DETERMINANTS OF INTENTION TO USE WEBSITES: A CASE STUDY OF 3 LEADING SITES IN THAILAND

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Abstract

This study examined the determinants of the intention to use websites in Thailand. The websites investigated were the 3 leading websites in Thailand namely sanook.com, kapook.com, and manager.co.th. This study also aimed to explore the relationship between information quality, system quality, service quality, playfulness, and intention to use the websites. The result of this study showed that there was a significant relationship between the determinants dimension of intention to use the websites and intention to use three websites. Sanook.com's determinants had stronger positive relationship with the intention to use than the other two websites' determinants. The study concluded that all three websites should concentrate on all the determinants dimensions to improve their websites to increase consumers' intention to use their website.

INTRODUCTION

Even though e-retailing is in its infant stage in Thailand, there has been a tremendous growth in the last few years as initiated by the Thai Government (NECTEC, 2005) when the IT development framework for 2000-2010 was set up to develop e-commerce in five main areas: e-Government, e-Commerce, e-Industry, e-Education and e-Society. The purpose of the e-Commerce project is to make Thai entrepreneurs, especially SMEs, to be more competitive outside the country by using e-Commerce as a tool for exporting goods and services apart from domestic marketing. There was a boom in the development of web-sites to support e-commerce. The three most frequently visited websites in Thailand are sanook.com, kapook.com, and manager.co.th and these are getting more popular among Thai people (NECTEC, 2005). These websites help consumers to find and access information and to make online purchases. These websites are registered with the Department of Business Development, the Ministry of Commerce of Thailand.

Users' expectation for the top three website in Thailand such as sanook.com, kapook.com and manager.co.th has increased as indicated by the exit rate and return visitor percentage (truehits.net, 2006). The data from www.alexa.com shows lot of fluctuations in terms of reach, and page views per million of three websites. Phuangmaha, (2005) noted that sanook.com concentrated on Thai contents from business partners and 70% of the company's revenues come from online advertising and it is expected that the revenue will double in the near future. These over dependencies on advertisement and content from business partners can reduce revenue if the users do not visit the websites. The imperatives are that these websites need to increase usage of or intention to use their website in order to increase revenue of their company. That is, users need to revisit the website, view many pages, and stay longer in the website. The determinants of online intention to use websites are still in the exploratory stage (Lee et al., 2003) and these intentions to use websites factors differ from the previously researched and the normal intention to use studies. Information quality, system quality, service quality and playfulness are key influencing factors of intention to use the websites. As such, the main objective

of this research is to study the relationships between the information quality, system quality, service quality, playfulness, and intention to use the three leading websites of sanook.com, kapook.com and manager.co.th in Thailand.

LITERATURE REVIEW

Dimensions of Intention to use

Intention to use is the measure of the strength of one's intention to perform a specified behavior (Fishbein and Ajzen, 1975). Attitude towards the website influences the intention to use and intention to return to the website (Gao and Koufaris, 2006). Intention to use a website is used to measure usage of the website since usage of the website is determined by the intention to use the website (Abrahão et al., 2004). Actual use of a website is measured using frequency of system usage that is how often consumers use the website and the volume of system use, which is represented by the number of pages user visit or time they spend in the website. Similar measures have been used in most of the existing researches on Technology Acceptance Model (TAM) as noted in Davis, 1989 and Davis at al., 1989. Korgaonkar et al., (2002) studied web usage by studying the number of hours users are online at the website, how often users revisit the website, and how many pages the users visit in a website. Intention to use also leads to user satisfaction (Delone and Mclean 2002). Kim, (2005) suggested extending the research by linking intentions or satisfaction with actual behavior.

Intention to use technology is a main concept in the Technology Acceptance Model (Davis, 1989). Based on the Theory of Reasoned Action, the Technology Acceptance Model in information systems research suggests that a person's intention to use technology impacts his or her actual usage. TAM literature identified perceived usefulness and perceived ease of use as important antecedents to an individual's intention to use a technology product (Davis, 1989 and Davis et al., 1989). Delone and McLean (2002) proposed that intention to use and user's satisfaction is a core concept in information system success. In this model, information quality, system quality and service quality are the variables which influence intention to use and user's satisfaction.

