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Readiness to Continue Online Learning Post Covid-19 among Students of Politeknik Jeli Kelantan

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ABSTRACT

The Covid-19 pandemic has prompted the Ministry of Education to transition entirely to online learning method. All schools and higher education institutions are no exception in embracing this shift. However, the drastic change, executed without adequate preparation, has led to numerous challenges and setbacks, resulting in a decline in student performance. Consequently, once the movement control order was fully lifted, the ministry promptly reverted to traditional face-to-face learning method completely. Polytechnics followed suit, mirroring this approach. Despite the problems and complaints that surfaced, dismissing the role of virtual technology in education is unjustified, given the considerable effort and preparation invested to improve the online learning effectiveness during the Covid-19 pandemic. Hence, this study was conducted to assess students' readiness to continue online learning post-Covid-19. A total of 293 students from Politeknik Jeli Kelantan participated as respondents, and the collected data was statistically analyzed using SPSS V22 software. The study's findings revealed that majority of respondents expressed a strong willingness and motivation to engage in online teaching and learning sessions. Moreover, these respondents exhibited confidence in the potential and effectiveness of online teaching and learning methods. These research findings are anticipated to assist relevant parties involved, particularly educators and educational institutions, in formulating comprehensive teaching modules and policies that integrate both face-to-face and online learning methods seamlessly.

Keywords:
Post Covid-19; online learning; student readiness; polytechnic

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1. Introduction

The Movement Control Order declared by the Malaysian Government in 2020 to control the spread of the Covid-19 pandemic has opened a new dimension in the transformation of education in Malaysia. Essentially, all the planning and policies implemented are aimed at preventing students from missing out on their education. Therefore, comprehensive online learning has been introduced. Online learning is not a new

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concept for the ministry and teachers. It is widely known that the concept of online learning, formerly known as Information and Communication Technology (ICT), has been introduced by the Ministry of Education Malaysia since 2014 [1]. Teachers have been given training and courses to handle computer hardware and applications related to virtual learning. However, when the country was tested with the Covid-19 pandemic, fully online learning has triggered various reactions in society in terms of accessibility, capability, and flexibility. This drastic change brings various challenges and obstacles, especially to a country that has traditionally relied on face-to-face learning in classrooms and has used less modern technology. This significant challenge is felt by all parties, including the ministry, educators, students, and parents.

Among the main challenges faced are the lack of equipment and reliable internet access. Some students do not have sufficient internet data, and there are also areas with weak internet access, leading to disruptions during class sessions. Not all students can afford sophisticated electronic gadgets; many are not proficient in using devices or applications, especially school students. Ishak Haron [2] states that the socioeconomic status of a family plays a crucial role in influencing students' involvement in the teaching and learning process. Students from low socioeconomic status families are more affected by online learning methods. This is said because a significant amount of money needs to be spent by parents to buy gadgets and Internet data packages to ensure their children have devices to participate in online learning sessions and enjoy internet speed at an optimal level. This situation somewhat affects the financial problems of some families. In fact, it tends to lead to student absenteeism when some of them cannot attend online sessions due to parents' inability to provide learning equipment such as computers, smartphones, and internet data packages. Hafiza Abas [3] stated that the slow development of e-learning in Malaysia is due to technical issues, internet access status, uninteresting learning content, limited teaching materials, and users' readiness and awareness of new technology. All these obstacles have become constraints on the holistic implementation of online learning in all educational institutions in Malaysia [4].

Furthermore, the concept and learning styles of each student vary. According to the study by Bobby De Porter and Mike Hernacki [5], learning methods or styles are divided into three, namely visual learning style, audio learning style, and kinesthetic learning style. Students with audio and visual learning styles may enjoy and be able to participate well in online classes. However, students with a kinesthetic learning style are likely to have difficulty understanding because online learning lacks movement activities and physical skills. In addition, in the teaching and learning process, the relationship and social interaction between lecturers and students are crucial in forming a community during the teaching session. When social interaction becomes dynamic in the classroom, the class becomes an active place [6]. This learning process involves interactions between lecturers and students, students with students, and learning materials during the process.

