

### **Title**

MIM-GA: Measuring Non-Native Students' Group Attitude (GA) in using Mobile Instant Messaging (MIM) in Learning English

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## **Abstract**

Successful language learning often requires students to collaborate in a group in completing certain tasks assigned to them by instructors. The success of such collaboration relies heavily on effective communication which requires positive attitude among group members. However, group attitude can be difficult to measure. Meanwhile, technological advancement has made mobile instant messaging (MIM) very popular in group communication. Much research has been conducted on GA and increasing number of studies have shed light on MIM. Nevertheless, little is known about their relationship. Therefore, this study aimed to measure non-native students' group attitude (GA) in using MIM in completing their English language classroom group projects and the strength of the relationship between MIM and GA. A total of 77 students participated in the study by answering a set of questionnaire comprising 35 items (20 GA items and 15 MIM items). Results have shown a significantly positive correlation between MIM and GA. Thus, it can be concluded that positive group attitude, which is key to effective group communication, can be achieved and enhanced with the use of MIM. This study further recommends that MIM should be seriously considered for implementation in English language learning in which group communication is of great importance.

**Keywords:** *Mobile instant messaging, group attitude, group communication, English language learning.*

## **Introduction**

The burgeoning growth of modern technologies and their potential benefits for education especially in language learning which provide the opportunities for the transformation of students' learning experience from the previously conventional *chalk and talk* mode to many new multimodal technological immersions, such as the use of instant messaging (IM) applications. One of these popular IM applications is *WhatsApp* (WA). Swathi (2015) has reported that WA application is Malaysia's most favourite IM with 81% daily usage. In Malaysia, young adults in the category of 20-24 years of age often use technology to communicate especially using smartphones and despite the decreasing trend in

the use of short text messages (SMS), the use of free messaging application has been on the rise since 2012 (Malaysian Communications and Multimedia Commission [MCMC], 2015). Therefore, this study aimed to measure GA among non-native students in using MIM application in completing group tasks assigned in English language classrooms with a protocol that provided guidelines for students. More importantly, it also aimed to eventually measure the strength of the relationship between MIM and GA.

## **Literature Review**

Five characteristics of mobile learning suggested by Laurillard (2007) are (1) *adaptive*; (2) *investigative*; (3) *communicative*; (4) *collaborative*; and, (5) *productive*. MIM fulfils these criteria in which it promotes interactivity and leads to active collaboration among the participants (Holley & Dobson, 2008; Markett et al., 2006; Bollen et al., 2004). Moreover, it benefits the students if the content of the messages are related to their learning (Kuznekoff, Munz & Titsworth, 2015). Additionally, the text-based nature of MIM provides opportunities for students to express their opinions and ask questions without the pressure or feeling of threat that can accompany traditional classrooms (Kitsantas & Chow, 2005; Rau et al., 2008; Ting, 2012), thus minimizing anxiety. Arguably, it has also been reported that MIM supports social bonding between students and instructors (Rau et al., 2008).

The features in *WhatsApp* (WA) as one of MIM applications, a popular mobile application among young higher education users (Duggan, 2015), fulfil these criteria allowing students at the universities to make use of this mobile apps for group communication. For language learning in group communication to be effective, positive group attitude (GA) among its members is necessary, however it is difficult to be measured. Furthermore, very few studies have examined the use of MIM in connection with GA. Its potential in enhancing the quality and quantity of interaction in communicative events among small group members (Clement, Dornyei & Noels, 1994) promotes positive attitude in group communication and cohesiveness among group members which contributes to enhanced performance (Evans & Dion, 1991).

Group work is one of the various activities in language classrooms. Arguably, it is one of the most effective ways to provide opportunities for learners to study language actively with group members among peers by co-constructing their understanding and knowledge focusing on communication. This may minimize anxiety and result in learning becoming socially constructed (Vygotsky, 1978).

Collaborative learning is also a crucial part of students' learning as the nature of some forms of course assessment may involve group assignments such as group oral presentation and writing assignment. Ideally, this will encourage group communication among students. Rambe and Bere (2013) reported that 35% of students in their study had agreed that WA application would lead to better collaborative learning compared to face-to-face one-way communication in lectures and tutorials. However, effective group communication requires positive group attitude, which expedites students' learning and aids comprehension of any given task at hand.

