Electronic Propinquity in the Hospital Management System among ICT Integrated Hospitals in Malaysia

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ABSTRACT

This research explores the applicability of electronic propinquity (EP) in hospitals and the integrated communication among medical doctors in Malaysia by utilizing new media facilities. This research uses and updates Korzenny's (1978) electronic propinquity theory. A total of six hospitals were selected in this study. This study used a qualitative methodology to address all objectives: to examine the level of IT literacy among Medical Officers; to examine the existence of electronic propinquity among medical officers; to explore the use of new media among medical staffs in their work and to identify the integrated communication among medical officers. For this purpose, the formula introduced by Amran Rasli has been adopted to examine the IT literacy level of medical officers. To obtain an applicable result, 8 Medical Officers agreed to take part in semi-structured interviews and to fill in the forms provided. From the result of this analysis and through thematic methods, we found that the advantages listed are contained in the elements of EP. The study showed that the level of literacy among Medical Officers is high, and the most used programme is the Microsoft Words. The study also showed that there is an existence of electronic near-theoretical in hospital management which uses new media preordained by the closeness in time, followed by physical and distance. Among other purpose of using new media among medical officers is to gain knowledge, office work and entertainment. Finally, the result of this study showed that the integrated communication existed indirectly. Regardless that the ICT facilities are provided by the Malaysian government, the use of applications in mobile phones is considered more helpful to the Medical Officer to carry out their responsibilities. This statement is in line with some previous research findings, medical doctors need only a few technology-oriented facilities in management since their primary task is to treat patients while only a few are involved with administrations.

Keywords: *New media, social media, media, communication, hospital information system*

INTRODUCTION

The application of modern equipments in management system in hospitals is not considered as something new. Many theories and studies have proven the capabilities of equipment technology to facilitate all affairs in the field of hospital work. The adoption of information and communication technology (ICT) applications has been significant in ensuring a more efficient communication in working environment (Mohd Azul, Ali Salman, & Nor Shahizan, 2016). Electronic Propinquity (EP) Theory which was introduced by Korzenny in 1978 described the closing of distance in term of human relationship with each other through medium of communication when technology such as internet and computers are being utilized. This theory introduced three perspectives from which relationship can bring us closer; through the perspective of time, physical and place. This is the reason why the utilization of ICTs in

management system especially in big organisations has a lot of benefits, in this context, the adoption of ICT in hospitals is substantial.

In the early stage of introduction of this theory, Korzenny only saw the amount of electronic-social interaction in the propinquity process. However, technology accelerates and intensifies how human relationships become closer. The utilization of IT allows integrated communication to happen. As part of the plan to achieve maximum development, the utilization of ICTs as a medium for communication and its development especially in management is very important to meet the needs in Malaysia. In developed countries such as USA, United Kingdom, Canada, Netherlands, Norway, Denmark, Australia and South Korea, the utilization of ICTs are already considered as a basic and essential tool in their administration. The government of Malaysia has made a notable effort in making Malaysia into one of the top users of ICTs in management including the development of Multimedia Super Corridor (MSC).

So far, the use of ICTs have been implemented in many sectors in Malaysia especially in public sector, namely in education, accounting, safety and many others. Although this implementation has been ongoing for quite some time, there is still not much research conducted on the acceptance of its usage among the public workers. In fact, Mohamad Sobhi and Junaidi (2015) have explained that the rapid development of technology has created an environment of interaction within the community itself. Due to this fact, this study is conducted to assess the level of usage, effects of using ICTs and to gain feedbacks from hospital personals in using information system. Moreover, the increasing number of patients requires efficient information management system to expedite treatment for patients and accessing patients' records.

The introduction of a technology-based communications system is very helpful to humans in terms of relationship enhancement with each other, especially friends in different locations. However Mohamad Yuzaidy and Muamar Ghaddafi (2015) said the new media system has given a great challenge to the community itself. One of the goals of the government by providing technology in the management system is to accelerate and save cost from the aspect of communication. In the medical field, integrated communication is necessary. The demands of a doctor's job, as an example, are easier if ICT is fully applied in their field of work. However, the need for legal aspects in medicine is considered to have restricted the concept of integrated information, this occurs among medical doctors in particular.

