Impact of Students' Learning Preferences in an Entrepreneurial University

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Purpose – This paper aims to study the use of latest web-based tools like Web2.0 technology to do online learning. The Web 2.0 based learning may involve the use of blogs, Wikis, online social community (e.g. Facebook, Twitter), Dropbox – a file hosting service that offers cloud storage, file synchronization and client software, online video sharing (e.g. YouTube), online video and audio conferencing tool, and social virtual environment (e.g. Second life). Web 2.0 has provides rich web tools to help student's have better learning platform and ensures far-reaching impact on the student's performance. Furthermore, this technology can support education in terms of participation, interaction, sharing of knowledge, social networking, critical reading, critical thinking and writing, collaboration, and expression of opinions. **Design/methodology/approach–**An empirical study (quantitative) has been conducted on the selected respondents randomly. A random sample of 100 respondents is adopted by the questionnaire survey method. The results will be obtained on measuring the students' performance after the students' adopt Web 2.0 Technology for learning purpose. **Findings –** The finding in this study present the perception and awareness of students on Web 2.0 technology and its influence on their academic performance. Based on regression analysis, the results indicated that the two factors awareness and perception of students' on the use of web 2.0 technology significantly relates to students' academic performance. Overall outcome of this study is that the use of Web 2.0 technology in higher education is quite positive. From the students' perspectives when analyzed it suggests that they clearly realize the benefits of the use of Web 2.0 tools in their education. **Originality/value –** While the importance of this study are to provide evidence that most students feel that integrating Web 2.0 in context of learning can be effective at improve their learning ability. From a research perspective, the results demonstrate the use of Web 2.0 tools has significant potential to support and enhance in-class teaching and learning in higher education.

Keywords: Web 2.0 technology, students' performance, learning, teaching
Paper type – Research paper

Background and Significance

Nowadays, technology enhancement is transforming the mode of pursuing education into a new era. Web2.0 is used to do online studying such as blog, Wikis, online social community (e.g. Facebook),

online video sharing (e.g. YouTube), online video and audio conferencing tool, and social virtual environment (e.g. Second life). Web 2.0 has provided rich information to help students learn better. Furthermore, this technology can support education in terms of participation, interaction, sharing of knowledge, social networking, critical reading, critical thinking and writing, collaboration, and expression of opinions. According to Swapna Kumar (2007), students appreciate teaching and learning experiences where new technologies add value to existing practice, enhance the learning process, and gratify different types of learners. Web 2.0 is a revolution in education. According to Sirje Virkus (2008) study, Web 2.0 influences the way in which people learn access information and communicate with one another. Experiences with open and distant learning and e-learning have transformed teaching and learning, have provided new alternative delivery modes, and helped to reach new target groups.

Nevertheless, the implementation of Web 2.0 Tools depends on the emerging usage of internet. Web 2.0 refers to Internet-based tools and services which allow participatory multi-way information sharing, dialogue, and user-generated content (Government of Canada). The internet is a platform that drives a change in the way people interact and accomplish tasks. Internet enables interactivity and gathering of knowledge through experience and practice of Web 2.0 tools on a global scale. The term Web 2.0 was initially created and used to describe the change in the information technology world where it links internet users to enhance speed and creativity (O'Reilly, 2005). Eventually, the accessibility and usage of internet by students and educators will affect the implementation of Web 2.0 Tools in education.

Web 2.0 Tools can also be used by higher education institutions for teaching purposes. Successful implementation of web 2.0 tools relies on variety of factors such as instruction, participation, institutional readiness, applicable course curriculums and designs etc (Arif Sari, 2012). Many of the studies conducted about the implementation of web 2.0 tools show similar studies which commonly involved two key participants, the "teacher" and the "student". In fact, it is found that so far researchers were focusing more on "teacher" factor rather than students, whereby according to this research "students" play the main character in the studies.

Understanding individual awareness, learning preferences towards usage of Web 2.0 Tools have positive or negative impact on students' performance is critical if educational institutions are to encourage their patrons to use these services and therefore reap the benefits to increase students' grade.