Studies have been conducted on the effectiveness on MIM applications on team work but most of these focus on workplace setting (see Wang, Yang & Tseng, 2016; Isaacs, Walendowski, Whittaker, Schiano & Kamm, 2002). Even though MIM tools may provide opportunities for students to foster active learning via group interaction on mobile devices, there is paucity of research on GA among students who are using MIM in education setting. Furthermore, little is also known about how students carry out group-related tasks and the difficulties they may have encountered. Therefore, it is important that both GA and students' use of MIM in educational setting are measured. More importantly, the relationship between GA and MIM within the context of English language learning needs to be determined.

## **Methodology**

### ***The study***

The present study was part of a larger research on the use of MIM among university students. The participants were non-native speakers of English among Universiti Malaysia Pahang (UMP) students who had registered for *English for Technical Communication* (ETC) course, an intermediate level course. In the course, these engineering and technology students were required to write a feasibility report based on a given scenario. The task, which was a group work that involved three to four members, required the students to collaboratively write and submit the feasibility report as group assignment. Each group was asked to appoint a leader and create a WA group. A protocol was developed to aid instruction (Yusof et al., 2015) for use by students as guidelines. Informed consent form and questionnaire were distributed. A total of 120 sets of the questionnaire were distributed and 77 sets were returned which yielded 64 % response rate.

### ***Data collection and data analysis procedures***

The questionnaire had 35 items, comprising 20 GA items and 15 MIM items. GA items were adapted from Evans and Jarvis (1986) while MIM items were developed by researchers in the present study. Participants were asked to rate their agreement on the items using a 6-point Likert-scale ( $1=Strongly\ Agree$  to  $6=Strongly\ Disagree$ ). However, the scores for 11 GA items (GA items no. 4, 6, 7, 8, 9, 10, 14, 15, 17, 19, and 20) were reversed because they were negative statements. Data were entered in *IBM SPSS Statistics version 22* for analysis for Mean ( $M$ ) scores and their standard deviations ( $SD$ ) for GA and MIM. In addition to correlation, reliability analysis was also performed.

## **Findings and discussion**

### ***Demographic data***

In the present study, female respondents outnumbered their male counterparts by 48% and this similar scenario has been evident in Malaysian tertiary education (Ismail, 2015). The breakdown of ethnicity showed more than half (61%) of the sample were the dominant indigenous Malay *Bumiputera* (literally translation: *sons of the soil*), followed by the Chinese (8%), which is the largest minority ethnic group in Malaysia. The remaining groups tied at 4% each were the Indian students and students from other indigenous non-Malay *Bumiputera* ethnic groups who were mostly from the Borneo Island states of Sabah, Sarawak and Federal Territory of Labuan. In the context of the Malaysian population, this breakdown resembled the 5:3:2 ratio (Tamam & Abdullah, 2012). Approximately 56% of the respondents were students from engineering faculties. The remaining 44% were students from the newer technology and industrial management faculties related to engineering subjects. Most of the respondents were using prepaid mobile lines (nearly 90%). This was consistent with the trend among students in Malaysian universities (Mokhlis & Yaakop, 2012). Most of the respondents admitted that they had been using WhatsApp (WA) messaging application for three to five years. In terms of time preferences, approximately half of the respondents (49%) did not restrict their use of WA application for social purposes. Likewise, slightly more than half of them (53%) also did not limit their use of WA application for learning purposes. Nevertheless, it can be seen that the other half of the total number of respondents preferred to use WA application for social purposes later in the evening until past midnight because WA application was used for learning purposes during daytime. Almost all respondents had WA groups for social purposes (96%) and learning purposes (99%). However, the category of number of WA groups for social purposes which recorded the highest percentage of users

was the 5-10 group (46%) whereas for learning purposes, it was the 5 or less group of users. Most of the students also responded positively to the questions whether WA application did help them in their learning process (87%). Almost all respondents agreed that WA should be used in group communication for learning purposes (94%). As noted by Kuznekoff, Munz and Titsworth (2015), this indicated a positive impact of the use of MIM such as WA application on students' learning. Summary of demographic profile of the respondents is shown in Table 1.

