

Measuring the Responsiveness of Staffs in Using an Organization’s Electronic Internal Communication Channels

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KEYWORDS	ABSTRACT
Mobile Applications Marketing Technology Acceptance Model Internal Communication	The effectiveness and efficiency of communication is very crucial in ensuring the accomplishment of an organization’s goals. Communication channels play an important role in achieving these goals. The adaptation of the latest and appropriate technology will be of significant value to enhance the effectiveness of internal communication. Due to issues of internal communication efficacy, a preliminary study will be conducted in an organization to find major problems and opportunities. An adaptation of the new Marketing Technology Acceptance Model (MTAM) is used in order to understand and determine the effectiveness of electronic communication channels. This model is applied in developing a set of questionnaires where the questions are adapted or adopted from previous studies. Some of the questions are also customised to suit the requirements of the organization under the current study. The findings will be used as bases in formulating and developing a mobile application for more effective internal communication within the organization. The findings of this research will also contribute towards the theory and practical refinement of MTAM and communication through mobile applications.

1.0 Introduction

The effectiveness and efficiency of communication is very crucial in ensuring the accomplishment of an organization’s predetermined objectives, mission and vision. The communication channel plays an important role towards this strategic direction. The adaptation of the latest and appropriate technology will be a significant added value and competitive advantage to enhance the effectiveness and efficiency of formal communication.

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With the advent of Information Communication Technology (ICT), communication through electronic internal communication channels which includes social media and email has taken a new dimension, building lots of new opportunities for individual, groups and organizations. The old offline meeting has evolved with web technologies, enabling users to interact through profile preferences, photos, videos, discussion boards and various other tools [1]. Social media applications are also used within an organization as a communication tool, a source to share information and knowledge, as a medium to relief stress and for learning new skills. The social media is a good channel for communicating with others, allowing users to meet and make new relationships with users from around the world. As predicted by [2], the use of corporate social media has cut down on unnecessary e-mails and instant messaging among employees. Using it in the workplace has also allowed customers to easily contact and communicate with a company.

Previously [3] concluded that organizations in Malaysia require a longer period of time in adopting digitization. However, the rapid growth of internet use and higher bandwidth provided by telecommunication companies have disproved this. The current trend of digitization allows institutions to adopt digital marketing as a tool of communication to reach their potential staffs and customers. It saves time, shortens the sales cycle, reduces paper wastage and carbon emissions since less commuting is needed during the whole process of communication and works implementation [4]. Additionally, the adoption of digital marketing also permits effective communication to take place between organizations and their target audiences [5].

Due to its rapid growth in popularity, platforms originally intended purely for social networking have been adopted by organizations for digital marketing and internal communication. Despite the success of these platforms as digital marketing tools, the use of these platforms has given rise to some issues in internal communication effectiveness. This motivated a preliminary study to be conducted to discover the major problems and opportunities in using current communication channels. In UiTM Terengganu the electronic platforms used for internal communication are the official email, WhatsApp and Telegram, however not all three are used by all staffs. From observations, there are attempts to send communiques through all three platforms but there are times when only one platform is used. This resulted in some information not being relayed to some staffs since not everybody used all three platforms regularly. There are also issues where the information conveyed to the general population are a mixture of messages which could be of a general nature or specific to a particular staff or a group of people. This caused some confusion since specific filters according to employee roles, information content, departments, events, or specific staffs are unavailable or not fully utilized. There is also the issue of the ability to monitor the receipt of information by staffs, and furthermore there is no incentive given to staffs to promptly read messages.

An adaptation of the new Marketing Technology Acceptance Model (MTAM), pioneered by [4] will be applied in order to understand and determine the effectiveness of existing internal communication channels of UiTM Terengganu. The decision to adapt this improved version of the Technology Acceptance Model (TAM) which was first introduced by [6] is driven by the added dimensions of cost, return on investment and effectiveness in MTAM. Cost and return on investment are among major considerations of today's organizations regardless whether or not they are profit oriented institutions. The focus of government organizations especially public higher learning institutions like UiTM on financial independence leads to greater concern on cost and return on investment in measuring the responsiveness of staff towards electronic communication channels. The income generation capability of the organization will always be a top priority in implementing any strategic initiatives including electronic internal communication channels.

