Analysis of Decision Making on Selection of the Social Networking Sites by College Students

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ABSTRACT

The high internet usage from college students has drawn the attention of different marketers. However, research pertaining to statistics of social media usage among youngsters, especially college students in Malaysia and their choice in social networking sites (SNSs), are still very few. The objective of this paper is to study the choices and the prioritised criteria in choosing SNSs among college students by using Analytical Hierarchy Process (AHP). Findings revealed that privacy attention and awareness are rapidly increasing among college students since privacy threats could hardly be ignored.

Keywords: Social networking sites, students' preference, Analytical Hierarchy Process (AHP)

INTRODUCTION

Billion of people are using social networking sites (SNSs) such as Facebook, Twitter, Google+, and Instagram to connect with friends and family, share photos and videos, or exchange ideas every day. According to the statistics by Statista (2014a), 1.82 billion of global social networking users were reported in 2014, which is an increase from 1.61 billion users in 2013. Facebook was reported to be the main dominant social network and market leader throughout the years and has successfully surpassed one billion registered accounts. The president of the Malaysian Digital Association (MDA) reported and presented the current social media usage in Malaysia (Wong, 2014). Out of the total population of 29.9 million Malaysians, 61.7% or 17.7 million of Malaysians were Internet users, while 41% or 15.2 million of them were users of most popular SNSs. Also, young adults in the age

category of 15-24 years formed the highest percentage of online users compared to the other categories.

Generation Y, who are mostly students, have grown up with SNSs. Undeniably, the high usage from users of this age group has drawn the attention from different marketers (Berthon *et al.*, 2012). Various international corporations are also keen to make effective marketing strategies in SNSs to target youngsters (Li *et al.*, 2007). In fact, more and more marketers are using social media as an important and indispensable tool for marketing and for building up good interaction platform with their potential customers. Marketing and advertising in SNSs are apparently the most important future business trends. Nonetheless, research done on priorities, preferences, concerns and users' behaviours of social networking usage among Malaysian youngsters, especially college students in Malaysia, remains scarce. As a result, marketers have difficulties to applying effective marketing strategies without understanding their users' behaviour in the SNSs. Multiple researchers have identified the importance of studying the SNSs users' behaviour in applying effective marketing strategies in SNSs (Lorenzo-Romero *et al.*, 2011; Chu & Kim, 2011; Vinerean *et al.*, 2013). A study of SNSs users' behaviour can be done by analysing their selection criteria and the priority choice on SNSs. The objective of this paper is to analyse the choices and the priorities of criteria among Malaysia college students in choosing SNSs. As a practical implication, the findings can definitely shed

some light to keen marketers to expand their businesses and apply effective marketing in Malaysia through SNSs.

LITERATURE REVIEW

The study of the selection criteria and choices in SNS is significantly important and essential as it discloses their priorities, preferences and concerns in relation to their SNSs users' behaviour and consumers' behaviour. Nevertheless, research pertaining to selection criteria for SNSs are limited. Hence, inferring and identifying any possible criteria in choosing SNSs among college students are important and these can be done by referring to past studies done on website evaluation and selection criteria, which are the most popular activities in social media networks and their significant concern over SNSs.

Pempek *et al.* (2009) investigated the typical activities of college students on Facebook and the results indicated that although college students spent quite a lot of time posting latest personal news updates, they preferred viewing or reading the content/information posted by their friends without communicating in any way. They used SNSs to read the latest news updates on what have been done by friends and see at the pictures posted by others. Kayahara *et al.* (2007) highlighted that the gratification of looking at contents on the Internet was from acquiring information from others. Meanwhile, Lampe *et al.* (2006) investigated the primary use of the SNSs by conducting a survey among 2000 students and concluded that they mainly used the functions of

"social searching" and "social browsing". Students frequently used the social networks, especially Facebook, to organise offline meetings and different kinds of events in their college. The studies by Lenhart and Madden (2007) and Wiley and Sisson (2006) also revealed that college students primarily use Facebook to connect friends, with those whom they meet frequently, rarely seen or to make new friends.

Flavián et al. (2006) commented that the greater the usability of the website, the higher the chance of remaining loyal by the Internet users. The well design and usability of the website will certainly generate users' experience with a great sense of satisfaction. Great usability of the websites will offer more sense of security and confidence to the website. Therefore, winning the loyalty from the customers has become the main objective to bring the greater success to the business. Abdul Hamid (2008) and Casaló et al. (2008) carried out similar research and agreed that there is a positive relationship between perceived usability by customers and their loyalty to the internet banking website. In particular, the degree of trust, satisfaction and loyalty will greatly be increased and enhanced when they use easy-to-use e-commerce websites. The research further implied that user-friendly website will continuously bring the highest business value to the companies.