Educational institutions are the most important unit after family institutions in shaping social identity [7]. Previously, face-to-face teaching approaches were able to foster effective social interaction in the classroom because they encompassed all aspects related to social aspects. However, online learning lacks effective two-way interaction, leading to inadequate development of relationships and social interactions [8]. This is because online learning and teaching focus more on individual knowledge without emphasizing the personalities and skills of the students. Wildavsky Ben *et al*., [9] states that the main weakness in the online learning process is the lack of interaction between students and teachers, making it difficult to socialize among students.

Constraints in online learning also involve the ability and efficiency of teachers in conducting classes and assessments online [10]. The tasks of teachers and lecturers are becoming more challenging as they have to adapt their teaching methods to new norms and practices [11] that demand full utilization of the virtual world and interaction with students remotely (remote learning). Educators must change the atmosphere, teaching strategies, and delivery methods in virtual classrooms to have a positive impact on learning [12]. For educators who are less skilled in technology, they have to learn and master quickly how to manage classes using suitable applications or platforms. Moreover, the existing equipment is often insufficient, forcing teachers to spend their own money on purchasing supplementary tools to provide quality teaching materials. Wei Boon Quah [13] argues that educators lack complete ICT facilities such as video cameras, microphones, and speakers, making it difficult for students to focus due to these technical issues. Furthermore, he adds that educators still need courses and e-learning training to strengthen the implementation of the online teaching process.

Another challenge in online teaching and learning is the cultivation of students' morality. According to Abdul Halim Masnan [14], one of the causes of the decline in the morality of today's adolescents is the result of materials and programs from social media. Social media, which is most favored by students, tends to be entertainment-oriented, leaning towards pleasure, and does not contribute positively to the moral development of today's younger generation. Entertainment content is obtained through the internet, television, entertainment magazines, and radio. The influence of entertainment becomes the primary choice of the community compared to religious slots and discourse on knowledge that can enhance intellectual development [15]. According to Sohana Abdul Hamid [16], the development of technology, besides having benefits, has evident negative elements or impacts caused by technology and social media itself, leading to numerous changes. The emergence of issues regarding the decline in human dignity is a consequence of moral crises. This moral crisis occurs due to the imbalance between technological progress in the era of globalization and the integration of moral and ethical aspects.

Due to the factors mentioned above, the success of the teaching and learning process becomes less effective. In the teaching and learning process, there are three crucial elements for achieving success: students, educators, and teaching materials [17]. If any of these elements do not support each other, the online teaching and learning process will not be maximized, and the impact will result in many students failing to understand the taught subjects. Due to the constraints and challenges faced, in addition to the permission to reopen all schools and educational institutions, learning sessions are reverted to fully face-to-face methods, as if the previously conducted online learning sessions were considered unsuccessful and ineffective. Despite the Malaysian government spending millions of ringgits on all preparations and equipment development to assist online teaching sessions, it would be highly detrimental if the efforts made so far are abandoned without continuity. Therefore, comprehensive studies are highly needed to help continue the use of broadband technology in improving learning performance in Malaysia. This study has been conducted to assess the extent to which students are ready to continue online learning even after the end of the Covid19 Movement Control Order.

2. Methodology

This study was conducted among students at Politeknik Jeli Kelantan, which is one of the national technical and vocational education and training centers based on agricultural and agro-food development. A quantitative approach based on a cross-sectional design was used in this study. The selection of this design is in line with the study's requirements, allowing researchers to collect data from study respondents at a specific point of time. The study population includes all students at Politeknik Jeli Kelantan, covering two diploma study fields: Diploma in Aquaculture Technology and Diploma in Agrotechnology. The total number of students at Politeknik Jeli Kelantan in 2023 is estimated to be around 1000 individuals. The study sample was chosen using the snowball sampling technique. Links to the survey questionnaire developed using Google Forms were shared with various student associations at Politeknik Jeli Kelantan via whatsapp and email. Students were asked to distribute the survey link to their closest associates to achieve the required sample size. One month was allocated for the data collection period. Based on the basic assumption according to the Sampling Size Determination Table by Krejcie and Morgan [18], the sample size for this study was determined to be 278, representing the population size of 1000 individuals. A total of 293 students responded comprehensively, with a response rate of 81.8%, where a response rate exceeding 70% is acceptable in social science research [19].

