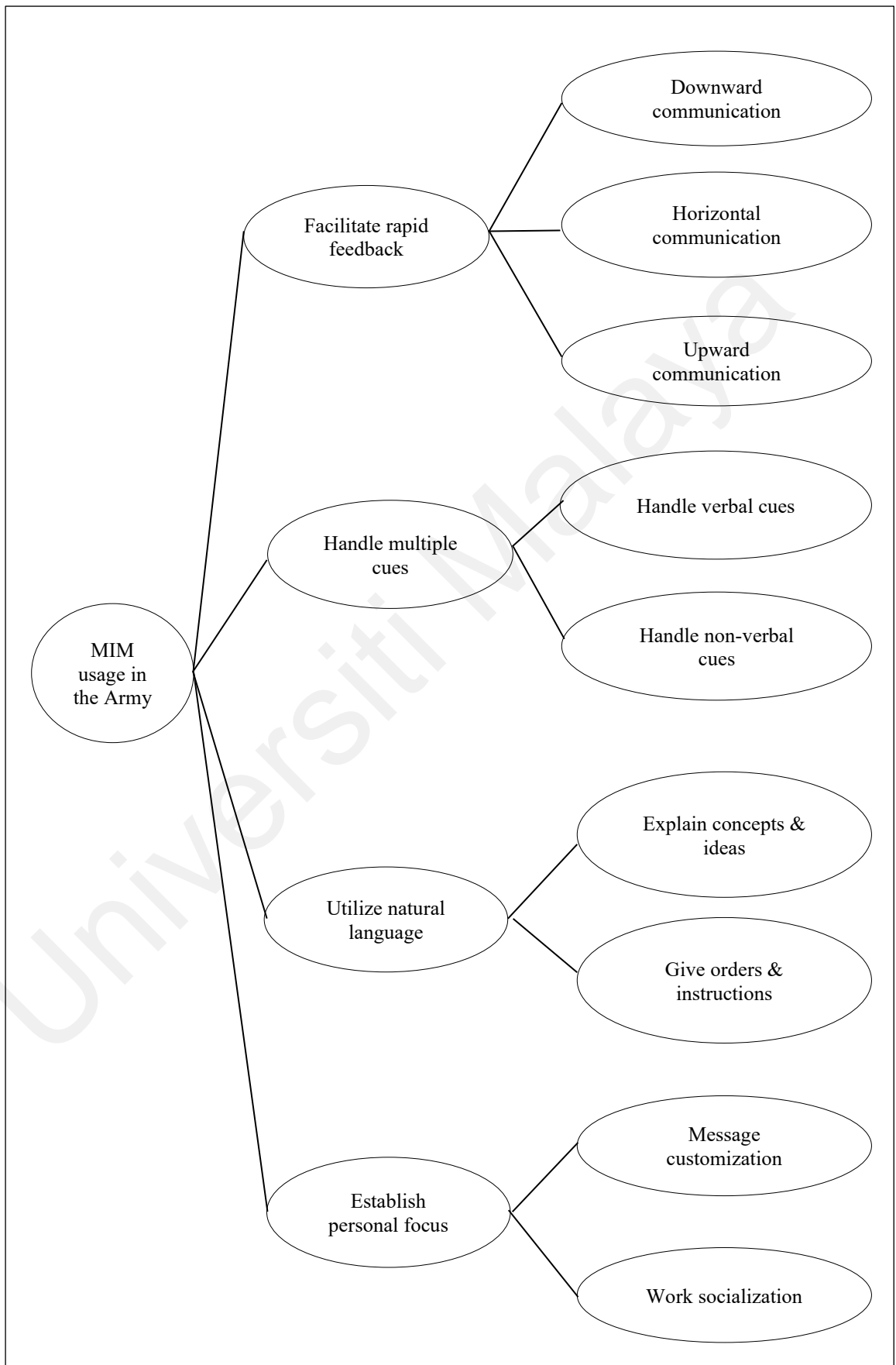
concepts. Pre-established concepts defined for this study are based on the theoretical lens. There are four pre-established concepts identified through the theoretical lens, namely facilitates rapid feedback, handles multiple cues, utilizes natural language, and establishes personal focus. These subsequently became themes.

Table 5 lists all the codes, basic themes and organizing themes generated from the coding process:

**Table 5: Themes generated from thematic analysis**

Codes	Basic themes	Organizing themes
<p>Instant superior-subordinate interaction, facilitates the immediate requirement</p> <p>Instant group interaction</p> <p>Allows questions, quick clarification</p>	<p>Downward communication</p> <p>Horizontal communication</p> <p>Upward communication</p>	<p>Facilitate rapid feedback</p>
<p>Use of text and visuals, use of audio/voices</p> <p>Use of gestures, use of emoticons &amp; symbols</p>	<p>Handles verbal cues</p> <p>Handles non-verbal cues</p>	<p>Handle multiple cues</p>
<p>Shares information, explains &amp; saves contents, shares thoughts</p> <p>The complexity of orders and instructions</p>	<p>Explains concepts &amp; ideas</p> <p>Gives orders &amp; instructions</p>	<p>Utilize natural language</p>
<p>Reporting requirements, restrictions on usage, the suitability of words &amp; language used</p> <p>Positive and negative work socialization (motivators and inhibitors)</p>	<p>Message customization</p> <p>Work socialization issues</p>	<p>Establish personal focus</p>

## 4.2 Findings



**Figure 4: General framework of findings**

Figure 4 shows the general framework of the findings collected from the study. The framework is based on the themes generated through the thematic analysis process. The themes were extracted from the interview transcripts that were collated into the organizing themes derived from the theoretical lens. The information collected is from across four different working environments in the Army activities, namely management, training, operational, and logistics. To better understand the findings and discussion sections, Table 6 shows some of the tasks of the informants related to the use of MIM communication.

**Table 6: Respondents' job tasks**

Respondents	Job tasks
Officer A (Training)	Senior Instructor – administers training activities, conducts meetings with instructors, plans and conducts indoor and outdoor training, sends reports to Commandant, monitors training progress
Officer B (Management)	Head of Administration and Services – leads admin department, manages human resources, coordinates unit activities, performs staff work, sends reports to superior and formations
Officer C (Management)	Staff Officer at Army IT Centre – administers ICT matters at Army level, manages ICT hardware and software, advises on ICT matters, administers top-level WhatsApp group
Officer D (Training)	Second in Command of the Armor Regiment – responsible for training matters at the regiment, plans and supervises training activities, delivers training instructions, sends reports to higher formations
Officer E (Training)	Chief Instructor – leads training activities, plans and conducts courses for students (soldiers) including outdoor training, coordinate activities, meeting with instructors, delivers instructions, sends reports to superior and higher formations

**Table 6, continued: Respondents' job tasks**

Respondents	Job tasks
Officer F (Operation)	Company Commander – commands at a company level, supervises personnel, delivers operational orders, coordinates activities, conducts operations, sends reports to the commander and higher formations
Officer G (Logistic)	Staff Officer for Technical (Procurement) – performs staff work for procurement at Logistic HQ, receives requirements from formations, coordinates procurement process, monitors work progress, reports to superior
Officer H (Management)	Staff Officer Human Resource Department – manages staff work for personnel matters, manages personnel information, manages directives on HR matters, sends reports to higher command
Officer I (Logistic)	Senior Ammunition Technical Officer – conducts ammunition management in Army, supervises ammunition establishment, organizes inspections, advises on the technical aspect
Officer J (Operation)	Staff Officer for Operation – senior staff officer at operation branch, manages directives and information on operational matters, coordinates meetings, communicates with commanders
Officer K (Operation)	Operational Officer – responsible for operational activities at infantry battalion, delivers orders, sends operational activities reports to the superior
Officer L (Logistic)	Head of Project Team (Infra) – responsible for infrastructure and construction work in the Army, monitors construction progress, manages reports, performs staff work on logistics

#### 4.2.1 Facilitate rapid feedback

In the dimension ‘facilitate rapid feedback’, three themes have been identified from the transcripts that are related to the communication direction in the organization. The organizing themes found were ‘downward communication’, ‘horizontal communication’, and ‘upward communication’. The related information from the text was collated into these themes and distributed in the form of tables below involving the four activities in the Army, namely management, training, operation, and logistics.

Table 7 shows a summary of the findings on the theme of ‘facilitates rapid feedback’.

**Table 7: Summary of findings for ‘facilitate rapid feedback’ theme**

Basic themes	Activities			
	Management	Training	Operation	Logistics
Downward communication	Commanders comfortably using MIM to communicate with their subordinates for quick feedback	Officers and instructors use MIM for instant interaction with subordinates. The instant interaction between instructor and trainees is difficult	Officers use MIM in the operational environment to communicate with subordinates where instant feedback can be acquired	MIM was mostly used in situations that demand quick feedback in a logistics environment, except in certain locations
	Effectively used in facilitating immediate requirement in daily routine works and activities	Less effective in facilitating immediate requirement involving instructors-trainees communication	Less effective in facilitating immediate requirement in handling operational tasks and duties	Effectively used in facilitating immediate requirement about work progress

**Table 7, continued: Summary of findings for ‘facilitate rapid feedback’ theme**

Basic themes	Activities			
	Management	Training	Operation	Logistics
Horizontal communication	Active group interaction due to immediate response capability. Instant sharing of information, facilitates the collection of working materials among staff	Instant group interaction through MIM in coordinating training-related tasks. Directly acquire quick information from intended persons	Instant workgroup interaction among soldiers for better coordination in operational activities	Effectively used for work coordination due to fast feedback and response in groups. Real-time work team interaction for better work coordination. Able to share feedback on work matters.
Upward communication	MIM allows quick responses and questions about work tasks and organization events from soldiers  MIM facing difficulty in facilitating quick clarification. Face-to-face interaction is preferred for clarification of tasks by soldiers	MIM is comfortably used where instructors in the group can ask questions to the intended officers  MIM facing difficulty in facilitating quick clarification by soldiers. Face-to-face communication is more appropriate and easier	MIM effectively used in decision-making since MIM allows instant questions by soldiers  MIM facing difficulty in providing quick clarification on messages and information shared. Face-to-face interaction is preferable	MIM allows questions from officers and staff to their superior for improvement of tasks.  MIM does not guarantee an understanding of logistic technical issues. Difficult to facilitate quick clarification during interaction

Downward communication is the interaction between superiors and subordinates and the flow of information starts from the top to down. In rapid feedback in downward communication, the study found that instant interaction from top to the lower hierarchy by using MIM communication happens in all activities. In management, commanders and officers at the higher formation are comfortable using MIM to communicate with their subordinates due to an ability to receive quick feedback. In training, officers can directly acquire information from intended persons by using the MIM channel. That is the reason why the staff at the higher formation use WhatsApp channels specifically for training discussion purposes among training staff instructors. It is easier for the staff to interact with the training officers at the unit level through the MIM channel and to share training-related information with them.

However, the study found that when it comes to interaction between instructors and trainees, it is difficult to acquire fast feedback due to the nature of training activities that disallow direct communication between training officers and their trainees. In training, the trainees are usually not in a position to handle mobile devices most of the time, only after training hours. They are without their mobile devices during activities such as shooting training, water training, and physical training. Even in the classroom, MIM use is minimal. In some situations, they may read the messages but will not reply.

In operation activities, officers and their subordinates actively use MIM where instant feedback can be acquired. Commanders usually communicate about their training situation and current activities with their subordinates and officers at the unit through MIM. The same happens in the logistics environment where MIM is effectively used by officers to communicate with their staff situations that demand quick feedback. This study found that in the establishment of logistics, several locations limit the use of MIM such

as ammunition building and airports. Quick feedback is sometimes difficult in these places and so, an instant reply will not be expected when MIM is used in this situation.

Meanwhile, downward communication also relates to immediate requirements from superiors that need to be fulfilled by subordinates through MIM. This study found that MIM is effective at facilitating the fulfillment of the immediate requirements in daily routine works and work progress in management and logistic activities. In management activities, due to frequent changes that take place in performing routine tasks, MIM is used to inform those involved of changes in daily work activities such as updating tasks, managing staff schedules, staff movement, staff gathering and dispersal of staff. MIM is widely used at most of the offices and administrative departments since these places permit the use of mobile communication and MIM by soldiers.

*“We use MIM to broadcast routine information of daily activities such as updating tasks and updating routine work instructions such as staff movement, staff gathering, staff dispersal, and changes in schedules, so any immediate requirement can be easily discussed.”* – Officer B, Head of Admin and Service Department.

Another activity where MIM is used effectively in situations that demand immediate feedback is in logistics. Here, interaction and quick feedback from staff are crucial in completing a work process. Feedback from subordinates in various locations of logistics establishments can be easily acquired using MIM. The nature of the logistics activities that demand fast response to ensure work continuity has created awareness by the soldiers on the importance of MIM usage. The staff in logistics are aware that urgent requests will be transmitted through MIM such as instructions to prepare lists, submit documents, and prepare simple reports, and they have no difficulty fulfilling these requests.