Following TAM and IS Success models, many researchers proposed their own models like "Consumer satisfaction with internet shopping: A research framework and propositions for future research" (Cheung and Lee, 2005), "Investigating the Influence of Website Quality on Continuance Intention (Wangpipatwong, Chutimaskul, and Papasratorn, 2006) and "B2C e-commerce web site quality: an empirical examination" (Cao et al., 2006). In these researches, information quality, service quality, system quality and playfulness affect perceived ease of use and perceived usefulness of the technology that finally influences intention to use and the actual usage of the website. Kuan et al., (2005) derived variables such as information quality, system quality, and service quality to determine the intention to planned purchase and intention to future purchase based on the DeLone and McLean's Model of IS Success of 2002.

Dimensions of Information quality

Information quality is concerned with accurate, useful, timely, updated and relevant information provided to users like information based on their expectation (Tan et al., 2003). Information quality is the key antecedent of intention to use (DeLone and McLean, 1992), which leads to user's satisfaction, net benefits, and system use. Information quality leads to actual usage of the website (Lin and Wu 2002).

From the information quality features, it can be said that the information should be complete, accurate and up to date while the way of presentation of the information should be attractive. Taking this into account and the study by (Cheung and Lee, 2005) on information quality affecting the satisfaction of internet shoppers, the key factors include content, format, accuracy, and timeliness. It can be said that content, accuracy, format, and up to date information are key dimensions of information quality which influence intention to use the website.

Dimensions of System quality

System quality is how users can interact with the website and retrieve information. It is how well one user can search for the information (Loiacono et al., 2001). It is also considered as an important component of website quality (Waite and Harrison, 2006). System quality has major influence towards intention to use the website (Wangpipatwong et al., 2006).

Nielsen (2000) identified four basic usability principles and suggested that design principles specific to online environment should cover navigation, response time, credibility, and content, whereas Jun and Cai (2001) covered content, accuracy, ease of use, timeliness, aesthetics, and security in the system quality. Cheung and Lee (2005) proposed ease of use, navigation, response time, and security as the key dimensions of system quality to satisfy end users. Security or privacy is concerned about the security of credit card payments and transacted information privacy (Wolfinbarger et al., 2003). As there is diversity in the interpretation of system quality, this research will use only navigation, ease of use, and response time as important dimensions of system quality to induce intention to use website.

Dimensions of Service quality

E-service quality is the customer's evaluation and judgment of the service provided by the website (Santos, 2003). DeLone and McLean (2002) updated their IS Success Model by adding service quality as an antecedent of intention to use and user's satisfaction. Service quality is one of the key roles in retaining users because it is very expensive to acquire a new user in this competitive world (Long and McMellon, 2004).

Cheung and Lee's (2005) research on service quality satisfaction of end users include responsiveness, assurance, and empathy. Webb and Webb (2004) considered responsiveness, reliability, assurance, empathy, and tangibility as the dimensions which influence website quality. According to previous studies, reliability and assurance which are considered to be dimensions of service quality are more related to intention to use website rather than the responsiveness, empathy, and flexibility dimensions of the website. Other dimensions such as tangibility, access, navigation, and security are not included since they are already discussed under the category of information quality and system quality.

Dimensions of Playfulness

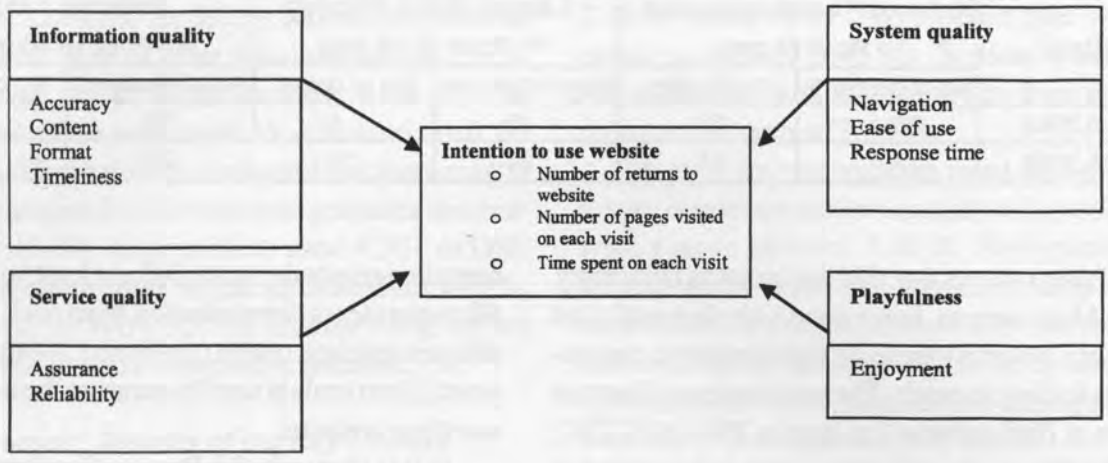
Playfulness is one's belief that the interactiveness of the website will fulfill the users' basic need (Moon and Kim, 2001). Playfulness helps to determine attitude towards the website and it further induces intention to return to the website (Gao et al., 2006). Advertisement and some web functions can influence the playfulness among the customers to stay in the website for a longer time (Jang and Burns, 2004).