The research instrument was adapted from the survey questionnaires conducted by Yassine Ismaili [20] and Ummi Munirah *et al*., [21], combining five components to assess students' readiness for online learning after the Covid-19 pandemic. The questionnaire for this paper is divided into two sections: Section A, which pertains to respondent demography, and Section B, which relates to student attitude assessment. The respondent profiles include five items: race, gender, year of study, diploma program, and family income. The student attitude assessment is divided into five essential components: readiness of facilities (5 items), learning environment (5 items), learning effectiveness (5 items), communication (5 items), and motivation and psychology (5 items). The total number of questions is 25. The obtained data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 22. Descriptive analysis was used in this paper to

analyze data related to respondent profiles and student attitudes based on frequency, percentage, and mean values.

3. Results and Discussion

3.1 Respondent Demography

A total of 293 student respondents have answered comprehensively and are used for analysis purposes in this paper. The data distribution in Table 1 shows the demographic data of the respondents, including ethnicity, gender, year of study, study program, and household income. The majority of students are Malay, accounting for 91.12%, while Indian, Chinese, and others make up 7.17%, 1.37%, and 0.34% respectively. In terms of gender, the number of male students is twice that of female students, with percentages of 65.53% for male students and 34.47% for female students. Regarding the distribution of students by year of study, there are 39.25% first-year students, 40.27% second-year students, and 20.47% final-year students. Students in the Aquaculture Technology Diploma program are more numerous compared to Agrotechnology Diploma students, with 61.32% compared to 38.68%. The family background of students indicates that the majority, or 68.60%, fall into the B40 group with a total monthly income of parents below RM4,850. Only a small number of students fall into the M40 and T20 categories, namely 24.23% and 7.17% respectively.

Table 1
Respondent demography

Parameter	Frequency (f)	Percentage (%)
Race		
Malay	267	91.12
India	21	7.17
Chinese	4	1.37
Others	1	0.34
Gender		
Male	192	65.53
Female	101	34.47
Year of Study		
1st year	115	39.25
2nd year	118	40.27
3rd year	60	20.47
Diploma Program		
Diploma of Aquaculture Technology	176	64.47
Diploma of Agrotechnology	117	42.86
Family Income		
B40 (<RM 4851)	201	68.60
M40 (<RM4851- RM10,970)	71	24.23
T20 (>RM10, 970)	21	7.17
Total	**293**	**100.00**

3.2 Readiness of Facilities

The data in Table 2 offers insights into the readiness of students at Politeknik Jeli Kelantan to continue online learning after the Covid-19 Movement Control Order. The scores are presented as percentages, indicating the proportion of students who agree with each statement. Majority of the students report possess a computer (90.78%) and handphone (95.90%) that can be used for online learning. This is a positive sign, suggesting that most students possess the necessary hardware for participating in online educational activities. Mobile devices can be essential for accessing learning materials, participating in discussions, and engaging with course content on-the-go. On the other hand, only 63.48% of the students have a sufficient data package for online learning. The data suggests that a considerable portion of students may not feel they have a sufficient data package for online learning. This finding highlights a potential challenge for a significant

number of students, indicating a need for further exploration into factors affecting data accessibility. However, 97.61% of students agreed that their institution provides adequate tools, such as computers, for online learning. 93.86% of students also agreed that the wifi data provided at the institution is sufficient for online learning. This positive perception is crucial for ensuring that students have the necessary resources to engage in online education smoothly and effectively.