The findings are expected to contribute to a better understanding of the factors that promote Web 2.0 Tools usage among the educational institutions. It is critical to have more empirical evidence of the factors affecting the usage of Web 2.0 Technology to help government bodies, educators, and Information Technology (IT) providers further access the benefits of its potential development.

Literature Review

Role of Web 2.0 Tools in Higher Education

Emergence of the interconnected digital world transformation which leads people to become more creative and respond to an ever changing set of problems raised a new demand for skills required by an industrial economy (Arif Sari, 2012). Education plays critical role on forming personality and character of people whereby it changes behaviors and eliminates undesired attitudes but the response of education systems on this matter seems quite slow.

The education system on the whole has responded partially to this demand by focusing on technical IT skills and only few of the educational institutes have considered the full range of "21st century skills" while framing the latest course curriculum. In order to respond to this certain demand in the society completely, those role players (students and teachers) should be IT proficient (Arif Sari, 2012).

University is a higher educational institution which produces skilled manpower and provides higher level of information for education searchers to effectively and efficiently represent a competitive edge in an increasingly globalized job market.

IT has become one of the most important terms in the global market where those who are IT literate have –'power of autonomy, power of enlightenment, power of self-improvement and self-assertion, power over their lives and their families' future,', (Gregorian, 2002).

Web 2.0 Tools

Web 2.0 is a collective term for a group of web-based technologies' and communication capabilities. Web 2.0 heavily values users' participation and contribution as an active and open web architecture (Anderson, 2007). There is a large range of Web 2.0 systems, some of the most important of these can be used as educational enhancement applications like Blogs, Wikis, Skype, Google Docs, SNS platform and so on.

The blog as a Web 2.0 tool helps students create a sense of belonging and creates a conversational tone amongst them in their interactions (Woods & Baker, 2004). Wikis can be used for the creation of annotated reading lists by one or more teachers and Wikis can be used in class projects, and are particularly suited to the incremental accretion of knowledge by a group, or production of collaboratively edited material, including material documenting group projects (Embi, 2011). Students actively interact with one another to create content on wiki. Moreover, Skype offers an easy way for disparate students and instructors to engage in synchronous communication (Embi, 2011). Further Google docs enables the students in different locations to work simultaneously but independently on the same artifact. Even the teachers, can be included as observers on each project group and thus track the development of the work on Google docs (Broin & Raftery, 2011). The most popular amongst university students are the Social networking sites (SNS platform) like Facebook, MySpace and LinkedIn which allow users to build up networks that connect them with family, friends, and other colleagues (Strawbridge, 2010). Growth of social networks has generated concerns among parents, school officials, and government officials about the potential risks posting personal information on these sites, but it is evident they have a series of positive pedagogical implications (Lenhart & Madden, 2007). Extending this idea, these sites could be used to establish a series of academic connections or to foster cooperation and collaboration in the higher education classroom (Malhiwsky, 2010).

Based on literature review, it is found that not many research studies have been conducted on the topic web 2.0 learning technology in Malaysia. The main focus of this paper is on the use of Web 2.0 tools like social networking; wikis and other platforms which are preferred by most of the students to enhance their speed and creativity and improve their performance in class.

In this study various factors were considered to identify the frequency and intensity of Web 2.0 tools usage by students. The purpose of this study is to evaluate whether there is any relationship between the usage of Web 2.0 tools and students academics performance. To understand Web 2.0 tools as being a platform for university students learning and improved academic performance, the following questions should be answered.

- What is the frequency of internet usage on the part of university students?
- What are the main factors affecting this use?
- What are the favourite Web 2.0 tools among university students?
- What is the impact of such use on student learning process?

This study tries to answer these questions by exploring the learning culture and the impact of the use of Web 2.0 tools in higher level education.

In a bid to assess the impact of learning preference and the use of Web 2.0 tools on students, the study specifically aims to:

1. Identify awareness on availability of Web 2.0 learning technologies used amongst university students.
2. Discover the preferences of Web 2.0 learning technologies amongst university students.
3. The study investigates the impact of using Web 2.0 learning technologies on university students academic performance.

