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A Preliminary Study On Leveraging Utmost Social Media For Collaborative Learning

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ABSTRACT

With the advancement of technology, social media is increasingly being used to deliver learning activities. Tertiary students have a new means to socialize, communicate, and interact with others through social media in educational institutions' learning processes. Therefore, changing the teaching lifestyle is critical for assisting students achieve strong academic success while adapting to technology. This study examines the impact of using social media through collaborative learning in Technical and Vocational Education and Training (TVET) institutions. In the context of this study, social media platforms refer to the utmost social networks used by Malaysians, including Facebook, Instagram, TikTok, Twitter, Pinterest, LinkedIn, and YouTube as reported in the Digital 2023 Global Overview Report. This study emphasized quantitative research methodology. An online survey and a self-administered questionnaire with 31 items adopted from a previous study were used to collect data. 162 tertiary students from The Department of Tourism and Hospitality, Polytechnic Sultan Idris Shah have completed the survey forms via purposive and snowball sampling. In this case, the sample criteria were defined as a Polytechnic Sultan Idris Shah student who had experience using social media as a learning tool. The IBM Statistical Package for the Social Sciences (SPSS) performed descriptive analysis. The findings revealed adopting social media improves interactivity with peers and lecturers, engagement, and student academic performance. This study gave distinctive and interesting perspectives on using social media through collaborative learning, which can assist students and TVET institutions in achieving their learning objectives.

1.0 Introduction

The proliferation of social media platforms and the advancement of technology have altered the structure of our communication by erasing physical and temporal constraints (Tobin, 2019). Social media platforms can be used to organise events or conversations, assist courses and reading groups, and provide a space for communication and engagement in the context of education and learning. Thus, social media plays an important role in strengthening and facilitating today's academic education process by fostering virtual communities (Kapoor et al, 2018) and active collaborative learning (Phuthong, 2021). In terms of skills, higher education has shifted its emphasis from knowledge to lifelong learning (Greenhow, Galvin, Brandon & Askari, 2020), and collaborative skills are highly valued by companies (Raza, Qazi, Umer & Khan, 2020). The broadest definition of active collaborative learning, defining it as a situation in which two or more individuals study or aspire to learn something new together. As a result, collaborative

learning is mentioned in the syllabus or curriculum as one of the teaching and learning methodologies, with groups of 2-4 students being encouraged (Khan & Mansoor, 2020)

However, students have trouble communicating with their lecturers and peers in e-learning, which has an impact on their studies (Selvanathan, Hussin & Azazi, 2020). It is difficult for lecturers to connect with students, look at their reactions, and check their involvement in class in such an e-learning context. Furthermore, according to Van Den Beemt, Thurlings and Willems (2020), social media use has an impact on study habits and can be a study distraction. Students who use social media spend less time studying and perform worse than those who do not (Abbasi, Jagaveeran, Goh & Tariq, 2021). Students' overall academic performance declines as a result (Masood, Luqman, Feng & Ali, 2020). Therefore, it is vital to bridge this gap by researching the nature and scope of social media and academic achievement via collaborative learning. This study investigates the Technical and Vocational Education and Training (TVET) institution setting. Tourism and Hospitality Department student of Polytechnic Sultan Idris Shah was chosen as a study case. This study is aimed at examining how the use of social media in teaching and learning influences interactions with peers and lecturers, engagement, collaborative learning, and student performance. In the context of this study, social media platforms refer to the main social networks used by Malaysians, including Facebook, Instagram, TikTok, Twitter, Pinterest, LinkedIn, and YouTube as reported in the Digital 2023 Global Overview Report. WhatsApp, Telegram, and Facebook Messenger are not addressed in this context because they are messaging and chatting apps primarily used for communication. The outcomes of this study can assist students and educational institutions in their use of social media for learning objectives.