In the training and operation environments, MIM is less effective at transmitting immediate requirement to soldiers. In training, trainees face difficulty in response to these requirements if they were sent through MIM due to the nature of the relationship between instructors and trainees. Instructors especially officers need to use another person as a mediator to communicate with students from a lower-ranked soldier group. The mediator might be the head of department or senior ranks appointed as their supervisor in the training activities. The same situation happens in operational activities. MIM is not so effective if a requirement on operational matters sent through MIM requires immediate attention, especially if it involves soldiers on duty. Soldiers in both activities are aware that any immediate requirement should be sent through other channels such as telephone, radio communication, or DEMS (Defence Electronic Messaging System).

*“normally, as we practice recently, we do not directly communicate with the trainees. Usually communication until the senior ranks group, such as Sergeant and above, Staff Sergeant and Warrant Officer. So, they will inform what is our requirement to the soldiers, as mediator. But, if we still need to talk, we still do not go directly to the soldiers. If we use WhatsApp, communicate with senior ranks, or any head of the department, telling that we need to meet them.”* – Officer E, Chief Instructor.

In horizontal communication where messages flow at the same level, MIM is commonly used in group interactions. These group interactions promote better coordination and collaboration in all activities. With group chat feature in the MIM channel, discussions become interactive.

In the management activities, MIM is actively used in group interactions due to its immediate response capability. Group interactions through MIM assist staff in the collection of working materials such as administrative documents, copies of letters, and audio-visual. It is quicker than using other methods such as printed messages and

memorandum. Printed messages take some time to deliver and by the time they are received, they may no longer be timely.

In training, instant group interaction takes place through MIM in coordinating training-related tasks and activities. The application of WhatsApp groups for communication is widely practiced among officers, lower-ranked soldiers, and staff at training establishments and training headquarters. Information about training-related events can be easily disseminated using MIM groups. Exchange of training-related information can be done in real-time especially among instructors and they will discuss it in situ. The coordination of training activities has been conducted by using MIM such as the sharing of training events and information, training schedule, and training requirements for instructors and trainees.

In the operation activities, MIM channels are used as a social group medium among Army personnel, where instant interaction happens. Interactions among company commanders are conducted through WhatsApp channels for them to share information. At the directorate level, MIM channels such as Telegram have been used as media for formal interaction among heads of department and officers to talk on general operational matters. Discussion groups exist at the higher formation levels as well as at directorates, division troops, and among commanders of the regiment. Many inputs discussed in the groups have benefited decision-making.

In the logistics environment, MIM channels have proven beneficial for interaction within work teams where they produce better work coordination. Tasks that are completed at their respective workplaces are published in MIM channels and shared with other staff at different departments to facilitate continuity in work processes. Each work team can give feedback at every stage of the work. Each completed task will be reported through the MIM channel and will be acknowledged. The alertness of the work team members in

group discussions is important for work continuity. Instant interaction takes place between the staff who work at different locations in the Army logistics environment. These MIM group interactions facilitate the exchange of feedback among staff.

*“with the availability of instant messaging, we created groups. As an example, group IGFMAS user, technical group, specification group, and so on. Through instant messaging, after the groups were created, all the information will be quickly acquired. So, we will alert, we will ensure that we work fast. Because, if the information comes late, we will be late in the preparation of specification, the advertisement will be late..”* – Officer G, Staff Officer for Procurement.

In upward communication, MIM is used by soldiers or officers at the lower hierarchy to send instant information to the superior where messages flow from down to top. Two important feedbacks from subordinates to superiors found in this study are questions and clarifications. In all activities in the Army, questions are allowed to be asked instantly during the conversation.

In management, MIM channels allow for quick responses and questions from soldiers about work tasks and organization of events. The group discussion feature in MIM provides an opportunity for users to send messages or ask questions to the intended officer. In training, MIM allows officers to interact with the sender to get clearer information even beyond training hours. Users report being comfortable using MIM as all members in the group are free to give acknowledgement or ask questions. In training, MIM is comfortably used where instructors in a group can ask questions to intended officers on matters related to training activities.

In the operation environment, points of discussion are complemented by members of the group since questions are allowed in conversations. The discussion is effective in

decision-making processes since MIM enables two-way communication. This attribute makes MIM a user-friendly channel. Logistic staff can instantly share information and report completed tasks to their superiors. The Q&A that goes on in MIM channels among officers and staff contributes to the improvement of tasks and knowledge. In reporting work progress, the report shared through MIM and the question through the group discussion get immediate answers from the intended officers.

*“The things that we don’t understand, we can ask our officers including on immediate requirements.....and if we face a problem, the problems or doubt that we share, or raise, can be solved immediately.”* – Officer L, Head of Project Team.

In upward communication, MIM is not the easiest way for soldiers to get quick clarification from their superiors. In all four activities, the findings indicate that the MIM channel is cumbersome and ineffective for obtaining quick clarification. Clarification is crucial since conversations in MIM occasionally lead to misinterpretation due to its heavy reliance on plain text messages. The use of MIM to get fast clarification or explanation is not recommended by any of the respondents.

In management activities, even though the use of WhatsApp group discussion is common among soldiers, for better understanding during the communication process, face-to-face communication is preferred. Clarification through text messages leads to poor understanding and confusion. The inability of MIM to provide instant accurate interpretation is the reason why the channel has not been used for important discussions at the workplace. At the same time, the sharing of reports through WhatsApp groups will expose them to different interpretations especially to users from different backgrounds.

In communicating with superiors in a training environment, the use of face-to-face communication is more appropriate and easier for clear instructions. Personal interaction

guarantees delivery of true meaning. This is because the response from the receiver can be observed and quick clarification can be made. There are several training-related materials such as training pictures and training diagrams shared through MIM. Some pictures are inappropriate and sensitive to recipients such as accidents and private photos that are open to different interpretations. Non-military users give a different interpretation and sometimes it can be negative. In sharing important content, face-to-face interaction is preferable since it is difficult to give accurate interpretation through text.

In operation workplace, the inability of users to utilize MIM to provide quick clarification regarding viral messages is a setback. It is difficult for users to correct inaccurate information shared through MIM, especially once it has gone viral in the public sphere. It will be hard to control. Inappropriate spreading of information through MIM such as combat action photos and soldiers' activities can expose these materials to different interpretations especially when it is shared with people who have no business knowing about it. Negative interpretations lead to negative consequences including potentially harming national security.

In the logistics environment, technical discussions between staff, dependency units, and superiors usually will be conducted face-to-face. The finding reveals that MIM communication does not guarantee a better understanding of discussing technical matters on logistics. The use of MIM in sharing important information in logistics especially those related to technical specifications will lead to different interpretations. In MIM communication, the receiver's reaction cannot be observed and there is no way to tell if the information has been wrongly interpreted. It can affect assessment and decision making. The sharing of materials collected from unauthorized sources also has the possibility of being wrongly interpreted.

*“The disadvantage that we cannot deny, as I said, when the information spreads too fast, sometimes it is difficult for us to clarify or make authentication whether it is accurate or inaccurate information.”*

*“in the aspect of classified documents, that involve a high degree of secrecy. Very easy to spread. Take pictures, snap, just post through MIM, without thinking of the impact on the organization and the individual.....it involves the negative interpretation of the nation. This is the disadvantage of using instant messaging as I observed.”* – Officer J, Staff Officer for Operation.

#### **4.2.2 Handle multiple cues**

There are two basic themes in ‘handle multiple cues’, namely the capability of MIM to handle verbal cues and handle non-verbal cues. Verbal cues in communication include text, visual signs, and voice whereas non-verbal cues are gestures, facial expressions, and symbols that represent gestures and emotions such as emoticons or emojis.

In all activities, the verbal cues available in MIM have been widely used in communication such as text and visual. The audio-videos also available in the MIM application but it has been used for different purposes in all activities. The use of voice notes is very minimal. The same cannot be said however of non-verbal cues, it has seen limited use. Excerpts from the transcripts on the handling verbal and non-verbal cues are summarized in Table 8.

**Table 8: Summary of findings for ‘handle multiple cues’ theme**

Basic themes	Activities			
	Management	Training	Operation	Logistics
Handle verbal cues	<p>Mainly uses text to send information, occasionally uses a photo of text documents and pictures of events or activities</p> <p>Voice note is not advisable to be used during interaction</p>	<p>Mainly uses text and copy of documents including PDF documents, shares training related materials</p> <p>Video and voice notes sometimes used for communication</p>	<p>Mainly uses text and graphic information, rarely shares pictures of operational events</p> <p>Audio and videos are used to facilitate understanding of operational tasks</p>	<p>Mainly uses text and visuals together with text. Pictures shared as an enhancement to text for better understanding</p> <p>Audio and videos are used to share information from separate locations</p>
Handle non-verbal cues	<p>Gestures are important in getting the real feedback or opinion but are unavailable in MIM</p> <p>Emojis in MIM is not appropriate and shows a lack of professionalism in formal conversations</p>	<p>Gestures are important when discussing important things with superior or to deliver important content to subordinates, but are unavailable in MIM</p> <p>Emojis are unsuitable to be applied in official communication especially in a superior and subordinate relationship</p>	<p>Gestures are important when making crucial decisions and to see real feedback, but are unavailable in MIM</p> <p>Emojis are unsuitable in official occasions to represent emotion in the operational environment</p>	<p>Gestures are important when discussing important matters to avoid misunderstanding, but are unavailable in MIM</p> <p>Emojis are not recommended for use in formal settings such as when discussing work-related matters</p>

In all Army activities, officers and soldiers use MIM to send information mainly in text format. In the management environment, occasionally photos of text documents are used as material for communication such as minutes of a meeting, memorandum, or official military correspondences. This type of sharing is easier and faster than the traditional way of sending files such as through email or hard copy distribution. Voice message feature is available in WhatsApp and other MIM applications, but it is not recommended for use in administrative work as it looks unethical in a formal conversation for the military.

In the training environment, extensive use of MIM among users in training activities has a lot to do with its capability of transferring text and documents, including copies of letters in 'pdf' format. These documents are shared personally or circulated in the group chats. Instructors or students also share pictures of training activities but are limited to those that are not sensitive or classified. Video and voice features in MIM are used as additions to enrich text communication. Chat group members are also allowed to have discussions using voice.

In operation activities, MIM allows users to share instant information in the form of informative illustrations, graphics, or image form. The practice of using email to send documents or work materials has dropped in popularity. The users have a much more convenient alternative for sharing documents with fellow operational members. Additional to that, MIM is available and utilized to record audio and video for work use. Sharing of tutorial videos through WhatsApp facilitates officers and soldiers in executing their tasks in the operational area.

In logistics duty, the ability to share messages in text and non-text formats as well as in pictures is beneficial to logistical work as it facilitates communication among staff working in various locations. Pictures and videos shared as an enhancement to text,



promote better understanding, and can be used for future references including for work progress. The audio-video capability of MIM also brings benefits to users in the logistics environment where voice is used to share information with others in faraway locations.

*“no requirement to use email, he will forward it through WhatsApp, and until today, it is easier for me to read because I don't have to bring books. We always, 24 hours with a handphone. I can read and access it anytime”*

*“including pictures, presentation slides, videos that have been added, explain the way of doing tasks.”* – Officer K, Operation Officer

Non-verbal cues are what is missing from the communication medium other than face-to-face interaction. Nevertheless, MIM has since been upgraded and now includes symbols that represent some of the emotions and gestures of a user. In all Army activities, all respondents accept the importance of gestures as non-verbal cues in communication. They are in mutual agreement that MIM is incapable of presenting true expressions or feelings of a user in the communication process the way human gestures and body language do. At the same time, the use of non-verbal symbols such as emoticons and emojis in MIM is not recommended even though it is available, as it is considered too casual for formal work communication.

In management activities, MIM is not recommended when staff members are looking for an opinion from others. This is because the true reaction of users cannot be observed through plain text messages. The reliance on the text conversation in getting feedback or opinion will lead to misinterpretation and wrong judgement. Emojis and expression symbols available in MIM are not appropriate for formal occasions and show a lack of professionalism.

In training activities, the respondents describe that the use of text messages cannot indicate voice intonation to show levels of seriousness, especially if the message is a commander's thought to his subordinates. They agree that gestures and the voice intonations during the communication process are important and cannot be observed in MIM messages, thus the understanding of the receiver cannot be assured. Face-to-face interaction is still the best method to deliver important messages in the training environment. Emojis and symbols are, again, unsuitable to be applied in official communication especially for superior and subordinate relationships in the military.

MIM is inappropriate for important meetings or discussions relating to operational matters. These findings point to the use of face-to-face interaction for important discussions so that body language can be observed for better understanding. Facial expressions, body language, and gestures are carrying important meanings in the decision-making process in the operational area. The use of text alone does not promote real understanding or agreeableness of a topic. The use of emojis in MIM conversation is unsuitable for official occasions even though it can replace expression.