Playfulness is represented by the enjoyment when using the website which indirectly represents intrinsic motivation (Webster and Martocchio, 1992). Liu and Arnett (2000) studied enjoyment as a key dimension that affects the websites success and that further influences the intention to use the website. Monsuwe et al., (2004) also studied enjoyment as a dimension to influence the intention to use the website.

CONCEPTUAL FRAMEWORK

Based on the literature discussed previously, the key constructs includes information quality, system quality, service quality, and playfulness as the four main factors which influence the user intention to use websites as shown in Figure 1. The researchers adopted information quality, system quality, and service quality from the DeLone and McLean's model of "reformulated IS Success" as the key factors (Wangpipatwong, Chutimaskul, and Papasratorn, 2006) to be studied and as widely supported by other literature. In addition, playfulness (Cao et al., 2005) influence the variables of Technology acceptance model like perceived ease of use and perceived usefulness leading to intention to use the website.

Figure 1: Conceptual framework



Research hypotheses

Based on the research framework and research objective, the null hypotheses for this study are:

$H1_0$: There is no relationship between information quality and intention to use the three websites.

$H2_0$: There is no relationship between system quality and intention to use the three websites.

$H3_0$: There is no relationship between service quality and intention to use the three websites.

$H4_0$: There is no relationship between playfulness and intention to use the three websites.

RESEARCH METHODOLOGY

The research design used to collect and analyze the needed information is descriptive statistical technique because descriptive study helps to find the characteristics of variables. The descriptive technique used in this study is survey since it is the most common method of generating primary data. The sampling procedure used in this study is non-probability sampling because the population chosen for this study is unknown (Zikmund, 1994). In non probability sampling there are two techniques; they are judgment sampling and convenience sampling. In this research, the researcher uses convenience sampling.

Since there is no exact data for the number of students using internet and the three websites at Assumption University, Hua Mak campus, a pilot study was conducted to find the number of users of the three websites. The pilot study was conducted between the dates of (21.5.2006) and (22.5.2006) in the university's Hotspot, Library, and Internet centre. The study was mainly conducted to make sure that the population sample (Undergraduate and MBA students of Assumption University, Hua Mak) are valid for this research (Anderson, 1996).

Table 1: Number of Students Using Three Websites

Date	Hotspot P building ground floor (2 pm)		Library (Saint Gabriel) 1st floor (2.15 pm)		Internet centre 4th flour (2.30 pm)	
	No of students	No of users	No of students	No of users	No of students	No of users
21.5.2006	33	22	16	9	18	11
22.5.2006	42	31	24	15	25	21

Table 1 shows that that Assumption University, Hua Mak campus, has a good sample population that can be considered as representative respondents for this research. The total number of internet users in Thailand was 7 million in 2004 (NECTEC, 2005). The number of internet users in Bangkok was 28.7% of total internet users. Users between 15 - 34 years old accounts for 71.8 % according to the report given by NECTEC (2005). Therefore the target population between 15 - 34 years old segment is approximately 1,442,462 people.

Based on the Anderson's (1996) recommendation, at the 95 percent confidence level and 5 percent sampling error for 1,442,462 internet users, the sampling respondents are 385. At least, a minimum 60 respondents were selected from each group for efficient research output (Anderson, 1996). The Five point Likert scale is used to measure the intention to use three websites.

In this research, the Pearson Product Moment Correlation Coefficient was applied to test the relationship between the intention to use websites of sanook.com, kapook.com and manager.co.th.

