



The Social Media Adoption in Human-Computer Interface Course at Politeknik Mukah

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Full Paper

Article history

Received

10 October 2022

Received in revised form

15 October 2022

Accepted

20 October 2022

Published online

1 November 2022

Abstract

Adopting social media in learning environments becomes one of the major challenges among students and academic staff in Politeknik Mukah, Sarawak (PMU) with no official support, guidance, exposure, or any teaching method provided. With the social media influence, students are unable to focus on teaching and learning sessions at PMU. Hence, the research aims to discover the perception of social media adoption among students, evaluate the readiness of social media adoption and identify hindering factors to adopting social media in a learning environment among students who took the Human-Computer Interface Course. Data were obtained using the survey method and analysis using SPSS 26 including descriptive and a total of 33 students participated in the survey. The results show the highest mean that shows students' readiness to adopt social media for education. The result of this study reveals the trends, perceptions, students' readiness, and hindering factors in adopting social media for educational purposes, particularly at PMU.

Keywords: Social media, Facebook, WhatsApp, media adoption, students

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1. Introduction

In recent years, the usage of mobile technology among students has greatly increased. Widespread access to the Internet and inexpensive computing devices, as well as the rapid development of social software applications, e.g., Twitter, Facebook, YouTube, Instagram, and WhatsApp, is facilitating open collaboration and information sharing. (Kaur and Gurnani, 2022). This opens new possibilities and opportunities in education. Traditional teaching and learning styles are getting more challenging in this era of the "millennial generation" (Hafeez, 2021), there has been a rise of interest in developing a new practice in education by taking full advantage of social media. The adoption of social media in education could be the next trend in engaging students with knowledge. Currently, there is no

facilitation to support, guide, expose, or any specific teaching method for the adoption of social media in the learning environment among the students of PMU. The usage of social media in the classroom has never been practiced now to enhance learning. The influence of social media among students has greatly affected students' focus in the classroom. Social media has become a trend in today's millennial lifestyle, especially among students. It is nearly impossible to avoid the usage of social media among students even in the classroom. As a result, many students were distracted and lost their attention in the classroom during teaching and learning sessions. The dilemma of the educator's and student's relationship in social media platforms might be the main cause of the limitation of social media usage as a teaching and learning tool as the usage of social media may go beyond the education

institution life, there is a stigma and dilemma among the educators and students which they think that the relationship in the social media can disturb their personal life and may expose their privacy to each other. This hindered the usage of social media as an educational platform. Up to now, there is no formal effort of adopting social media in the PMU teaching and learning process, in contrast to the social media emergence. Although there is a positive trend in the usage of the official polytechnic's e-learning platform, this still led to a traditional teaching and learning style where the e-learning platform only supports the conventional way of learning. Most of the time, the usage of the e-learning platform is limited to the submission of students' works and uploading/downloading of lecture notes or other course materials. While the concepts of blended learning and e-learning have been used in PMU over the past few years, very little to no effort has been made to integrate social media into the PMU learning environment. The cause of this has not yet been determined. However, there is a need to adopt social media in the PMU learning environment. This is in line with the social media initiatives in the increasingly global higher education market (Mardiana, 2019). A further study on the challenges of the adoption and the usage of social media in PMU could lead to the answers and suggest the best social media platform that could be used in PMU. Hence, the purpose of this research is to investigate the challenges and opportunities of social media in education and to determine the readiness for their adoption in education, particularly in the Human-Computer Interface course taught at PMU. The research will also identify and suggest the elements of social media that used in improving the teaching and learning process. In recent years, social media usage in our society has been tremendously changing the way how people communicate, get their news resources and how organizations do business. There is a chance of the social media platform used as one of the educational tools to facilitate and enhance the teaching and learning between educators and students. As smartphone and Internet access has become more affordable, social media platforms become more accessible among students. This paper will provide a new perspective on how to view the adoption of social media, particularly in the Human-computer Interaction course at PMU.