The findings in this study will be used as the bases in formulating and developing a mobile application that will be the primary internal communication channel of UiTM Terengganu which will overcome the weaknesses of existing channels.

2.0 Literature Review

The Technology Acceptance Model (TAM) has been widely used in order to understand the acceptance and responsiveness of organizations and their staffs towards electronic internal communication. The use of TAM was to determine acceptance based on two main factors, namely perceived usefulness and perceived ease of use [6]. Perceived usefulness is about an individual's belief towards enhanced job performance that can be increased by the use of proper technology, and perceived ease of use refers to an individual's belief that efforts in accomplishing a job could be reduced by the usage of technology [6].

A study stated that organizations in Malaysia are currently using digital marketing strategies that focused on marketing functions, popularity levels, and challenges in using the technologies to enhance their marketing strategies [4]. They arrived at the same conclusion with [6] that digital marketing strategies can provide organizations with better opportunities to compete in an open market and the strategies enable them to retain their customers and staffs effectively, attract more potential customers and become resourceful and sustainable.

According to [4], also tried to determine which smart digital marketing strategies have been adopted by organizations in this country. The study also hypothesized additional constructs that can be adopted by organizations in engaging appropriate digital marketing strategies necessary for the sustainability of their businesses. Six hypotheses were proposed in the context of TAM to form the new digital marketing strategy and capability development model, known as Smart Digital Marketing Technology Acceptance Model (MTAM). Beside focusing on the aforementioned factors featured in TAM, MTAM was applied to test the responsiveness of staffs towards internal communication channels which are similar to digital marketing. In order to measure the adoption of new marketing technologies, MTAM was developed based on predominant key constructs derived from those six hypotheses. Those constructs are ease of use, perceived usefulness, perceived cost, greater return, efficiency, attitude towards use, and actual use in terms of functions [4].

The important role of smart digital marketing in an organization's operations was supported by [7-8] who added that the process of using internet marketing tools for marketing via social media or other digital marketing techniques to achieve certain business interests was very precise since it allows a company to build its customer preferences, uphold their trusts and upgrade its marketing strategies to achieve communication objectives. Social media marketing itself has proved to have positive impacts toward marketing through the effectiveness and efficiency of communication, aside from other influential factors such as interaction, entertainment, customization and trendiness [9]. Thus, social media and user-generated content has also been considered as one of the five key focal points to be considered in transforming digital marketing into smart and sustainable digital marketing, in addition to understanding consumer behaviour, platforms and two-sided markets, search engines, and contextual interactions [7].

According to [1], the use of social media platforms has a significant and moderate relationship with work productivity. Therefore, organizations should allow their employees to access social media during working hours, as the findings show that staffs in the organization in which the study was conducted have used and adapted to social media platforms in a positive manner, where the use reduces stress and improves skills.

Social media is also an e-marketing tool that allows companies to have effective engagement with their customers with no time limitation and is of low cost compared to many conventional communication tools. Therefore, it is the most effective marketing tool that can be employed by all kinds of business organizations [10]. Meanwhile, [11] defines social media marketing as the use of social media platforms in creating, communicating, delivering, and exchanging information, and they found their use to be valuable for the sustainability of a business organization. With the recent immense development of social media use in Malaysia, many companies including a majority of small or medium-sized enterprises (SMEs), have started to adopt social media marketing as their main marketing strategy. The adoption of this concept of social media

marketing as an internal communication channel has also been widespread in higher learning institutions in Malaysia.

The increasing popularity of social media among its users is consistent with the emphasis on the Fourth Industrial Revolution that features an integration of technologies that creates no clear boundaries between the physical, digital, and biological spheres. [2]. Facebook for example, has achieved 2.45 billion active users monthly as of the third quarter of 2019, making it the world's largest social media platform [12]. Formerly the Malaysian Digital Association indicated that 20,650,133 of Malaysians have utilised social media in 2016 and this was equal to 67.7 percent of the total population at that time. Malaysians were found to spend an average of 5.1 hours a day on the Internet and 2.8 hours a day on social media.