2.0 Literature review

2.1 Social Media in Higher Education Institution

According to Statista Report, the global social media subscription is expected to exceed 4.59 billion people by 2022. This is due to Web 2.0's superiority over Web 1.0 in terms of superflux dynamism, interface, and integrated intelligence (Chawinga & Zinn, 2016). Many internet users utilise social networking sites to convey attitudes, ideas, and sentiments regarding real-world events while engaging in virtual conversations (Sloan & Quan-Haase, 2017). For example, because of the COVID-19 pandemic, students in higher education institutions (HEIs) have steadily transferred their attention to social networks for academic advancement (Coman, Țîru, Meseșan-Schmitz, Stanciu, & Bularca, 2020). Amid the COVID-19 epidemic, students are utilising existing learning technologies and social networking platforms to better their learning and collaborative capacities, such as Facebook, Blogs, and YouTube, as a tool to run their activities (Batubara, Nur, Lubis & Arianto, 2021). Previous research, such as Song (2018), investigated the general usefulness of social media among young students in higher education. Similarly, Moseti (2019) and Boman et al. (2019) investigated the use of social media and concluded that the adoption of social technology is not a simple and straightforward procedure. More complex academic tasks are handled at higher levels of education, and the current generation of students is seen to appreciate the importance of social media and social technologies in learning. Several previous research have found evidence that effort is required to begin using social media to affect educational activities. However, academics have not paid enough attention to the entire process of adopting a certain social media platform (McGrath, 2018).

2.2 Social Media for Collaborative Learning

Social media encourage collaborative activities such as information sharing among students and also facilitates easy engagement among group members, satisfying their desire for active collaborative learning (Almulla & Alamri, 2021; Al-Rahmi, 2015). Classroom discussions, seminars, lectures, or year-long research projects are examples of collaborative learning activities. Collaborative learning can be presented in a variety of ways by lecturers with diverse teaching experiences, but the common thread is the incorporation of assumptions about students and their learning cycle. According to Beard and Wilson (2018), the context and goal of learning influence

its adoption. Through collaborative learning activities, students are immersed in difficult times and questions. For example, collaborative learning exercises frequently begin with difficulties that require students to rationalise acceptable reality and concepts to apply (Coman et al., 2020). Rich contexts, such as social networks in collaborative learning, have challenged some students to practise and develop a stronger sense of reasoning and problem-solving abilities (Hwang & Lain, 2017). Students with various experiences, learning styles, encounters, and objectives can present multiple viewpoints in the classroom through collaborative learning.

2.3 Social Media and Effects on Academic Performance

There are advantages of using any social media platform. There have been reports of its impact on students' academic performance. Some investigations explored the final consequence of social networking use among college students as well as their academic achievement. According to studies conducted in Western countries, online social media utilised for collaborative learning improves student academic performance and happiness (Ansari & Khan, 2020). Data show the positive connection between social media platforms and how they can be used to improve learning in a select rare cases (Bond, Buntins, Bedenlier, Zawacki-Richter & Kerres, 2020). Furthermore, students who participate in social media-based learning experienced significant benefits to academic training and learning (Braxton, Milem & Sullivan, 2000; Khan, Cao & Pitafi, 2019). However, some research, discovered a negative effect and influence when media is used in a way that does not academically assist learning or its process (Rouis, Limayem & Salehi-Sangari, 2011; Stollak, Vandenberg, Burklund & Weiss, 2011; Wang, Chen & Liang, 2011).3.0Methodology

3.0 Methodology

3.1 Research Design

This study emphasised quantitative research methodologies, including data collecting, measurement, and statistical analysis in a non-contrived setting. For this study, the researcher collected data at a single point in time, also known as cross-sectional studies, which are relatively cheap and less time-consuming than other types of research. The unit of analysis is individuals.

3.2 Population and Sample

The total population of this study comprises the Polytechnic Sultan Idris Shah (PSIS) students and the sample is final-year students of the Department of Tourism and Hospitality. In this case, respondents are the final year students of Tourism and Hospitality, PSIS who have experience using social media in learning. The sampling technique employed is purposive sampling, typically used to determine who can contribute the greatest information to meet the study's objectives (Dwyer, Gill & Seetaram, 2012). According to Zikmund, Babin, Carr and Griffin (2013), purposive sampling is a practical and cost-effective way to collect numerous data.

