A Survey of The Knowledge, Attitudes and Motivations of Polytechnic of Tawau Sabah Students Towards Online Education in 2024, Post-COVID-19 Pandemic and Its Comparison in 2020, During the Pandemic

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Abstract

This study in 2024 is a series of previous studies by researchers in 2020, when the pandemic was ongoing. This study aims to look at the soft skills of Polytechnic of Tawau, Sabah students, namely their knowledge, attitudes, and motivation towards online education during the post-pandemic period. A comparison is made between 2020 and the current year to see the average difference of the three measurement levels, whether it makes a significant difference or not. 106 respondents were among students from semester two to semester four, answered the given questionnaires via online, Google Form. This study used SPSS software for data analysis. In summary, it was found that the results of this year's study showed that the mean average for knowledge was high, while attitude and motivation were moderate. This data is also the same as the results of the study in 2020. This proves that the respondents showed their three levels of soft skills towards online education is something that is no longer new, unique, or strange. The use of technology for their generation has become a routine/practice. No matter how technology develops, even viruses can mutate, and we don't know what the future holds. This study is important for the management of the Polytechnic of Tawau, Sabah, and other educational institutions to see the need for and importance of online education, along with the provision of appropriate infrastructure for its current and future students.

Keywords: Online-Education; Post-Pandemic; COVID-19; Knowledge; Attitude; Motivation; Students.

1.0   Introduction

The COVID-19 pandemic has had a profound impact on educational institutions globally (Tadesse & Muluye, 2020). This situation has disrupted the implementation of traditional teaching and learning and led to a shift towards distance education or online learning. The need to implement online learning is under the pretext of curbing the spread of the virus so that learning in schools, colleges, polytechnics, and universities continues to operate as usual to ensure continuity of learning. This sudden transition to online learning has posed significant challenges for educators and students, as educational institutions need the develop new teaching methodologies, digital infrastructure, and support systems to effectively facilitate online learning. Although online learning is seen as easy, the situation exacerbates the existing socio-economic gap and widens the digital gap among students. (Olanrewaju et al., 2021)

While some students have access to good internet connections, computers, and a conducive learning environment, the B40 student group is seen as facing obstacles such as limited internet access, a lack of devices, and unstable living conditions. (Beh et al., 2021). Unequal access to these resources exacerbates educational inequality, hindering academic progress and the well-being of marginalized students, in particular B40 students.

Almost two years have passed, and students have abandoned online learning. Despite this, students have gained two experiences in learning, namely online and traditional learning, where students can compare the effectiveness of the two methods. After COVID-19, comparing online learning and traditional learning has become crucial to understand their respective strengths and weaknesses, as the pandemic forced a rapid and widespread adoption of digital education methods. This comparison helps educators and policymakers assess the effectiveness, accessibility, and inclusivity of online learning platforms versus in-person instruction. By evaluating factors such as student engagement, learning outcomes, resource availability, and flexibility, stakeholders can make informed decisions about integrating technology into education, improving teaching strategies, and ensuring that both models can complement each other to enhance overall educational quality. Based on this situation, studies should be conducted to assess the level of knowledge, attitudes, and motivation of students towards online learning. This study is important because it provides insight into the effectiveness of the implementation of online learning in a post-pandemic environment and helps the Polytechnic of Tawau, Sabah, identify the challenges faced by students and provide appropriate support to students.

1.1 Research Objectives
   i. Identify the level of knowledge, attitude, and motivation of Polytechnic Tawau Sabah students towards online learning after the COVID-19 pandemic.

   ii. To compare the level of knowledge, attitude, and motivation of Polytechnic of Tawau, Sabah students towards online learning between pre- and post-pandemic COVID-19.

2.0 Literature Review
Online learning has many advantages and disadvantages (Salleh et al., 2021; Amin & Nasri, 2021). According to Saamri et al. (2020), online learning is flexible and accessible remotely without following in-class learning. Online learning also allows students to easily access a variety of courses and educational materials regardless of the student's location and time (Mohammad, 2020; Abd Halim & Abd Rahim, 2023). The accessibility of online learning through internet technology helps students from different backgrounds to take classes easily (Rahman et al, 2020; Hasaan et al., 2021). Additionally, with online learning, students can access a wide range of learning resources such as e-books, instructional videos, educational websites, and interactive learning software (Asmuzi et al., 2022). This allows them to learn in a more varied and interesting way. Online learning is also cheaper and more affordable compared to on-campus learning (Sakarji et al.,