Internal information dissemination is very essential in an organisation. In Malaysia, the Ministry of Health itself has a very large number of employees with many divisions, units and it institutes in every district and state in Malaysia. This condition creates physical distance. Although the physical building of a state department is located within the same compound, the employees in different units under the state management are usually placed in different rooms, floors, or even buildings. This separation creates gap in communication and relationship becomes distant and disconnected. Without effective and efficient communication, the exchange of information will become slow. For this reason, telecommunication system plays an important role in bridging the gap and the improvement in communication channels will be in line with the goal of Malaysian Government in creating electronic government.

In 6th Malaysia plan, has stated that all hospitals in Malaysia would be equipped with information technology tools to assist in management. This was evidence in Malaysia Health Ministry Annual report of the year 2000 which recorded the name of the hospitals using

electronic based management system annually. For example, electronic management system was introduced to Selayang Hospital in 1998, followed by Putrajaya Hospital, Sultanah Bahiyah Hospital in Kedah and Queen Elizabeth Hospital in Sabah. By the year of 2007, all hospitals in Malaysia were equipped with electronic facilities and this progress is able to support the integration of electronic propinquity theory in hospitals.

Therefore, this study would explain the meaning of proximity and its advantages to the government especially to the Ministry of Health organization. Information content is used as a moderator for information acceptance and based on the Communication Model for persuasion (Igbaria & Tan, 1997). This model utilizes three dimensions when conveying information, namely source, information content and audience aspects. This study is needed to assess the effectiveness of IT usage and IT competency of hospital personnel in four hospitals in Malaysia using new medium of communication which has been implemented by government with millions of spending.

For the long term, the introduction of information technology systems is necessary, due to the terrain in Malaysia. The structure of land area in Malaysia, comprising of hills and mountains, requires the use of new media to disseminate information to residents who live in rural areas or far from the city centre. Transport or communication costs will be higher if the hospital maintains traditional ways to communicate with those who live remotely. With the creation of new media, dissemination of information related to the development of community health is cheaper and faster. Hence the construction of an infrastructure of information technology in Malaysia can be considered as a positive move toward disseminating information to the population in Malaysia. Based on the scenarios that have occurred in Malaysia, this study is important because the findings may provide answers to the government with regard to its revenue concerning the introduction of new media as a medium of communication. If there is no effort to use technology to improve the facility level, the level of productivity among the staffs in the organization in terms of receiving information is diminished. Long-term efforts to improve the quality of management are very difficult to achieve. The findings of this study will also explain the advantages of using information technology as a tool to strengthen the relationship between human beings.

Research objectives
RO1:   To examine the level of IT literacy among medical officers.
RO2:   To explore the existence of EP among medical officers.
RO3:   To explore the use of new media among the medical officers in their work.
RO4: To identify the integrations of medical officers among the hospital in
          Malaysia.

Research Questions
RQ1:   What is the level of IT competency of medical officer in hospitals?
RQ2:   How do medical officers understand the existence of the theory of EP?
RQ3:   For what purpose is social media being used by the Medical officers in hospitals?
RQ4:   How are the integrations of the Medical Officers in between the hospitals in
          Malaysia?

LEVEL OF IT LITERACY AMONG MEDICAL

The introduction of ICT systems at hospitals is often regarded at the identification stage. However, IT-related knowledge has been given an earlier exposure. Link and Marz (2006) have noted that IT-related disclosures at the University of Vienna were given early in the first year of medicine. This means that the level of IT literacy is quite high when medical officers started working in hospitals. However, according to a study conducted at the University of Glasgow, in order to answer RQ2 in this study, there is an assumption that the level of competence among hospital administration staffs is on less than average. The lack of exposure in this medium is prior to the use of the ICT unit which handles courses or workshops. The comprehension and skills to utilize ICT systems cannot be achieved within a very short period of time. ICT skills appropriation takes a bit longer. Thus the level of competence at among medical officers is below average.

