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Students' Emotions in Online Learning Post-Covid-19: A Study of Malaysian University Students

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Abstract

This study explores the emotional experiences of the students in a Malaysian university in online learning post-COVID-19. The pandemic forced a shift from traditional to online learning, leading to various emotional responses among students. However, there is limited understanding of how these emotional responses impact students' engagement and learning satisfaction in the Malaysian context. A survey of 121 students revealed mixed feelings. While some appreciated the flexibility and comfort of learning from home, others faced anxiety, boredom, and challenges with maintaining focus and motivation. The study found that students enjoyed certain aspects of online learning, such as recorded lectures, but struggled with engagement and technical issues. The findings highlight the need for more interactive and supportive online learning environments to enhance student satisfaction and learning outcomes.

Keywords*: Online learning, post-Covid-19, Student emotions, Malaysian university, Digital education*

1. INTRODUCTION

The COVID-19 pandemic has reshaped education, ushering in an era of online learning. Due to the need for social distancing, academic institutions have had to transition from conventional classroom teaching to online learning approaches. This shift has involved the adoption of Learning Management Systems (LMS) like Moodle, WebCT, and Blackboard, along with various digital communication tools (Mohammed et al., 2022). According to Peck (n.d.), online learning has grown by 900% since 2000, making it the education industry's fastest-growing market. This boom in digital education is expected to continue, with the number of online learners predicted to reach 57 million by 2027 (Peck, n.d.). This reflects a significant shift toward more flexible and accessible ways of learning.

This transition has not only changed the method of instruction but has also highlighted a range of emotions felt by students participating in online learning. Switching to online classes during COVID-19 brought a mix of feelings for students. Many students liked the new ways of learning but also worried about staying focused (Schlenz et al., 2020). Learning alone meant students have to manage their time better, building their resilience but also showing where they might need more help (Ainiyah et al., 2021). While the flexibility was a plus for some, the lack of face-to-face interaction left others feeling lonely (Ishak, 2022). These mixed emotions—ranging from anxiety and boredom to enjoyment—can affect how well students engage with lessons and perform academically, as well as how instructors deliver and adapt their teaching.

Studies have found that Malaysian higher education students show a moderate level of readiness for online learning, especially in technical, communication, and social competencies (Hamzah et al., 2021; Ranganathan et al., 2021; Jafar et al., 2023). While many international studies have explored

students' emotional states in online learning, past research in Malaysia tends to focus more on readiness and access rather than emotional impact (past studies in Malaysia gap). There is limited discussion on how these emotional responses affect learning outcomes in the local context, especially post-pandemic.

To address this gap, this study focuses on the emotional experiences of students at Universiti Malaysia Sarawak (UNIMAS) and how these emotions are shaped by instructional quality, technology, and the home learning environment.

In the post-pandemic era, classes are moving online more frequently. It is crucial to grasp how students feel about this change. Therefore, this study was conducted to better understand students' emotional experiences and the factors affecting them in the context of online learning after the COVID-19 pandemic, as outlined in the following objectives:

1. To identify the range of emotions experienced by students during online learning after the COVID-19 pandemic.
2. To examine the impact of online learning after the COVID-19 pandemic on students.
3. To explore the factors influencing students' emotions in online learning after the COVID-19 pandemic.

2. LITERATURE REVIEW

Online learning isn't just about taking traditional classes into the digital realm. It is evolved into something bigger and more complex. As Kreijns et al. (2021) noted, defining "social presence" in digital classrooms has its challenges. Yet, the very nature of online learning continues to adapt and change, showcasing its flexibility and diversity (Marks, 2000). This type of learning is now often integrated into blended education models that mix online with in-person teaching (Hrastinski, 2019). According to Johnson and his team (2022), the understanding of online learning is deepening as it becomes more intricate.

Since the pandemic, online learning has skyrocketed (Chatterjee & Chakraborty, 2021), bringing new insights into how it affects learners emotionally. Research shows that students' feelings deeply influence their learning outcomes and mental health (Hernández-Torrano et al., 2020). More than ever, educators realise that learning is not just about intellectual growth—it is also about supporting students' mental and emotional wellness (Flinchbaugh et al., 2012; Mahatmya et al., 2018).