RESEARCH FINDINGS

Characteristics of Respondents

Table 2: Frequency of Respondent's personal characteristics

Respondent's personal characteristics	Group	Frequency	Percent	Valid Percent	Cumulative Percent
Gender	male	155	40.4	40.4	40.4
	female	229	59.6	59.6	100.0
Age	15-24	180	46.9	46.9	46.9
	25-34	204	53.1	53.1	100.0
Education	Under graduate	168	43.8	43.8	43.8
	MBA	216	56.3	56.3	100.0
Internet Connection	Dial Up	30	7.8	7.8	7.8
	ADSL or DSL	210	54.7	54.7	62.5
	WIFI	137	35.7	35.7	98.2
	Mobile Internet	2	.5	.5	98.7
	Others	5	1.3	1.3	100.0
	Total	**384**	**100.0**	**100.0**	

For the descriptive statistics analysis, as shown in Table 2, of the 384 questionnaires distributed, females accounted for 59.6%, and males accounted for 40.4%. Most of them were between the 25 - 34 years age group, which accounted for 53.1%, whereas those who aged 15 - 24 accounted for 46.9%. The majority of respondents were master degree holders 56.3% with undergraduates accounting for 43.8%. Most of them used ADSL or DSL internet connection which accounted for 54.7%, followed by WIFI 35.7%, Dialup 7.8%, others 1.3%, and the least was mobile internet .5%.

Importance" Results of the Key Factors

Results of information quality

Most of the respondents rated content as a very important information quality of sanook.com, with a mean score of 3.5773. Accuracy is the second most important information quality, with a mean score of 3.5356, followed by the format and timeliness with the mean scores of 3.4740 and 3.3707, respectively. Information quality of sanook.com is rated first among the three websites with a mean score of 3.4894.

Most of the respondents rated timeliness as a very important information quality of kapook.com, with a mean score of 3.5755. Content is the second most important information quality, with a mean score of 3.4436 followed by the accuracy and format with mean scores of 3.4160 and 3.3325 respectively. Information quality of kapook.com is rated second among the three websites with a mean score of 3.4405.

Most of the respondents rated accuracy as a very important information quality of manager.co.th, with a mean score of 3.3247. Content is the second most important information quality, with a mean score of 3.2977, followed by the timeliness and format with the mean scores of 3.2674 and 3.2318, respectively. Information quality of manager.co.th is rated third among the three websites with a mean score of 3.2804.

Results of system quality

Most of the respondents rated ease of use as a very important system quality of sanook.com, with a mean score of 3.7318. Navigation is the second most important system quality with a mean score of 3.4844, followed by the response time with the mean scores of 3.4592. System quality of sanook.com is rated first among the three websites with a mean score of 3.5584.

Most of the respondents rated ease of use as a very important system quality of kapook.com, with a mean score of 3.4618. Navigation is the second most important system quality with a mean score of 3.2648, followed by the response time with the mean scores of 3.2300. System quality of kapook.com is rated second among the three websites with a mean score of 3.3189.

Most of the respondents rated ease of use as a very important system quality of manager.co.th, with a mean score of 3.3247. Navigation is the second most important system quality, with a mean score of 3.2743, followed by the response time with the mean score of 3.1962. System quality of manager.co.th is rated third among the three websites with a mean score of 3.3154.

Results of service quality

Most of the respondents rated assurance as a very important service quality of sanook.com, with a mean score of 3.4618, followed by reliability with a mean score of 3.1085. Service quality of sanook.com is rated second among the three websites with a mean score of 3.1385.

Most of the respondents rated assurance as a very important service quality of kapook.com, with a mean score of 3.3854, followed by reliability with a mean score of 3.1623. Service quality of kapook.com is rated first among the three websites with a mean score of 3.2739.

Most of the respondents rated reliability as a very important service quality of manager.co.th, with a mean score of 3.1076, followed by assurance with a mean score of 3.0130. Service quality of manager.co.th is rated third among the three websites with a mean score of 3.0603.

Results of playfulness

Sanook.com is rated first among the three websites with a mean score of 3.7656. Kapook.com is the second with a mean score of 3.2830, followed by manager.co.th with a mean score of 3.2040.

Results of Hypotheses testing

As shown in Table 3, the significance result of four hypotheses of the three websites (H_{1o} to H_{4o}) is less than 0.05, therefore, the four null hypotheses are rejected which means that there is a relationship among the variables at 0.05 significance level.