THE EXISTENCE OF EP AMONG MEDICAL OFFICERS

The existence of electronic systems in the administration of the hospital is still considered new. The introduction of this system in late 2006 has shown that the system itself is still in the introduction and improvement phase. As such, its use is still not completely smooth when utilized. At this stage, the existence of aspects of EP is considered not yet established and medical officers do not yet know about the existence of EP. EP theory is a theory under the title Theory of Communication Technology (Gragan and Shield, 1998; Griffin & Emory, 2009; Littlejohn, 2002, 1996; Saodah, Narimah, & Mohd. Yusof, 2006). Within this theory, Korzenny (1978) has referred to propinquity as distance from the aspect of location, time and physical aspects. In addition, problems caused by the distance of geography are no longer a major problem. Indeed, in the education world, ICTs can enable the world to join distance learning programmes or initiate business in electronic commerce. Moreover, this theory describes physical propinquity in terms of time, distance and space.

This theory explains communication patterns of individuals and builds on their own use of electronic media. Distance among individuals is not a barrier to communication, nor access to published material, as it is enabled through the internet. The distance of place between two people is overcome by the open channel of communication, using signage easily and quickly. Individuals feel close to others when they are talking through mobile phones, although the distance between them may be great. Technology can limit physical obstruction between two communicating individuals. Therefore, technological closeness in terms of distance has almost made this theory a non-issue. In this study, EP views the ability to bridge the relationship among medical officers in Malaysia. With this new medium, all matters relating to dealing with records management should become easier. In the theory of electronic proximity, Korzenny (1978) lists several elements SUCH AS Time, Distance and Physical.

THE PURPOSES OF USED NEW MEDIA AMONG MEDICAL STAFF

The rapid development of communication technology has also influenced the development of relationships in the medical world. Medical doctors have also taken the initiative to use media technology in facilitating their work. The use of social media among medical doctors is discouraged. This is because of the issues related to border and professional use of media among doctors is unclear. Laerum, Ellingsen and Faxvaag (2001) have pointed out that the

needs of medical doctors are far less than the systems supported in the new media. The use of new media is deemed less necessary by the medical doctors in the daily task as a medical officer. A study conducted by Laerum, Ellingsen and Faxvaag (2001) in Norway on medical doctors at Norwegian hospitals have found that the purpose of using new media in the field of work was extremely low. Usage is only to view patient data records. In 2017, the use of new media among Medical officers may be more focused on personal or social goals.

THE INTEGRATED COMMUNICATION AMONG MEDICAL OFFICER BY USING NEW MEDIA

The introduction of a new media system in management is considered to create integrated communication among hospital medical personals. Wang and Woo (2007) have described the introduction of a technology system in an organization to complement a well-informed and efficient information management system. Miller et.al (2000) has described the introduction of technology systems in an organization may not really be needed but it is considered as the current required facility that may help improve service quality. In a hospital, the introduction of sophisticated technology systems is not an absolute necessity, but with the technology will facilitate the internal administration system that speeds up the business. Long-term impacts can also be seen as customers' satisfaction is increasing from time to time. The use of technology in hospitals is much needed by the administrator only. This is because new media are used to store patient data as well as to manage information storage systems for record purposes. The technology system is more to the concept of convergence rather than the integration. Therefore integration concepts are difficult to be created among medical doctors even though the hospital has been equipped with technology.