3.3 Research Instrumentation

The constructed questionnaire was adapted from references from journals, mainly from previous studies. The survey instrument consists of six sections. Before answering section A, there are two screening questions that were asked according to the sample criteria. Section A until Section E utilized Likert scales, where its assessment was based on a five (5)-point scale ranging from strongly disagree to strongly agree, while Section F is demographic questions. The total number of items in the survey instrument is 30 items. The instrument's reliability and validity were confirmed. The values ranged from 0.936 to 0.976, which was greater than the threshold of 0.70 representing good and very good reliability of the questionnaire.this study imple

3.4 Data Collection

A self-administered survey questionnaire is applied for information gathering. The sample consists of PSIS students of a certain description to assure relevance. Each survey takes about 10

minutes to complete. The data was collected through messaging social media applications such as WhatsApp and Telegram through Google Forms invitations to provide the information that fits the respondent's criteria using the technique of snowballing. 162 out of 217 final-year students from the Diploma Tourism Management and Diploma Food Service Halal Practice answered the survey.

3.5 Data Analysis

Analyses of the survey data were performed using IBM Statistical Package for the Social Sciences (SPSS) version 27. For this study, frequency analysis was used to determine the percentage of respondents based on generic information in Section F. Then, the descriptive analysis was used where the mean score and standard deviation value were calculated for each variable to measure central tendency and data dispersion for sections A until E.

4.0 Discussion of analysis and findings

4.1 Descriptive Analysis of Study Variables

Table 1.1: Results of the mean score and standard deviation for each construct

Code	Measurement Items	Mean	SD
	Interactivity with peers		
INP1	Using social media in class facilitates interaction with peers.	3.98	0.88
INP2	Using social media in class allows me to discuss with peers.	4.00	0.85
INP3	Using social media in class facilitates dialog with peers.	3.89	0.91
INP4	Using social media in class allows the exchange of information with peers.	4.09	0.85
INP5	I use social media platforms to collaborate with peers on task problems.	4.03	0.90
	Interactivity with lecturers		
INL1	Using social media in class facilitates interaction with the lecturer.	3.87	0.93
INL2	Using social media in class allows me to discuss with the lecturer.	3.94	0.93
INL3	Using social media in class facilitates dialog with the lecturer.	3.86	0.96
INL4	Using social media in class allows the exchange of information with the lecturer.	3.93	0.95
INL5	I use social media platforms to collaborate with the lecturer on task problems.	3.94	0.92
	Engagement		
ENG1	By using social media, the class has favored my personal relationships with my peers and lecturers.	3.86	0.92
ENG2	By using social media in class, my peer and department interactions made me feel valuable.	3.86	0.90
ENG3	By using social media, I felt that my opinions have been taken into account in the class.	3.86	0.94
	Using social media for collaborative learning		
COL1	I felt using social media for collaborative learning in my group was effective.	4.01	0.87
COL2	I was able to develop research skills through peer collaboration.	4.00	0.89
COL3	I developed new skills and knowledge from other members of my group.	4.04	0.89
COL4	A collaborative learning experience in the social media environment is better than in a face-to-face learning environment.	3.71	1.06
	Students' academic performance		
PER1	Using social media to facilitate academic activities and coordinate with peers.	4.00	0.86
PER2	Using social media to facilitate academic activities and coordinate with lecturers.	4.00	0.90
PER3	Group discussions can be arranged with my classmates using social media and this will improve my academic performance.	4.00	0.85
PER4	I use social media to build a student-lecturer relationship with my lecturers and improve my academic performance.	3.93	0.89
PER5	Using social media improves my interaction with classmates and lecturers, thus, helping me improve my academic performance.	4.00	0.86