Table 1

*Demographic data*

No.	Demographic information		Frequency	Percentage
1.	Gender	Male	20	26.0
		Female	57	74.0
2.	Ethnicity	Malay	61	79.2
		Chinese	8	10.4
		Indian	4	5.2
		Other	4	5.2
3.	Faculty	Civil Eng.	17	22.1
		Industrial Mgmt	13	16.9
		Chemical Eng.	8	10.4
		Industrial Tech. Engineering	16	20.8
		Tech.	5	6.5
		Computer Eng.	18	23.4
4.	Type of mobile phone plan	Postpaid	8	10.4
		Prepaid	69	89.6
5.	Category of WA users	Less than 1 year	4	5.2
		1-3 years	51	66.2
		3-5 years	17	22.1
		More than 5 years	5	6.5
6.	WA use preferences for social purposes	In the morning	3	3.9

		In the afternoon	6	7.8
		In the evening	19	24.7
		Past midnight	22	28.6
		All the time	38	49.4
7.	WA use time preferences for learning purposes	In the morning	19	24.7
		In the afternoon	18	23.4
		In the evening	14	20.2
		Past midnight	7	9.1
		All the time	41	53.2
8.	Number of WA groups for social purposes	None	3	3.9
		Less than 5 groups	23	29.9
		5-10 groups	35	45.5
		11-15 groups	5	6.5
		More than 15 groups	11	14.3
9.	Number of WA groups for learning purposes (other than this WA group)	None	1	1.3
		Less than 5 groups	39	50.6
		5-10 groups	29	37.7
		11-15 groups	5	6.5
		More than 15 groups	3	3.9
10.	Does <i>WhatsApp</i> use help you in learning process?	Yes	67	87.0
		No	10	13.0
11.	Do you agree that <i>WhatsApp</i> should be used to communicate among group members for learning purposes?	Yes	72	93.5
		No	5	6.5

### ***Statistical analyses***

Table 2 and Table 3 present the mean ( $M$ ) scores and standard deviations ( $SD$ ) of data from GA items and MIM items, respectively. The mean scores for GA and MIM items were 3.96 and 4.83. Data analysis of GA items showed minimum-maximum range of mean scores from

3.45 to 4.22 with overall mean score of 3.96. Three positively worded statements (items no. 5, 12, and 11) that described group cohesion were rated highly by student. However, at least seven negatively worded GA items (items no. 17, 10, 9, 20, 4, 14, and 15) were also rated above the mean score of GA ( $M=3.96$ ). Two possible reasons could have caused these mixed results. Firstly, as noted by Hou, Kang and Sung (2007, 2008), despite of the aim of MIM to facilitate students' communication to complete group assignment, some students could have used gone off-topic in their discussions. Secondly, the presence of negatively worded statements in the GA items adapted from Evans and Jarvis (1996) could have caused confusion among students. These items can be ineffective (van Sonderen, Sanderma, & Coyne, 2013) and may affect internal consistency of the instrument (Salazar, 2015). Even though internal consistency was not affected, the negatively worded items which were intended to avoid acquiescence bias could have resulted in another problem: inconsistency. Acquiescence bias refers to the tendency to agree with what is stated (Colosi, 2005).

Meanwhile, data analysis of MIM items clearly showed eight (items no. 2, 3, 9, 12, 14, 15, 11, and 8) of the nine MIM items rated highly by students described group communication among peers. Much of students' MIM group communication largely concentrated on seeking answers from classmates and teammates, planning activities with teammates, giving and receiving instructions as well as notifications to and from teammates and classmates. Only one MIM item (no. 13) rated above the mean score for MIM items ( $M=4.83$ ) was a description of students' communication with their instructors. The present study has shown that unlike in the case of Rau et al. (2008), MIM did not seem to strongly support student-instructor social bonding.

Prior to correlational analysis, reliability analysis was performed. Cronbach alpha coefficients for both GA and MIM were 0.85 and 0.97, respectively. This indicated that both instruments had good measures of internal consistency. Normality test for GA showed that data did not violate the normality assumption. However, this was not demonstrated by data analysis of MIM. Therefore, Spearman's  $r_s$  was used to determine the correlation between MIM and GA. Despite non-normality of MIM data distribution, Pearson's  $r$  was also analysed for comparative analysis of the two measures. Results indicated that there was a weak but positively significant relationship between GA and MIM ( $r_s = 0.259, p < 0.05$ ) for Spearman's rho which was also similar to that of the Pearson's  $r$  ( $r = 0.243, p < 0.05$ ). Hence, it was evident that a weak but significantly positive relationship existed between students' use of MIM and their GA. In other words, as students used more MIM, their GA also increased.



