

Conventional vs Virtual Notice Board: The Effectiveness of Information Delivery in Higher Education Institution

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ABSTRACT

The conventional or traditional notice board is widely used in most universities all over the world as a tool to make announcement or deliver latest information to students. However, as the information technology (IT) is growing at incredible pace, it has definitely transformed the way we live, communicate, learn and do business. As the young generation embraced technology and became attached to it, universities or higher education institutions had to keep up with the transformation in order to smoothen daily activities. Therefore, the aim of this paper is to investigate the effectiveness of information delivery in higher education institution. Do these young IT savvy students go and read announcement or information from the notice board or do they opt to read them from the virtual notice board? Does the announcement or information updates on the notice board reach the students or do we have to develop a friendlier virtual notice board that could be accessed from anywhere? The population of this study consists of students from Universiti Teknologi MARA Cawangan Pahang. Six diploma programmes were randomly chosen and a total of 356 questionnaires were distributed. The selection of sample was based on stratified random sampling technique. The SPSS Version 18.0 was used to conduct data analysis. Data was analyzed for descriptive statistics such as mean, frequency and percentage.

Keywords: *conventional notice board, virtual notice board, information delivery*

Introduction

The conventional or traditional notice board is one of the oldest tools used to make announcement or deliver latest information to students. Many universities are still using it where students are required to go and read announcements from the notice board at their faculties or departments in order to know the latest news or information. But, as the world changes and new technologies have been invented, the information delivery has also become more efficient and user friendly.

The growth in information technology has definitely transformed the way we live, communicate, learn and do business. And as the new generation of students embraced technology and some of them became attached to it, it has raised a question whether it is still efficient and relevant to use the conventional notice board. It is often observed that whenever there is a change in seminar or class schedule, there would be some students missing the seminar or class because of not reading the notice board from time to time. This shows that the announcement system which is commonly used in many universities is ineffective when the message did not spread around and reach the students. Therefore, the objective of this paper is to investigate the effectiveness of information delivery in higher education centre. It is important to find out whether the announcement or information updated on the notice board is read by the students. This is because one of the factors contributing to the rate of student's participation and involvement in faculty or university's events and activities is the effectiveness of information delivery. And if not, do we have to develop a friendlier virtual notice board that could be accessed from anywhere?

The Y Generation

According to Business Dictionary (2011), Generation Y, which is also known as Millennial Generation, is the generation who was born during 1980s and early 1990s. Generation Y students grew up surrounded by technology and most of the time, used the Net to get any information they needed (Gardner & Eng, 2005). This statement was supported by Lenhart et al. (2005), when they found that out of ten teens, nine are internet users, and they are prone to log on wherever there is an internet connection. Many researches have documented the usage of internet among the young generation. For instance, it was reported that the primary purpose adolescents use the internet remains social reasons (Gross, 2004) despite various activities including doing schoolwork, playing games, shopping, and downloading music. It shows that the internet has become a virtual meeting place where teens hang out with their peers to pass time.

Statistics are also available for the usage pattern of internet among American teens where the 2002 Gallup Survey [cited from (Whitlock et al., 2006)] reported that Internet is preferred by many adolescents to the other media, including telephone, TV, and radio. In addition, the Pew Internet and American Life Project (Lenhart et al., 2005; Whitlock et al., 2006) indicated that the vast majority (89%) of teens use e-mail and 75% use instant messaging (IM). In short, it shows how virtual world has become part of the Y generation's lives. Therefore, these students are well known as an internet savvy generation. And because they had grown up surrounded by electronic devices, their critical thinking and other cognitive skills are somewhat affected (Weiler, 2004). Other than that, Weiler (2004) also stated that they would prefer absorbing words and images rather than reading. And in contrast, the notice board provided by the universities needed them to read.