Lastly, the focus on the aspects of cost and return on investment in any strategic initiatives by public universities such as UiTM is in line with current strategies of Malaysian higher education (Malaysia Education Blueprint, 2015-2025 (Higher Education)). In this new direction, Malaysia wishes to harmonise how private and public institutions are regulated, and to transition from the current, highly-centralised governance system to a model based on earned autonomy within the regulatory framework. Furthermore, it will ensure the financial sustainability of the higher education system by reducing reliance on government resources. The focus on dimensions such as cost and return on investment is highly in need and recommended.

Therefore, the authors proposed the following theoretical framework as depicted in Figure 1.

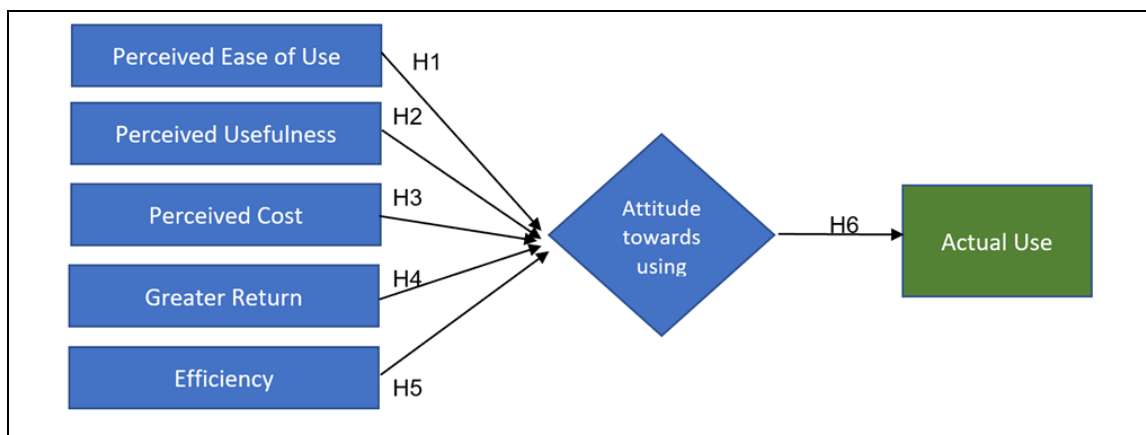


Figure 1: The conceptual smart digital marketing technology adoption model (MTAM), including cost, greater return, and efficiency as selected sustainability measures. Adapted from [4]

Understanding all the literature for theory refinement and development required an extensive comprehension and thorough analysis on the concepts and theories related to the major constructs or dimension in this current study. Table 1, summarizes the main literature on the constructs of this study. There are seven constructs altogether, in which two of them, namely 'Attitude towards using' and 'Actual Use' will be the dependent constructs.

Table 1: Summary of the Proposed Smart MTAM for Measuring the Responsiveness Toward an Organization's Electronic Internal Communication Channel

Construct	Definition and Resources
Perceived Ease of Use (EOU)	The perception that digital marketing will be easy to use [13].
Perceived Usefulness (PU)	The perception that digital marketing may be useful for future trend marketing [13].
Perceived Cost (PC)	The perception that digital marketing is cost-efficient when compared to traditional marketing platforms [14].
Greater Return (GR)	The perception that sales, income, and profit will increase from digital marketing [15].
Efficiency (EF)	The perception that digital marketing is efficient for communities and companies [7].
Attitude towards Using (ATU)	The system attracts more customers, enhances sales and changes their behaviour for more usage [16].
Actual Use (AU)	The system actually acquires more customers and keeps the existing ones interested [8].

Based on the literature and conceptual framework above, six hypotheses are proposed:

- H1: Perceived Ease of Use has a positive effect on the attitude towards using an organization's electronic internal communication channel
- H2: Perceived Usefulness has a positive effect on the attitude towards using an organization's electronic internal communication channel
- H3: Perceived Cost Efficiency has a positive effect on the attitude towards using an organization's electronic internal communication channel
- H4: Perceived Greater Return has a positive effect on the attitude towards using an organization's electronic internal communication channel
- H5: Efficiency has a positive effect on the attitude towards using organization's an electronic internal communication channel
- H6: The Actual use is positively affected by the attitude towards using an organization's electronic internal communication channel

3.0 Methodology

The researcher will adopt a post-positivist research paradigm and accordingly apply quantitative research methodology where the online survey method is used. The sample will be selected from UiTM Terengganu staffs accordingly, using the stratified random sampling technique. This type of sampling is applied due to the statistical accuracy of the method, and the fact that smaller sample sizes can also retrieve highly useful results for a researcher. This sampling technique covers the maximum population as the researchers have complete charge over the strata division.