RESEARCH METHODOLOGY

In this study, one of the methods employed is qualitative method. Indeed, qualitative descriptions can play an important role in suggesting possible relationships, causes, effects and even dynamic processes in school settings (Burns, 2000). Additionally, Burns (2000) has argued that qualitative methods can highlight subtleties in pupil behaviours and response, illuminate reasons for action and provide in-depth information for teacher interpretations and teaching style. The protocol began with an introduction to the research and also touched on the background questions to be asked of the Medical Officers. The questions asked of the Medical Officers are broadly divided into two parts; the first part of the question is more of an introduction to the study. At this stage, it was also necessary to identify more closely with the Medical Officer so that the Medical Officer feels comfortable and easily gives ideas and answers when entering the second stage of the interview.

FINDING

Level of IT Literacy among Medical Officers
The level of Medical Officers' IT literacy is assessed by adopting an instrument used by Mohamad Amran (2003), it has been developed to evaluate clerical workers in ICT based facilities. This instrument is suitable for this study as it has a few similarities. Both studies were conducted within civil servants and they have adopted the ICT based facilities in their daily work. Furthermore, both of the studies are based in Malaysia, where similar influencing factors

involved especially in the aspect of culture and working environment. The aspects of IT literacy assessed (Mohamad Amran, 2005) are: Overall IT Literacy (Overall); database (DB); Graphic (Gr); Word Processing (WP); Spreadsheet (SS); Communication and Internet (C&I); General Computer Operation (GCO) and General Technology Application (GTA). The researcher used the Terrell transformation technique 2000 to convert ordinal data into indices, based on the following formula (Mohamad Amran, 2005):

Transformed Score = [(actual raw score-lowest possible raw score)/ possible raw score range] x 100.

For each item, the checklist was rescaled to the higher competence. The MO with the higher numerical values was as follows (as in table 1):

Table 1: Final Value for Response Choice

Response choice	Final Value
Have not observed	1
Have observed	2
Perform with supervision	3
Perform without supervision	4
Can do and instruct others	5

In this research, for example, if a Medical Officer responded to the checklist with 'Perform with supervision' to the entire questions in the **general technology application (GTA)** domain, he or she would have a raw score of 18, calculated by (3+3+3+3). Subsequently, if another Medical Officer responded with 'Have observed' to all the questions in the general technology application (GTA), the raw score would be 12 (or 2+2+2+2).

Table 2: Communication and Internet (C&I) checklist:

II. Communication and Internet **Individuals should be able to use e-mail and the Internet to communicate and locate Information. This would include the ability to:**	Have Not Observed	Have Observed	Perform with Supervision	Perform Without Supervision	Can Do and Instruct Others
A – use e-mail to:					
1. send and receive e-mail Messages			X		
2. enclose and recover documents attached to e-mail messages		X			
B – use the Internet to:					
1. access the Internet with a Browser		X			
2. navigate the Web by use of links and URL addresses		X			
3. use search engines to locate desired information		X			
4. download and print desired items from the Internet		X			

5. access and contribute to chat rooms and newsgroup	**X**	
6. create World Wide Web pages	**X**	
7. use a Web Publishing tool	**X**	
8. organise and moderate a synchronous computer conference using chat tool	**X**	

Therefore, the calculation of the raw score for Anita in C&I is 3+2+2+2+2+2+2+2+2+2= 21, subsequently, her C&I literacy is (21-10)/ 40 * 100 = 27.50 (rounded into two decimal points). For each aspect, the same formula is used and the IT literacy is calculated. The detailed results of each MO are shown in table 3.

Table 3: MO Workers' IT'S Literacy

Name	GR	DB	SS	WP	GCO	C&I	GTA	Overall
MO 1	71.00	86.00	97.00	98.00	90.00	85.00	79.20	86.60
MO 2	83.70	73.00	83.33	98.20	90.00	76.00	79.20	83.34
MO 3	67.00	53.35	75.00	100.00	70.00	75.00	58.00	71.20
MO 4	71.00	71.42	90.00	98.00	74.00	85.00	62.00	78.80
MO 5	63.00	66.00	73.00	100.00	79.00	90.00	42.00	73.30
MO 6	83.00	75.00	87.00	96.00	85.00	100.00	79.20	86.50
MO 7	83.33	77.00	83.33	69.00	75.00	100.00	87.00	82.09
MO 8	50.00	95.00	72.00	86.00	74.00	85.00	79.20	56.60
MO Mean	70.89	74.59	92.82	93.15	79.63	87.00	70.73	77.30

*Overall IT Literacy (Overall); Technology Application (GTA); database (DB); General Computer Operation (GCO); Graphic (Gr); Communication and Internet (C&I); Word Processing (WP); Spreadsheet (SS); and General.