Reach and Growth of Internet in Malaysia

There were 17,723,000 internet users in Malaysia (representing 61.7% of the population) in December 2011, according to Internet World Statistics. This represented 1.7% of the Asian population. (Internet World Stats,2011). More than 11 million people age 15 and older accessed the internet from a home or work location in Malaysia in August 2011 (comScore, Inc., 2011). Amongst leading countries worldwide, Malaysia was ranked as having one of the fastest growth in Internet users, April 2012 (% change vs Prior year) as 9% (% change vs Prior year).

The number of Malaysians accessing the internet reached 41% in 2010, a 15% increase over the previous year, according to The Nielsen Company's Mobile Insights Survey. The highest usage was recorded among people aged 20-24: almost six in ten (57%) regularly use the internet, spending an average of 22.3 hours online per week. Once online, Malaysians primarily use social networking sites. Almost three-quarters (71%) are keeping in touch with friends and family via these sites, a 24% increase from 2009. Instant messaging and reading local news rounded out the top three online activities. (The Nielsen Company, 2011).

Impact of Web 2.0 tools on students' performance

Students using rich technologies environment experience different types of impact on their performance. The main study is to expose the use of Web 2.0 Tools affect the students positively or otherwise. Malhiwsky (2010), conducted a research which evaluated the level of effectiveness of the Web 2.0 technologies on student achievement in an online Spanish class. Results from pre-test and post-test suggest participation in the Web 2.0 enhanced courses did significantly improve student knowledge, understanding and communicative abilities in the language. Research also revealed a statistically significant relationship between Web 2.0 enhanced courses and the level of classroom community and connectedness self reported by students.

According to Odegebe (2012), students' internet usage and performance are related. The outcome of the correlation coefficient of the Microbiology students indicated a strong positive correlation of approximately 0.57. At the 0.05 significant levels, this outcome is significantly large to have indicated a degree of relationship between the frequency of visits by the students of Microbiology to the cyber café and its impact on their academic performance.

Similarly study by Moyle & Wijngaards (2012), students view of e-learning based on three aspect were positive regarding use of technologies in higher education makes a positive difference to studying, use of technology effectively enhances the learning experience and increases satisfaction with their course of study and technology improved student engagement with course material. The use of technologies in higher education has certainly made information more readily available to students than before, but providing adequate guidance and instruction, basically educating students on how to effectively turn this information into knowledge is still the responsibility of lecturers. One student from the Dublin Institute of Technology commented that "Lecturers will always be needed. Technology cannot always be trusted."

Awareness of Students about Web 2.0 Tools

The use of Web 2.0 Technologies in higher education is still a new phenomenon and its integration into teaching and learning is in the initial phase. According to Ajjan & Hartshorne (2008), study had conducted to assess faculty's awareness of the benefits of Web 2.0 to supplement in-class learning and to assess faculty's decisions to adopt these tools using the decomposed theory of planned behavior. This study indicated that while some faculty members feel that some Web 2.0 technologies could improve students' learning, their interaction with faculty and with other peers, their writing abilities, and their satisfaction with the course; few choose to use them in the classroom. Additional results indicated that faculty's attitude and their perceived behavioral control are strong indicators of their intention to use Web 2.0. A number of implications are drawn highlighting how the use of Web 2.0 could be useful in the classroom.

Web 2.0 Technology on education is still new and need to consider from many aspect. The instruction needs to be well prepared to meet the learner's characteristics, needs, and their learning styles which are referred to as individual differences in learning (Kolb, 1984). Otherwise, the learner role would be impeded, and learning would not take place. Cross (2001), categorize learning styles as the way the individual concentrates on, processes, internalizes, and remembers new and difficult academic information or skills.

Similarly study Puzziferro (2008) had examined performance as a function of grade and course satisfaction in online undergraduate level courses, specifically students' self-efficacy for online technologies and self-regulated learning strategies. Self-efficacy is defined as a person's perception regarding his or her ability to successfully execute a behavior required in accomplishing a desired outcome (Bandura, 1977). The greater perceived of Web 2.0 tools depend on the easier uses of its. However, result did not find a correlation between online self-efficacy and student performance, which necessitates further exploration into the relationship.