Students from various parts of the world have experienced a range of emotions through online learning during the Covid-19 pandemic. In China, students' feelings shifted from anxiety to emotional stability and back again, reflecting the ongoing changes during the pandemic (Sun & Zhang, 2021). In China universities, the shift to online learning led to increased stress and burnout among Pakistani students (Alam et al., 2021), and a notable increase in psychological distress and fear of failure (Siddique et al., 2022). In Lebanon, Fawaz and Samaha (2020) observed significant depression and anxiety among university students during the COVID-19 quarantine, linked to dissatisfaction with online learning. Meanwhile, in Southeast Asia, technical issues and a sense of disconnection caused frustration in countries like the Philippines and Malaysia, though students also displayed remarkable adaptability (Baticulon et al., 2021; Chung et al., 2020). These different reactions show that online learning isn't a one-size-fits-all situation. In Indonesia, a study by Landra et al. (2022) found that EFL students experienced moderate anxiety due to the shift to online learning, with female students feeling more anxious than males. The primary source of their anxiety was fear related to uncertainties in both their educational and personal lives during the pandemic (Landra et al., 2022).

Fortunately, there are silver linings to the problem because not all aspects of online learning are daunting. Some students reported that they have developed better learning skills through online education (Bojovic et al., 2020), despite feeling isolated or less satisfied at times (Besser et al., 2020). Well-designed online platforms that are engaging and visually appealing can make learning more exciting and effective (Sharma & Alam, 2022).

Creating a positive emotional environment in online classes is critical. When students feel good about their online courses, they are more focused and develop effective learning strategies, which can lead to better academic performance (Deng et al., 2021). Using engaging materials, incorporating fun teaching methods, and fostering supportive teacher-student relationships are essential for boosting student engagement and success (A'yunin, 2023). The experience of online learning varies widely,

especially depending on internet access. Students with stable internet connections find online learning feasible (Thandevaraj et al., 2021), but those without reliable access struggle significantly (Putra et al., 2020; Sufian et al., 2020). Issues like poor network infrastructure in rural areas can hinder the learning process and differ markedly from traditional classroom experiences (Williams et al., 2011). Baltà-Salvador and colleagues (2021) found that the way online courses are set up and taught, and the overall learning environment, really make a difference in how students feel. Boca (2021) also pointed out that teachers who can adapt well and offer high-quality lessons are key to making students feel better about their online learning experience.

3. MATERIALS & METHODS

The focus of this descriptive study was on the emotional states of the students in a Malaysian university in the context of the post-pandemic period. The participant pool consisted of 121 students aged 18 to 27, split into 45 males and 76 females. A survey questionnaire of a 5-point Likert scale was used to collect the data. The questionnaire, which consisted of 48 items, was adapted from prior studies namely of Nwe et al. (2022), Bączek et al. (2021), Shao et al. (2023), Puljak et al. (2020), Biwer et al. (2021), Baltà-Salvador et al. (2021), Gopal et al. (2021), Almuraqab (2020), and Alsoud & Harasis (2021). The questionnaire included sections on: (i) participant demographics like age and gender, (ii) their emotional experiences, (iii) the impact of transitioning to online learning, and (iv) the factors that influenced these emotions.

The questionnaire was distributed via Google Forms. The adapted questionnaire items were reviewed with the assistance of an academic expert to ensure clarity, consistency, and relevance to the study's objectives. Minor modifications were made to improve language suitability and local contextual understanding. As the items were derived from reputable, peer-reviewed sources, this expert review process was considered adequate for content validation. Data analysis was conducted using descriptive statistics, which is a way to summarise big amounts of data to make them easier to understand. The mean values were interpreted using a three-level scale adapted from Jafar et al. (2023), where scores from 1.00 to 2.33 indicate low, 2.34 to 3.67 indicate moderate, and 3.68 to 5.00 indicate high levels of agreement. This scale helped to categorise students' responses and identify the intensity of their emotional experiences.

4. RESULTS

4.1. The Spectrum of Students' Emotions in Online Learning

This section describes the types of students' emotions towards online learning after the pandemic. Many students were dealing with mixed emotions. This section presents a range of emotional responses, including negative emotions like anxiety and boredom (Tables 1 and 2), as well as positive emotions such as enjoyment (Table 3), to reflect the full spectrum of students' experiences in online learning. While some enjoyed the comfort and flexibility of studying from home, others were struggling with anxiety, boredom, and the challenge of keeping up with the pace of online classes.