The population for this study consists of all levels of UiTM Terengganu staffs which includes both academics and non-academics. There is a total of 834 staffs of UiTM Terengganu, located in three different campuses, Dungun, Kuala Terengganu and Bukit Besi. Based on the table [17], the number of samples for this population will be 265 from the total population. Following the classic

stratified random sampling, calculation of the sample of each position using the stratified random sampling formula is as in table 2 below:

Table 2: Population and Sample

Position	Population	Sample
Academics	319	98
Academics with Administrative Posts	50	19
Executive Officers and above	157	51
Top Management	10	4
Support staffs	298	93
Total	834	265

The instrument developed for this study is a questionnaire consisting of a number of statements that the respondents scored by using a Likert scale of 1 to 5. As indicated below, the measurement items for the questionnaire used in this study were adapted or adopted from previous studies. Some of the measurement items are also customised based on the specific requirements of the organization under the current study which involved the formulation of specific items through brainstorming sessions with the top management related with this study. Both the constructs and the theme of the questions can be referred to in Table 3:

Table 3: Measurement of MTAM

Construct / Sources	Proposed Questions
Perceived Ease of Use [18]	I find UiTM internal communication channels easy to use Interaction with my superiors, using UiTM internal communication channels are clear and understandable Interaction with my colleagues using UiTM internal communication channels is clear and understandable Interaction with my subordinates using UiTM internal communication channels is clear and understandable
Perceived Usefulness [18]	I find UiTM internal communication channels useful in performing my tasks UiTM internal communication channels help to stay in touch with colleagues UiTM internal communication channels make it easy to stay informed with the latest information Using different internal communication channels caused me to miss some important information.
Perceived Cost [4]	The cost of using UiTM internal communication channels is low or almost zero
Greater Return [4]	Using UiTM internal communication channels will generate revenue for UiTM
Efficiency [4]	UiTM internal communication channels are efficient in delivering information I am happy to use UiTM internal communication channels UiTM internal communication channels delivers fast and instant information
Attitude towards Using [19]	Overall, I enjoyed using UiTM internal communication channels I prefer NOT to use current UiTM internal communication channels in the future

Actual Use [20]	<p>I do not find the amount of information received through UiTM internal communication channels to be overwhelming</p> <p>I immediately read all news and directives given through UiTM internal communication channels</p> <p>I respond promptly to all directives given through UiTM internal communication channels</p> <p>I find all questions and directives that I post through UiTM internal communication channels are immediately attended to</p>
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The data will be collected by using an improved questionnaire that is converted into a Google Form. This online questionnaire will be stored and accessed via a URL link <https://terengganu.uitm.edu.my/index.php/fasiliti/kaji-selidik> which will be distributed by using current communication channels, namely official e-mail, Telegram and WhatsApp. According to [21], these applications are compatible and accessible from smartphones and also using social media applications will ease access for mobile respondents.

The responses secured from this online survey will be automatically stored in Google Forms. The Statistical Package for the Social Sciences version 23 will be used to retrieve the data from the online storage. The Smart Pls 3.0 software will be employed to analyse the relevant statistical measurements. The formative technique with first order and second order constructs will be applied in testing relevant statistical data.

4.0 Conclusion and Recommendation

The findings from this survey will be used as bases in formulating and developing a mobile application for electronic internal communication system of organizations particularly for UiTM Terengganu which is hoped to overcome the weaknesses of existing communication channels. The proposed new mobile application will be developed in 2 phases and divided into five modules, namely Content Creation, Personal Dashboard, Discussion Board, Ads Board and Communication Insights. It will be developed in house and is expected to be completed within one and half years. The completion and deployment of this new mobile application will suit current mobile lifestyle and furthermore, will enhance the effectiveness and efficiency of communication.

Interestingly, this mobile application will also offer an income generation platform for organizations particularly for UiTM in this context and at the same time will increase engagement and excitement among staff. Strategically, this new mobile application will have potential for commercialization that could be employed by other institutions as well. Directly it will support the aspiration of the new higher education system, Malaysia Education Blueprint 2015-2025 (Higher Education). The findings of the research will also contribute towards the theory and practical refinement of MTAM, in addition to contribution to the field of ICT, in electronic internal communication through mobile applications.