The use of MIM to share feedback or information will lead to misinterpretation at the Army logistics workplace. Feedback from superiors cannot be accurately understood since reactions and emotions cannot be observed. Misunderstanding of actual meaning and content will lead to a wrong assessment by superiors due to the absence of intonation in text. The use of MIM for detailed technical discussions on important matters also is not recommended. Some technical issues need proper explanation by the technician. The same goes for the use of emojis, also not recommended in formal conversations even though it can replace the facial expression in real communication.

*“When we ask for the opinion of any issue, sometimes receiver read, but silent. We cannot see his true reaction....*

*in words, we cannot assume that everybody accepted, and the response is the same. As an example, people typed ‘do I care’. Some people thinking that it is a joke. Some people ask, why he get angry? So, it is not suitable to be used.....*

*also, inappropriate to put emojis when we discuss work, it looks unprofessional.” –*

Officer H, Staff Officer, Human Resources Department.

#### **4.2.3 Utilize natural language**

In the theme of ‘utilize natural language’, this study found two important basic themes extracted from the respondents’ views. The basic themes found are ‘explains concept and ideas’ and ‘gives orders and instructions.’ Natural language is the language commonly used by the user that is available on the channel. The languages also are understandable by the common users in the organization. The Army utilizes natural language in MIM mainly for these two purposes. The summary of the findings in this theme is shown in Table 9.

**Table 9: Summary of findings for ‘utilize natural language’ theme**

Basic themes	Activities			
	Management	Training	Operation	Logistics
Explains concepts and ideas	Capable of explaining and saving content, especially brief and simple information in a preferred language	Capable of explaining and saving content such as the thoughts and training information in a preferred language	Capable of explaining and saving content such as operational directives and information in a preferred language	Capable of explaining and saving content including directives, information, and feedback
Gives orders and instructions	Capable of delivering short and simple administrative instructions	Capable of delivering simple and short instructions related to training. Detailed instructions require the use of official channel	Capable of delivering short and simple orders. Detailed orders require the use of an official medium	Capable of delivering short and simple instructions on logistics works for work progress

Generally, in all activities, MIM is used for explaining and sharing concepts and ideas at the workplace. It is because it accommodates the user’s preferred language. MIM is suitable for use if the user needs to explain concepts and ideas in common languages such as Bahasa Malaysia and English. MIM application also allows ideas to be kept and saved for future references.

In Army management activities, MIM is usually used to share brief and simple explanations in the user’s preferred language. MIM is used to share informative materials, brief information, and internal circulations for work purposes. However, detailed administrative content such as official reports, meeting notes, and briefing notes are not

to be transmitted through MIM. These items require proper formal correspondences which, in the military's case, are letters, minutes of meeting, and formal briefs presented as hard copy documents.

In training activities, MIM is the medium of choice for sharing thoughts and training materials among instructors. The channel affords the use of common languages such as Bahasa Malaysia or English. The simplicity of the language used, and the availability of group discussion feature make the sharing of thoughts among instructors easier. Concepts and ideas can be explained in a language that the receiver understands. Understanding the commander's thoughts and the instructor's instructions in the training is crucial to training success. Materials or information shared through MIM such as the training materials and visual information usually is saved for future references.

This is also applicable in operation, where MIM is used to share operational information and directives from the higher formation. Sharing through MIM is much more convenient compared to traditional methods of distributing directives such as printed documents through the filing system. MIM is also used in logistics to share information and directives from higher formation or authorities, as well as feedback from important discussions and meetings. Updates on procurement and logistics can also be done through a MIM channel. Whether through direct messages or group discussions, the exchange of information through this channel is faster since the language used is common and understandable. Content could be in the form of words, visuals, and audio that can be easily viewed to afford a better understanding of the message among officers and soldiers.

*“There are instructors that sharing their thoughts, and when they have something to discuss, the use of casual and understandable language, they will share a good opinion and sharing their experience. If they are in the WhatsApp group, everybody will get the benefits from the shared points” – Officer A, Senior Instructor*

The respondents in this study all explained that in using MIM to give orders and instructions, the complexity of said orders and instructions matters. In general, in all activities, the use of MIM to give detailed orders or instructions is not encouraged. The detailed orders usually explain the complete arrangements of any activities to be conducted together with the diagrams and tasking tables. The MIM channel will be used only for simple instructions or the orders preferably be delivered through another channel.

In the management environment, to assure smooth execution of instructions, officers need to conduct face-to-face interaction with soldiers. The use of MIM will not guarantee instructions will be received with full understanding or free from any doubt. Therefore, orders or instructions for training can only be sent to soldiers through the use of MIM if they are simple and easy. Success in training hinges on the trainees' understanding of orders and instructions through language that can be understood. Having said that, the delivery of orders and instructions through WhatsApp is inappropriate due to the informality of the language used.

The use of MIM such as WhatsApp in delivering daily working orders to soldiers is not encouraged in the operational environment. Ultimately, the Army still applies the traditional way of giving orders, that is by using 'Daily Orders' pasted on notice boards at offices. All the instructions about daily work routines are shared via 'Daily Orders'. Not only is this part of the practice to preserve the military's value system at the unit level, but it is also because the casual language in MIM is inappropriate for orders and instruction delivery. Orders only can be given using proper words and language especially when it involves communicating with seniors and superiors.

Meanwhile, in logistics activities, the use of MIM is suitable for giving simple orders and instructions to soldiers at the lower level. The only concern is when instructions sent through the MIM channel are inaccurate and unclear in terms of the terminology used and

if it involves figures and numbers. There is a possibility that the instructions will not be well implemented by the staff or soldiers. This will negatively affect work progress in the logistics environment.

*“to ensure the smoothness in the execution of instructions, officers still use face-to-face interaction or directly talk to the soldiers, so that the information or instructions received to them as required, without any doubt.”*

*“giving detail instruction through text in the WhatsApp is not suitable, better face-to-face to avoid misunderstandings”* – Officer B, Head of Admin and Services.

#### **4.2.4 Establish personal focus**

In the dimension ‘establish personal focus’ in the use of MIM in the Army organizational communication, there are two important basic themes that were deduced from the interview transcripts. The establishment of the personal focus when using MIM at the Army workplace is influenced by two elements, namely ‘message customization’ and ‘work socialization issues’.

The findings on the ‘establish personal focus’ theme in using MIM are summarized in Table 10.

**Table 10: Summary of findings for ‘establish personal focus’ theme**

Basic themes	Activity			
	Management	Training	Operation	Logistics
Message customization	Shares only initial and short administrative reports, unsuitable for detailed reports. Use personal message for confidential information	Not to share training reports, the only initial reports related to training administration. No sharing of confidential information	Share the initial report but must be followed by using the official channel. Apply camouflage of confidential information	Share initial progress reports, the official report still requires official channel. Military form not applicable
	Avoid sharing classified information, sensitive content and uncertain issues	Avoid sharing classified information related to military training	Avoid sharing of classified information related to operational activities	Avoid sharing classified information and technical data
	Use short and simple text with proper language. Avoid the use of casual words when communicating with different ranks	Use simple language for better understanding. Appropriate use of language for formality	Use proper words and structured writing for better understanding	Use proper words and structured content for better understanding. Avoid mistakes and ensure accuracy of technical information



**Table 10, continued: Summary of findings for ‘establish personal focus’ theme**

Basic themes	Activity			
	Management	Training	Operation	Logistics
Work socialization	Motivated through social interaction among officers and admin staff. Bonding with military values	Motivated through social interaction among instructors and training staff. Bonding with military values	Motivated through social interaction among officers and commanders. Bonding with military values	Motivated through social interaction among staff and work teams. Bonding with military values
	Distracted due to uncontrolled MIM usage at the workplace	Distracted due to uncontrolled MIM usage during training activities	Distracted due to uncontrolled MIM usage at operational area	Distracted due to uncontrolled MIM usage at the workplace.

In customization of the message, this study found that MIM users in the Army focus on several aspects and situations before sending messages for work purposes. One of the considerations of customization of messages is in the reporting requirements if the message needs to send through MIM, restrictions imposed by the organization, and suitability of words and language used in the conversation. All three elements affect the focus of Army personnel when using MIM for communication at work and they are also the needs and requirements at the Army workplace.

In general, all Army activities allow the use of MIM channels for reporting purposes since reports are important mechanisms to present work outcomes from subordinates to their superiors. This study found that the reporting requirements for submission through MIM will affect the personal focus of the user through the customization of a message. The common practice in all activities is to use MIM to disseminate an initial report before

a detailed official report is sent through an official channel which in the case of the military are printed copies or as an attachment in DEMS.

In management activities, the administrative and incidents report from units or formation headquarters can be immediately sent to superiors at the Army Headquarters including to the Chief of Army through the MIM channel. However, confidential reports must be transmitted using personal messages, not in discussion groups. This is because there is a risk of confidential information leakage through MIM communication if it is communicated openly in groups. Furthermore, reports sent through MIM are only the initial reports and subsequently, the more detailed reports will be delivered through official media such as printed reports or official correspondences. Examples of initial reports in management that were sent through MIM are incident reports, personnel reports, and event arrangement reports.

A MIM channel such as WhatsApp is used to share administrative content related to training activities such as the welfare information of the trainees such as deaths or sickness reports. These brief reports are shared with members of the organization but not the detailed reports. MIM is used to provide initial information on incidents that took place during training activities directly to the staff at the higher formations as initial reports. This will be followed by a detailed report properly submitted through the official channel.

According to the respondents in training activity, it is more appropriate if the sender provides an initial brief report to the superior through phone conversation before the actual report is sent through the MIM channel. This is due to the nature of the training environment where officers and soldiers are not always with their mobile phones most of the time. The information is delivered through MIM to the superior at the headquarters when the officer is available again on mobile Internet communication.

In the operation environment, it is common for operation situational reports to be sent directly to operation commanders using WhatsApp. Concurrently, reports are also sent through the official communication channel, the cryptography, or DEMS. If an accident or unwelcome situation happens in an operation area, the report sent through WhatsApp will be useful especially in situations of the military radio network not being available. Initial reports that we send through MIM is followed by official reports using the official signal network for operation.

To protect confidentiality, some information in the text is camouflaged by changing some words that can only be understood by the intended recipient for security reasons. Words camouflaging is one of the techniques to protect secret information in the military. In this case, the intended format is set by the higher formation for the standardization of information. Official correspondences such as memorandum are recommended for reporting purposes instead of the MIM channel.

A MIM channel such as WhatsApp is beneficial in situations where the superior cannot be contacted by a phone call or face-to-face, as revealed by the logistics officers. On a few occasions, the staff needed to send urgent reports to their immediate superior about the information they had received from a higher formation or other sources. The superior in logistics preferred to receive feedback from their officers through the MIM channel. In this situation, WhatsApp provides the best medium for initial reports delivery, but it needs to be followed by official reports in the form of official correspondences.

Real-time work progress and issues arising at worksites are reported to the headquarters and other related officers through the MIM channel. However, confidential information such as the states of operation elements and troop readiness should not be included in reports sent through MIM. Detailed information about readiness can only be transmitted through secure channels. Official correspondences such as written briefs and

memorandum need to be preserved and should be given priority as the main channel to be used as suggested by the respondents. MIM is only suitable for sending initial information following the format outlined by the headquarters.

One method of reporting is by using military forms, which can be transmitted using MIM. A military form is a document usually used for reporting purposes. However, it cannot be amended or marked through MIM and therefore its usage is not recommended.

*“Usually, the practice in this headquarters is to give early information. For the early action of the staff. Later, it will be followed by black and white, either using a written message or letter.”*

*“Usually, we share the framework. Before they submit to us following the required format...”*

*The unsuitability, when we share the military forms. Meaning that the filled forms can't be amended and can't be remarked”* – Officer I, Senior Ammunition Technical Officer

Users focus on using the MIM channel at the workplace is also affected by the restrictions that they need to follow during the communication. In all Army activities, the important rules that need to be adhered to by military personnel are the restrictions imposed on them regarding the use of Internet communication at the workplace. Even though the directives did not specifically focus on the MIM channel, in general, MIM is one of the applications referred to in the instruction since it uses Internet connectivity. Cases of classified information leakage happen in all Army activities.

In management activities, officers understand the restrictions on the use of Internet communication for organizational communication, namely exposure of confidential

information, sharing of sensitive content, and spreading of unverified issues related to the service as well as spreading of important meetings or discussions conducted at strategic levels. They are all in agreement that the practice should be avoided since it will affect or tarnish the image and reputation of the Malaysian Armed Forces. This restriction has been taken seriously since leaked information can spread quickly through MIM and will be difficult to control.

Administrators in MIM discussion groups must keep reminding group members about information security since there have been reports received by the headquarters on the misuse of MIM among military personnel. There have been cases of MIM being used to share classified information such as confidential letters, that were posted and uploaded in the groups and leaked to other parties. In the management office, the staff frequently processes information on operational matters such as location, movement, and actions of the soldiers. The respondents agree that it cannot be shared in MIM conversations so as not to jeopardize national security.