Table 1. Anxiety responses in online learning

Items	N	Mean	Description
I feel anxious during online learning classes.	121	3.17	Moderate
I am anxious that I will not be able to keep up with the lecturer's pace in the online learning class.	121	3.30	Moderate
I am worried that I will not be able to understand the teaching content clearly during the online class.	121	3.26	Moderate
I feel burdened thinking about the sudden changes in my schooling.	121	3.33	Moderate
I was worried about how the disruption affected my learning.	121	3.55	Moderate
Valid N (listwise)	121	—	—

Table 1 presents the students' levels of anxiety related to online learning. Based on the interpretation scale by Jafar et al. (2023), all items fall within the moderate range (2.34–3.67), indicating that students experienced a moderate level of anxiety overall. For instance, the item "I feel anxious during online learning classes" scored 3.17, reflecting moderate feelings of anxiety. Similar moderate scores were observed for concerns about keeping up with the lecturer's pace (3.30), understanding content clearly (3.26), and adapting to sudden changes in schooling (3.33). The highest anxiety response was related to worries about how disruptions affected their learning, with a mean of 3.55, still within the moderate level. These results suggest that while students were not highly anxious, they did face consistent, moderate levels of stress across different aspects of the online learning environment.

Table 2. Students' boredom in online learning sessions

Items	N	Mean	Interpretation
I get bored with this online learning session.	121	3.43	Moderate
I feel extremely bored that I cannot wait for the class to end.	121	3.50	Moderate
I find the e-learning session is daily dull and lack of interactions.	121	3.43	Moderate
I think about what else I might be doing rather than listening to this boring online class session.	121	3.36	Moderate
Valid N (listwise)	121	—	—

Table 2 highlights students' feelings of boredom during online learning sessions. All items fall within the moderate range, indicating that while students did experience boredom, it was not at a severe level. For example, students moderately agreed that online learning sessions were dull and lacked interaction, with mean scores of 3.43 for both "I get bored with this online learning session" and "I find the e-learning session is daily dull and lack of interactions." The statement "I feel extremely bored that I cannot wait for the class to end" received a slightly higher score of 3.50, but still within the moderate category. Meanwhile, the statement "I think about what else I might be doing rather than listening to this boring online class session" scored 3.36. Overall, these results suggest that students were somewhat disengaged, but not to a high extent. The boredom they felt points to a need for more interactive and stimulating online class experiences.

Table 3. Students' enjoyment in online learning

Items	N	Mean	Interpretation
I enjoy learning online.	121	3.40	Moderate
My enjoyment in the e-learning motivates me to actively participate in the class.	121	3.02	Moderate
Online learning session is so exciting that I could spend hours listening to the lectures.	121	2.88	Moderate
Valid N (listwise)	121	—	—

Table 3 presents students' enjoyment levels in online learning, and all items fall into the moderate range. While students indicated some enjoyment in online learning (mean = 3.40), it did not necessarily lead to increased participation (mean = 3.02) or prolonged attention (mean = 2.88). These results imply that although students were not displeased with online learning, they were also not deeply enthusiastic or engaged.

4.2. The Emotional Impact of Online Learning on Students

This section explores how students felt emotionally about online learning in the post-pandemic period. It looks at their levels of confidence, focus, access to learning tools, preferences for future learning, and how well they adapted to the changes. Most of the students' responses were in the *moderate* range, which suggests that while they were generally coping with online learning, they were not fully comfortable or highly enthusiastic. They recognised the benefits—such as flexibility and improved digital skills—but also struggled with focus, motivation, and the lack of hands-on interaction. The results show that online learning was neither fully embraced nor completely rejected; instead, students experienced a balanced mix of acceptance and hesitation. The tables below provide a closer look at each of these emotional areas.

Table 4. Student confidence in online learning

Item	N	Mean	Interpretation
I feel more at ease to participate in online class discussions compared to when in a traditional-learning classroom.	121	3.20	Moderate
I feel confident in online classes after COVID-19 pandemic	121	3.31	Moderate
I am satisfied with my performance in my online lectures after the Covid-19 pandemic.	121	3.26	Moderate

Table 4 shows how confident students felt in online learning settings. The item "I feel more at ease to participate in online class discussions compared to when in a traditional-learning classroom" received a mean score of 3.20, which indicates a moderate feeling of ease. Similarly, students felt moderately confident after the COVID-19 pandemic when asked if they felt confident in online classes (mean = 3.31). However, satisfaction with performance was also rated moderately (mean = 3.26), suggesting students adjusted to online learning but still felt some uncertainty about their overall success.