Social media platforms are built on principles of interactivity that allow users to connect, gather news and information, or create and share content. The functionality of social media provides opportunities to enhance the effectiveness of institutional processes and it provides challenges (Koltay, 2021) The widespread use of social media among students has been a great debate on the impact on their academic performance. Junejo (2022) revealed that most college students used social media platforms not only for social interactions or entertainment purposes but also for information seeking in the academic context. Another research among medical students showed that social media had become another source that allows students to do features like multimedia sharing, posting user-generated content and others (Hettige, Dasanayaka & Ediriweera, 2022). While the conventional e-learning

platform is long existed to support teaching and learning environments, the usage of the e-learning platform seems to be limited and does not attract students or motivate them in learning. Current Usage of Social Media as a Tool in Teaching and Learning Environments. As a traditional teaching and learning process become more challenging in attracting today's "millennial generation", the implementation of social media could be one of the diversified strategies to engage students in the classroom. Corcoran and Duane (2018) in their project on using Twitter in the classroom reported that the students found the lecturers include their tweets in class to be engaging, interactive, and relevant, and nearly 90% of them recommended the usage of that approach again. This shows that the social media platform helped students to stay focused and motivated throughout the learning process. Indirectly, this could lead to the improvement of the student's academic performance. This is also in line with the opinion of how social media give a positive effect on academia and education as stated by Han (2016).

Another great use of social media to facilitate teaching and learning is the collaborative features. The implementation of social media and cloud platforms offers an innovative solution to both teaching and learning collaboratively (Valencia, Enriquez & Tigreros, 2018). When students used the available collaborative functionalities, they were able to generate high-quality output (Chu et al., 2017). This refers the usage of the wikis platform implemented among the students in producing a collaborative writing assignment. Social media also contribute to the variety of materials and media used in teaching and learning. The usage of YouTube sites for sharing video materials among students has been adopting among students in learning Physics, Mathematics, Science, and computer studies (ICT) (Dewanti and Santoso, 2020). As a video platform, YouTube has a huge collection of learning and academic video which can be utilized by students and offer an easy and quick sharing feature (Madhavika & Rathnayake, 2020).

In terms of communication, the usage of social media had improved student-educator communication in an online learning environment. Social media tools can help educators in connecting with students better, thereby improving students' academic performance (Guo, Shen & Li, 2018). Social media had also proven to lead to a more active, well-bonded community of students (Ghofur & Youhanita, 2020). A messaging application for instance helps student-educator to communicate on a real-time basis to discuss further on certain topic. The usage of WhatsApp and Telegram group features enables the discussion between student-educator, especially beyond the classroom. The discussion, which can be on a real-time basis, becomes more interesting with the usage of this instant messaging application where participants in a message group can share any files in the chatroom. And all this can be done just by using a smartphone. The adoption of social media in teaching and learning had also proven to reduce the communication barriers and problems among students who have a passive personality during their class or face-to-face interaction. Students feel more confident to contribute to the lesson via social media platforms as the usage of more casual social media platforms support

communication between students and teachers (Dewanti & Santoso, 2020). Communication through social media also had proven in improving student confidence levels. According to Chandiook (2018), social media communication helps students to do their presentation confidently through collaboration between peers and teachers within the class. As social media communication happens on screen whether by text messaging, commenting, media, or posting sharing, students may feel more comfortable compared to in-class personal and group interaction. Another research by Iqbal (2018) also notes that there was no impact of using social network websites per week on academic achievement. This opposes the opinion that social media usage may lead to poor academic performance, which is supported by an inverse relationship between academic performance and Facebook activity level, and there was no significant relationship found between academic performance and Facebook time. (Lemay, Bazalais & Doleck, 2019).