The Use of Technology in Information Delivery

The era of information age, as well as massive wave of data produced today, has claimed people to vary means in delivering information. It is also important to determine what is needed to apply in order to deliver information effectively. It does not matter whether it is virtual or conventional method, as long as the information reaches them on time and it is accurate. However, most of the people nowadays prefer to communicate online to gain fast feedback and absorb the information around the world. As stated by Heiberger and Harper (2008), students today network and communicate with each other using technology as much as, if not more than, face-to-face communication. That is why he stresses that university administrators must recognize this phenomenon and learn to use the variety of electronic media available in positive ways to stay connected to college social networks or to promote relevant events on campus (Harper, 2008).

In order to understand the pros and cons of a virtual notice board, the researchers referred to a paper written by Behzaidi (2011). In her investigation towards pros and cons of online educations, she stated that online education has greater flexibility which gives students more freedom. In addition, students are able to access the information from home or anywhere they want to. This is agreed by Weber (2007) where he also stated that online technology really helps students to be flexible because it is available at any times and places. Other than that, Behzaidi (2011) also stressed that online education can save time and money as compared to conventional class which wasted on commuting. However, the conventional method also claimed self-discipline among students which they need a little effort to come and get information whereas online education does not need such effort. The same thing goes for the case of conventional notice board, where it acquires students to go and read the notice board from time to time at specific locations in the campus to update information.

On the other hand, the drawback for virtual notice board is it needs internet connection. If the server networks fail, it will break the communication process. Stressing on the weakness of online education, Badragheh (2011) claimed that online education entirely depends on internet connection. If the connection fails, then the entire class needs to be canceled. Therefore, if we want to apply the virtual notice board in campus, we still need a hotspot to get internet connection. Unfortunately, there are certain places in campus which are not covered with internet connection yet. Furthermore, the server itself is always buffering and lagging which make users feel bored to access the internet.

The Drawbacks of Conventional Notice Board

The old method in delivering information, which is using wooden notice board, is not accessible everywhere and everytime. This is due to the fact that notice board is only placed at specific location in the campus. Students need to commute to the notice board which is located such as at the Head of Programme's office, Academic Affairs office, lecture blocks and some other locations, just to update information. It troubles them because it is time and energy consuming to always go and read the notice board from time to time. As a result, the information delivery will be limited and ineffective.

According to Osamor et al. (2007), the wooden notice board is a flat solid object placed at strategic positions, makes it an object with notices and posters on it. They stated that when notices are being placed on the board, some of the old notices need to be removed and if not, with time, the notice boards will get filled up with the relevant and irrelevant notice messages. As a result of this, students might not take caution or overlook of any new notices being displayed as it is time consuming to go through the whole notice board searching for relevant notices. Osamor et al. (2007) also found that many states of the art and cutting edge universities in the world still rely on wooden notice board hanging on a wall to display announcements. In addition, he stated that the overreliance of this practice in a university is still not enough to pass relevant information around as many problems are encountered. Osamor et al. (2007) listed 4 problems and disadvantages of using wooden notice board as below:

1. Multiple people struggle and cluster a single wooden notice board for information just released.
2. People mutilate, remove or destroy paper notices from the notice board, leaving other people to be uninformed.

3. Some people do not have time to settle down and read all the relevant information posted on a notice board especially where digital printout cannot be made easily.
4. There is unregulated display of information, difficulty in storage and no efficient reference to past relevant information being posted.

UiTM Pahang Announcement System

Through some observations, researchers found that currently UiTM Pahang is using both conventional and virtual notice board. The use of conventional notice board is seen as more dominant compared to the use of virtual notice board. Quite a number of wooden notice boards are displayed at specific locations in the campus. A few of them are placed at a very strategic location such as at the student's walking alley to lecture blocks where they can stop by and read while walking to their classes. But some of the notice boards are quite distant especially the faculties or Head of Programmes' notice boards.