In the training environment, users are not encouraged to share directives or training information categorized as classified documents through MIM channels. The respondents agreed that it should be excluded from MIM conversations to prevent the possibility of information leakage. The items that should not be shared include letters containing secret information, information about the strength of a unit, weapon capability and readiness of assets, and sensitive or confidential information about personnel. All officers are aware that the Malaysian Army has issued directives reminding Army personnel not to share classified information through MIM since it is associated with a threat to military service and national security.

However, due to a need to be fast and quick in sharing information, the MIM channel is sometimes used without much restriction and the users do not realize the indirect impact

of information leakage to the organization and the nation's security at the strategic level. At the workplace, the rule has not been successfully imposed on soldiers due to situations that require them to be fast in delivering information and low awareness on issues of information security.

The directives warn personnel regarding cybersecurity threats circulating in the operational environment and guide on sharing classified information through the Internet. The spread of classified information about operations through MIM is strictly prohibited, as revealed by the respondents. The military service prohibits the use of an open Internet medium to share confidential operational information. However, the MIM medium can be utilized in sharing routine information that will not jeopardize the conduct of a military operation.

The respondents in the operation environment stressed that it is the officers' accountability to monitor the soldiers' behavior to prevent disclosure of classified information through Internet communication, such as through MIM communication. Irresponsible soldiers will snap photos of, for example, documents at operation areas and post them on MIM channels with little regard for the negative impact their behavior might bring to the organization and specifically to them as military personnel. The sharing of confidential information not only affects the security of the military forces but also brings a negative image to the nation. There is a possibility that information disclosure in terms of military operational scenes, equipment, signal information, and other related information can be used or exploited by other parties.

In logistics, sharing of information related to operational activities through Internet communication is prohibited. Reports containing information about the readiness status of the forces must be submitted through a secure email. However, there have been cases where logistics staff used open MIM conversations to deliver such confidential

information. This breach happened due to immediate requirements by the superior and work demand as mentioned earlier. As a soldier, they had no choice but to follow orders from their superiors as part of their duty at the workplace.

In logistics, tasks related to ammunition and explosives are considered confidential and must not be freely shared. There is always a possibility that the information will be leaked to unauthorized parties. Disclosure of information on ammunition and explosives in groups where persons such as non-ammunition technicians are present will expose the information to manipulation. Furthermore, the respondents stressed that soldiers should avoid discussing strategic locations, ammunition storage, quantity, condition of ammunition, and related information through MIM communication. In the ammunition organization, distribution and delivery of any information related to storage, location, personnel, ammunition's condition, and quantity should be handled by hand and not through MIM communication.

The most shared items are information about routine activities categorized as unclassified information for the knowledge of members of the organization. The rules also apply to the Armed Forces construction works especially construction at strategic locations or military bases. The officers stressed that information about sensitive matters on work progress should not be shared publicly or with people other than the stakeholders. This instruction must be complied not only by Army officers and soldiers but also by civilian workers and other stakeholders.

*“about the sharing of the documents and information related to operation. We, if possible, not encourage the sharing in the instant messaging. As an example, the statement on weapons holding, troops readiness, should not be included in the instant messaging.”*

*“even though the guidelines have been published by higher formation, but there is a situation it not been followed. It was not because of disobedience, but sometimes at the higher level, the autocratic. Boss is always right. In the military, all need quickly.”* – Officer G, Staff Officer for Procurement

Excerpts from the transcripts indicate the importance of using suitable words and language for communication. In general, according to the respondents in the management and training activities, short and simple language is preferred in MIM communication. It is different however in operations and logistics, where there is an emphasis on using proper words and properly structured writing.

In management activities, MIM messages are written in short and simple language but proper words still need to be used to ensure the message gets across. Officers and soldiers are not interested to respond to long text messages. The use of convoluted writing is unreasonable and will have difficulty getting feedback. At the same time, the interaction between Army personnel and their superiors requires the use of proper language and positive manners. Military personnel needs to be mindful of their words in group communication involving management and officers from different ranks. Respect needs to be accorded throughout the conversation.

The use of simple and easily understood writing is encouraged in communicating training matters. In addition to that, the appropriate usage of language matters when communicating with higher-ranked officers. Even in lower hierarchy groups involving soldiers of lower ranks where the language is more casual, simplicity is still the best option. Training officers emphasize the use of manual and formal modes of communication rather than relying on MIM for communication. Formality is still a big consideration in the training environment. MIM is only an alternative for sending information faster in casual language, but it is not a replacement.



In the operation environment, the use of proper words and language is encouraged in communication with superiors. However, casual language is permitted in interaction with peers and subordinates. As agreed by the respondents, because of the casual nature of MIM, an overuse of MIM communication has resulted in a lack of seriousness among Army personnel of the same rank in performing their duties. The situation is deteriorating at the workplace. In communicating with superiors in the organization, officers and soldiers need to use appropriate language and the right selection of words.

Similarly, at the logistics workplace, there is an emphasis on using proper words, language and content, and well-structured writing in interaction with superiors. In communication with fellow personnel at the same hierarchical level, the language used is more casual. One of the problems that were raised regarding MIM usage at the logistics workplace is mistakes in message writing due to the user taking it as only an informal medium. Such mistakes are reflected in inaccuracies in subsequent decision-making processes. Logistics does not place much concern on the ethics of writing text messages and soldiers occasionally ignore simple writing rules such as capital letters.

*“if the information needed directly by our superior, maybe it should be one-to-one, personal. Then, we should give in simple language, but with content and structure....”*

*“When we communicate with peers at the workplace, at the same level, the language used is casual, more towards the sharing of information.”*

*“in the ethical way of writing, in the use of language, do not concern on the grammar, small letters, capital letters, because as we realize, the way MIM is used is casual”*

– Officer L, Head of Project Team.

MIM users in the Army focus on their use of MIM at the workplace since the channel provides an avenue for social interaction. This social interaction happens at every level of the organization. Work socialization is important as part of personal focus consideration since the emotions and feelings felt as a result of these interactions are important in fostering good working relationships. Work socialization issues that influence the focus of MIM users in the Army environment can be divided into two categories: positive work socialization that motivates Army personnel and negative socialization that distracts and disturbs the work focus.

*MIM also used to share social information and more towards interaction among staff for a better working relationship – Officer C, Staff Officer, Army IT Centre*

In all activities in the Army, aside from for work, MIM is used for social bonding at the workplace. In management activities, administrative officers and staff use MIM as a social medium to help them perform work tasks. Social interaction among instructors in the training environment is bolstered through MIM usage as it is easier to share thoughts and opinions related to training. The commanders and officers in the operation activities also use MIM group discussions as a social medium. In the logistic activities, MIM is also used for bonding between superiors, logistics staff, and among the work teams so that they can easily share information and feedback related to work.

Socializing at work contributes to the focus of Army personnel through the enjoyment, happiness as well as frustration and distraction when they are communicating with MIM at their workplace. In the context of the Army, most respondents agree that social bonding between military personnel is compatible with the military values, the system that the Army uses as a code of conduct in daily life that includes respect, honor, integrity, loyalty and putting the interest of the Army and the nation first.

Having said that, work socialization through MIM also has its negative sides, as found in this study. There are workplace issues that indicate the focus of personnel is sometimes affected when using MIM in their workplace communication. In all activities, distraction is a recurring theme raised by the respondents. In the Army management activities, the distraction at work is one of the drawbacks of using MIM. When attempting to complete office tasks, administrative activities, or coordination of events, the personnel's focus sometimes goes elsewhere when there is active MIM use for work communication.

Instead of work, the staff focuses more on their mobile phones monitoring conversations on MIM that they feel are also important things to be done. Discussions on important matters conducted through MIM have tendencies to drag on for a long time with every participant of the conversation wanting to share their thoughts and opinions. According to the respondents, important discussions should never be conducted through MIM. They recommended a face-to-face meeting instead.

Distraction is an issue in the Army training environment too. The overuse of MIM has caused low levels of seriousness in performing tasks in training activities. Training gets interrupted when instructors and trainees are too engrossed with their smartphones. Some of the training activities in the Army require the soldier to put their full attention on the module. When there is too much reliance on technology, when everything requires users to check their smartphones, instructors and trainees lose their original training focus.

The respondents in the operation activities also discovered some officers and soldiers used group discussions on WhatsApp to discuss matters of leisure. This behavior distracts them from the original intent of the creation of the group, which was to discuss important work matters. They end up spending their time frequently checking for incoming messages. The constant chatter indirectly creates an extra burden on other officers and soldiers at the workplace as they too need to frequently check their messages in case some

contain work-related matters. Distraction from tasks also happens when soldiers use the Internet including MIM application during working hours. This is why the use of smartphones is prohibited during operational duties such as guarding strategic places and patrolling. It is to prevent leakage of confidential information.

In logistics, concerns have been raised regarding distracted work focus when officers and staff use many types of devices for work. Even though they have their desktop or notebook for work purposes, they still rely on their smartphones to obtain information and updates via MIM use. At the same time, smartphones also contain other social media applications that further contribute to distracting the user at the workplace. The situation is impossible to be avoided by officers or staff since MIM is used intensively in the organization. Therefore, officers and soldiers need to be constantly alert on the communication in the discussion groups. Sometimes their focus may get deviated to other matters. This happens and cannot be avoided.

*“when we conduct an operation at the places with high-security protection, as for an example, my battalion had been ordered to safeguard the house of Chief of Defence Forces. So, the soldiers should not use instant messaging to take a photo, during operation or taking photos during patrolling, and so on. The information if shared through MIM indirectly exposes the house of Chief of Defence Forces to the virtual world.”* – Officer K, Operational Officer.

## **4.3 Discussion**

### **4.3.1 Facilitating rapid feedback**

In the dimension of ‘facilitate rapid feedback’, the usefulness and suitability of the MIM channel in the Army working environment are applied in three areas that are categorized according to the flow of communication, namely downward, horizontal and upward communication. Lunenburg (2010) states that the ideal situation of communication occurs when the communication travels in both directions wherever it is downward, horizontal, or upward. In the case of the Army, MIM communication is allowed to flow in all directions and this is the ideal situation for communication.

In downward communication, the study found that MIM enables Army commanders and officers at a higher level across all activities to obtain quick feedback when communicating with their subordinates. This ability is important in all activities where the commanders, officers, and instructors constantly interact with subordinates to assist in carrying out tasks and delivering the requirement of the organization. The findings are supported by Canary (2011) when he suggests that the superior-subordinate relationship is crucial for an organization’s success. Good communication between superior and subordinate in any activity helps an organization to achieve its objective.

However, there are limitations in the training activities where instructors face difficulty getting quick feedback from trainees if MIM is used. Meanwhile, in the logistics environment, difficulty in getting feedback happens if subordinates use MIM at certain logistics establishments that restrict the use of mobile Internet communication for safety reasons, such as ammunition building and other restricted areas. In this situation, the use of other modes of communication such as face-to-face interaction and memorandum are more appropriate.

The findings also suggest that MIM is effectively used in managing immediate requirements in management and logistics activities in the Army. The tasks in the management activities deal with frequent changes and this is handled effectively through instant communication offered by MIM. In the logistics work environment, some situations demand immediate feedback from officers or soldiers such as reporting on work progress. A highly capable medium such as MIM is required in this situation to provide an instant response in both directions.

Due to the nature of work in training and operation activities where soldiers are not in a position to use mobile communication most of the time, immediate requirements cannot be entertained through the use of MIM and the role of MIM in facilitating immediate feedback in training and operation is less significant. In the Army training environment, the nature of the instructors-trainees relationship does not encourage MIM technology to be used effectively in situations that demand immediate action. There is a gap in the relationship between instructors and their students in the military that leads to the ignorance of an unofficial medium such as MIM. In carrying out duties at the operation area, the use of mobile communication to quickly respond to or entertain requirements is limited.

In situations of instructor-trainee relationships and contacting soldiers during operational duties, Canary (2011) mentions that downward communication in the organization usually is formal, the same as in the Army organizational structure. That is the reason for the difficulty faced in these two activities. MIM is regarded as unofficial communication and in some situations, soldiers assume they have no responsibility to quickly respond to messages. After all, they are in a situation that prohibits the use of mobile Internet communication.

In horizontal communication, this study found that MIM is actively used in group interactions at the workplace since the Army personnel can easily reach their colleagues instantaneously. Instant interaction between officers and soldiers helps in the coordination of activities, collection of work materials, the collaboration of tasks, and sharing of feedback on work matters. This capability is important in all activities and is successfully utilized by the Army personnel. Group discussions are established at various levels in the Army to facilitate communication and interaction. Interaction and collaboration among work teams are also effectively implemented especially in monitoring work progress.