Table 2
Readiness of facilities

No	Item	Yes	No
B1	I have a computer for online learning	266 (90.78%)	27 (9.22%)
B2	I have a cell phone that can be used for online learning	281 (95.90%)	12 (4.10%)
B3	I have sufficient data package for online learning	186 (63.48%)	107 (36.52%)
B4	The institution provides adequate tools for online learning	286 (97.61%)	7 (2.39%)
B5	The wifi data provided at the institution is sufficient for online learning	275 (93.86%)	18 (6.14%)

In summary, the study data provides a comprehensive overview of students' access to essential tools for online learning at Politeknik Jeli Kelantan. While the majority possess computers and cell phones, there are considerations regarding the sufficiency of data packages for a notable percentage of students. The positive perceptions regarding the institution providing adequate tools and wifi data are encouraging but this is only applicable in institution areas, where the problem may arise if the students are outside the institution. Addressing any identified challenges can contribute to a more inclusive and effective online learning environment for all students.

3.3 Learning Environment

Learning environment in the context of online learning refers to the practical execution and application of instructional strategies, resources, and technologies to facilitate effective learning experiences for students in an online environment. It encompasses the actual deployment of educational materials, activities, and assessments to achieve desired learning outcomes. There are several key elements that contribute to the learning environment in online education, such as curriculum design, technology integration, interactive learning activities, accessibility considerations, and continuous improvement. Table 3 shows the results for subsection of learning environment, where on average, students find the application and platform used for online learning easy to navigate (mean = 4.0). This positive perception indicates a user-friendly experience, which is crucial for effective online learning. For the statement “lecturers always provide interesting notes and modules for online learning”, the mean score is 3.2, which indicates a moderate level of agreement, suggesting that, on average, students may not strongly feel that lecturers consistently provide interesting notes and modules. This finding could prompt further exploration into the design and delivery of online course materials to enhance engagement. The relatively high mean score of 3.8 for statement “online learning helps group activities between me and my friends” suggests that students generally agree that online learning facilitates group activities with peers. This positive perception indicates a perceived effectiveness in fostering collaboration and group interactions in the online environment. Students not only find online learning help in group activities but also express a preference for it over face-to-face learning (mean = 4.1). This could be influenced by factors such as comfort, convenience, or individual learning styles. For the statement of “online learning is fun and helps me focus”, the mean score is 3.2. The moderate score for this statement indicates that while some students find online learning enjoyable and helpful for concentration, there is a notable portion that may not share the same sentiment. This suggests a diversity of experiences and opinions regarding the engagement level of online learning.

Table 3
Learning implementation

No	Item	1	2	3	4	5	Mean
B6	The application and platform provided is easy to use	0	8	54	160	71	4.0
B7	Lecturers always provide interesting notes and modules for online learning	14	58	105	94	22	3.2
B8	Online learning helps group activities between me and my friends	2	25	101	113	52	3.8
B9	I am more confortable learning online than face-to-face	24	62	108	73	26	4.1
B10	Online learning is fun and helps me focus	12	74	93	89	25	3.2

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5= strongly agree

In summary, the environment in online learning involves the practical application of instructional design, technology, and pedagogical strategies to create engaging, effective, and accessible learning experiences for students in a virtual environment. In general, students show a positive perception of the ease of use of online learning platforms. While there is room for improvement in terms of the perceived interest level of course materials, students express positive views on the facilitation of group activities in the online environment. These findings provide valuable insights for educators and institutions to consider when designing and implementing online learning initiatives.

3.4 Learning Effectiveness

Learning effectiveness in online learning refers to the degree to which educational goals and objectives are achieved through digital or online methods. It assesses how well students acquire and retain knowledge, develop skills, and achieve the intended learning outcomes in an online learning environment. There are several factors contributing to learning effectiveness, including instructional design, engagement strategies, technology integration, and ongoing evaluation to ensure that students achieve the intended learning outcomes.