Nonetheless, there is some effort from the university's authority to virtualize the announcement through UiTM Pahang website at www.pahang.uitm.edu.my (at the right column of the page). But the use of it is very minimal. It is only meant for specific university's information updates. Meanwhile all faculties in UiTM Pahang are still heavily depending on the conventional notice board; unless there is faculty own effort to develop their own blog or create a Facebook account to stay connected with their students. The faculty-student and university-student communication are very important as there are so many events, seminars or programs are planned and carried out in one academic cycle. The updates and information dissemination should be efficient in order to make students aware of the events or any changes of dates or venues. This at the end will influence the rate of students' participation in the events or seminars.

Methodology

The population of this study consists of the students from Universiti Teknologi MARA Cawangan Pahang. Six diploma programmes were randomly chosen and a total of 356 students were selected as respondents based on stratified random sampling by proportionate allocation from the six programmes.

A quantitative descriptive survey was conducted using a structured self-administered questionnaire designed by the researchers. The questionnaire was designed to capture some demographic information and data on students' interest in using internet, student's perception on virtual notice board and the effectiveness of using conventional notice board. It was designed in Bahasa Malaysia to enable the respondents to complete it without any language difficulty. The questionnaire consisted of four-point Likert Scale items which required the students to rate each statement as 1-'Strongly Disagree' to 4-'Strongly Agree'. The positive and negative statements were mixed. However, the negative statements were reversed into positive statements during the data entry process for certain analysis. All 356 questionnaires were returned as they were distributed during class period. Students were asked to answer and return it straight away. The method was carried out not only to ensure a high response rate but also to avoid discussion among students in answering the questionnaire so that the assumption of independent samples is satisfied. The Statistical Package for Social Sciences (SPSS) Version 18.0 was used to conduct data analysis. Procedures used include reliability test and descriptive statistics such as mean, frequency and percentage.

Findings and Discussions

The reliability test carried out shows that the internal consistency of the questionnaire is acceptable since the Cronbach's Alpha is greater than 0.6 which is 0.672. The proportion of respondents participated in the study (by gender and by program) can be referred at Table 1 and Table 2 respectively. Out of 356 respondents participated in the study, 29.5% are male and 70.5% are female respondents.

Table 1: The Proportion of Respondents by Gender

Gender	Frequency	Percentage (%)
Male	105	29.5
Female	251	70.5
Total	356	100

Students from BM111 and OM114 share the highest percentage of respondent that is 21.6%. This is followed by BMI 12 which is 18.5%, EC110 (14.6%), AC110 (14%) and lastly CS110 (9.6%).

Table 2: The Proportion of Respondents by Program

Program	Frequency	Percentage (%)
BMIII	77	21.6
BM112	66	18.5
AC110	50	14
OMI14	77	21.6
CS110	34	9.6
ECHIO	52	14.6

The descriptive statistics for the three main categories analyzed in this study are presented in Table 3. The three categories are students' interest and tendency to use internet, the perception towards the virtual notice board and finally the effectiveness of conventional notice board. A higher score of mean ($M > 2.5$) indicates a more positive attitude and effectiveness.

Table 3: Descriptive Statistics of the Internet Interest, Perception towards Virtual Notice Board and Effectiveness of Conventional Notice Board

Categories	Mean	Standard Deviation
Students' interest and tendency to use internet	2.90	0.45
Students' perception on virtual notice board	2.76	0.42
The effectiveness of conventional notice board	2.28	0.39

From the results in Table 3, it is observed that in general, students are quite interested in using the internet and they also tend to have positive perceptions towards the virtual notice board given the means are 2.90 and 2.76 respectively. Nevertheless, in general, the use of conventional notice board is somewhat ineffective when the mean score is only 2.28.

Students' Interest and Tendency to Use Internet

Section B in the questionnaire is meant to measure students' interest and tendency to use the internet. This is to determine whether or not the students are internet savvy (as their birth years matches with the generation Y as reported by many researchers). Students were asked to rate eight items in Section B based on the Likert scale ranging from 1-'Strongly Disagree' to 4-'Strongly Agree'. The results of mean and percentage for the eight items measured in section B is presented in Table 4.