4.1.1 Interactivity with peers

Five items were used to assess interactivity with peers using social media. The item with highest mean value is item INP4, where the respondents agreed that using social media in class

allows the exchange of information with peers (M=4.09; SD=0.85). The second highest mean value was student used social media platforms to collaborate with peers on task problems (INP5) (M=4.03; SD=0.90). This is followed by item INP2, using social media in class allows student to discuss with peers (M=4.00; SD=0.85), and item INP1 which using social media in class facilitates interaction with peers (M=3.98; SD=0.88). Lastly, item INP3 has the lowest mean, which the respondents somewhat agreed that using social media in class facilitates dialog with peers (M=3.89; SD =0.91). Overall, the data showed that the majority of respondents agreed with all items, as mean values exceeded the average. This section finding clearly indicates that the social media contribute to the interactivity with peers. The medium of technology, interactions, and learning tools break limited class interaction and increase interaction between students via social media sites in closed or class groups (Almulla & Alamri, 2021, Al-Rahmi & Othman, 2013; Blasco-Arcas, Buil, Hernández-Ortega & Sese, 2013; Pitafi, Kanwal & Khan, 2020).

4.1.2 Interactivity with lecturers

There were five items measuring the interactivity with lecturers using social media in teaching and learning. By using social media in class allows student to discuss with the lecturer and student use social media platforms to collaborate with the lecturer on task problems have the highest mean value, which item INL2 with (M=3.94; SD=0.93) and item INL5 with (M=3.94; SD=0.92). This is followed by item INL4, which using social media in class allows the exchange of information with the lecturer (M=3.93; SD=0.95), and item INL1, by using social media in class facilitates interaction with the lecturer (M=3.87; SD=0.93). The lowest mean value is item INL3, which is using social media in class facilitates dialog with the lecturer (M=3.86; SD=0.96). Overall, the data show that all items have above average means values. It demonstrates that the used of social media helps in interactivity with lecturers and positively correlated (Al-Rahmi & Othman, 2013; Chein & Koo, 2021). When students investigate their classroom learning together, teachers quickly develop an understanding of how they are learning through their contributions to the class (Holstein, 2019).

4.1.3 Engagement

Three items measured student engagement through social media used. Items ENG1, ENG2 and ENG3 have a similar mean value, which respondents agreed that by using social media, the class has favored my personal relationships with peers and lecturers (M=3.86; SD=0.92), and using social media in class, the peer and department interactions made them feel valuable. (M=3.86; SD=0.90). The respondents also agreed that by using social media, they felt that their opinions have been taken into account in the class (M=3.86; SD=0.94). The preceding discovery clearly indicated that social media used in teaching and learning enhanced students' engagement. This is reinforced by the study of Alismaiel, Cifuentes-Faura and Al-Rahmi (2023), Awidi, Paynter and Vujosevic (2019), and Manca (2020), who found that social media is a useful tool for increasing student engagement and collaboration in the development of learning environments.

4.1.4 Using social media for collaborative learning

Four factors measured the used of social media for collaborative learning. Item COL3, which respondents agreed they developed new skills and knowledge from other members of their group has the highest mean value (M = 4.04; SD = 0.89). The second-highest mean value was item COL1, which concerns using social media for collaborative learning in respondents' group was effective (M=4.01; SD=0.87). The third-highest mean value was item COL2 that the respondents agreed they were able to develop research skills through peer collaboration (M=4.00; SD=0.89). Lastly, item COL4, about a collaborative learning experience in the social media environment is better than in a face-to-face learning environment has the lowest mean value (M=3.71; SD=1.06). Overall, the data showed that all items were between M=3.71 and M=4.04. It indicates that social media social media use improves learning and involvement for all societal segments, especially for collaborative learning based on social media (Nand, Pitafi, Kanwal, Pitafi & Rasheed, 2019; Pitafi et al., 2019; Rashid, Rashid & Pitafi, 2020).