Students Learning Preferences

Web 2.0 Technology on education is still new and need to consider from many aspect. The instruction needs to be well prepared to meet the learner's characteristics, needs, and their learning styles which are referred to as individual differences in learning (Kolb, 1984). Otherwise, the learner role would be impeded, and learning would not take place. Cross (2001), categorize learning styles as the way the individual concentrates on, processes, internalizes, and remembers new and difficult academic information or skills.

Similarly topics Zakaria, Watson & Edwards (2010) conducted their research on the use of Web 2.0 technology by Malaysian students. The general opinion gathered about the integration of Web 2.0 tools into learning was positive. Result showed that students preferred using e-mail to disseminate and share digital contents. Similarly it was also found that for finding information related to education, students prefer to use search engines instead of asking friends or teachers.

According to Bilal et al. (2010), attitude of students towards IT whether they feel comfort with usage of internet use had been conducted to evaluate that whether the use of internet improve the academic performance of students or not This study revealed that 37 per cent of total respondents were strongly feel comfort while using internet and 9.8 per cent are not feel comfort while using internet. The survey showed that majority of students thought that the use of internet in education can increase the quality of study.

Therefore, students' learning preferences on Web 2.0 discussed is their opinion and belief attitudes. Factors of perceived usefulness and ease of use had used in The Technology Acceptance Model (TAM)

focuses on individual computer usage (Davis, 1989). Perceived usefulness is defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context. Perceived usefulness is the prospective user's subjective probability that using a specific innovation will increase his or her job performance within an organizational context. While perceived ease of use is refers to the degree to which a person believes that using a particular system would be free from effort (Davis, 1989). Thus, students' positive attitude to use Web 2.0 tools to support their education learning is expected to influence their academic's performance.

Research Methodology

The primary aim of this study is to identify relationship of the students' awareness level and learning preferences to use Web 2.0 on academic performance. An empirical study (quantitative) was conducted on the respondents of the selects randomly. A random sample of 100 respondents from the sample group was adopted to respond to the questionnaire survey method. The sample group were the undergraduate students of University Malaysia Kelantan, Pengkalan Chepa, Kelantan.

A comparison of demography parameter and the description method was carried out. The questionnaire measured the students' performance after analyzing the impact of Web 2.0 Technology on their learning and academic performance.

Due to resource constraints, the population of the study was restricted to 100 students only located in the state of Kelantan, Malaysia. The selection of the respondents was done on the basis of convenience technique based on the non-probability method of sampling. In this research, quota sampling has been used in addition to convenience which means the sampling is selected from a location which is most convenient to the researchers (Kumar, 2005).

The questionnaire was partially adapted and modified based on researches conducted by Ajjan & Hartshorne (2008) on students' performance based on the use of Web 2.0 Technology. A 5 point scale from 1(fully satisfied) to 5(not satisfied) was used to construct this research. Likert scale is the easiest to build that is based upon the supposition that each statement on the scale is "attitude value", importance, or has weight in terms of reflecting an attitude towards the issue in question (Kumar, 2005).

The questionnaire comprised of two parts. Section A was based on demographic questions designed to identify the characteristics of the respondents like age, gender, ethnicity, educational, frequency of the use of internet per day, purpose of the use of Web 2.0 Tools and experience of the use of Web 2.0 Tools. Section B was based on likert scale and carried 15 items to measure the awareness level, learning preferences, and impact of Web 2.0 Tools.

Hypothesis

Hypothesis I:
H0: Students are not aware of Web 2.0 technology.
H1: Students are aware of Web 2.0 technology.

Hypotheses II:
H0: Students' learning preferences do not favor use of Web 2.0 technology in studies.
H1: Students' learning preferences favor use of Web 2.0 technology in studies.

Data Analysis

This data analysis based on SPSS 19.0 software package was used to test whether the objective of this research was achieved and whether the questionnaire tests were reliable, characteristic of the sample and hypothesis

Table 1.1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.890	.891	15

Cronbach's Alpha can take values between 0 and 1. The closer to 1 mean the more reliable the scale of the variables. In general most researchers agree 0.7 is acceptable. In this research study, Alpha= 0.890 (refer to Reliability Statistics table 1 above), so this indicates the test is reliable and able to carry on with further test. This test clearly stated the positive relationship between the undergraduate students' learning preferences of using Web 2.0 tools have influence the students' academic performance.