2020). Students can reduce the cost of travel and accommodation required to attend physical classes, as well as reduce or avoid the cost of textbooks and physical learning materials. In addition, online interactions also need to be given greater emphasis. Lecturers need to strive to provide more effective support and interaction with students through online platforms. The role of lecturers is very important to ensure that teaching and learning can be carried out as well as possible so that there is no dropout of information to students (Azmira & Siti Mariam, 2023)

3.0   Research Methodology

This research study used a quantitative method with a total of 106 students who took part by answering questionnaires conducted online. Random sampling was used in this study to get samples from the Diploma in Tourism Management and Diploma in Tourism Recreation programmes. The data collected was statistically analysed using descriptive statistics to obtain the mean score value. The mean values were translated to the following as used in the study of Ngadiman et al. (2019): 1.00– 1.99 (Weak); 2.00– 2.99 (Low); 3.00– 3.99 (Simple); 4.00– 5.00 (High).

4.0   Results and Discussion

Table 1 provides a demographic snapshot of respondents, focusing on their gender and internet usage habits in 2024. Among the 106 respondents, a significant majority are female (69.8%), compared to men (30.2%). Internet usage for learning and obtaining information is high, with 54.7% using it very often and 39.6% always, indicating a strong reliance on digital resources for educational purposes. Similarly, internet use for socializing and playing online games is also prevalent, with 49.1% always and 21.7% very often engaging in these activities. Only a small fraction rarely or never uses the internet for these purposes. This data highlights the pervasive role of the internet in both educational and social activities among the respondents.

Table 1: Background of Respondents, 2024

Items		n	%
Gender	Men	32	30.2
	Female	74	69.8
The frequency of using the internet to learn and obtain information	Very often	58	54.7
	Always	42	39.6
	Sometimes	5	4.7
	Rarely	1	0.9
The frequency of using the internet to socialise and play online games	Very often	23	21.7
	Always	52	49.1
	Sometimes	26	24.5
	Rarely	4	3.8
	Never	1	0.9

4.1   Polytechnic of Tawau Sabah students' level of knowledge, attitude, and motivation towards online learning after the COVID-19 pandemic.

Table 2: Data Analysis Results for Knowledge, 2024

Variable/item	Min	S. P	Level
Knowledge			
I am aware that online learning systems such as CIDOS are applied in the Polytechnic of Tawau, Sabah.	4.321	0.641	High
I have the skills to use the online learning system applied in the Polytechnic of Tawau, Sabah.	3.925	0.700	Moderate
I realized that as a Polytechnic of Tawau, Sabah student, I needed to use online learning during the post-COVID-19 pandemic and in the future.	4.217	0.768	High
I realized that online learning has many advantages.	3.811	0.957	Moderate
I know that many learning materials are available through online learning systems.	4.283	0.714	High
Average	4.111	0.568	High

Table 3: Data Analysis Results for Attitude, 2024

Variable/item	Min	S. P	Level
Attitude			
I always use the online learning system to get notes and other learning materials.	4.255	0.648	High
I am ready for the challenges of learning online during the post-COVID-19 pandemic and in the future.	3.896	0.883	Moderate
I rarely encourage my friends to use the online learning system. (Reverse item)	2.792	1.075	Low
I am always concerned about the issues faced in the implementation of online learning.	3.774	0.820	Moderate
I always use online learning systems such as CIDOS throughout my study sessions. (More than 3 times a week)	3.717	0.870	Moderate
Average	3.687	0.584	Moderate

Table 4: Data Analysis Results for Motivation, 2024

Variable/item	Min	S. P	Level
Motivation			
I received encouragement from Polytechnic Tawau, Sabah lecturers, to use the online learning system.	3.887	0.797	Moderate
I feel that online learning saves time and cost.	4.094	0.889	High
I can study online anytime and anywhere.	4.113	0.919	High
I felt that the applications in online learning were fun.	4.019	0.894	High
I found that my assessment scores improved in online learning.	3.585	0.914	Moderate

Variable/item	Min	S. P	Level
Average	3.940	0.697	Moderate

The findings of the analysis are shown in Table 2. The findings are divided into three parts, namely knowledge, attitude, and motivation. The overall average for knowledge level was 4.111, indicating that overall, students have a positive awareness and understanding of the use of online learning systems in the Polytechnic of Tawau, Sabah. Meanwhile, referring to Table 3, a mean score of 3.687 for attitude variables, showing a moderate yet relatively positive overall attitude towards online learning. While the overall average for motivation (3.940), as shown in Table 4, shows positive motivation from students towards the use of online learning systems in Polytechnic Tawau, Sabah.