Furthermore, there is also a significant relationship between students' engagement through social media in the classroom. For example, the usage of the micro-blogging site, Twitter for education was found to increase overall students engagement and include curricular activities (Šafranĳ, Zivlak & Bojanić, 2019). As mentioned before, since engagement in social media may happen online without the need of having a personal interaction, this may help students who have a lower level of confidence in their interpersonal skills. However, this should be monitored closely as it may affect their interpersonal communication skill in real life. The usage of social media for communication should not replace interpersonal communication in the real world. Although social media seem to be a fun way of learning, the usage of social media should be bound by a certain policy to ensure all the engagement of the students is in well and good ethical way. A set of guidelines and policy shall (Rozehnal, 2022) exist in ensuring issues related to students' behavior online, information privacy, and students' identities.

The usage of social media among students has been a great debate about whether it can contribute to the performance of the students, or will be a distractor in their teaching and learning environment. It is being said that students lost their concentration and wasted a lot of time viewing photos, playing games, and chatting (Huang, 2018). The perception of this somehow may refrain from the adoption of social media in teaching and learning. Some are still in doubt about whether to use social media or not in the educational environment. Some faculty members show the dilemma where the usage of social media for teaching and learning purposes was not among their choices (Maślankowski & Brzezicki, 2020). The argument on whether social media may give any value to the education environment may cause by some reasons that needs identification and clarification. Besides the perception problem of social media, another challenge that needs focus is the device's challenges. Smartphone gives quick access to most social media platforms, nevertheless, some students or teachers might not equipped with the device or using the below-requirement device. This resulted from the applications that did not work as anticipated (Zhampeissova, Kosareva & Borisova, 2020).

In addition, the challenges of students using social media sites such as electricity, bandwidth, time management, infrastructure, and physical problems are also some of the factors that hinder the usage of social media in education (Alabdulkareem, 2018). As social media is becoming more important in the education environment, the issue of social media fatigue should be given attention. The term social media fatigue is referring to too much social media interaction and related to privacy and boredom among social media users (Yang et al., 2022). If students misuse the social, media platforms, their education performance will negatively affected and gave a bad impact on their daily life. Another issue in social media usage is regarding its privacy and security factor. There is a feeling among users that social media is unsecure, open to threats, viruses, privacy breaches, and the risk of leaking user data. Targeted advertisement, for example, has become one of the user concerns as it shows a dedicated advertisement based on user's browsing pattern. This may cause an alarm among users who think that social media is tracking their usage patterns. This feeling of being 'spied on and monitored' gave an uncomfortable feeling to the users. The way of social media content is shared also should be addressed. In this era of technologies, privacy is an individual responsibility, the thought of privacy harms in terms of individuals or groups of people; there is a need to frame privacy in terms of networks, or the relationships between people. (Hollenbaugh, 2019).

The concern of social media usage also involved parents and guardians where kids security and privacy during online sessions may disclose too much of their life. Parents are also concerned about their children's online data being collected by marketers (Tan et al., 2018). The usage of social media for education also may give a great debate among parents. This is because the usage of social media in some families may have limited access for their children. However, an acknowledgment to parents about the usage of social media for learning purposes may help parents to understand the task of using social media by their children.

2. Methodology

This research will only focus on the teaching and learning of the Human-Computer Interaction course offered at PMU, Sarawak. Social media usage in this research refer to the usage of Facebook, Twitter, Instagram, and other real-time messaging applications. The research will discover students' perception on their social media usage in their daily life. In addition, students' opinions on the social media adoption as one of the learning tools. The questionnaire was adapted from Stollak et al. (2011). This study uses 5 Likert scale of 1 for "strongly agree" to 5 for "strongly disagree". to evaluate respondents' feedback. This study follows Krajie and Morgan's proposed sampling size to obtain the target respondents for the survey. This study utilizes few common statistical tools to analyze the data. SPSS Version 26 was used for this purpose. The reliability test on the identified variables for this study was found to be acceptable and reliable as Cronbach's alpha values for all the variables are 0.9620, which is above 0.70.