The findings of this study corroborate a study by Cameron & Webster (2005) that says employees use instant messaging as an additional means to reach other members of an organization in real-time. The way Army personnel communicate and collaborate in organizations has changed where they prefer to work using their devices while the use of face-to-face interaction has diminished (King & Lee, 2016). The same situation is taking place in the Army where interactions among officers and soldiers are now facilitated through the advantage of instant feedback capability and virtual group interaction at the workplace.

The collaboration and coordination of tasks in the Army have been made much easier through the use of MIM group communication. This is similar to the findings by King & Lee (2016) who state that collaboration of the workforce is crucial in any organization and developed through effective two-way interaction. The complex tasks such as in the logistics environment given to work teams require more efficient communication and knowledge sharing to facilitate problem-solving (Ou et al., 2010). Collaboration among work teams also becomes easier when the officers and soldiers having alternatives in conducting online interaction (Tang & Bradshaw, 2020). MIM is considered an efficient

communication channel in this context since it enables instant feedback in group settings and assists in the completion of complex tasks as proven in the logistics environment.

In the Army organization, chat groups also exist as part of the interaction that is facilitated through the rapid feedback capability of MIM. The findings of this study are similar to those of Kenyon (2004) who suggest that temporary group discussions in MIM are an advantage that should be exploited by users for effective communication. Army personnel also can use MIM as a valuable source of work materials similar to findings by Gritsenko (2016) who says online group discussions can be utilized as valuable sources of information in an organization. The Army should take advantage of the instant connection characteristic of MIM to ensure a smoother collaborative process among team members as recommended by Ou et al. (2010). It is also supported by Tang & Hew (2020) that discussion forum in the MIM affords more interesting group discussion.

In upward communication, this study found that interaction through MIM in all activities is made possible by the capability of MIM to allow questions to be asked instantly during an interaction. MIM channels allow open responses and questions about work tasks such as details about meetings, visits, interviews, movements, and administrative activities. Inquiries from subordinates about work tasks, training arrangements, operational activities, and work progress can be instantly delivered through MIM and helpful in decision-making.

The findings are similar to those by Trevino et al. (1987) who in his earlier concept of media richness states that the richer medium should allow questions to be asked and corrections to be made instantly. However, this study found that quick clarification cannot be accommodated through the MIM channel in all activities. Even though it is effective in facilitating immediate feedback in management and logistics activities, MIM is difficult to use in situations where quick clarification is required, and this is observed in



all activities in the Army workplace. Clarification through MIM is not always helpful in creating better understanding and clearing doubts especially when the discussion involves technical issues and detailed information.

The findings are at odds with the study by Kahai & Cooper (2003) who specifies that rich media, which can facilitate rapid feedback, should also have an ability to provide clarification of messages during the conversation. As found in this study, clarification of messages is difficult to attain even though MIM successfully facilitates rapid feedback. In this situation, commanders and officers need to decide on the best medium to be used for quick clarification purposes to overcome equivocality issues during the conversation as suggested by Sheer & Chen (2016). Even though Kaihko (2020) suggests that modern military personnel are preferred to chat online in their daily communication, but the study shows that it led to difficulty in the situation of clarification requirements.

From the above discussion, the results on the richness of MIM in facilitating rapid feedback in the Army were mixed. In general, all the above findings support what has been found earlier by Lee et al. (2009), that a medium is considered rich when the user is equipped with an ability to immediately respond to the messages that they receive. Using the above argument, we can say that MIM is a suitable medium in facilitating rapid feedback in the Army environment with certain limitations.

MIM provides the best medium for effective two-way communication, and as suggested by Keyton et al. (2013), the organization needs to take various actions to improve communication through participative communication. The use of the MIM channel among commanders, officers, and soldiers benefits them such that they can stay connected and actively respond to each other as suggested by Sheer & Rice (2017). Taking advantage of development in mobile technology, smartphones, and small portable

devices, Army personnel can conveniently use MIM in flexible arrangements, which is similarly found by Fujimoto et al. (2016).

The findings show that the use of MIM in the Army environment will facilitate instant feedback during the communication process even though in a superior-subordinate relationship situation in training and operation, quick feedback is hard to attain. In the military setting, the superior-subordinate relationship is not only formal but also bound by military values embedded within the military working environment such as respect, loyalty, selfless service, and integrity. The difficulty of MIM interaction between instructors-trainees and commanders-soldiers in situations of immediate requirement could be handled by using other modes of communication. The Army could use another channel such as face-to-face meetings to increase richness in communication.

In the context of rapid feedback capability, the Army channel could be used to communicate routine and casual work-related information either in a downward, horizontal, and upward flow of communication. MIM should not be used for important discussions where clarification might be raised by soldiers. The only appropriate channels for important discussions and urgent requirements are physical meetings and face-to-face interaction. Presenting administrative, training, operational, and logistics reports through the MIM channel will only open things to a variety of interpretations and should be avoided. As a result, MIM cannot be considered rich since it is not always suitable in facilitating rapid feedback (Kahai & Cooper, 2003).

The usefulness and practicality of MIM in facilitating rapid feedback in all the activities are summarized in Table 11 below.

**Table 11: Suitability of MIM usage in ‘facilitating rapid feedback’**

Usage context	Suitability of Usage			
	Management	Training	Operation	Logistics
Quick feedback	Suitable	Suitable	Suitable	Suitable
Immediate requirement	Suitable	Unsuitable	Unsuitable	Suitable
Work collaboration	Suitable	Suitable	Suitable	Suitable
Allowing questions	Suitable	Suitable	Suitable	Suitable
Quick clarification	Unsuitable	Unsuitable	Unsuitable	Unsuitable

#### **4.3.2 Handling multiple cues**

The ability of MIM to handle multiple cues in the Army working environment will be discussed in two areas, namely the ability to ‘handle verbal cues’ and the ability to ‘handle non-verbal cues’. This study found that MIM is capable of handling verbal cues across all activities in the Army. The findings suggest that all activities in the Army benefit from MIM use through the exploitation of available verbal signs. Text and visual signs are extensively used in MIM communication at every stage of command in the Army. MIM communication is mostly conducted using text format. In many situations, users in the Army apply visual signs as an enhancement to text conversation. In this context, the MIM channel is used to great effect in carrying verbal signs in the Army activities since it improves interpersonal interactions.

This study revealed that voice notes and videos are utilized in all activities but are not necessarily useful in all situations. Even though voice message feature is available in the MIM application, it is not recommended for use in military settings such as administrative work, during training activities, at the operation theatre, and in logistics work. The use of

voice messages looks unethical in a formal conversation especially between different ranks in the military. Voice sign is preferable only when it is applied in video form, not a single voice communication. In training, the video feature in MIM is used as an additional medium to facilitate the trainee's understanding.

The practicality of voice application was not assessed in this study since the practice is not encouraged during the conversation. In some instances, MIM is used to record audio and video for work to enhance user understanding especially soldiers working in separate locations. The communication is almost like a phone conversation with additional features that provide other advantages: since the conversation is recorded, the reply can be delayed while coming up with a better response. Eventually, conversations using voice notes become more natural compared to writing text with the ability to convey emotions or meanings through the voice intonation. Besides, voice notes will be helpful when text writing is difficult.

However, not all situations permit the use of voice notes in MIM especially in the military environment with all its rules. The use of voice notes is not suitable for conversations between superior and subordinates since the relationship is bound by the 'respect' value and voice notes are considered poor etiquette in such communication. Voice notes also need to be transcribed into text for them to be kept as meaningful material for future reference. If it is only recorded in the voice format, it cannot be presented as a valuable form of working material.

These findings on verbal cues are similar to findings by Aharony & Gazit (2016) that suggest more people use text-based communication rather than a face-to-face interaction to communicate in their social networks. Text-based is the main form of communication handled in the Army organization. According to Lee et al. (2009), MIM is deemed suitable as a medium to be used since it can carry not only text but also other meaningful

graphics and symbols for effective communication. Furthermore, Kahai & Cooper (2003) mention that media capable of handling multiple information channels such as voice inflection are capable of handling multiple cues. In this study, the use of voice notes across all activities is unsuitable and Army personnel seldom use voice notes to communicate.

This study also found that MIM is incapable of handling non-verbal cues such as gestures and body language. Even though emoticons are available in the MIM application, the use of emoticons in the Army organization is inappropriate due to the nature of Army communication across all activities. This finding is similar to the finding by Raišienė & Jonušauskas (2011) where they claim that the success of an informal medium such as MIM is negatively affected by the scarcity of non-verbal signs in its communication. The communication in the Army working environment will fail when the gestures and body language are removed from the interaction requirement especially when it involves crucial decision-making.

Aldunate & Gonzalez-Ibanez (2017) mention that facial expressions are also considered as one of the most important cues in human communication. In MIM, message senders use various conventions in addition to text messages to more clearly and richly express emotions during communication (Kwon et al., 2013) and it was also applied by the Army personnel in all activities. In the Army, an emotional expression also is significant and is important not only for interpersonal relations but also for inter-group (Iyer & Leach, 2008). To effectively handle non-verbal cues, officers and soldiers may use emoticons or emojis available in MIM as an enhancement to text since the most frequently used features to represent expression in MIM are emoticons and photos (Wang et al, 2016), but it was difficult to suit with the formal environment.

The scholars find emotional expressions in text messages affect the message receivers' emotional intensity and acceptance of the message (Kwon et al., 2013) thus contribute to mobile communication's success not only in interpersonal interaction but also inter-group (Iyer & Leach, 2008). Li et al., (2005) argue that MIM is a better alternative to face-to-face communication than other technologies in presenting user emotions during communication. This is due to the availability of emoticons or emojis that represent facial expressions. However, in the context of the Army work environment, the use of emoticons even though it is highly valued, but it is inappropriate especially in the interaction between commander, superior, and subordinates.

From the above discussion, the results on the richness of MIM in handling multiple cues were less encouraging. In the context of both verbal and non-verbal cues, this study found that MIM channel can handle verbal cues, but has difficulty handling non-verbal cues due to the absence of gestures and body language. For facial expression, the technology has indeed been improved so that emotional expression can be represented by emojis. MIM is considered as a less rich communication method compared to face-to-face interaction when emojis are ignored in the Army context and voice is not actively used either at the workplace.

These findings are similar to those by Lee et al., (2009) when they state that MIM is rich since it provides communication signs to be used in communication. It cannot be denied that the features of MIM have improved over time (Schnitzler et al., 2020) and now allows users to receive real-time information through text messages and multimedia in online interaction (Marino & Presti, 2018; Kaufmann & Peil, 2019). Besides the main cues of text chats, other cues available for the Army use are in the form of voice and video calls, pictures, emojis, audio, and video messages (Church & de Oliveira, 2013) or

combinations of them (Tseng et al., 2019). MIM also offers a variety of multimedia functions (Anderson, 2016) that can be utilized by an Army organization.

MIM is useful to be applied in the Army working communication in all activities since it can handle these multiple cues even though it has the limitation as discussed earlier. In this context, as mentioned earlier, the MIM channel might be lower in richness if gestures and emotions are taken into consideration. MIM is unsuitable to be used if Army officers need to make concrete decisions by assessing a person's physical response and emotion. There are emoticons and symbols in MIM at the user's disposal (Wang et al., 2016), but whether it is suitable for use in the Army work environment is sometimes a question mark. The formal military relationship, especially in the superiors-subordinates and instructors-trainees relationship, limits the use of emoticons and symbols in the conversation.

Anyhow, Army users can increase the richness of MIM communication by using voice and emoticons. These two functions in MIM can facilitate more understanding during the communication process. However, even though the voice is highly valued in a few situations, but its application in the Army environment needs to be carefully assessed. As an example, the use of voice notes may disturb the execution of operational duty and conduct of training. The suitability of emoticons to represent emotions and feelings need to be studied further if it is to be comfortably used for official organizational communication. In conclusion, MIM is a partially suitable technology for handling multiple cues.

Table 12 below summarizes the suitability of MIM in the dimension of handling multiple cues in all activities.

**Table 12: Suitability of MIM usage in 'handling multiple cues'**

Usage context	Suitability of Usage			
	Management	Training	Operation	Logistics
Use text	Suitable	Suitable	Suitable	Suitable
Use visual and graphic	Suitable	Suitable	Suitable	Suitable
Voice notes when text available	Unsuitable	Unsuitable	Unsuitable	Unsuitable
Voice notes when text unavailable	Suitable	Suitable	Suitable	Suitable
To show gestures	Unsuitable	Unsuitable	Unsuitable	Unsuitable
Use emoticons	Unsuitable	Unsuitable	Unsuitable	Unsuitable

#### **4.3.3 Utilizing natural language**

In this discussion, the utilization of natural language can be described in two basic themes, namely 'to explain concept and ideas' and 'to give orders and instructions.'