Table 2

Mean (*M*) scores for Group Attitude (GA) items and their standard deviations (*SD*)

Group Attitude (GA) Items		<i>M</i>	<i>SD</i>
Item no.	Description		
1.	I want to remain a member in this group.	<b>4.0779</b>	1.2114 2
2.	I like my group.	<b>4.0649</b>	1.1623 2
3.	I look forward to coming to the group.	3.9481	1.1343 5
4.	I don't care what happens in this group.*	<b>4.0390</b>	1.4367 5
5.	I feel involved in what is happening in my group.	<b>4.2208</b>	.99503
6.	If I could drop out of the group now, I would.*	3.8052	1.4513 1
7.	I dread coming to this group.*	3.6623	1.1877 7
8.	I wish it were possible for the group to end now.*	3.8831	1.4865 5
9.	I am dissatisfied with the group.*	<b>4.1429</b>	1.4392 5
10.	If it were possible to move to another group at this time, I would.*	<b>4.1558</b>	1.3085 2
11.	I feel included in this group.	<b>4.1818</b>	1.0603 8
12.	In spite of individual differences, a feeling of unity exists in my group.	<b>4.2078</b>	1.1161 2
13.	Compared to other groups I know of, I feel my group is better than most.	<b>4.0390</b>	1.1521 3
14.	I do not feel a part of the group's activities.*	<b>4.0260</b>	1.2975 1
15.	I feel it would make a difference to the group if I were not here.*	<b>3.9740</b>	1.2770 7

16.	If I were told my group would not meet today, I would feel badly.	3.5195	1.2205
			5
17.	I feel distant from the group.*	<b>4.1688</b>	1.1743
			2
18.	It makes a difference to me how this group turns out.	3.4545	1.0704
			8
19.	I feel my absence would not matter to the group.*	3.5195	1.2629
			4
20.	I would not feel badly if I had to miss a meeting of this group.*	<b>4.0779</b>	1.3508
			1

Table 3

*Mean (M) scores for Mobile Instant Messaging (MIM) items and their standard deviations (SD)*

Mobile Instant Messaging (MIM) Items		<i>M</i>	<i>SD</i>
Item no.	Description		
1.	To seek answers from my lecturers	4.415	1.3411
		6	6
2.	To seek answers from my classmates	<b>5.026</b>	1.0256
		<b>0</b>	5
3.	To seek answers from my teammates	<b>5.000</b>	1.0130
		<b>0</b>	7
4.	To provide answers to my lecturers	4.324	1.2818
		7	7
5.	To provide answers to my classmates	4.818	1.0603
		2	8
6.	To provide answers to my teammates	4.792	1.2176
		2	1
7.	To arrange appointment with my lecturers	4.714	1.2232
		3	1
8.	To plan learning activities with my classmates	<b>4.909</b>	1.0154

		<b>1</b>	3
9.	To plan learning activities with my teammates	<b>4.974</b>	.99966
		<b>0</b>	
10.	To receive instructions from my lecturers	4.740	1.2711
		3	6
11.	To give and receive instructions from my classmates	<b>4.935</b>	1.2067
		<b>1</b>	5
12.	To give and receive instructions from my teammates	<b>4.974</b>	1.1695
		<b>0</b>	0
13.	To receive notification from my lecturers	<b>4.844</b>	1.1592
		<b>2</b>	3
14.	To receive and send notification from my classmates	<b>4.974</b>	1.1236
		<b>0</b>	0
15.	To receive and send notification from my teammates	<b>4.961</b>	1.1173
		<b>0</b>	5

## Conclusion

In summary, it has been evident that English language learners among non-native students responded favourably to the use of MIM in their group communication to complete the group work assigned to them. This also enhanced positive GA. In other words, MIM has the potential to engage English language learners in interactive communication by enhancing their attitudes towards peers in the same group.

The present study therefore recommends that MIM should be seriously considered for implementation in English language learning in which group communication is of great importance. However, before such recommendation can be implemented, a clear protocol or guidelines for both students and their respective language instructors should be developed.

It is acknowledged that this study had several limitations. Statistical power and relevance could have been improved by employing experimental design and stratified random sampling as well as increasing the effect and sample size. Statistical analyses performed did not involve validity checks. In this regard, Rasch model measurement can be employed to obtain person measures and item measures. This type of analysis will also show individual respondent's trend in answering questionnaire items, whether they are all positively worded items or a combination of both.

## Acknowledgement

This research was funded by Universiti Malaysia Pahang (Research Grant Vote No. RDU1403159).

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