Table 1.2: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
AW1	55.3100	41.913	.554	.547	.884
AW2	55.1200	41.480	.605	.612	.882
AW3	55.1900	42.681	.524	.488	.885
AW4	55.3100	40.196	.631	.507	.880
AW5	55.1100	40.968	.601	.542	.882
PW1	55.0800	41.630	.630	.566	.881
PW2	55.0600	42.966	.477	.471	.887
PW3	54.9800	42.707	.470	.379	.887
PW4	55.1200	41.682	.430	.406	.890
PW5	55.0000	43.838	.349	.429	.891
IW1	55.1300	41.205	.617	.518	.881
IW2	54.9900	41.121	.581	.449	.883
IW3	55.0900	40.305	.646	.515	.880
IW4	55.0300	40.878	.678	.569	.879
IW5	54.9000	40.677	.608	.542	.881

When we examined the Corrected Item-Total Correlation, the result was that item PW5 had the lowest value (.349). Cronbach's Alpha for the overall scale of this study's variable was 0.890. If we delete this item, the Cronbach's Alpha if item deleted column showed that the overall reliability increased slightly to

0.891. Judging from this, deletion of this item would not much increase the reliability. Hence researcher decided to maintain all the items. This also reveals the questionnaire design was fine and able to understand by respondents.

Descriptive Analysis

Table 1.3: Demographic characteristic of respondents

Demographic	Number of respondent	Percentage
Gender		
Male	35	35
Female	65	65
Total	100	100
Age		
20-29	100	100
Total	100	100
Ethnicity		
Malay	57	57
Chinese	26	26
Indian	17	17
Total	100	100
Education Level		
Bachelor Degree	100	100
Total	100	100
Frequency use of internet per day		
1-3hour		
4-6hour	41	41
7-9hour	40	40
>9hour	11	11
Total	8	8
	100	100
Purpose use of Web 2.0 tools		
Email		
No		
Yes	19	19
Total	81	81
	100	100
Chat		
No		
Yes	27	27
Total	73	73
	100	100
Research		
No		
Yes	9	9
Total	91	91
	100	100
Entertainment		
No		
Yes	11	
Total	89	11
	100	89
		100

Experience used of Web 2.0 tools		
SNSU		
No		
Yes	13	13
Total	87	87
	100	100
Google Docs.		
No		
Yes	51	51
Total	48	48
	100	100
Blog		
No		
Yes	48	48
Total	52	52
	100	100
Wikis		
No		
Yes	35	35
Total	65	65
	100	100
Skype		
No		
Yes	37	37
Total	63	63
	100	100

Out of 100 in this study, 35 male and 65 female students were involved in the survey. Their percentages were 34.3 per cent and 63.7 per cent respectively. In terms of age, all respondent were under 20-29 years old. In terms of ethnicity, it divided the respondents into three categories, 57 people were in the first category (Malay), this constituted 57% of the sample. This was the largest group of ethnicity of our respondent. This was followed by those in second category (Chinese), 26 respondents (26%) in this ethnicity category. Only 17 people (17%) ethnicity were Indians. In terms of education level, this study was aimed to study Bachelor degree level students only. In terms of frequency of internet usage per day, respondents are divided into 4 groups. The higher one fell into 1-3hour of usage with 41 respondents. Follow by 4-6hour usage with slightly different which was 40 people. Next was 7-9 hour usage with 11 people. Lastly only 8 respondents were more than 9hour of internet usage. In terms of purpose of use of Web 2.0 tools, 4 different purposes were identified to study in this research. 91% of respondents were online to do research/study. Followed by entertainment (89%) and email (81%). Chatting (73%) was the least adopted purpose. In terms of Web 2.0 tools which was heavily used by respondents were Social Networking Sites (87%) were the most highly adopted Web 2.0 tools. On the other hand, Wikis (65%) and Skype (63%) were second highly adopted tools. Google Docs (48%) and Blog (52%) were less likely to be employed by survey respondents.

Pearson Correlation

In this research, the we have used correlation analysis to identify the relationship between dependent variable and independent variables. So, the dependent variable in this research is impact of Web 2.0 tools on students' performance (IW) and the independent variables are awareness of students about Web 2.0 Tools (AW) and students learning preferences towards the use of Web 2.0 Tools (PW).