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References

- [1] Seman, S. A. A. (2014). Organizational member use of social networking sites and work productivity. *International Journal of Innovation, Management and Technology*, 5(1), 30-34.
- [2] Schwab, K. (2016). *The Fourth Industrial Revolution: What it Means, How to Respond*. <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>

- [3] Alias, A., & Z.T, J. P. (2012). Internet Marketing of Residential Properties: Investigation on Effectiveness of Its Application. *Journal of Surveying, Construction & Property*, 3(1), 1-30.
- [4] Low, S., Ullah, F., Shirowzhan, S., Sepasgozar, S. M., & Lee, C. L. (2020). Smart digital marketing capabilities for sustainable property development: A case of Malaysia. *Sustainability*, 12(13), 5402.
- [5] Razali, M. N., Rahman, R. A., Adnan, Y. M., & Yassin, A. M. (2014). The impact of information and communication technology on retail property in Malaysia. *Property Management*.
- [6] Davis, F. D. (1985). A technology acceptance model for empirically testing new end-user information systems: Theory and results (Doctoral dissertation, Massachusetts Institute of Technology).
- [7] Kannan, P. K. (2017). Digital marketing: A framework, review and research agenda. *International Journal of Research in Marketing*, 34(1), 22-45.
- [8] Ullah, F., Samad Sepasgozar, P., & Ali, T. H. (2019, December). Real estate stakeholders technology acceptance model (RESTAM): User-focused big9 disruptive technologies for smart real estate management. In *Proceedings of the 2nd International Conference on Sustainable Development in Civil Engineering (ICSDC 2019)*, Jamshoro, Pakistan (pp. 5-7).
- [9] Wang, Y., Chowdhury Ahmed, S., Deng, S., & Wang, H. (2019). Success of social media marketing efforts in retaining sustainable online consumers: An empirical analysis on the online fashion retail market. *Sustainability*, 11(13), 3596.
- [10] Kaplan, A. M., & Haenlein, M. (2010). Users of the World, Unite! The Challenges and Opportunities of Social Media. *Business Horizons*, 53(1), 59-68.
- [11] Tuten, T. L., & Solomon, M. R. (2018). *Social Media Marketing (3rd Edition)*. SAGE Publications Ltd.
- [12] Iqbal, M. (2020). Facebook Revenue and Usage Statistics (2020). <https://www.businessofapps.com/data/facebook-statistics/#:~:text=Alphabet%2C and Amazon-,Facebook User Statistics,than currently live in China>.
- [13] Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers & Education*, 128, 13-35.
- [14] Melović, B., Jocović, M., Dabić, M., Vulić, T. B., & Dudic, B. (2020). The impact of digital transformation and digital marketing on the brand promotion, positioning and electronic business in Montenegro. *Technology in Society*, 63, 101425.
- [15] Tao, Y., Hinton, M., & Little, S. (2005, December). Exploring sources of competitive advantage: E-business applications within Chinese home appliance industry. In *Proceedings of the Fourth International Conference on Electronic Business (ICEB2014)*, Beijing, China (pp. 5-9).
- [16] Ramayah, T., & Jaafar, M. (2008). Technology Usage Among construction Students The Moderating Role of Gender. *Journal of Construction in Developing Countries*, 13(1), 63-77.
- [17] Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- [18] Rauniar, R., Rawski, G., Yang, J., & Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: an empirical study on Facebook. *Journal of Enterprise Information Management*.

- [19] Al-Jabri, I. M., & Roztock, N. (2015). Adoption of ERP systems: Does information transparency matter?. *Telematics and Informatics*, 32(2), 300-310.
- [20] Mayeh, M., Ramayah, T., & Popa, S. (2014). The Role of Absorptive Capacity in the Usage of a Complex Information System: The Case of the Enterprise Information System. *J. Univers. Comput. Sci.*, 20(6), 826-841.
- [21] Ibrahim, J., Ros, R. C., Sulaiman, N. F., Nordin, R. C., & Ze, L. (2014). Positive impact of Smartphone application: WhatsApp & Facebook for online business. *International Journal of Scientific and Research Publications*, 4(12), 1-4.