The first hypothesis (H_{01}: There is no relationship between information quality and intention to use website) revealed that there is a high positive relationship between information quality and intention to use sanook.com website. For kapook.com website, the result revealed medium positive relationship between information quality and intention to use website, whereas for manager.co.th website, the result reveals medium positive relationship between information quality and intention to use website. The findings of the research from three websites imply that information quality and intention to use website are significantly related.

The second hypothesis (H_{02}: There is no relationship between system quality and intention to use website) revealed that there is a high positive relationship between system quality and intention to use sanook.com website. For kapook.com website the result reveals medium positive relationship between system quality and intention to use website, whereas for manager.co.th website, the result reveals medium positive relationship between system quality and intention to use website. The findings of the research from three websites imply that system quality and intention to use website are significantly related.

The third hypothesis (H_{03}: There is no relationship between service quality and intention to use website) revealed that there is a medium positive relationship between service quality and intention to use sanook.com website. For kapook.com website, the result reveals medium positive relationship between system quality and intention to use website, whereas for manager.co.th website, the result reveals low positive relationship between service quality and intention to use website. The findings of the research from three websites imply that service quality and intention to use website are significantly related.

The fourth hypothesis (H_{04}: There is no relationship between playfulness and intention to use website) revealed that there is a high positive relationship between playfulness and intention to use sanook.com website. For kapook.com website, the result revealed medium positive relationship between playfulness and intention to use website. For manager.co.th website, the result also reveals medium positive relationship between playfulness and intention to use website. The findings of the research from three websites imply that playfulness and intention to use website are significantly related.

Table 3: Summary of Pearson Correlation Coefficient Results of the three websites in the Hypothesis Testing

Hypothesis	Sanook.com	Kapook.com	Manager.co.th	Result
H_{o1}: There is no relationship between information quality and intention to use website	.842**	.471**	.452**	Reject null hypothesis H_{o1}
H_{o2}: There is no relationship between system quality and intention to use website	.822**	.547**	.524**	Reject null hypothesis H_{o2}
H_{o3}: There is no relationship between service quality and intention to use website	.614**	.437**	.379**	Reject null hypothesis H_{o3}
H_{o4}: There is no relationship between playfulness and intention to use website	.867**	.643**	.612**	Reject null hypothesis H_{o4}

DISCUSSION AND CONCLUSIONS

According to the summary of findings in the previous section, most of the respondents rated "neutral and somewhat agree" for information quality, system quality, service quality, and playfulness of three websites sanook.com, kapook.com and manager.co.th. Sanook.com independent variables show higher mean than the other two websites like kapook.com and manager.co.th (Table 4).

For intention to use, most of the respondents said that they revisit the website once in a week to once in two days, number of pages views were 7 to 12 pages and stayed in the website for 1 to 2 hours. Since the independent variables of sanook.com was significant, intention to use the website's means average was also higher than the other two websites so Sanook.com needs to improve its key independent variables in order to increase and maintain its status of intention to use in the market. The same also applies for Kapook.com and manager.co.th in that they also need to improve their independent variables in order to increase intention to use and to compete with sanook.com and other websites.

Discussion from information quality aspect

Sanook.com's information quality showed that there is a high positive relationship between information quality, and intention to use whereas kapook.com and manager.co.th showed medium positive relationship between information quality, and intention to use. Kapook.com and manager.co.th's information quality showed a lower level of relationship when compared to sanook.com's information quality.

Table 5 showed that sanook.com's content and accuracy of information quality has higher means average than the other variables like format, and timeliness. Hence, Sanook.com needs to focus on format and timeliness and also needs to keep the same information quality of content, and accuracy. kapook.com's timeliness of information quality has higher means average than the other variables like content, accuracy, and format. So Kapook.com needs to focus on content, accuracy, and format and also need to keep the same information quality of timeliness. All variables of information quality of manager.co.th have a lower means average than the websites sanook.com, and kapook.com and as such manager.co.th needs to focus more on all the variables in order to compete with Sanook.com, and Kapook.com and also to improve its websites information quality.