Test of Hypothesis

Hypothesis I:
H0: Students are not aware of Web 2.0 technology.
H1: Students are aware of Web 2.0 technology.

Table 1.4: Relationship between students' awareness and academic Performance

		MeanAW	MeanIW
MeanAW	Pearson Correlation	1	.606**
	Sig. (2-tailed)		.000
	N	100	100
MeanIW	Pearson Correlation	.606**	1
	Sig. (2-tailed)	.000	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Table 1.4 shows the relationship between the students' awareness towards Web 2.0 tools and students' academic performance. From the results of the significant value P<0.05, this indicated that there is a relationship between students' awareness towards Web 2.0 tools and students' academic performance. The positive value of Pearson Correlation 0.606** indicated that the relationship between AW and IW is in positive level. It shows that 61% dependent variable (IW) is influence by independent variable (AW). Therefore, when students were aware about Web 2.0 tools, students' academic performance will be high. So, the null hypothesis was rejected and accepted the alternate hypothesis which proves our point.

Hypotheses II:
H0: Students' learning preferences do not favour use of Web 2.0 tools in studies.
H1: Students' learning preferences favour use of Web 2.0 tools in studies.

Table 1.5: Relationship between students' learning preferences on the use of Web 2.0 and academic performance

		MeanPW	MeanIW
MeanPW	Pearson Correlation	1	.617**
	Sig. (2-tailed)		.000
	N	100	100
MeanIW	Pearson Correlation	.617**	1
	Sig. (2-tailed)	.000	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Table 1.5 shows the relationship between the students' learning preferences toward use of Web 2.0 tools and students' academic performance. From the results of the significant value P<0.05, this indicated that there is a relationship between students' learning preferences towards the use of Web 2.0 tools and students' academic performance. The positive value of Pearson Correlation 0.617** indicated that the relationship between PW and IW is in positive level. It shows that 62% dependent variable (IW) is influenced by independent variable (PW). Therefore, when students opt to use Web 2.0 tools, students' academic performance will be high. So, the null hypothesis was rejected and the alternate hypothesis was accepted which proves our contention again that use of web2.0 technologies is preferred by students.

Table 1.6: Summary of Pearson Correlation

		MeanAW	MeanPW	MeanIW
MeanAW	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	100		
MeanPW	Pearson Correlation	.436**	1	
	Sig. (2-tailed)	.000		
	N	100	100	
MeanIW	Pearson Correlation	.606**	.617**	1
	Sig. (2-tailed)	.000	.000	
	N	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Table 1.6 is summary of Pearson correlation. Based on table 1.6 findings, researcher can decide whether to reject or not reject the hypothesis. For the first independent variable (AW - Awareness), p-value is recorded as 0.000 which is less than 0.05. This indicates that H1 is accepted. It implies that AW is significantly related to IW (Impact on Academic Performance). As for PW (Preference), p-value=0.000 is also less than 0.05. Researcher concluded that PW is significantly influence IW.

The independent variables namely AW and PW can determine respondents' IW. Looking at the relationship among the variables, we can further conclude that these hypotheses factors have moderate relationship with the dependent variable (IW). AW seems to be a little weaker than PW relationship with the IW because the Pearson correlation is reported as 0.606 while PW as 0.617.

Hence, this study has identified the important factors which can influence the undergraduate students' academic performance at UMK.

Regression Analysis

Table 1.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721[a]	.520	.511	.40633

a. Predictors: (Constant), MeanPW, MeanAW

Table 1.7: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.384	2	8.692	52.646	.000[a]
	Residual	16.015	97	.165		
	Total	33.400	99			

From the table above two independent variables (AW and PW) affect the students' academic performance by 52% (R square= 0.520). The ANOVA table indicates the F-value of 52.646 supports that relationship is significant. Hence, we conclude that the R is significant.

Table 4.9: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.322	.364		.883	.379
	MeanAW	.423	.080	.416	5.319	.000
	MeanPW	.518	.093	.436	5.573	.000

a. Dependent Variable: MeanIW

A closer look at the t-values indicates that the two independent variables, the AW and PW contribute towards the prediction of respondents' academic performance does get affected by the respondents' awareness and learning preferences. From the above coefficients table we can create regression equation of this survey IW = 0.322 + 0.416AW + 0.436PW.