Table 4 shows the results for subsection of learning effectiveness, where on average, students are somewhat neutral or moderately agree that online learning does not interfere with their learning process (mean = 3.6). This implies a mixed perception, and it may be worthwhile to explore specific aspects that contribute to this sentiment. On the other hand, there is a positive perception that online learning contributes to students' creativity (mean = 4.0). This suggests that students believe the online learning environment fosters creative thinking and problem-solving skills. The relatively high score of the statement of “online learning makes it easier for me to make a revision" (mean = 4.2) suggests that majority of students agree that online learning facilitates the revision process. This may be attributed to the availability of recorded lectures, digital resources, or other features that support reviewing and reinforcing course materials. For the statement “online learning makes it easier for me to understand what is being taught”, the mean score is 3.2. The score indicates a moderate level of agreement, suggesting that, on average, students may not strongly feel that online learning makes it easier for them to understand the content. This finding could prompt further investigation into potential challenges or areas for improvement in the clarity and delivery of online course materials. Lastly, there is a strong student’s preference for online exams over face-to-face exams (mean = 4.7). This positive sentiment could be influenced by factors such as flexibility, reduced exam anxiety, or the convenience of taking exams remotely.

Table 4
Learning effectiveness

No	Item	1	2	3	4	5	Mean
B11	Online learning does not interfere with my learning process	0	45	128	92	28	3.6
B12	Online learning educates me to be more creative	0	24	100	133	36	4.0
B13	Online learning makes it easier for me to make a revision	0	0	39	158	96	4.2
B14	Online learning makes it easier for me to understand what is being taught	11	30	148	104	0	3.2

B15	I prefer online exams more than face-to-face	0	0	30	147	116	4.7

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5= strongly agree

In summary, the study data indicates a mix of perceptions regarding the impact of online learning on the learning process and understanding of course materials. While students express positive views on aspects like creativity, revision, and online exams, there are areas, such as understanding course content, where perceptions are more neutral. Addressing these nuanced perspectives can contribute to refining and optimizing the online learning experience for students at Politeknik Jeli Kelantan

3.5 Communication

Communication in online learning refers to the exchange of information, ideas, and feedback between students and lecturer in a digital educational environment. Building a sense of community and social presence is crucial in online learning. This involves creating opportunities for students to connect with each other and the lecturer, fostering a supportive learning environment. Online learning often involves collaborative projects and discussion forums where students and lecturers can work together in real-time, fostering teamwork and communication, post messages, ask questions, and engage in discussions. This asynchronous form of communication allows participants to contribute effectively, which will enhance the overall learning experience.

Table 5 shows the results for subsection of communication in online learning, where a significant number of students find online interactions are easier compared to face-to-face interactions (mean = 4.2). This could be due to factors such as convenience, comfort, or the flexibility provided by online communication tools. The moderate score of “online learning helps encourage me to interact more actively” (mean = 3.3) indicates that, on average, students may not strongly feel that online learning actively encourages them to interact more. This suggests that there may be room for improvement in the design or implementation of online learning strategies to foster increased interaction. The result also shows that majority of students report actively interacting with both classmates and lecturers during online learning (mean = 3.9). This is a positive indication of engagement and participation in the online learning environment. For the statement of “lecturers can effectively control interactions during online learning”, the mean score is 4.4. The high score indicates that students perceive lecturers as being effective in controlling interactions during online learning. This suggests a positive view of the instructors' ability to manage and facilitate online discussions and activities. Lastly, the moderate to high mean score of 3.8 suggests that, on average, students feel that the tools and platforms used in online learning contribute to effective interaction. This indicates a positive perception of the technological aspects of online learning.

Table 5
Communication

No	Item	1	2	3	4	5	Mean
B16	Interacting online is easier that face to face	4	34	115	91	49	4.2
B17	Online learning helps encourage me to interact more actively	7	42	135	83	26	3.3
B18	I always interact with classmates and lecturers during online learning	3	40	101	114	35	3.9
B19	Lecturers can effectively control interactions during online learning	0	8	85	143	57	4.4
B20	The tools and platforms used help me interact effectively	2	42	130	84	35	3.8

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5= strongly agree

In summary, the study data indicates that students at Politeknik Jeli Kelantan generally find communicating online easier than face to face. There is also a positive perception of lecturers' ability to control communication s, and students actively engage with classmates and instructors during online learning. However, there may be opportunities to enhance the active encouragement of active communication in the

online learning environment and further optimize the tools and platforms used for effective communication. Effective communication is essential for creating a supportive and engaging online learning experience.