With reference to Table 3, majority of the Medical Officers have high levels of literacy in Word Processing (93.15), Spreadsheets (92.82), and Communication and Internet (87.00). Among the lowest levels of literacy are in the aspect of General Technology Application (70.73), Graphic (70.89), and Database (74.59). The mean literacy for all Medical Officers was 77.30, and this is considered quite high. The Medical Officer with the highest level of literacy is Medical Officer 1, who is the youngest Medical Officer among the informants.

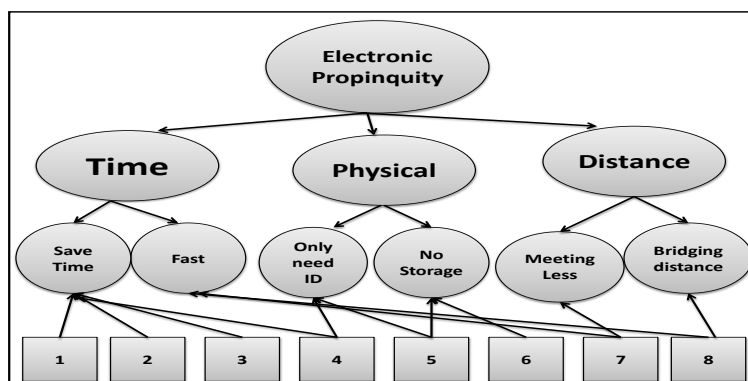*The Existence of EP among Medical Officer*

Figure 1: Electronic Propinquity Elements

Figure 1 describes the overall findings of the study with the presence of EP among Medical Officers in hospitals in Malaysia. The findings show that electronic propinquity elements have existed among Medical Officers who work in hospitals in Malaysia. The top reasons given by informants for using new media in hospitals are to speed up their work and save time. A total of four informants have described that the use of new media is to save time while two informants have stated that with new media, all the tasks that are needed to be resolved could be implemented quickly. Two informants have said that the use of new media provided comfort within the physical aspirants of the Medical Officers need to know basis of a patient's ID while the other two informants have put comfort in the new media by eliminating storage. These mean that four informants have chosen the point of advantage in using new media in the hospital and is categorized in the physical aspect. Whereas two informants has classified the advantages of using new media from the aspect of distance. Overall, the majority of the informants have agreed that by using the new media, the electronic propinquity will happen from the aspect of time, followed by physical and distance.