Ishak et al. (2012) and Gross and Acquisti (2005) reported increased high privacy concern and high security awareness among the undergraduate students in Malaysia and Canada on SNSs.

Ishak et al. (2012) concluded that college students generally had high awareness on privacy settings when they used SNSs. Young and Quan-Hasse (2009) also revealed the significant privacy concern in Facebook from the respondents. They were afraid that any unknown parties with potentially harmful purposes might abuse their personal information. Katona et al. (2011) modeled the diffusion of the social networks and asserted that the adoption decision to particular social networks of individuals was affected by the level of connection in the group of adopted users (clustering effect). The two studies indicated that the popularity might be the possible criterion used in choosing the particular social networking site.

Neilsen (2012) tabulated the data of Top 5 U.S SNSs via mobile web, social networking apps and PC and found that Facebook and Twitter were ranked in the first and the second places. In the survey results from the Pew Research Centre, Duggan (2013), the senior researcher compared users' statistics for SNSs and reported that Facebook was still dominant in 2012 and 2013. College students were accounted for the high percentages of the total Facebook and Twitter users. Facebook was still the main dominant and market leader throughout the years and has successfully surpassed one billion registered accounts to date.

METHODOLOGY

Research Design

Fig.1 shows the research design consisting of a detailed description of this study.

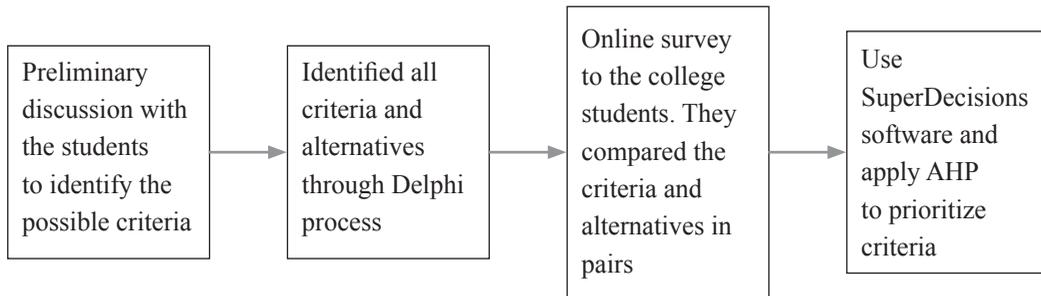|			
Preliminary discussion with the students to identify the possible criteria	Identified all criteria and alternatives through Delphi process	Online survey to the college students. They compared the criteria and alternatives in pairs	Use SuperDecisions software and apply AHP to prioritize criteria

Fig.1: Research design

After the preliminary discussion, five criteria (content, functionality, usability, privacy and popularity) and three alternatives (Facebook, Twitter and Google+) were identified. Then, the online survey was distributed to college students from different public and private universities in Malaysia. A total of 60 college students consisting 27 males and 33 females participated in this study. Through the online survey, they compared the relative importance and preference with respect to the criteria and alternatives using the scale ranging from 1 to 9 on both ends. Finally, all the data from the online survey were computed into SuperDecisions software and analysed using the Analytical Hierarchy Process (AHP) to obtain the priorities of the criteria and alternatives from the 60 college students.

Conceptual Framework of the AHP Model

The analytic hierarchy process (AHP) is a useful decision making tool originated from Thomas Saaty. It can be applied to a problem that involves a number of selection criteria and multiple-choice alternatives. In particular, AHP can arrange all the criteria and alternatives in a hierarchical form, compare two criteria or alternatives in a pair, and calculate the priorities of individual criteria and alternatives (Saaty, 1990, 2006). The AHP model for this study could be constructed as shown in Fig.2 below.
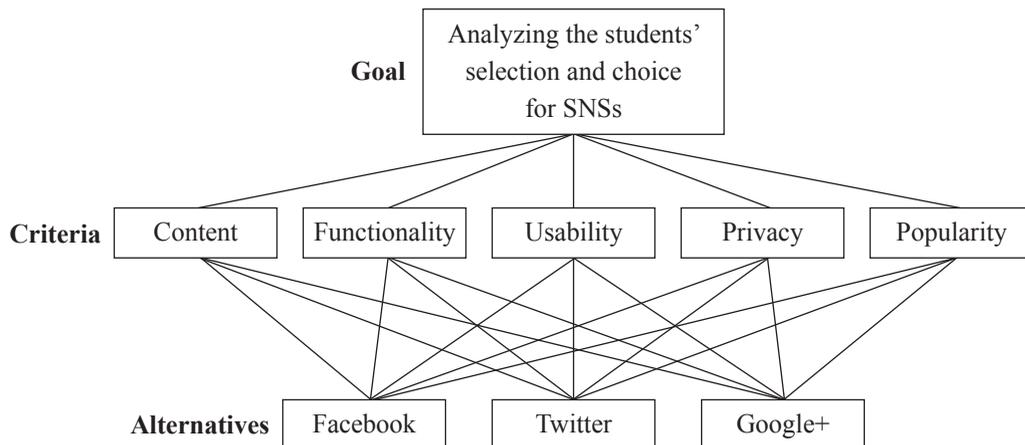