In conclusion, we prove that all two factors significantly explain the changes in IW. Based on the above finding, the two factors significantly explain 51.1% of changes in IW. This is shown clearly by referring to adjusted R Square of 0.511. Meanwhile 49.9% of changes in IW are due to other factors that are not included in this study. The model of regression is fit because findings show that all the factors are significantly related to IW, p-value which is less than 0.05 is reported in this finding. This implies that both factors (Awareness and Learning Preferences) are important to be considered in determining undergraduate students' academic performance at UMK.

Results and Findings

The main purpose of this research is to identify the relationship between the dependent variables and the independent variables. The hypothesis testing (ANOVA) has shown evidence that dependent variable will be influenced by the independent variables. By performing this hypothesis testing, we can say that the students' academic performance is greatly influenced by students' awareness and learning preferences of use Web 2.0 tools. This has a strong impact on the academic performance of students and provides insight to educators at higher educational institutions to apply Web 2.0 tools in teaching. Thus we refer to hypothesis (H0), which is students are not aware of Web 2.0 tools towards students' academic performance, which is rejected because the Pearson correlation had shown there is positive correlation relationship between the dependent variable and independent variable. Based on previous research, educator who applies Web 2.0 in students' learning such as Conroy (2010) had concluded that Internet based or assisted language learning could support college students in independent language learning and academic writing because these students are enthusiastic and reasonably competent users of Internet-based tools and techniques. According to Shih (2010), blended learning that integrates online and face to face instruction could create an effective teaching and learning experience for both instructors and students. Additionally, based on the results of the same study, blended learning can enhance students' motivation to participate actively in class. The result has shown a highly significant value which is less than 1%. Thus we should accept the alternate hypothesis (H1) in both hypotheses.

Based on the Pearson Correlation, for the second hypothesis the table shows positive relationship between the students' learning preferences to use Web 2.0 tools and academic performance., it is highly significant relationship which is (0.000<0.005). Hence, we will reject the (H0) and accept (H1). Besides, it also indicates the objective had been achieved where the students favour the use of Web 2.0 tools toward learning process. At the same time it also shows the importance of Web 2.0 tools in educational institutions. According to Andrews & Tynan (2011), distance learners of all ages are appropriating Facebook and other social networking tools to support a range of teaching and learning activities including online discussion forums, creating repositories for learning artifacts and supporting special

interest groups. Students are demonstrating a high level of distinctiveness in their use of IT to fit learning into their busy lives. As learning environments have become increasingly mediated by technology and students are heavily committed with families, work and other pressures they are utilizing technology to engage in learning in very different ways. Besides that, Ajjan & Hartshorne (2008) reported that while students feel that some Web 2.0 technologies can be effective at increasing satisfaction with a course, improving their learning and writing abilities, and increasing interaction with other students and faculty.

Refer to the descriptive analysis, the frequencies of internet usage which supporst the use of Web 2.0 tools resulted in proving that respondents had an access to internet. This study also investigated 5 different Web 2.0 tools, including SNS platform, Google Docs., Blog, Wikis and Skype, students' rates of awareness were different from one technology to another. For instance, Social Networking Sites were the top tools adopted. Wikis and Skype were second highly adopted tools. On the other hand, the students rated their level of awareness was lowest were Google Docs and Blogs were concerned. Main purpose of using internet was to do research based study.

Overall, the finding in this study presented the perception and awareness of students on Web 2.0 technologies positive influence on students' academic performance. Based on regression analysis, the results indicated that the two factors together significantly related to students' academic performance. The level of awareness and students' learning preference with each having an r value of 0.606 and 0.617 respectively indicating their relationships were positive. Besides that, the regression model revealed that there was evidence to support the AW and PW were statistically significant contributors to the IW. Similarly in a previous research conducted by Gonzalez et al. (2010), the effect of e-status on the student grade was an improvement of 0.48 points (95% CI: 0.10e0.86) on a ten-point scale. Among the 94 students who actually employed e-status, the effect size was 0.63 (95% CI: 0.17e1.10). Moyle and Wijngaards (2012), overall the outcome of these Web 2.0 technologies was that students' perspectives on the use of technologies in higher education were quite positive. The students' perspectives when analyzed showed they clearly realized the benefits to be achieved from using Web 2.0 tools in their education. In another study, when the question regarding critical thinking skills was put to the student participants 41% of Trinity College Dublin's students and 54% of Dublin Institute of Technology's students agreed that the use of technology in higher education improves students' critical thinking skills.