4.1   Comparison of the level of knowledge, attitude, and motivation of Polytechnic of Tawau, Sabah students towards online learning between pre- and post-COVID-19 pandemic.

Table 5: Comparison of Data Analysis Results, 2020 and 2024

Variable/ item (refer to Table 2)	2020		2024	
	Min	Level	Min	Level
Knowledge				
1.	4.500	High	4.321	High
2.	4.038	High	3.925	Moderate
3.	4.236	High	4.217	High
4.	3.538	Moderate	3.811	Moderate
5.	4.094	High	4.283	High
Average	4.081	High	4.111	High
Attitude				
1.	4.406	High	4.255	High
2.	3.858	Moderate	3.896	Moderate
3.	3.151	Moderate	2.792	Low
4.	4.160	High	3.774	Moderate
5.	3.915	Moderate	3.717	Moderate
Average	3.898	Moderate	3.687	Moderate
Motivation				
1.	4.189	High	3.887	Moderate
2.	3.962	Moderate	4.094	High
3.	3.707	Moderate	4.113	High
4.	3.783	Moderate	4.019	High
5.	4.084	High	3.585	Moderate
Average	3.945	Moderate	3.940	Moderate

A comparison of pre- and post-pandemic COVID-19 findings is shown in Table 5. The findings show a comparison of the mean values of Knowledge, Attitude, and Motivation in 2020 (pre) and 2024 (post). For 2020, the average knowledge was 4.081 (high), while in 2024, it increased to 4.111 (high). These findings explain that overall, there has been an increase in knowledge from

2020 to 2024. As for attitudes, 2020 shows the average attitude is 3.898 (moderate), but in 2024, it decreased to 3.687 (moderate). As for the motivational comparison, the year 2020 showed that the average motivation was 3.945 (moderate), and in 2024, it remained almost the same at 3.940 (moderate). Overall, there has been a slight change in motivation from 2020 to 2024, and this shows that student motivation remains almost the same from 2020 to 2024.

Conclusion

In summary, all three levels—knowledge, attitude, and motivation—among students at the Polytechnic of Tawau, Sabah, showed high to moderate scores in 2024. These scores did not differ significantly from those recorded in 2020, based on the average score at each level. However, there was an increase in the mean score for motivation in the current year. Respondents reported being highly motivated by the advantages of online education, including its cost-effectiveness, flexibility in time and location, and the positive experience it offers during online learning. This increase may be attributed to the rapid technological advancements that occurred between 2020 and 2024. Both lecturers and students have become more proficient in using online educational software and applications. Although not entirely new, these tools now offer a wider variety of teaching and learning methods that many find more engaging and enjoyable than traditional approaches.

The Government of Malaysia has already introduced the Digital Education Policy in 2023. Hence, all institutions may face the challenges of intelligent technology, especially with the growing artificial intelligence technology. Although the Technical and Vocational Education and Training (TVET) system is generally more towards practical training and face-to-face simulation, this does not mean that digital education, including online education, such as this study, cannot be applied in teaching and learning. TVET in Polytechnic Malaysia has proactively introduced CIDOS LMS (Centre for Instructor Development and Online Learning System Learning Management System). This online learning platform allows lecturers and students to communicate directly and indirectly through responsive learning designs, comprehensive reports, and appropriate modules. Even the Technology-Enabled Collaborative Classrooms (TeCC) facility allows students to use technological equipment in learning. Similarly, the latest technology is pioneered by students who are used to social media and online applications related to their social environment, such as audio-visual editing, and this should be used as a platform for online education.

In the end, the management of the Polytechnic of Tawau, Sabah, should enhance facilities such as comprehensive and fast internet access and computer labs to meet the needs of students and lecturers involved in this online education. We understand that the government's hurdles are mainly financial factors. Still, management can take advantage of the benefits of social media and related applications used as a variation of online education platforms. In this regard, all parties, including lecturers and students, must be more proactive and creative in online teaching and learning.

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Author Contributions

Mohamad Zulhilmy M. Y.: Conceptualization, Methodology, Software, Writing Original Draft Preparation, Data Collection, Analysis, Data Curation, Interpretation, 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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