Discussion from system quality aspect

Sanook.com's system quality showed that there is a high positive relationship between system quality, and intention to use sanook.com website whereas

Table 4: Means Average of the key factors

Key Factors	Sanook.com	Kapook.com	Manager.co.th
Information quality	3.4894	3.4405	3.2804
System Quality	3.5584	3.3189	3.3154
Service quality	3.1385	3.2739	3.0603
Playfulness	3.7656	3.2830	3.2040
Intention to use	3.6102	3.5095	3.1128

Table 5: Means average of the sub-variables of information quality

Sub-Variables	Sanook.com	Kapook.com	Manager.co.th
Accuracy	3.5356	3.4106	3.3247
Content	3.5773	3.4436	3.2977
Format	3.4740	3.3325	3.2318
Timeliness	3.3707	3.5755	3.2674
Information quality	3.4894	3.4405	3.2804

kapook.com and manager.co.th showed medium positive relationship between system quality, and intention to use its website. Kapook.com and manager.co.th system quality have a lower level of relationship when compared to sanook.com websites system quality.

Table 6 shows that sanook.com's ease of use of system quality has higher means average than the other variables like navigation, and response time. So Sanook.com needs to pay more attention to navigation, and response time in order to improve its system quality. Sanook.com also needs to maintain the system quality of ease of use. Kapook.com's ease of use of system quality has a higher means average than the other variables like navigation, and response time, but still all variables have a lower means average than the sanook.com's variable, therefore, Kapook.com needs to focus on improving its system quality. Manager.co.th's variables including navigation, ease of use, and response time of system quality have lower means average than those of Sanook.com, and Kapook.com, as such, manager.co.th needs to focus on or pay more attention to all variables in order to improve its website quality, and to compete with the other websites.

Discussion from service quality aspects

Sanook.com and Kapook.com's service quality showed that there is a medium positive relationship between service quality, and intention to use sanook.com website whereas manager.co.th shows low positive relationship between service quality, and intention to use its website. Sanook.com and manager.co.th's service quality have a lower level of relationship when compared to kapook.com websites service quality.

Table 7 showed that Kapook.com's assurance of service quality has a higher means average than reliability. So Kapook.com needs to pay more attention to reliability in order to improve its service quality. It also needs to maintain the service quality of assurance to compete with other websites. Both the variables of service quality of sanook.com have a lower means average than the kapook.com's variables. So Sanook.com needs to focus on both the variables to improve its service quality of its website to compete kapook.com. Manager.co.th's variables, assurance, and reliability of service quality, have lower means average than those of sanook.com and kapook.com and as such, manager.co.th needs to focus more to these variables to improve its website service quality.

Discussion from playfulness aspect

Sanook.com's playfulness showed that there is a high positive relationship between playfulness, and intention to use sanook.com website whereas Kapook.com and manager.co.th showed medium positive relationship between service quality, and intention to use its website. Kapook.com and manager.co.th's playfulness have a lower level of relationship when compared to Sanook.com website's playfulness.

Table 6: Means average of the sub-variables of system quality

Sub-Variables	Sanook.com	Kapook.com	Manager.co.th
Navigation	3.4844	3.2648	3.2743
Ease of Use	3.7318	3.4618	3.4757
Response Time	3.4592	3.2300	3.1962
System quality	3.5584	3.3189	3.3154

Table 7 Means average of the sub-variables of service quality

Variables	Sanook.com	Kapook.com	Manager.co.th
Assurance	3.1684	3.3854	3.0130
Reliability	3.1085	3.1623	3.1076
Service Quality	3.1385	3.2739	3.0603

Table 8: Means average of the sub-variables of playfulness

Variables	Sanook.com	Kapook.com	Manager.co.th
Enjoyment	3.7656	3.2830	3.2040
Playfulness	3.7656	3.2830	3.2040

Table 8 shows that the enjoyment variable of playfulness of Sanook.com has a higher means average than the Kapook.com, and manager.co.th's variables, so sanook.com needs to maintain the status of the website to compete with other websites. Kapook.com, and manager.co.th's enjoyment variable of playfulness have a lower means average than that of Sanook.com so both the websites need to focus more to improve the playfulness of their websites.

RECOMMENDATIONS AND MANAGERIAL IMPLICATIONS

The results of this study showed that there is a significant relationship between the websites' key determinants dimension and intention to use the websites. It is therefore very important for the management of sanook.com, kapook.com, and manager.co.th to ensure that the determinants dimensions of the website affecting the intention of the users to use their website are addressed.