The Purpose of Using New Media among Medical Staff
Medical Officers are like any other people using new media and the results of the study have found that busy Medical Officers working at the hospital also use new media for their daily needs. There are a number of new media that are being used among medical personnel including office work, searching for information and entertainment. Figure 2 shows that the majority of Medical Officers agree that the purpose of using the new media is for searching information which followed by office work and entertainment.
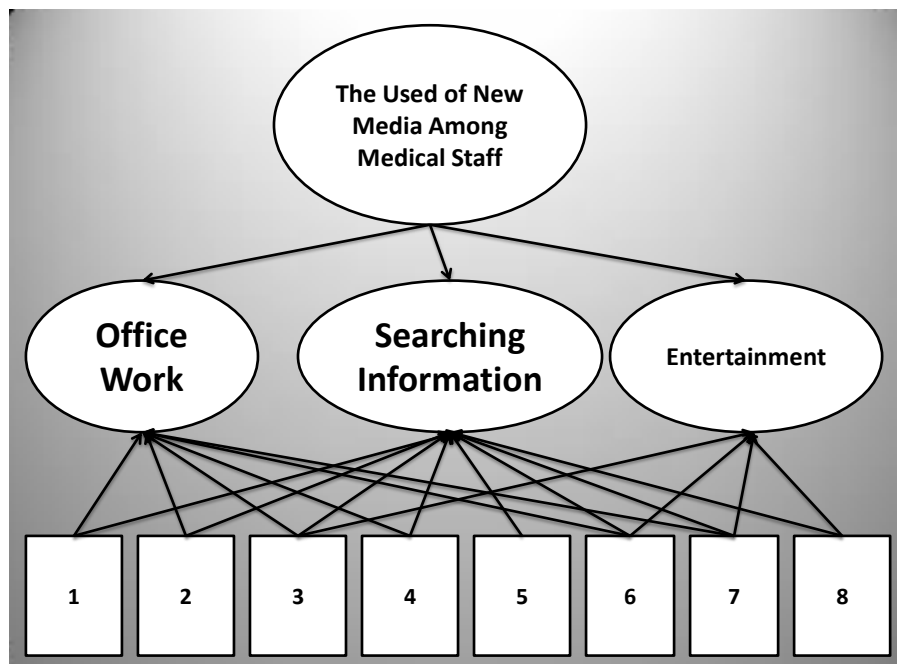

Figure 2: The Used of New Media among Medical Staff

The Ingrated Communication within Medical Officer Staff in ICT Hospitals?
Figure 3 shows the results of the studies that were intended to see the interactional relations between hospitals in Malaysia and Medical Officers. Despite different locations, medical officers are deemed to be able to create integrated communication with other medical officers by using mobile information. The technology equipment provided by the government at the hospital is unable to build integrated communication within the medical officers in Malaysia. The facilities provided are merely patient data storage and medical staff records only. On the other hand, the mobile facilities that are connected to the internet network are actually a pillar of the existence of integrated communication among medical officers.
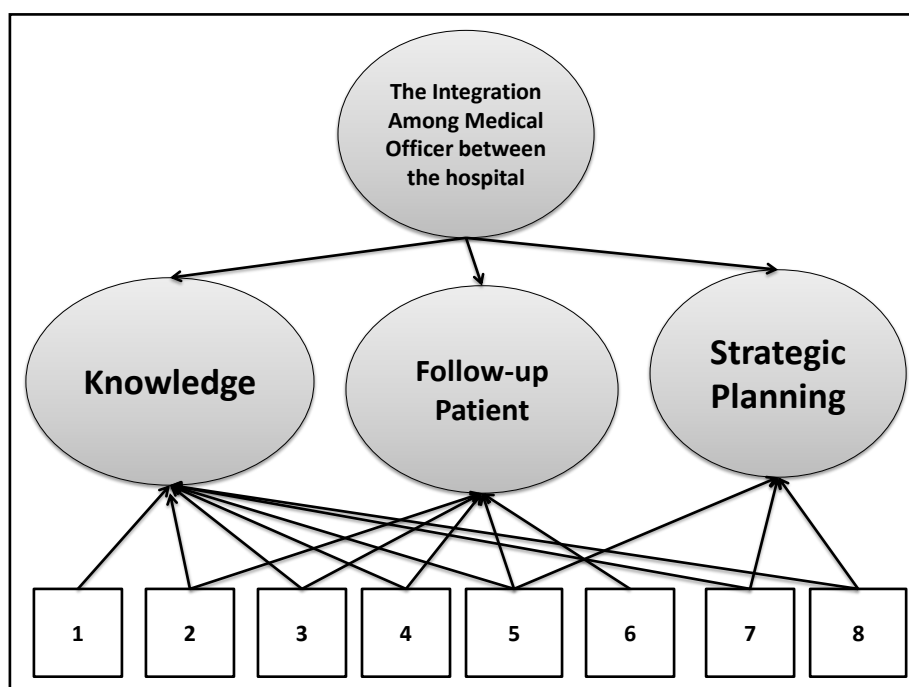

Figure 3: The Integration among Medical Officer between the Hospital

The results of the study in figure 3 show that the majority of medical officers are of the opinion that the use of new media contributed much to knowledge. As to what the 8 informants have mentioned, 5 informants stated that the utilization of new media is a tool to follow-up the patients, while a total of 3 informants agree that new media could be used for strategic planning. For the purpose of knowledge, informant 5 states:

> I often update knowledge on diseases through new media. Sometimes I will contact my colleagues to find out the latest developments related to new diseases that hit the country.