This study found that the MIM channel is capable of utilizing a variety of languages across all activities in the Army to provide understanding to users. Through the availability of text in MIM, concept, and ideas as well and orders and instructions can be disseminated in the Army organization with certain conditions according to the work environment. In this study, two preferred languages that have been identified are Bahasa Malaysia and English. Both are used widely in the Army work activities.

The findings in this study suggest that concepts and ideas can be effectively explained using MIM communication. Concepts and ideas that are frequently shared through MIM channels include organizational strategic information and direction, commander's thought, personal opinions, and feedback on activities. This concept and ideas usually



shared in the Army organization by using documents sharing in the 'pdf' format. MIM also used to share simple informative material and brief information in the user's preferred language. The sharing of concepts and ideas among commanders and instructors can also be conducted using simple language throughout the conversation. In this situation, the study found that the officers and soldiers will not be interested in the lengthy form of explanation through the MIM message.

Materials and information shared through MIM are kept or saved in that preferred language for future use. This function allows officers and soldiers to keep their important working materials of files in their mobile devices. The cross-reference becomes easier. At the same time, directives and information from higher formations to soldiers at lower hierarchy are disseminated well through the MIM channel, mostly by using 'pdf' documents or infographics. These are the common practices in the Army organization. The sharing is faster, and it covers a wider group of soldiers regardless of their locations.

The findings of this study are similar to those by Kwon et al. (2013) in their studies where they reveal that appropriate use of MIM is advantageous to organizations since ideas are can be widely disseminated throughout the organization as happened in the Army. In the context of MIM usage in the Army, MIM is considered suitable as a medium to convey concepts and ideas meaningfully through the proper use of language (Lee et al., 2009). This observation is parallel with the earlier introduction of the media richness concept by Trevino et al. (1987) that considers a medium is rich if it is capable of using preferred languages to ensure a broader understanding of any concept or idea.

Besides facilitating communication, MIM is also used for knowledge dissemination in the Army workplace, resulting in high team performance (Ou et al., 2010) as shown in all activities. Officers and soldiers are engaged in instant messaging because information and interactions are easily accessible to them, especially if the MIM application is available

on their mobile devices. The development of mobile technologies and MIM allow the medium to be used as a work diary by the soldiers with capture tools since it is cost-effective and user-friendly (Kaufmann & Peil, 2019). The military staff uses MIM to keep records of their work for future references (Sheer & Rice, 2017).

The findings in this context are at odds with the findings by Padmavathy et al. (2018) when they clarify that media only provide an avenue to promote knowledge in the organization, but not as a main source of knowledge. With the capability of MIM in conveying concepts and ideas, the study found that the knowledge in the context of concept and ideas can be shared with the officers and soldiers. Pimmer et al. (2019) also find the insignificant relationship between online messaging usage and the transfer of knowledge at the workplace. This insignificant relationship may be true in the context of a detailed explanation of concept and ideas which is difficult to be materialized by using the MIM medium. The study found that MIM only capable to convey simple and brief ideas as a promotion to real knowledge.

This study also found that in all Army activities, MIM is capable of delivering short and simple orders or instructions. With the availability of languages in the channel, the delivery of orders and instruction can be executed but with certain restrictions. If the orders or instructions are too detailed, it will lead to confusion and the instructions or orders getting ignored, thereby affecting the execution of the order or instruction by soldiers. This might happen even when the language used can be understood by the recipient. Generally, in all Army activities, the findings suggest that Army officers emphasize face-to-face interaction to deliver orders and instructions to soldiers to ensure full understanding, especially in the training and operation environments. Failure to execute an order which comes as a result of poor understanding will undermine the impact of training or operation.

In the military, tasking orders and work instructions are usually long and detailed documents that are sometimes equipped with graphical illustrations, as guidance for the commanders and soldiers. They follow a standard format following the service requirement. Other documents that are similarly long and detailed include administrative instructions, training directives, operational orders, and instructions for logistics for the progress of work. The use of MIM to deliver this kind of information is inappropriate and impractical. At the same time, the study suggests that MIM is not the only medium they should rely on when delivering orders and instructions. There might be a low level of seriousness in receiving orders if they were delivered through informal and casual channels such as MIM. Soldiers might mistakenly assume the orders and instructions are not important.

Marino and Presti (2018) in their study suggest that adequate communication channels if integrated can become crucial platforms to gain organizational success. To deliver orders, there should be a combination of efforts to ensure the orders are understood and well implemented. Besides depending on the written orders, the use of the face-to-face mode of orders delivery also will help to develop more understanding among the soldiers. If the written orders are long and complex, MIM could facilitate to ease the understanding through the simplified form of writings. But, simple orders delivered through MIM are insufficient for complex tasking.

Good communication channels should be used by Army organizations to communicate with officers and soldiers to assist them in performing their jobs better and to comply with organizational policies and practices (Cornelissen, 2014). The availability of languages, figures, and symbols in MIM contributes to its ease-of-use among military personnel and provides them with an ability to express their meaning and encourage mutual understanding with others (Tseng et al., 2019). Anyhow, it is difficult for commanders to

express their thoughts, opinions, and feedback. They still rely on written documents to communicate more serious issues such as orders and instructions.

In this situation, MIM as a channel is appropriate to be used for explaining simple and brief concepts and ideas. However, the study suggests that MIM is less useful to convey detailed information and heavy subjects. It is not recommended for use to submit content such as official reports, minutes of meetings, and long notes. The unsuitability of MIM to convey detailed information and heavy subjects is acknowledged by all the respondents. In the context of the Army work environment, other formal media need to be used for official purposes to aid better understanding. These findings also suggest that MIM technology is appropriate to be used by a commander and officers to deliver short and simple orders to subordinates in a language that they understand. Delivery of orders and instructions is crucial in the Army organization and is considered one of the important functions in command.

The result of the richness of MIM in utilizing natural languages was found less encouraging due to this limited capability. The richness of information can only be achieved through the consolidation of formal and informal means of communication in the organization. Even though MIM offers the capability to utilize a variety of languages to explain ideas and deliver orders, Army personnel should not rely on one specific medium for that purpose. Furthermore, the MIM channel as a medium is not the only source of knowledge and information in an organization. The MIM channel has severe limitations when it comes to conveying concepts and ideas and delivering orders and instructions if the content is huge and complex. It will impair the user's understanding of the message. In conclusion, MIM is, at best, a partially suitable technology for utilizing natural languages.

Table 13 below summarizes the suitability of MIM in the dimension of utilizing natural language in all activities.

**Table 13: Suitability of MIM usage in ‘utilize natural language’**

Usage context	Suitability of Usage			
	Management	Training	Operation	Logistics
Convey complex concept & ideas	Unsuitable	Unsuitable	Unsuitable	Unsuitable
Share brief and simple content	Suitable	Suitable	Suitable	Suitable
Deliver detailed orders and instructions	Unsuitable	Unsuitable	Unsuitable	Unsuitable
Deliver simple orders and instructions	Suitable	Suitable	Suitable	Suitable
Utilize common language	Suitable	Suitable	Suitable	Suitable

#### 4.3.4 Establishing personal focus

In discussing ‘establishing personal focus’, two themes have been identified, namely ‘message customization’ and ‘work socialization’. These two themes are important since customization of messages is meant to suit the needs and situation at the workplace while socialization at the workplace is associated with the emotion and feeling of Army personnel while socializing in a work environment to keep the focus on the positive communication environment. This study found that a user’s focus is established in the MIM channel across all activities through effective customization of messages and socialization at work that was provided during communication. The capability of MIM to establish user focus in these aspects are encouraging.

In the context of customization of messages, it has been seen in the context of the report's submission, the restriction on message delivery, and the use of words and language. First, MIM allows the customization in the report's submission. The submission of the report is one of the important functions in the Army. The findings suggest that the Army users in all activities focusing on the use of MIM just to share initial reports and they customized the messages as simple and short before it was sent through the MIM channel. The customization of the MIM message in the submission of initial reports is to ease the acceptance by the recipients to facilitate the understanding before the full report is submitted through other formal means of communication. Submission of initial reports through the MIM channel is becoming common to fulfill the superior's and organization's needs but officers and soldiers are confined to current acceptable practices.

In current practice, the reports submitted through MIM are not done in detail, only in a simple form. In this situation, the characteristics and content of a report submitted through the MIM channel are important for soldiers to meet the requirement at work. Examples of initial reports that usually submitted through MIM in the workplace are reports related to Army events and activities, training execution, operational routines, and logistics work progress. MIM is incapable to handle detailed and long reports in all activities since it is virtually impossible to grab the user's attention. User focus and attention in receiving these reports are crucial for their understanding of their working environment.

MIM is considered a suitable medium to use when the messages can be customized to suit the user's requirement by following the intended reporting format. This will greatly aid understanding and minimize the chances of equivocality. This includes the use of common language that can be easily understood, camouflaging some words in operational

activities, and using a simple format for common usage. Taking camouflaging some words as one of the customization examples, it was done with the purpose to hide crucial confidential information before a message is sent through the MIM channel. This is the practice in deliver critical confidential information especially when it is related to operational information. The study suggests that the MIM channel allows the customization of messages in this context by using the intended camouflage format to hide some critical information to suit the working requirement in operational activities.

Secondly, the customization of messages also relates to the adjustment that needs to be done by the user to comply with the restrictions enforced by the Army organization. The restrictions enforced on MIM usage in Army organizations affect the soldiers' focus in using the media for their work. The findings of this study suggest that restrictions on Internet use for organizational communication in the Army have been taken seriously especially for Internet and mobile communication usage. There are many organizations including the military impose strict rules on MIM usage in their work environment for various reasons including preventing information leakage and maintain work focus. In the Army organization, restrictions on Internet use are enforced to prevent the act of information disclosure during MIM communication in all Army activities. The rules for Internet use and social communication were distributed from higher formations to all soldiers at the unit level. MIM allows the adjustment to be done in the message content to comply with the rules.

Third, the MIM message also can be customized through the use of language and selecting words by the user. This study suggests that more casual language is used among officers and soldiers in their MIM communication to promote better understanding. The soldiers also prefer a more casual way of communication. Additional to that, the use of proper words is encouraged to help Army personnel understand each other especially

since they come from different backgrounds and different hierarchical levels in the organization. Some critical information, ideas, and work-related materials in the military require that they are delivered through formal means such as official briefing or correspondences. These include technical presentation, operational and training requirements, and logistical arrangements. MIM is only an alternative to send information faster in a language that casual and easy to understand.

Besides ensuring the understanding of message during communication, the right use of words and language is to conform to military staff duties and to ensure accuracy of information delivered. Mistakes made during MIM communication lead to inaccuracy in the decision-making process. There is also an ethical consideration in the use of language in the Army communication where interaction between officers and their superiors or subordinates are bound by the use of proper language and positive manners even though the communication takes place online. Military personnel needs to careful in the selection of words in a group communication that involves commanders and officers from different ranks. In this context, MIM allows the customization of messages through the selection of words and language to maintain the user's focus in communication.

The findings of this study similar to those by Canary (2011) when he observes that reporting is one of the requirements that need to be fulfilled in upward communication and so it is happening in the Army organization. In the Army, reports should be tailored to the needs and requirements of superiors and organization needs. Lee et al. (2009) in his study mentions that personal focus in using communication media is achieved when the media allow customization of messages according to the need and situation of the workplace.

As found in this study, different activities in the Army require different formats in the delivery of messages through MIM. As an example, confidential information related to



personnel can be disseminated through private messages in the management activities, but it cannot be discussed in groups. Regarding words and languages used in the MIM communication, the practice in the Army is similar to what is suggested by Kuyath et al. (2013) that the languages used for MIM communication are appropriate as they are short and simple.

The scholars have also raised concern about the restrictions imposed on users in the communication. In the Army environment, officers and soldiers accept the restrictions imposed on them for the interest of an organization. It is dissimilar to the findings by Proctor & Doukakis (2003) that the pattern of rules that are intended to restrict and structure communication in the organization will result in frustration and low motivation among employees. As happened in the Army organization, officers and soldiers keep focusing to use MIM medium by complying with the rules and regulations imposed on them. They feel that practice is the best measure to govern the use of MIM in the military.

Even though the introduction of various control measures will limit the optimization of online interactions (Gehlbach & Sonin, 2014), security concerns have been taken seriously for the organization's interest (Mansi and Levy, 2013). The control measures imposed by the organization come in the form of written instruction and the enforcement of rules. Different organizations having different approaches in performing their control measures. The security concern is significant in a military organization that protects the security of a nation.

The second element that relates to the establishment of personal focus is to work socialization issues at the workplace as found in this study. In terms of work socialization, the users in the Army are focusing on the use of the MIM medium since they are motivated by the social interaction feature provided by the technology. The high motivation will keep the users engage in their communication with other organization

members. Social interaction is one of the purposes of using MIM at the workplace and the Army personnel are happy to use MIM as a medium to interact with others. Exchange of information through MIM social interaction has been widely practiced at various levels of units and departments in the Army.