Fig.2: The AHP model

The main research objectives of this study are to figure out the priorities of the criteria in choosing the SNSs and the priorities of their choices between Facebook, Twitter and Google+. In order to achieve these, college students answered the pairwise comparison questions pertaning to the criteria and the alternatives through the online survey. To apply the AHP method according to Saaty (1990), the w_i, the weight of the criterion (i) and w_j, the weight of the criterion (j) would be computed to get the score of a_{ij}, and the relative importance of the criterion on row (i) over the criterion on column (j). This process will eventually generate the pairwise comparison matrix as shown in Equation (1) below.

$$A = \begin{pmatrix} w_1/w_1 & w_1/w_2 & \cdots & w_1/w_n \\ w_2/w_1 & w_2/w_2 & \cdots & w_2/w_n \\ \cdots & \cdots & \cdots & \cdots \\ w_n/w_1 & w_n/w_2 & \cdots & w_n/w_n \end{pmatrix} = \begin{bmatrix} 1 & a_{12} & \cdots \\ a_{21} & 1 & \cdots \\ \cdots & \cdots & \cdots \\ a_{n1} & a_{n2} & \cdots \end{bmatrix}$$

(1)

Next, the matrix operation of $Aw = \lambda_{max} \cdot w$ (2) was computed for the pairwise comparison of the criteria and the alternatives, where λ_{max} is the eigenvalue of A and w is the eigenvector of A. W is the main goal as it shows that value of the priorities for the criteria and alternatives.

$$Aw = \lambda_{max} \cdot w = \begin{pmatrix} w_1/w_1 & w_1/w_2 & \cdots & w_1/w_n \\ w_2/w_1 & w_2/w_2 & \cdots & w_2/w_n \\ \cdot & \cdot & & \cdot \\ \cdot & \cdot & & \cdot \\ w_n/w_1 & w_n/w_2 & \cdots & w_n/w_n \end{pmatrix} \begin{pmatrix} w_1 \\ w_2 \\ \cdot \\ \cdot \\ w_n \end{pmatrix} = \lambda_{max} \begin{pmatrix} w_1 \\ w_2 \\ \cdot \\ \cdot \\ w_n \end{pmatrix}$$

(2)

Lastly, the value inconsistency level that indicating the consistency and reliability of the set of pairwise comparison by the college students were carried out. According to Saaty (1990), inconsistency ratio of about 10% or less is allowed to accept the estimate of w.

RESULTS AND DISCUSSION

In this chapter, the basic background of the surveyed college students is firstly reported. Then, the outcome of the priorities of the criteria and alternatives in choosing the SNSs for college students are presented in tables. Finally, the observations and implications of the AHP results are further discussed in details. In term of gender, the total number of female respondents (55%) was slightly higher than the male respondents (45%). In particular, 55% of the respondents spent around 3 to 5 hours a day for social networking sites. Only 3.33% of them used the sites less than one hour per day. The statistic indicates that most of the college students are heavy users doing different activities in social networking sites.

TABLE 1
Overall synthetised priorities

No.	Criteria	Priorities
1	Privacy	0.40804
2	Functionality	0.17915
3	Usability	0.16749
4	Content	0.13062
5	Popularity	0.11471

TABLE 2
Priorities of alternatives of criteria

Alternatives	Priorities
Facebook	0.49593
Twitter	0.26624
Google+	0.23783

As for the AHP results, all the pairwise comparison matrices showed a highly acceptable inconsistency ratio of 0.00192 compared to a benchmark of 0.1. This finding illustrates that the college students' set of judgments were highly consistent and reliable. Table 1 and Table 2 illustrate the overall synthetised priorities of the criteria and alternatives in choosing the SNSs by the college students in the AHP model. The criterion of privacy (0.40804) was found to be the top priority when the college students chose SNSs, followed by functionality (0.17915), usability (0.16749), content (0.13062), and popularity (0.11471). As for the priorities of alternatives by considering the criteria, the college students were more likely to choose Facebook as their first choice (0.49593), followed by Twitter (0.26624) and Google+ (0.23783).