This statement is supported by informant 3, who added:

> I have some friends who are also medical doctors but are in different hospitals. We have created a group of solely for updating knowledge related to the latest diseases.

Also, informant 1 states:

> I often refer to the most recent information pertaining to the current situation which refers to new diseases through domestic or foreign websites. In this way I am confident that my knowledge of the disease will always increase.

DISCUSSION

The findings showed that the use of new media is very useful in managing an organization, especially in hospital management. The Malaysian government's decision to invest a substantial amount of money in the development of hospital facilities has increased the level of high efficiency in management as well as speeding up medical affairs especially among medical officers. This study has made an in-depth study of IT literacy levels among Medical Officers, the existence of electronic propinquity theory in managing hospitals, the purpose of using new media among Medical Officers, as well as the existence of integration in the medical world through new media.

Information Technology Literacy among Medical Officers

The nature of a Medical Officer's work shows that they do not need to use new media in daily routine. This is because a medical officer on a daily basis only needs to treat the patient. A large part of the medical officer work is with the patient. Therefore, focusing on work involving information technology is much less. The findings show that the level of IT literacy among medical officers is considered high. This is also due to the management system in the hospital itself today requiring medical officers to include patient cases in the database. Therefore, knowledge in IT is now a necessity. Overall IT literacy among Medical Officers in Malaysia is high. High efficiency can be seen in word processing, followed by spreadsheets and internet communication. IT efficiency from the technological aspect is somewhat less, particularly in the skills of general technology application, graphics and database. Hazlett and Hill (2003) have emphasized the role of the government in bringing about the fundamental change in the use of IT. This situation is similar to the scenario in which despite the HIS system being fully implemented in 2008, technological equipment was first introduced in the spring of 1998. 10 years were allocated to enable the staffs in the hospital, to learn to use the IT system. Compared to other public offices, staffs at the hospital certainly have advantages in obtaining training before the full use of IT systems in the hospital.

The Existence of EP among Medical Officers

The use of new media has also created an electronic approach as mentioned in the theory introduced by Korzenny (1972). The concept in the first approximation theory is from the aspect of time. The majority of informants noted that the use of new media has given a significant

impact in terms of time. From the aspect of time the informants have agreed that the use of new media has resulted in work being quick and saving time. The results overall totally have followed the EP theory. EP theory is one theory under the Theory of Communication Technology (Wok, S., Ismail, N., Yusoff, H., and Husain (2006), Littlejohn (2002; 1996), Griffin and Emory (2009) and Gragan and Shield (1998).

The results is also aligned with the first element in EP theory that is the time. Korzenny (1978) has mentioned that, one of the advantages of using IT is in the time aspect. Time in this case refers to people who are from different locations and still communicate with one another at a very fast rate. All matters, including the decision process, are extremely significant, and often occur at the same time. This is consistent with Symanski (1990) who has claimed that the values of accuracy, timeliness and completeness of information will allow better decisions to be made, thus, IT enables business to gain a competitive edge (Symanski, 1990). Organizations that do not use information technology facilities will be considered obsolete, and will always be behind. This is also parallel to the need for hospitalization requiring its staff to work quickly and emphasize the speed of delivering information.