As mentioned by Kaihko (2020), social interaction influences the communication choice of Army personnel. Army personnel is preferred to communicate online through MIM since the medium provides a platform for socialization. This is similar to Ridings & Wasko (2010) when they found that online discussion is the favourite medium used by members of the organization to share ideas and at the same time keep the focus on communication in the social network environment. However, there are work socialization issues that are relevant to MIM usage in the Army activities that give impact to the officer's and soldiers' focus in using the MIM channel for their work communication. This is related to the emotion and feeling of a user. Happy users will keep engaging in communication while unhappy users may ignore the conversation.

MIM is a medium that can be utilized either for formal or informal occasions at the workplace. There is a thin line separation between the use of the MIM medium for work and social use at the workplace. Critics are mentioning that MIM is a social platform and not suitable for organizational use (Staudacher & Kaiser-Grolimund, 2016; Cameron & Webster (2005). In the context of military use, the use of an informal medium such as MIM for socializing should not degrade the importance of practicing military values throughout the communication. Military values should be embedded in daily communication especially the preservation of respect between superiors and subordinates, even in online communication. The findings indicate that decorum is deeply embedded in the Army work environment and becomes one of the elements in establishing user focus in communication

The preservation of military values is to balance the socialization impact, and this can be implemented through the way MIM should be used in military settings. As an example, the commanders still require to talk face-to-face to subordinates to deliver their thoughts and orders. In the training, the social gap between instructors and military trainees needs to be maintained for the sake of training success. In both events, the use of MIM is not advisable. This preoccupation with military values is closely related to the organizational culture of the military that is vested with rigid rules, respect, and loyalty in executing tasks at the workplace. The values that should be preserved is not limited to face-to-face communication but also staff duties convention such as the military writing style. The MIM channel is an only enhancement and it is not meant to replace formal correspondences such as a memorandum, written orders, and letters.

MIM establishes the user focus in the Army through the socialization at work with limitation to comply with the military values as discussed. The focus established through the comfortability of Army personnel in using this medium to communicate similar to those by Trevino et al. (1987) that the messages will be conveyed effectively when personal emotion is infused in the communication, thus affecting the user's focus in the communication process. Personal emotion in a military setting is related to the enjoyment experienced by Army personnel as part of social groups at the workplace. Song & Wang (2011) agree that the use of MIM as an enjoyment platform is important to indicate the continuance of usage of MIM in a social context. MIM is particularly suitable to promote expression of emotions thus made interaction more effective (Tang & Hew, 2020).

The findings of this study on the preservation of military values in the social environment in the MIM usage context are similar to the study by Kummer & Schmiedel (2016) who observed that culture is a complex and intangible phenomenon. The culture and norms guide the usage behavior of officers and soldiers in using information systems

in Army organization. The culture and norms in the Army, which is related to the Army regimental system, is to obey proper documentation by following all the correspondences stated in the services. This regimental system and convention of staff duties shaped the military values in the Army working environment including in the use of modern communication such as MIM. The study found that the user focus on using MIM is established with the consideration of military values in a social environment.

Regarding socializing at work, Army personnel enjoys using MIM due to its user-friendly characteristic. This is similar to findings by Tang & Hew (2017) who mention that one of the qualities of MIM that make it popular is user-friendliness or ease-of-use. The casual way of interaction in MIM makes it suitable for private communication (Staudacher & Kaiser-Grolimund, 2016) among military personnel and the user-friendly characteristics make it attractive to potential users. It is also affordable to be used together with mobile devices (Li et al., 2005) since the majority of officers and soldiers using mobile devices for their communication. These are the things that affect the focus of a user that is successfully established in the context of MIM use. With these advantages, Army personnel continue to use MIM as their preferred communication channel at the workplace.

This argument on the preference of communication channel relates to Ruck & Welch (2012) through their recommendation that organizations need to put more attention to employee's preferences for effective communication at the workplace. MIM is a preferred channel among commanders, officers, and soldiers in all activities since they can socialize with others and at the same time assist them in coordinating work activities and completing their tasks. MIM offers conveniences that meet people's interests and needs and is used regularly for communication (Dukic et al., 2015) and for coordinating the activities in everyday life (Ling & Lai, 2016). Similar opinions are held by Zhang et al.,

(2009) when they list the benefits of instant messaging in an environment where it is pervasive. MIM provides the simplest and most convenient way of communication, making it a better communication medium in the Army environment where information spreads among a large group of users consist of commanders, officers, and soldiers.

Good personal communication and socialization at the workplace help Army personnel to perceive other user's responses in MIM communication, thereby increasing focus during an interaction at their workplace (Tseng et al., 2019). This study found that commanders and officers are comfortable using the MIM channel at work since they feel that they can get a good response from their subordinates. With personal connection and social ties already developed, it makes communication easier. Hence, MIM is regarded as a good communication channel for social interaction in the Army similar to the findings by Karapanos et al. (2016) that the capability of MIM such as WhatsApp to provide intimate conversation is beyond other social media channels. The intimate relationship that takes place throughout conversations makes it a favorite channel to be used for social interaction at the Army workplace.

In the socialization context, the capability of MIM in providing real-time interaction instills a sense of social presence at the workplace (Kim et al., 2016) will keep the focus on the interaction. The good social relationship that occurs at the workplace through real-time communication assists in the completion of tasks and coordinating Army activities. This is observed in all activities in the Army workplace environment. Anandarajan et al. (2010) suggest instant messaging is useful for socializing and has become a favorite go-to medium for interaction with others while Ogara et al (2014) find that the perceived richness is one of the important drivers for social presence and user satisfaction with MIM which are similar with the findings. Army users perceive high levels of richness when

they are able to build good relationships with their communication partners and acquire pleasure and satisfaction from the interpersonal interaction (Jiang et al., 2013).

Nevertheless, there is concern about using MIM for socializing at the workplace. Some officers and soldiers are unable to draw a clear line between MIM usage for work and for personal use similar as mentioned by Li et al. (2005). Even though Nicholson (2002) suggests that the use of MIM stimulates a stronger sense of being part of the workplace community and provides an avenue for social communication with others, the casual way of communicating in MIM creates several issues that are related to the social interaction.

The findings of this study suggest that distraction at work is one of the drawbacks of using MIM in all Army activities. The staff's focus tends to deviate toward other things when the staff actively uses MIM for work communication. This happens when the staff pays more attention to his mobile phone to monitor conversations since he considers them also important things to be done. In some cases in the Army activities, the use of MIM has led to distraction, and this adversely affected work especially when it involved important occasions such as training activities and operational duties.

This concern on distraction from work arises when officers and staff use many types of devices for work as found in this study. The use of multiple devices for communication is a situation that officers or staff find hard to avoid due to an increase in workload. In this situation, officers and soldiers need to alert when communicating in discussion groups, as sometimes their focus gets deviated to other matters including entertainment, interaction with unrelated people, and browsing the Internet for leisure. Besides this kind of work interruption, addiction to using MIM at the workplace is also observed in Army activities, and becoming one of the consequences that need to be addressed.

These findings on the negative sides of work socialization are similar to the findings by Montag & Walla (2016) who suggest that personal focus in the use of MIM is related to interruption and deviation from work focus that happens in the Army workplace. Pazos et al. (2012) agree that while instant messaging enables engagement in more than one activity simultaneously, it also leads to frequent interruption (Lebbon & Sigurjónsson, 2016). This should concern the Army organization when deciding to allow the use of this media as a reliable means of communication for decision-making, the same concern shared by Li et al. (2005). Employees have exposed too many online activities when using MIM at work and the same situation is also happening in the Army work environment.

Similar findings found by Lundy & Drouin (2016) who observe that discussions conducted through MIM communication can drag on much longer than necessary, even when the actual message is short. Furthermore, tasks that are repeatedly interrupted by instant messaging communication will normally take longer to complete (Mansi & Levy, 2013). This situation happens at the Army workplace specifically in the management activities when the time taken to complete the tasks was longer when using MIM at the same time. This is parallel with Duke & Montag (2017) that the more time spent on the smartphone during work hours, the more likely addiction will set in, resulting in decreased productivity at the workplace. This distracted manner of working also happens when soldiers spend too much time on their smartphones paying attention to incoming messages in a continuous way (Montag & Walla, 2016; Pielot et al., 2014).

Other scholars who have compiled similar findings on the interruption issues are Yin et al. (2018) and Lebbon & Sigurjónsson (2016). The use of MIM at the workplace leads to information overload and hinders job satisfaction (Yin et al., 2018). In this study context, Army personnel found difficult to focus on the interaction that happens in the MIM thus resulting in inefficiency in their job performance. Most of the interactions that

occur during work hours involve non-work-related messages that deviate them from their work (Lebbon & Sigurjónsson, 2016). These consequences can be avoided through a good mechanism to control such behaviour at the Army workplace.

Based on the overall findings of this fourth dimension in MRT, the results on the richness of MIM in establishing personal focus were found to be encouraging, even though they are several issues arise. The MIM channel can establish personal focus across all activities in the Army through message customization and work socialization since it follows all the requirements to become a rich medium. This characteristic makes the channel suitable for use since both elements; message customization and work socialization, shape the Army personnel focus on using MIM as a medium for communication at the workplace. MIM allows the establishment of focus but at the same time considers certain requirements to comply.

Army personnel are generally happy when communicating using MIM since the platform not only provides an avenue for casual interaction and leisure but also assists them in completing work tasks. The good feelings and emotions infused in the communication (Hsieh & Tseng, 2017) lead to the enjoyment of MIM usage at the Army workplace. All these concerns together with what has been found in previous studies regarding the negative sides of MIM use should provide food for thought to commanders and officers as decision-makers in the Army in formulating the best control measures to contain the negative effects of MIM in work socialization. Fortunately, these drawbacks pale in comparison to the ability of the technology in establishing personal focus since the unintended behaviour can be controlled.

Table 14 summarizes the suitability of MIM in the dimension of establishing personal focus in all activities.



**Table 14: Suitability of MIM usage in ‘establish personal focus’**

Usage context	Suitability of usage			
	Management	Training	Operation	Logistics
Submit initial reports	Suitable	Suitable	Suitable	Suitable
Share classified information	Unsuitable	Unsuitable	Unsuitable	Unsuitable
Use short and simple language	Suitable	Suitable	Suitable	Suitable
Social interaction	Suitable	Suitable	Suitable	Suitable
Embed military values	Suitable	Suitable	Suitable	Suitable
Control the usage	Suitable	Suitable	Suitable	Suitable

## CHAPTER 5: CONCLUSION

Chapter 5 concludes the study by emphasizing on the current usage of MIM in the Army organization and subsequently summarize the suitability of usage. The recommendations to the organization were presented followed by the model of MIM suitability usage in the Army. Finally, the research contribution, limitation, and future research were explained.

### 5.1 Current usage of MIM in the Army organization

This study has achieved its first objective of identifying current practices of MIM usage for organizational communication in the Malaysian Army. In general, MIM is widely used for organizational communication across all activities in the Malaysian Army. The widespread usage of MIM is due to the convenience and user-friendly features offered by the technology on top of it being an affordable means of communication for commanders, officers, and soldiers. They are also comfortable using the medium since it can be used at their respective workplace even though it is considered an informal communication medium.

The use of MIM and mobile technology is a phenomenon. Access to technology by officers and soldiers will benefit the organization in many ways. However, the current directives on Internet use and cybersecurity are insufficient in the context of MIM practices, application and governance at the Army workplaces. The MIM communication allows the flow of messages in many directions in the Army organization, either upward, downward or horizontal but the guideline on the usage is insufficient.

Media Richness Theory used as a theoretical lens to guide data collection and analysis of the findings of this study. By using the four dimensions of the theory, namely facilitating rapid feedback, handling multiple cues, utilizing natural language and establishing personal focus, the findings gleaned from twelve Army respondents help to explain current practices of MIM in the Malaysian Army work environment and subsequently provide the decision on the suitability of usage through in-depth analysis.

This study found that in all Army activities, the richness level of MIM in each dimension is different and dependent on the situation and surroundings of each activity. It is similar to the concept of media richness introduced by Lengel & Daft (1984) that states the level of information richness provided by a medium is not rigid but is different according to the organizational environment. The success of the organization relies on the manager's capability to balance the richness of the media to suit the organization.

## **5.2 Suitability of MIM usage in the Army working environment**

The second objective of this study has been achieved by assessing the suitability of MIM use in the Army workplace. To identify the level of richness, I have created a scale of suitability according to the list in Table 11, Table 12, Table 13, and Table 14 in the previous chapter. I assessed the suitability of each activity by calculating the percentage of suitability from the list of usage context on each MRT's dimension. If the level of suitability was above 70 percent on that dimension of MRT, it was categorized as 'suitable'. If the percentage was between 30 to 69 percent, it was categorized as 'partially suitable'. A percentage of 29 percent and below was categorized as 'unsuitable'.