An unanticipated finding of this study revealed the privacy was the top priority of concern over the criteria of content and functionality, which are usually the most important concern in using or buying goods and services. This research outcome is congruent with the findings from Ishak *et al*. (2012) and Gross and Acquisti (2005) that reported the high privacy concern and security awareness on SNSs among undergraduate students in Malaysia and Canada. However, only little exsisting literature was found pertaining to the result of this concern. Noteworthy contradictions exist between the finding of this study and results described by Pempek *et al*. (2009) and Kayahara and Wellman (2007) for the concern of content and Lampe *et al*. (2006) and Wiley and Sisson (2006) for the interest of functionality. This rather contradictory result may be explained by the rising cybercrimes for the past few years. According to the statistics on reported incidents based on general incident classification statistics 2012 and 2013 from Malaysia Computer Emergency Response Team (MyCERT, 2012 & 2013), the number of different cybercrime incidents had a significant increase from 9,986 cases in 2012 to 10,636 cases in 2013. The cybercrime indeed triggered the awareness of the college students in relation to the importance of privacy in using the Internet. They are afraid of the personal information or activities shared in the social media being misused or abused by any unknown third parties. Therefore, college students eventually had the highest concern in the criteria of privacy when they choose the SNSs.

In order to protect the privacy information not being misused or abused by the parties, the Government of Malaysia started implementing Personal

Data Protection Act 2010 (PDPA 2010) in 2014. According to the act, marketers have to get the consent from consumers before collecting, storing and processing their personal and private data or information for commercial purposes. In a nutshell, this research finding revealed that privacy attention and awareness are rapidly increasing among college students since the privacy threats should not be ignored. Marketers have to take students' psychological feelings and concern account in planning the effective marketing strategies. This compelling finding also signifies the importance of website security when marketers are selling the goods and services to consumers. Marketers are advised to adopt the trusted and safe money transaction system to enhance its overall protection of the communication content, payment details and customers' personal and private information. VeriSign, GeoTrust, EnTrust and TrusE are appropriate options for marketers to enhance the security of money transaction. As a result, college students who have high privacy concern will have more confidence in the goods and services provided by the marketers.

The second priority in choosing SNSs is the criterion of functionality (0.17915), followed by usability (0.16749). These two criteria are significantly less important than privacy (0.40804). The lower priority of functionality may be due to the similar functions provided by most popular SNSs. This explanation is also supported by Richter and Koch (2008). Consequently, college students might not find any crucial difference for different SNSs and therefore assigned the lowest priority for the criterion of functionality in choosing the sites. A noteworthy outcome is the minor difference of the priorities between functionality and usability discloses the users' expectation in depth. They may expect the great functionality of the site should be accompanied with the great usability as well to optimise comprehensive users' experience.

A good content can keep users engaging with the website continuously, but Internet users may usually get similar posts and news in most popular SNSs. This reason, therefore, explains the low priority of the criterion of content. The lowest priority of popularity can be attributed to the reason that most college students are the users of most of popular SNSs. Hence, the choice of the sites may not be affected by their popularity. Finally, the results indicating Facebook as the dominant among college students corroborates with the findings of Duggan (2013) and Statista (2014b). Thus, marketers should spend more efforts and focus on marketing on Facebook.

CONCLUSION

This paper has further investigated the research issue of SNSs users' behaviour by Lorenzo-Romero *et al*. (2011), Chu and Kim (2011) and Vinerean *et al*. (2013)

from the perspective of the choices and the prioritised criteria in choosing SNSs among college students in Malaysia. As a conclusion, college students in Malaysia have high privacy concern in choosing SNSs compared to other related criteria and their prefer Facebook over the other social sites. Student market as the highly lucrative market is definitely the most important target for most marketers. Therefore, marketers should wisely make use of SNSs to expand their businesses and build up customer relationship and brand reputation in this competitive emerging student market. However, marketers should take into account the privacy concern of the students in marketing. Unwelcome calls and disturbances from marketers will certainly cause them to lose their business opportunities in the student market. Finally, this paper has brought extraordinary business commercial value to marketers. By setting up the right marketing priorities (Facebook), meeting and identifying the customers' needs (privacy concerns), marketers will have more business opportunities and unlimited potential through SNSs.

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