The overall findings show that information quality, system quality, service quality and playfulness of three websites have effects on intention to use the three websites. Even though sanook.com's information quality, system quality, service quality, and playfulness are higher than the other two website's independent variables, still it is in the range of 3 to 4, that is "agree to somewhat agree". A key major managerial implication is that all the three websites need to concentrate on all the determinants dimensions of information quality, system quality, service quality, and playfulness to improve their websites in order to compete with other websites and to increase intention to use their websites. Recommendations are given to all the three websites to improve their determinants dimensions of the intention to use the websites as shown in Table 9 below:

Table 9: Recommendations based on the determinants of intention to use the websites

Key Determinants	Sub Variables	Recommendations
Information quality	**Accuracy**	- Websites need to gather and post information from authorized, recognized, and well known source. - Periodical checking of links is required to avoid inaccuracy of hyperlinks. - All the contents should be checked for grammatical and spelling errors.
	Content	- Websites can provide information in two ways, 1) first paragraph with brief information about the whole topic, and 2) the rest of the paragraph with detailed information about the topic. - Website can also highlight the keywords with bold letters. - Website can add link to the keywords to study in depth details about the topic. - Relevant information to the topic. - Use simple words for easy understanding of the topic.

Key Determinants	Sub Variables	Recommendations
	Format	- Format creates impression, so the website can be made more colorful. - Selective in choosing the colors to make the website more attractive to the users. - Layout and style of the websites more appealing to the user. - The website can add more links instead of having more information at main page. - The website can select attractive pictures to excite young users, and the pictures also should be acceptable to all aged users. - The website can show variation between title and subtitle by different font size, and the text should be very clear to users. - The website can add attractive advertisement with sound and animation for good look of the website.
	Timeliness	- The website information needs to be updated and maintained according to the real world information. - Frequent update in the website with current information. - Periodical daily check to all links to confirm there is no outdated information. - The website needs to be updated frequently for the hot topics in the real world.
System Quality	**Navigation**	- The website should have search engine within its website to search any topic easily. - There should always be connection between all links from the start to end of the message. - The website can provide buttons, drop down menus, site maps, or page labels to access the information with sequence.
	Ease of use	- Organization and interface of the website should allow user to find information easily. - The website should be user friendly so that user can use it with out any problem. - Website can conduct website survey by selecting users who have never used their website before. - New users should be able to access all the information without any ones help. - The website can set help option and group related topic information together at one place in the website. - The website can use simple wordings, picture, symbol, so that new user can understand the content easily.
	Response time	- Website designers need to develop the website with less graphic and animation because they slow down the website. - Website designers have to create their website, where web page can be loaded within a few seconds even if end user uses slow internet speed. - Not only the main page, but website designer should also develop links of the website to respond quickly whenever the user clicks.

Key Determinants	Sub Variables	Recommendations
		- Information which is available for user to download should be of less storage size, so that user can download with less time.
Service Quality	**Assurance**	- The websites can develop assurance among the users by providing their company back ground, mission statement, announcement, and news in the main page. - The website should provide rules and regulation of the website which helps user to feel safer during browsing. - The website can adopt help screen or guidance box to create trust among the end user. - The website can create a feedback section in the website and provide feedback or answer to user on time.
	Reliability	- The information provided to the user should be exactly related to the topic and can be accessed very easily. - The website can get information from the certified agents and organization before uploading to the website. - The website should keep well back up system to prevent system crash. - There should be a team to monitor all the links of the website 24 hours to solve the failure in the website. - There should be a high skilled team to solve the error at the website as soon as possible when there is an error in the website. - Periodical testing of website would help to solve the error issue of the website.
Playfulness	**Enjoyment**	- Website developers need to develop a website with more fun and entertainment to create positive attitude towards the website. - Website designers can add more graphics and theme music to attract and make user feel better about the website. - Website designer need to develop more appealing design to motivate user to revisit the website.

FURTHER RESEARCH

As this research study is based only on the students of Assumption University, Huamark campus, Bangkok it is suggested that further research should be done with other groups of respondents with different age, income, and internet providers from various locations or other universities. Other areas of future research could include the replication of this study for an industry wide study covering the whole website industry or with the website from countries with different languages and cultures.

Using the same variables, further studies can be done with other website providers such as customer services, audiovisual content providers, e-outlets of brick and mortar stores, and dot-com companies. Variables in this study are also related to customer satisfaction of a website. Further research on customer satisfaction of retailers' website can be conducted using this research's determinants variables since they are also related to customer satisfaction.

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