Table 4: Mean and Percentage of Students' Interest and Tendency to Use Internet

Items	Mean	Percentage (%)			
		Strongly disagree	Disagree	Agree	Strongly agree
1. I like to use the internet	3.62	0.3	1.1	35.4	63.2
2. I spend my free time surfing the internet	2.80	2.5	30.9	50.6	16.0
3. I have personal computer/lap top, so easy to surf internet	3.43	3.1	6.2	35.1	55.6
4. I frequently utilize internet facility at the library / college	2.37	14.6	43.3	33.1	9.0
5. I have my own internet broadband	2.31	39.9	17.7	13.8	28.7
6. I like the student portal or i-learn portal	2.87	4.2	23.3	54.2	18.3
7. [always read latest announcement or information from lecturers' blog or FaceBook	2.77	8.4	27.5	50.8	13.2
8. I am well versed in using internet	3.04	2.0	14.0	62.1	21.9

More than 50% of the students agree and strongly agree for item 1, 2, 3, 6, 7 and 8. Thus the result portrays that these students are internet savvy. The highest percentage for agree is 62.1% at item 8. The item measures 'I am well versed in using internet'. Whereas the highest percentage for strongly agree is at item I (63.2%) which measures 'I like to use the internet'.

The result is also supported by mean value. The values that are higher than 2.5 will indicate students' interest and agreement on the items. From Table 3 it can be seen that all mean values are higher than 2.5 except for item 4 and 5. A total of 206 (57.9%) students seldom use the internet facility provide at the library or hostel IT centre, and 205 (57.6%) of the students cannot afford to have their own internet broadband. From the comments and feedbacks by these students, it was found that most of them surf the internet using the wi-fi hotspot provided by the university from their hostel room. Even though the wi-fi hot spots sometimes lag and buffer, students prefer the convenience of surfing at their own place and at their own preferred time.

Students' Perception on Virtual Notice Board

Section C in the questionnaire measures the perception of students towards the virtual notice board. The result is shown in Table 5. The higher mean value ($M > 2.5$) portrays the more positive perception towards the virtual notice board.

Table 5: Students' Perception on Virtual Notice Board

Items	Mean	Percentage (%)			
		Strongly disagree	Disagree	Agree	Strongly agree
1. UiTM has virtual notice board	2.93	2.8	18.3	61.8	17.1
2. The use of virtual notice board by university is very limited	2.79	2.5	28.1	57.0	12.4
3. Virtual notice board is user friendly and convenience	2.76	4.8	27.5	54.5	13.2
4. Virtual notice board suits today lifestyle	3.16	3.7	7.9	57.6	30.9

From Table 5, we can see that students tend to agree with all items measured in Section C ($M > 2.5$). 281 students (78.9%) are aware that UiTM has virtual notice board to upload announcements and information on the internet ($M=2.93$) and 247 of them which is 69.4% also agree and strongly agree that the use of the board is rather minimal ($M=2.79$). There are 241 (67.7%) students agree and strongly agree that 'virtual notice board is user friendly and convenient' and a total of 315 (88.5%) students also agree and strongly agree that 'virtual notice board suits today's lifestyle'. Mean for both items are higher than 2.5 which is 2.76 and 3.16 respectively.

The Effectiveness of Conventional Notice Board

Nine items were used to measure the effectiveness of conventional notice board. The mean and percentage for this section is presented in Table 6. Students were asked to rate the nine items based on Likert scale I- 'strongly disagree' to 4- 'strongly agree'. The nine items are as follow:

1. 'I always visit university's offices (*HEAIHEPIKO* of Head of Programme) to read announcements at their notice boards'
A total of 236 students (66.3%) responded disagree and strongly disagree to this statement which shows that students seldom read announcements from offices located quite distant from them. The mean for item I is 2.24.
2. 'I always go and read announcements from traditional notice boards at lecture block/hostel'
Mean of 2.76 and the percentage of 66.6% for this statement shows that students would go and read the announcements or latest information from notice boards that are located somewhere near to them (lecture blocks or hostel).
3. 'I normally get latest information from friends'
322 of the students 90.5% responded agree and strongly agree that they got latest information from their friends. A very high mean value of 3.26 also supports the statement.
4. 'In my opinion the conventional notice board is outdated'
Students tended to disagree when they were asked to rate whether or not the conventional notice board is outdated. 204 students (57.3%) responded disagree and strongly disagree whereas only 152 (42.7%) students responded agree and strongly agree. It shows that students thought that conventional notice board is still relevant with today's lifestyle.
5. 'I rarely have time to always go and check latest information / announcements from conventional notice board'
Majority of the students (236 or 66.3%) replied agree and strongly agree that they rarely had time to always go and read latest information or announcements from conventional notice boards. The rest of the students (33.7%) responded disagree and strongly disagree with the statement. Mean value for this item is 2.84.

Table 6: Mean and Percentage for the Effectiveness of Conventional Notice Board

Items	Mean	Percentage (%)			
		Strongly disagree	Disagree	Agree	Strongly agree
1. I always visit university's offices (Head of Programme) to read announcements at their notice boards	2.24	16.3	50.0	27.0	6.7
2. I always go and read announcements from traditional notice boards at lecture block/hostel	2.76	5.3	28.1	51.7	14.9
3. I normally get latest information from friends	3.26	0.6	9.0	54.5	36
4. In my opinion the conventional notice board is outdated	2.45	14.3	43.0	25.8	16.9
5. I rarely have time to always go and check latest information / announcements from conventional notice board	2.84	6.2	27.5	42.1	24.2
6. In my opinion UiTM/Head of Programme should have an up to date information delivery system	3.22	1.1	9.3	56.5	33.1
7. I often use 'sms' to get latest information from faculty/Head of Programme	2.32	20.5	38.5	29.5	11.5
8. The long distant from hostel/lecture block to Head of Programme/UiTM offices is the reason I seldom read the conventional notice boards	3.19	4.5	15.2	37.6	42.7
9. I always fail to notice latest information / announcement from the conventional notice boards	2.62	17.1	32.3	45.5	5.1
10. My Head of Programme/faculty delivers more information / announcement through conventional notice board compared to the internet	2.66	6.7	33.7	46.3	13.2

6. 'In my opinion UiTM / Head of Programme should have an up to date information delivery system'
A total of 319 students (89.6%) replied agree and strongly agree that UiTM and Head of Programme should have a more up to date information delivery system. Only 37 (10.4%) of the students responded disagree and strongly disagree with the statement. The mean value is 3.22.
7. 'I often use 'sms' to get latest information from faculty / Head of Programme'
Majority of the students (210 or 59%) responded disagree and strongly disagree when they were asked to rate the use of 'sms' in getting the latest information/announcements. And another 41% agree and strongly agree that they do use 'sms' to get latest information from their Head of Programme.
8. 'The long distant from hostel/lecture block to Head of Programme / UiTM offices is the reason I seldom read the conventional notice boards'
Mean value of 3.19 and the percentage of 80.3% (286 students) for item 8 shows that students responded agree and strongly agree that one of the main reasons they seldom read from conventional notice board at their Head of Programme / UiTM offices is because of the long distance of these offices from their hostel or lecture blocks. This result actually supports the result from item 1,2,3,5 and 6.
9. 'I always fail to notice latest information / announcement from the conventional notice boards'
A total of 180 students (50.6%) responded agree and strongly agree that they always overlook and fail to notice latest announcement or information from the conventional notice boards. Whereas another 49.4% responded disagree and strongly disagree to the statement. The mean value for this item is 2.62.
10. 'My Head of Programme/faculty delivers more information / announcement through conventional notice board compared to the internet'
212 students (59.5%) replied agree and strongly agree that their Head of Programme/faculty delivers more information through conventional notice board as compared using the internet as a medium. The mean for this statement is 2.66.