3.6 Motivation and Psychology

Motivation and psychology play crucial roles in the context of education, influencing how students engage with and benefit from educational systems. Motivation and psychology are driven by personal interest or enjoyment in the learning process, and involves external factors like force, rewards or grades. Both types are relevant in online learning, with well-designed courses aiming to foster intrinsic motivation. In online learning, motivation and psychology involve understanding and addressing the factors that influence learners' engagement, satisfaction, and overall success in digital educational environments. Effective online courses leverage motivational strategies, consider psychological principles, and create a supportive and engaging learning experience for diverse learners. Table 6 shows the results for subsection of motivation and psychology, where students agree that online learning offers flexibility (mean = 4.0). This positive perception suggests that students appreciate the adaptability and convenience that online learning provides compared to traditional face-to-face methods. In term of online learning increase the student's interest in learning, the mean score is relatively lower (mean = 3.1), which implies that, on average, students may not feel as strongly that online learning enhances their interest in the subject matter. This could be an area for improvement in terms of making online learning more engaging for students. Beside that, on average, students believe online learning has the potential to save them time. This could be due to factors such as reduced commuting or flexible study schedules. For statement "online learning can save me money", the mean score is 2.95, which indicates a relatively neutral to slightly disagreeing sentiment regarding the cost-saving aspect of online learning. While online learning may reduce the accommodation and transportation cost, it involves expensive gadgets and data packages. This finding may prompt further investigation into the students' perspectives on the financial implications of online learning. The result also suggests that there is a notable desire among students for online learning to persist beyond the pandemic (mean = 3.8). While it falls short of a strong agreement, it indicates a generally positive attitude toward the continuation of online learning.

Table 6
Motivation and psychology

No	Item	1	2	3	4	5	Mean
B21	Online learning is more flexible	0	0	84	153	56	4.0
B22	Online learning increases my interest in learning	1	63	137	59	33	3.1
B23	Online learning can save my time	0	27	89	135	42	3.6
B24	Online learning can save my money	20	53	112	87	21	2.95
B25	I want online learning to continue even though the pandemic is over	0	12	84	106	91	3.8

In summary, the findings highlight a generally favorable attitude toward online learning among the students at Politeknik Jeli Kelantan. The positive perceptions of flexibility and comfort, along with the expressed desire for online learning to continue post-pandemic, indicate a potential shift in preferences and a recognition of the advantages offered by online educational platforms. However, there are areas, such as interest-enhancing aspects of online learning, where improvements or adjustments may be considered to enhance the overall learning experience for students. Additionally, there are mixed sentiments regarding the potential time-saving aspect of online learning, and a slightly negative perception of cost savings.

4. Conclusions

The satisfaction of students with online learning varies according to their expectations and experiences. The online learning method has transformed the capabilities of some students through new approaches in their thinking and adapting to new realities. The positive attitudes of students and their willingness to engage in online learning during the pandemic indicate significant potential in the use of platforms at universities. Attitudes towards the readiness and accessibility of platforms play a crucial role in educational strategy

planning for the future. The use of technology and acquiring new skills will be a priority for students in the future. In conclusion, this study, conducted at Politeknik Jeli Kelantan, aimed to assess students' readiness for online learning post-Covid-19. Despite the subsequent return to traditional face-to-face learning, this study sheds light on the positive attitudes of 293 respondents towards online teaching and learning. The majority expressed a strong willingness and motivation to engage in online sessions, demonstrating confidence in the potential and effectiveness of online learning methods. These findings highlight the importance of recognizing the role of online technology in education, encouraging a blended approach that integrates both face-to-face and online learning. The insights from this research are valuable for educators and educational institutions in formulating comprehensive teaching modules and policies that seamlessly incorporate both modes of instruction.

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