Conclusion

Hypotheses were analyzed using descriptive analysis, Pearson correlation and regression analysis. Results suggested students' perspective in the Web 2.0 tools did significantly enhance students' academic performance. However, the result indicated there are certain Web 2.0 tools not adopted by the students. For example, there were 51% of respondents who did not experience use of Google Docs, followed by Blog (48%), Skype (37%), Wikis (35%) and lastly SNS platform (13%). Although not all respondent experienced using all the Web 2.0 tools, accessibility to Web 2.0 tools was considered as high where the students could remain online daily. There were active internet users for more than 9hours per day too. Findings show that the main purpose of students to study online was to do a research study. The most popular Web 2.0 tools adopted was SNS platform. These results could help educators to identify certain Web 2.0 tools which were applicable on current students learning process. The results of this study provided evidence that most students felt that integrating Web 2.0 in context of learning could be effective in improving their learning ability. From a research perspective, the results of this study demonstrate the use of Web 2.0 tools which have significant potential to support and enhance in-class teaching and learning in higher education.

The researches manage to determine the relationship between the independent variables with dependent variables. The results show that the relationship is highly significant.

Finally, to conclude it all, since we are still new in this kind of research and not much previous research guide us about the use of Web 2.0 toward students performance in Malaysia, future research is still needed to justify and strengthen the outcomes of this research. There may have been research similar to this topic but the situation in all research may be different, including this research. A slight change in the research context could bring about changes in findings. Therefore, future researches and also the related education institutes in Malaysia can use this research as a guideline.

Scope and Limitation

One of the limitations of this study is the small sample size of students (N=100) from a single university. Hence the results cannot be generalized. A comparative study could be carried out in other universities to display a bigger picture of the results.

Another limitation of this study is the language in which questionnaire was administered in. The questionnaire was administered in English and no translation was provided. As in Malaysia, Malay language is used as their main language for communication so there is a probability of many students who may have faced difficulty to understand the language clearly. In another words, the finding of this study was affected by this limitation as those who do not fully understand the meaning of some of the items in the questionnaire might have just completed the questionnaire for the sake of it without giving any consideration.

Also, this study just focuses on students' academic performance with limited demographic variable taken into consideration in order to determine the level of awareness and preferences toward Web 2.0 tools. The implication of Web 2.0 tools in learning was not generated based on students' grade. Moreover result and findings only used quantitative method to analyze and it will limit the collection of information. However, there is limited information about impact of Web 2.0 tools in Malaysia.

Recommendation

Web 2.0 technologies and the participatory culture they encourage are relatively new. There are two main things educators and researchers alike must begin to do ; First, while many of us have had positive experiences using these new Web 2.0 technologies, it is time to begin researching the efficacy of using these new tools in our classrooms.

The study can be extended over to the other universities, colleges and institutions. Detailed analysis can be taken to see the impact of Web 2.0 technologies in education. Further studies could identify which barriers occur at which stages in the Web 2.0 technologies using process and how can these obstacles be overcome. There is a vast scope for further research to study different types of students' behavior and comparison of students' behavior and attitudes towards the Web 2.0 technologies.

Besides that, Malaysia is a multicultural country and most of the schools consist students belonging to different ethnic races. So the questionnaire can be edited in multiple languages for clear understanding of the respondents. Accuracy can be higher.

Moreover, this study has used quantitative method to find out the result, it is recommended that using both quantitative and qualitative method should be adopted to collect data and analyze the result because using qualitative method can help in collecting information on actual thinking and actual experience of the respondents. Moreover, the similar and related topic of research is recommended to do more in the future as it is an important issue for all academic institutions and society on the whole.

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