3. Result and Discussion

The survey was conducted through a questionnaire method to get students' perceptions on the social media adoption in Human-computer Interface at PMU. The questionnaires consist of four sections, Demographic, Perception and Trend, Students' Readiness, and Factor Hindering the Adoption of Social Media. For this study, we have shared the questionnaires with 33 students who enrolled for the Human-Computer Interface course at PMU. The students are from two academic programs namely a Diploma in Information Technology (Digital Technology) and Diploma in Information Technology (Networking). Respondents answer fill in the questionnaires via online platform.

Table 1. Respondents' demographic profiles

Characteristics		N	(%)
Gender	Male	15	45.5
	Female	18	54.5
Age	17 – 20	20	60.6
	21 – 25	13	39.4
Program	Diploma in Information Technology (Networking)	18	54.5
	Diploma in Information Technology (Digital Technology)	15	45.5
Academic Background	SPM	30	90.91
	Community College Certificate	1	0.03
	Polytechnics Certificate	2	0.06
CGPA Performance	4.00 – 3.50	4	12.1
	3.49 – 2.50	25	75.8
	2.49 – 2.00	4	12.1

Table 1 shows the respondents' demographic profiles. A total of 15 respondents (45.5%) are male, while 18 (54.5%) are female. There are 20 respondents (60.6%) aged between 17 and 20 years old, and a total of 13 respondents (39.4) aged 17–25 years old. About 18 respondents (54.5%) are from Diploma in Information Technology (Networking) and 15 respondents are from Diploma in Information Technology (Digital Technology). In addition, 30 respondents, consisting of 90.9% of SPM graduates. Only 1 respondent (0.03%) graduated from Community College and 2 respondents (0.06%) graduated from Polytechnic. Furthermore, 4 respondents (12.1%) obtained CGPA of between 3.50 and 4.00. 25 respondents (75.8%) with CGPA at the range of 2.50 to 3.49 and only 4 respondents (12.1%) obtained CGPA of 2.00 to 2.49. A

Cronbach's Alpha test has been used to ensure the reliability of the questionnaire. Since the questionnaires adopted a Likert Scale as a measurement, the theoretical value of alpha varies from zero to 1 are more desirable.

The study discovers the perception, evaluate the readiness, and identify what are the factors that hinder the adoption of social media in the learning environment. The table below shows the summary of the mean values.

Table 2. Mean summary of responses

	Perception of Social Media Trends	Social Media in Education	Social Media Platform	Students' Readiness in Adopting Social Media for Education	Hindering Factors
Mean	4.1212	4.1273	3.6407	4.3273	3.7662

Based on the social media trends of the respondents, the mean value of 4.12 shows good usage of social media among the respondents. This revealed that all the respondents have access to social media in their daily life, which is a good chance for social media to be adopted among them. The existing pattern and trend of using social media will lead to easier penetration and implementation if social media is going to be used in their learning environment. In terms of the perception of social media in education, it also shows a mean value of 4.12, which is a positive sign of good perception on the adoption of social media among respondents. Most of the respondents agreed on the implementation of social media for learning purposes. A survey on the hindering factor scored a mean value of 3.76, shows a near-neutral response in the research. This will be a challenge that needs to be solved before the adoption of social media among the respondents. Moreover, the issue of online threats, spam, viruses, parent concern, infrastructure and facilities, and costs that need to be bear by the students. All of these should be carefully investigated to avoid any rejection among the respondents.

Table 3. Mean and standard deviation for students' readiness in adopting social media for education

Item	Descriptive Statistics		
	n	Mean	Std. Deviation
I have no issue/problem getting connected with my lecturer and classmate on any social media sites for my study.	33	4.021	.5590
I have no problem/issue if I had to use any social media sites for my study beyond my classroom period.	33	4.030	.6839

I agree that I need to have my own personal smart mobile device/computer to access any social media sites if it is required for my study purposes	33	4.010	.5520
I agree that I need to have my Internet connection subscription to access any social media sites if it is required for my study purposes.	33	4.023	.7071
I am ready for the additional tasks and activities which require me to access a social media site as my classroom activities in addition to the regular assignments/projects	33	4.484	.6671
I have no problem sharing my education work/tasks on my social media sites.	33	4.242	.7512