4.1.5 Students' academic performance

Five items measured the student's academic performance. Items PER1, PER2, PER3 and PER5 have a similar mean value, which respondents agreed that they used social media to facilitate academic activities and coordinate with peers (M=4.00; SD=0.86), using social media to facilitate academic activities and coordinate with lecturers (M=4.00; SD=0.90), group discussions can be arranged with their classmates using social media and this will improve the academic performance (M=4.00; SD=0.85), and using social media improves the interaction with classmates and lecturers, thus, helping improve academic performance (M=4.00; SD=0.86). The lowest mean value was item PER4, which the respondent uses social media to build a student-lecturer relationship and improve academic performance (M=3.93; SD=0.89). Overall, the majority of the respondents agreed with all items, as the data showed mean values exceed the average. It demonstrates that social media use has a favourable effect on students' confidence, performance, and learning (Al-Rahmi & Othman, 2013; Pitafi et al., 2019; Rashid et al., 2020).

4.2 Respondent's Profile

This section displays the characteristics of the respondents based on the questionnaire responses. This study received a total of 162 responses. Respondents' profiles consist of gender, study programme, preferable social media used for learning, and latest Cumulative Grade Point Average (CGPA) are illustrated in Table 1.2.

Table 1.2: Respondents' Profile

Items	Frequency (*n* = 162)	Percentage (%)
Gender		
Male	57	35.2
Female	105	64.8
Study Programme		
Diploma in Tourism Management	83	51.2
Diploma in Food Service Halal Practice	79	48.8
Social Media Preferred for Collaborative Learning		
Facebook	2	1.2
YouTube	80	49.4
Instagram	14	8.6
Twitter	3	1.9
LinkedIn	3	1.9
Pinterest	0	0.0
Tik Tok	60	37.0
Latest Cumulative Grade Point Average (CGPA)		
Below 2.75	4	2.5
2.76 - 3.00	9	5.6
3.01 - 3.50	55	34.0
Above 3.50	94	58.0

The number of respondents was dominated by females (64.8%, n=105), while the remaining were males (35.2%, n=57). The respondents from Diploma in Tourism Management were the largest portion of the sample, accounting for 51.2% (n=83) of the total, followed by Diploma in Food Service Halal Practice which accounted for 48.8% (n=79). YouTube platform has the highest proportion of preferable social media for collaborative learning among the respondents (49.4%, n=80), followed by Tik Tok (37.0%, n= 60), Instagram (8.6%, n= 14), Twitter (1.9%, n=3), LinkedIn (1.9%, n=3), Facebook (1.2%, n=2), and Pinterest (0.0%, n=0), With regard to Latest Cumulative Grade Point Average (CGPA), 94 respondents scored above 3.50, accounting for 58.0% of the total. Among the remaining respondents, 34.0% (n=55) received 3.01 - 3.50, 5.6% (n=9) scored 2.76 - 3.00, and 2.5% (n=4) obtained less than 2.75.

5.0 Conclusion and future research

Social media use in education enhances student engagement, peer and lecturer interactivity, and collaborative learning. Students benefit from it by performing greater academically. The results also showed that the most popular social media platforms for collaborative learning are YouTube, Tik Tok, and Instagram. For educators to fully benefit from social media's ability to increase student engagement, e-learning should integrate this interactive communication tool. TVET institutions ought to educate staff and students on the advantages of social media for improved learning outcomes. This study advances the knowledge of collaborative learning from a social media standpoint. It is recommended that future researchers look at the relationship between each variable and students' academic achievement. Like other studies, this one contains limitation that could open the door to further research. This study examined and recommended the use of social media in the Polytechnic Sultan Idris Shah Tourism and Hospitality Department's collaborative learning process. As a result, future research can further investigate other departments and courses of students in TVET institutions to get greater results.

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Author Contributions

Individual contributions of authors should be specified in this section to give appropriate credit to each author, for example:

M.R. Author: Conceptualization, Methodology, Software, Writing- Original Draft Preparation; **Y.Y. Author**: Data Curation, Validation, Supervision; **T.A. Author**: Software, Validation, Writing-Reviewing and Editing.

Conflicts of Interest

The manuscript has not been published elsewhere and is not under consideration by other journals. All authors have approved the review, agree with its Submission and declare no conflict of interest in the manuscript.

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