Table 15 summarises the suitability of MIM usage in the Malaysian Army according to the dimensions in the MRT:

**Table 15: Suitability of MIM use in all MRT dimensions**

Dimension	Activities			
	Management	Training	Operation	Logistics
Facilitate rapid feedback	Suitable (80%)	Partially suitable (60%)	Partially suitable (60%)	Suitable (80%)
Handle multiple cues	Partially suitable (50%)	Partially suitable (50%)	Partially suitable (50%)	Partially suitable (50%)
Utilize natural languages	Partially suitable (60%)	Partially suitable (60%)	Partially suitable (60%)	Partially suitable (60%)
Establish personal focus	Suitable (83%)	Suitable (83%)	Suitable (83%)	Suitable (83%)

Basically, MIM is a rich medium since it is suitable for getting rapid feedback during a communication process in management and logistics activities. The nature of training and operational activities, however, restricts the potential of MIM in entertaining immediate requirements. It is therefore considered only partially suitable for those two activities. Users in the Army also face difficulty using MIM for the clarification process. There is no guarantee that messages will be understood in the same way in all the activities. However, the medium does provide instant two-way interaction among officers and soldiers at the workplace, allowing questions to be asked for better feedback. The MIM channel facilitates rapid feedback in all three directions of communication in the organization i.e., downward, horizontal, and upward. The overall result of MIM suitability in this dimension is mixed.

In the dimension of handling multiple cues, MIM is the medium that handles verbal cues such as text, visual, and voice very well. The cues are used to great effect in communication at the workplace. However, there are limitations in the use of voice notes, which is considered inappropriate in the context of the Army working environment. MIM is also incapable of handling non-verbal cues since gestures and emotions cannot be observed throughout conversations. This situation prevents the optimal use of MIM during decision-making processes especially in situations where emotion and gestures are important. Even though emoticons are available in MIM, the use of that feature in a formal conversation is not recommended. This inability of MIM to handle non-verbal cues makes it only partially suitable in all activities.

MIM is a medium that enables users to utilize natural languages for communication that can be easily understood by both senders and receivers. MIM can be used to great effect to explain concepts and ideas under the following two conditions: that the explanation is structured and the language, simple. However, MIM is not the best medium to deliver detailed orders and instructions to soldiers. Orders and instructions delivered through MIM must be brief and simple to avoid confusion and guarantee a successful execution of the tasks. The MIM channel is able to accommodate the use of natural languages which, in the case of the Malaysian Army, are Bahasa Malaysia and English, to convey meaning. However, with certain limitations on the size of content, the richness is low compared to another medium. These reasons make MIM partially suitable in all activities that utilize natural languages.

The MIM channel also is a modern communication channel that can establish personal focus during communication. In the Army context, user focus can be witnessed in two perspectives. First, customization of messages according to the needs, situation, and requirements of a workplace. Messages are customized according to the requirements,

restrictions, and suitability of words and language. The second perspective is the work socialization that produces enjoyment and happiness in Army personnel when using the medium. However, social interaction at the workplace produces both positive and negative effects, the negative being distraction from work that has the potential to affect the emotion of a user and cause inefficiency in the completion of work. In this aspect, MIM is suitable to be used since it is capable to establish focus in Army personnel since the message can be customized and the negative impact can be mitigated by putting in place some control measures.

In general, this study concludes that even though MIM is considered a rich medium due to the fulfilment of all MRT dimensions, in actual application, it is bound by the practices and environment in each activity. Different activities use different approaches in communication to achieve objectives (Hong & Tam, 2006).

### **5.3 Recommendations for MIM use in the Army organization**

This study also meets the third objective of coming up with a set of guidelines that policymakers, commanders, and officers as managers in the Army organization may use to formulate and implement best MIM practices for organizational communication. It is as suggested by Dukic et al., (2015) that the recognition of MIM as a communication channel in an organization should be carefully implemented to guarantee the best return in terms of the employees' performance and productivity.

Effective use of mobile technology including MIM in organizational communication provides benefits to the Army in achieving its strategic objectives. MIM can be capitalized to increase communication turnover and contribute to the success of the Army organization. The following are recommendations for policymakers, commanders, and managers:

- a. The Army should utilize the MIM channel to complete work tasks and coordinate work in all activities. The ability to interact in real-time as provided by the channel allows instant sharing of work materials and resources among the commander, officers, and soldiers. Even though in the training and operation activities feedback is sometimes difficult to obtain due to the nature of work and environment, MIM is still useful for administrative purposes of those activities. As an example, early coordination among instructors before embarking on a training and distribution of personnel checklist for operation can be done through MIM.
- b. The use of MIM at the military workplace can boost officers' and soldiers' performances through the utilization of all cues in transmitting messages. Even though the use of non-verbal cues such as gestures and emotions are limited, verbal cues such as text, visuals, interactive multimedia, graphics, and videos can be maximized. MIM is regarded as an additional tool that can be integrated with other communication media in the service such as telephone, video conferencing, and military correspondences.
- c. The use of MIM as a social interaction tool is recommended but must be controlled and monitored. This is to avoid overuse that can affect the execution of work tasks and other important activities. Since MIM is capable of establishing personal focus, it can be controlled through a good governance policy that will guarantee effective use of the channel at the workplace while preventing distraction and interruption. Through the governance policy, commanders and officers will be guided about the priority of MIM usage at the workplace, the groups of users that need to be controlled and monitored, and the guidelines on specific tasks in all activities.
- d. The use of MIM to convey concepts and ideas as well as to deliver orders and instruction would be effective if messages are tailored and customized according

to soldiers' needs. The use of standard language, well-structured writing, and suitable format would promote better understanding especially in reporting and receiving important information in all activities. Sharing of relevant content would be beneficial since ideas or instruction can be evenly distributed to all soldiers regardless of their location. Commanders and officers must be aware of the limitations of MIM in carrying heavy contents and should decide the selection of contents to be conveyed accordingly.

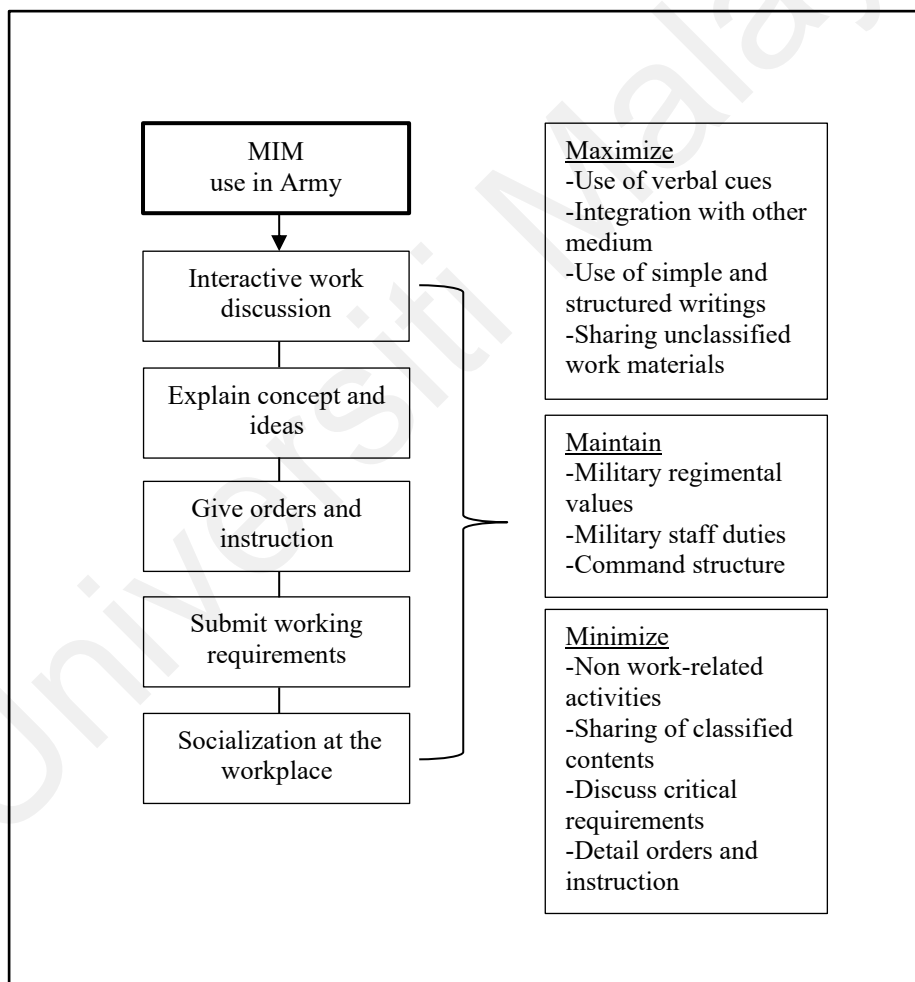
- e. As a military organization, communication in the Army should be imbued with military values. There needs to be a complete written guideline on how to use MIM communication when interacting with superiors and commanders. At the same time, the guideline will help users keep focus in using the media for discharging their duties at work. As an example, through integrity and respect values, all MIM accounts must display the officer's and soldiers' actual profile photos. The use of MIM must be conducted with respect and integrity. It must be understood that MIM is not to a substitute for military staff duties and correspondences, but still needs to be used with ethical considerations.
- f. With the limitation of MIM for quick clarification and interpretation of a message, the channel should not be used to discuss critical requirements for decision-making. The use of MIM for that purpose will lead to misunderstanding and confusion and there is the possibility that discussion will be dragged to a longer time. Important discussions must be conducted through face-to-face interactions such as meetings and group discussions.
- g. Information security should be a major concern in using the MIM channel for Army organizations. Even though the channel can facilitate rapid feedback, handle important cues, accept natural languages, and establish the focus during an interaction, information security should be a paramount consideration in all



situations. The sharing of classified materials through MIM channels must be prohibited and enforced. All classified content must be handled following the rules and regulations of the services.

#### 5.4 Model of MIM usage in the Army environment

This study suggests the model be used as a guideline to all commanders, officers, and soldiers in the Army for appropriate use of MIM in their working environment. The suggested model as shown in Figure 5.



**Figure 5: Model of MIM usage in the Army working environment**

Figure 5 shows the model of MIM usage in the Army working environment. The suggested model developed based on the findings and recommendations of this study. In this model, the uses of MIM in the Army can be named in five main functions; interactive work discussion, explain concepts and ideas, give orders and instruction, submit working requirements, and socialization at the workplace. In performing its function at the working, officers and soldiers need to consider three areas to maximize, maintain, and minimize to ensure that MIM is appropriately used for the working purpose.

While using MIM, users in the Army need to maximize the use of verbal cues available in the MIM application, integrate the usage with other means of communication, use of simple and structured way of writings, and sharing unclassified working materials. They need to maintain the military regimental values throughout the interaction, conforming to military staff duties. The flow of messages also needs to follow the command structure in the military. The users need to minimize non-work-related activities through MIM, sharing classified contents, discuss critical requirements through the channel, and deliver detailed orders and instructions. The model can be used as a guideline for all users in the Army.

## **5.5 Research contributions**

This study adds to the knowledge of organizational communication and information technology by applying the media richness theory in the context of the Malaysian Army. The study found different levels of suitability depending on the working environment in the Army. Practically, MIM can be capitalized in the Army organization to increase communication turnover and contribute to the success of the Army through effective communication. Through the model and recommendations that were proposed in this study, the commanders and officers as leaders and managers in the Army are able to

decide the appropriate way of using this communication channel to meet the working requirements. The governance policies on the use of MIM in the Malaysian Army can be developed by using the outcomes of this study.

## **5.6 Research limitation and future research implication**

The generalizability of the findings of this study is limited since it is a result of a case study conducted in the Army environment. The findings of the study are based mainly on data collected from the interviews with the officers in the Malaysian Army organization. At the same time, available literature on the application of mobile communication and MIM for communication in the military context is very limited even though MIM usage among soldiers is extensive and equal with non-military personnel. The literature in this study mostly covers practices found in civilian organizations such as in the business sector. However, the recommendations contained here perhaps may also be useful to non-military organizations.

The range of activities in the Army management, training, operation, and logistics is huge. However, for this study, each activity is represented by three respondents representing their sub-activity that adequately fulfill the data collection requirement. The respondents are experienced officers in their respective activities and their contributions during the data collection process are meaningful to this study. They were chosen for this study due to their roles in the organization especially in adopting MIM communication at their workplaces. In the future, different groups of respondents in the military could be used to see a variety of results, thus providing different angles of findings.

Since this study is based on a case study approach, it is not only to improve understanding of issues in real-life situations but also to come up with propositions for future research (Eisenhardt & Graebner, 2007). This study examines the usage of MIM

by using media richness as a theoretical lens by looking at the richness of the information provided by the media. In the future, the study might be conducted by using a specific group of users in the military-type organization to analyze their behaviour of usage. Besides, each dimension of Media Richness Theory also can be studied in separation to expand in-depth knowledge on the use of MIM or other types of communication technology in the Army.

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