I have no problem sharing my education work/tasks on my social media sites.	33	4.090	.5789
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The readiness factor is very important to make sure that respondents are well prepared for the adoption of social media in their learning environment. Several readiness factors such as personal connection in social media, social media usage period, connectivity, device, tasks, and privacy have been identified as readiness factors in the survey. As shown in Table 3, “I am ready for the additional tasks and activities which require me to access a social media site as my classroom activities in addition to the regular assignments/projects” the mean is between 3.50 and 4.49. Overall, most respondents agreed with students’ readiness in adopting social media for education. However, the lowest mean value in this category is “I agree that I need to have an Internet connection subscription to access any social media sites if it is required for my study purposes” with mean = 4.010.

The social media in education is still new, especially in PMU; this survey is to a survey to find out factor that contributes to the rejection of the usage of social media in education. These factors include social factors, threats, ease of use, cost, and facilities provided by their institution.

Table 4. Mean and standard deviation for hindering factors of social media adoption in education

Descriptive Statistics			
Item	n	Mean	Std. Deviation
Parent perception of social media usage in education	33	4.484	.5075
Social media usage in a classroom won't distract my focus.	33	4.181	.6825
Social media is easy to use	33	4.151	.7124
Opening a new social media account for education	33	3.909	.7230
The adoption of social media will not result in an additional cost.	33	3.939	.6585

As shown in Table 4, the level of hindering factor for social media adoption in education at PMU is moderately high with the mean values between 3.50 and 4.49. For this category, the highest mean value (mean=4.48) was 4. Overall, most of the respondents agreed that social media usage in the classroom will not distract them from their focus (mean= 4.181). However, the lowest mean value in this category is opening a new social media account for education (mean = 3.909).

4. Conclusion

To evaluate the readiness of the students in adopting social media as one of their learning tools. Since there is a minimum and no formal research has been done on the area, no knowledge of how the readiness of the students is with the adoption of social media in their learning environment. This readiness factor is very important as any new method of teaching and learning will not be effective if there is low readiness among students. From the research, a set of possible readiness factors has been discussed and surveyed among the respondents. Based on the provided readiness factors, it can be concluded that there is good readiness among respondents on the adoption of social media in the learning environment. Based on the findings, there also should be a consideration in giving out a task of using social media for learning activities. This is to avoid extra workload among the students. This study also noted some of the hindering factors that need to be properly taken care of before the adoption and implementation of social media in the learning environment.

Due to the limited time, the study focuses on a small population, students who enrolled Human-computer Interaction course at PMU only. It is suggested that for a better population and analysis, longer time should be used to cover more population and better analysis can be done in the future. The short time frame resulted in a smaller sample size. As stated in the previous limitation, a small sample size focuses only on the students who took the Human-computer Interface course at PMU. In addition, the number of students who took the course is also rather small; a wider and larger sample size is suggested to get a more accurate result. A larger population such as the whole campus or the whole enrolment of a specific academic program may return a good analysis and result. This could lead to a better and more accurate finding. As the study is only focusing on perception, there is no suggestion on the teaching and learning method in using social media in the classroom. This topic requires a great-depth study and experiment to identify the best method of teaching and learning using social media platforms. Technical knowledge of pedagogy is also required to suggest the best teaching method that can be adopted in the classroom based on a specific social media platform. Since there is no specific teaching and learning method is suggested and

conducted in this study, no academic performance comparison is made. It is suggested that a specific teaching method and evaluation of the student performance could be proposed so that the performance of the student can be measured before and after the adoption of social media in their learning environment. For future works, consideration of extending the research will be very beneficial to the education system. Below are the suggested future works that may contribute to the field of education related to social media adoption. Development of Social Media Educational Pedagogy to the exposed educator on the usage of social media in their teaching process. Research on how the adoption of social media in the classroom could affect academic performance among students.

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