The Purpose of using New Media among Medical Staffs
The findings also found that medical staffs adopted new media for information. Although their essential task requires them to use new media at all times, they also keep the new media as a source for information. The new media is a tool that is considered the fastest and easiest for medical doctors to get the latest information related to the diseases that exists today. The findings of this study also rejected what has been stated by Laerum, Ellingsen and Faxvaag (2001) that the needs of medical doctors are far less than the systems supported in the new media. They also mentioned that the use of new media today is deemed less necessary by the medical doctors in the daily task as a medical officer. The result also contradict with a study conducted by Laerum, Ellingsen and Faxvaag (2001) in Norway, where medical officers at Norwegian hospitals found that the purpose of using new media in the field of work was extremely low. The use was only to view patient data records. This means, in 2017 the use of new media among Medical officers may be more focused on personal or social goals. Despite not utilizing new media equipment solely to treat patients, medical doctors use new media for the purpose of getting new medical information such as in the relation of the emergence of new types of diseases in the world.

The Integration of Medical Officer Staff among Hospitals in Malaysia
In general, integration between medical officers is not formal. Although hospitals in Malaysia is equipped with state-of-the-art technology but integration between medical officers is still limited. However, the study found that an integration relationship occurs when a medical officer uses a new media via social media to obtain or share information. This relationship applies to medical officers who have been familiar with each other in advance. Most of the medical officers have stated that they will carry telecommunication equipment while treating patients. This is to seek the views of other medical officers regarding the proposed treatment method that is most appropriate for a particular disease. There are also a handful of medical officers

creating their own blogs to share their latest experiences or findings related to healthcare and how to deal with them.

In addition, the integration between the medical officers also applies to ordinary medical officers and specialist doctors. A hospital without a specialist doctor needs a communication medium to communicate with a specialist doctor from another hospital. The constraints of the lack of an expert physicians can actually be eliminated with the availability of new media. Medical doctors from regular hospitals can use the new media through the WhatsApp channel to get advices from specialist doctors. By using the application, a doctor could take photos or send information through the voice mailbox to the colleagues in the hospital with ease. Diseases such as skin diseases and visible illnesses can be photographed and reported to specialist doctors in other hospitals from time to time. The development of treatment can be seen by sending pictures of the problem without having to send the patient for treatment at other hospitals. This scenario will help the patient to reduce the cost of treatment requiring additional costs in terms of transportation. It is not impossible for medical doctors to observe the development of the patient's condition from home by just sending a picture to the medical officer handling the patient's case.

Furthermore, the integration relationship among medical doctors also occurs through online meetings in the context of strategic planning. Every organization, including hospitals, requires annual planning under strategic planning management. As such, planning involving medical matters requires planning and views of other medical specialists. Hence, medical officers are more concerned with the use of new medium through social media channels to make a connection.

CONCLUSION

What can be concluded is that the level of IT literacy among medical officers in Malaysia is higher than average. The ability to use technology equipment such as computers is an advantage. The government's actions to build technology-based infrastructures and hospitals are not in vain as the staffs, particularly medical officers, have high efficiencies in using IT. Viewed from the theoretical aspects of electronic propinquity, it is found that there has been an approximation when using IT in management. The strongest is the approximation of ttime followed by physical and distance. In addition, the use of new mediums is substance Medical Officers to get the latest information on new diseases or pandemics at present. In this study the main objectives is to look at the integration relationship among medical officers but the integration relationship does not exist clearly but it exists indirectly when medical officers use the latest applications to connect with other medical officers from other hospitals.

This clearly shows that integrated relationships persist through IT-based hospitals. The incremental relationship is getting stronger with the existence of easier and cheaper phone applications. Although IT facilities are somewhat reduced in hospitals, it does not interfere with interactions between medical doctors from other hospitals. What can be concluded is that the introduction of sophisticated telecommunications systems has greatly help humans in connection. This advantage has a considerable impact on the medical field when it is able to reduce the administrative costs that the government has to bear. It is hoped that the quality of healthcare can be improved and grow in time. Without technology, our country's development

would not be possible. This scenario is a steadfast groundwork for finding solutions especially those living in rural areas including in Sabah and Sarawak.

BIODATA

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