Students' Preference on Notice Board Options

As referred from Table 7, when students were asked to choose which method they like the best to receive information or announcements, more than half of the students (53.4%) seem to choose virtual notice board. There are 28.9% of them favor the old method and prefer to remain using the conventional notice board. And only 17.7% insist on the use of both types of notice board.

Table 7: Percentage of Students' Notice Board Preference

Students' Preference	Frequency	Percentage (%)
Change to virtual notice board	190	53.4
Remain to use conventional notice board	103	28.9
Use both conventional and virtual notice boards	63	17.7

Conclusion and Recommendations

'Information at your fingertips', so the saying goes, which shows how technological advancement has enabled easy access to information. Despite the fact that people nowadays choosing virtual space as a tool of delivering information, conventional method is still being used widely, especially in higher education institutions.

The study reveals four important findings. The first one is the study shows that students are really interested and tend to use the internet during their spare time. They have the tools to go online and stay connected to the internet. 90.7% of them have computer or lap top, 42.5% have their own internet broadband and wi-fi hot spots are also available at various locations on campus. The second finding is students do have positive perceptions towards the virtual notice board. The third important finding is the use of conventional notice boards will only be effective if they are placed at strategic locations. 66.3% of the students seldom visit university offices such as Head of Programme's office just to check out the latest announcement or information. 90.5% of them rather ask their friends for updates and latest announcements. And 50.6% of the students admit that they fail to notice new announcements or latest updates on the conventional notice board. But if the conventional notice boards are located at a place like students' walking alley to their lecture blocks or near their hostels, the percentage of effectiveness will be higher as 66.6% of them will go and read the notice board from time to time. Therefore, the location plays a vital role in order to make sure that the conventional notice board is effective. The last finding is majority of the students (53.4%), suggested that university and faculty should change to virtual notice board. But at the same time, they are also asking for a better and wider coverage of the wi-fi hot spots.

Therefore, it can be concluded that in order to encourage and attract more students to read updates and announcements from notice boards, a new and creative way of delivering information should be adopted. The idea of sharing information easily and quickly should be the base to find the best solution for an effective information delivery. In order to enhance student's participation, the information should reach the students. As recommendations, UiTM could build the virtual notice board as we have many experts in information technology. All faculties, especially the Head of Programme or Programme Advisor should have their own virtual notice board to stay connected with their students; and these pages which could be linked from UiTM Pahang website could have the security and privacy features by setting the user id and password.

Heiberger and Harper (2007) suggested that universities should use the technologies most popular with students. It should be user friendly, efficient and relevant with today's world. They highlighted the use of Facebook, as it is one of the most popular online communication tools among students. It allows users to connect to a large group of people with one log-in on one website. The two-way communication feature makes it relevant and suitable for faculty-students or university-student interactions. Faculty can upload announcement, updates information or news and students can always inquire doubtful itinerary of information or simply 'like' the message to show their agreement or preference.

Yeo (2009) suggested the use of bluetooth announcement system to replace the traditional notice board or even electronic notice board. He stated that even though the electronic notice board is more effective compared to the traditional one, (as it allows an end user to quickly and easily update any information that they wish to pass on to visitors in real time), the fact that it is not accessible from anywhere, and students still need to pass through the location of the board in order to read updates makes it still ineffective. Using the bluetooth system, all students will be able to get the most current news, information or any announcements at any time and any location (as long as their bluetooth is turned on and they are still within the coverage area).

In the end, it does not really matter whether we want to use the conventional or virtual notice board. What matters the most is for the information to reach the students. We should also take into consideration the transformation of today's world, the new generation of students and the changing trend in information delivery. At the same time, universities should also make full use of the facilities that they have. However, since this university has students from various family backgrounds, the researchers strongly believe that the combination of both conventional and virtual notice board is the best solution for a better and more efficient information delivery in UiTM Pahang. And once the virtual notice board is actively utilized by both parties (university or faculty -- students), it will be much more efficient to disseminate information rather than heavily rely on the conventional notice board.

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