Table 5. Challenges with focus and motivation in online learning

Item	N	Mean	Interpretation
I find it challenging to focus during online classes due to my tendency to get easily distracted.	121	3.66	Moderate
I experience a lack of motivation and enthusiasm in virtual classes after Covid-19 pandemic	121	3.45	Moderate

Table 5 highlights the difficulties students faced in staying focused and motivated. A mean score of 3.66 was recorded for the statement "I find it challenging to focus during online classes due to my tendency to get easily distracted," which indicates a moderate level of distraction. Similarly, they gave a moderate score (3.45) when asked if they lacked motivation and enthusiasm. These findings suggest that while online learning continued, maintaining consistent attention and energy was a challenge for many students.

Table 6. Benefits of online learning tools and resources

Item	N	Mean	Interpretation
I loved having recorded lectures which allowed me to watch them at a more productive time.	121	3.46	Moderate
I get better at using online tools after the Covid-19 pandemic	121	3.72	High

Table 6 reflects the usefulness of online learning tools. Students moderately agreed (mean = 3.46) that they appreciated recorded lectures because they could watch them when convenient. More impressively, they showed a high level of agreement (mean = 3.72) with the statement about improving their skills using online tools. This shows how online learning helped students build digital competence over time.

Table 7. Student preferences for future online class

Item	N	Mean	Interpretation
I'd like to have online lectures more often.	121	3.07	Moderate
I'd prefer not to have such online lectures in the future.	121	3.24	Moderate

Table 7 indicates that students were still undecided about their preference for future online learning. They responded moderately to the item "I'd like to have online lectures more often" (mean = 3.07), and similarly moderate to "I'd prefer not to have such online lectures in the future" (mean = 3.24). This suggests students were open to online learning but not entirely sure if it should continue as a permanent method.

Table 8. Adaptation in continuing online learning

Item	N	Mean	Interpretation
I'm content with how quickly I've adapted to online learning.	121	3.48	Moderate
Online learning cannot substitute for hands-on practical education and interactive seminars.	121	3.64	Moderate
I would like to continue and activate electronic platforms such as Zoom, Google Classroom, and other platforms even after the COVID-19 pandemic.	121	3.26	Moderate

Table 8 presents students' ability to adapt to online learning. They moderately agreed that they were content with how quickly they adapted (mean = 3.48), and also moderately agreed that online learning cannot fully substitute hands-on, practical experiences (mean = 3.64). Their willingness to continue using platforms like Zoom and Google Classroom was also rated moderately (mean = 3.26), showing a balanced view of the benefits and limitations of online tools.

4.3. Interpretation of Overall Emotional Scores

Table 9. Summary of students' emotional experiences

Feeling	Item	N	Mean	Interpretation
Anxiety	I was worried about how the disruption affected my learning.	121	3.55	Moderate
Boredom	I feel extremely bored that I cannot wait for the class to end.	121	3.50	Moderate
Enjoyment	I enjoy learning online.	121	3.40	Moderate

Table 9 shows a summary of how students felt during online learning. The statement "I was worried about how the disruption affected my learning" had the highest mean score of 3.55, which means many students felt moderately anxious. They were still worried about how the pandemic and online learning had affected their studies. The next highest was boredom, based on the statement "I feel

extremely bored that I cannot wait for the class to end", with a mean score of 3.50. This means students often felt bored during online classes, likely because of less interaction or too much screen time. The statement "I enjoy learning online" scored a mean of 3.40, also in the moderate range. This suggests that while some students were anxious or bored, they still found some enjoyment in online learning—especially the flexibility and ease of learning from home. In short, students had mixed feelings. They were a bit anxious and bored but also starting to enjoy some parts of online learning. This shows they were adjusting, even though learning from a screen was not always fun or easy.

4.4. What Shapes Students' Feelings About Online Learning?

This section shares the results on the factors that shaped students' emotions about online learning after the pandemic. These include how well instructors taught online, whether the technology worked properly, and if the home environment was suitable for learning. Most of the scores fall under the moderate which means students generally felt okay with these areas—they didn't struggle too much, but things weren't perfect either.

Table 10. Quality of instructors

Item	N	Mean	Interpretation
Lecturers conveyed information skillfully during online class.	121	3.57	Moderate
The instructor expressed a genuine concern in student learning during and after pandemic.	121	3.36	Moderate
Instructor was available to me outside of the online learning sessions.	121	3.53	Moderate
The instructor utilised an online platform to establish a comfortable learning environment for students	121	3.37	Moderate

Although all the mean scores fall under the moderate category (Table 10), most are on the higher end of the scale, showing that students had a generally positive impression of their instructors during online learning. They felt that their lecturers were quite effective in explaining content (Mean = 3.57) and were available to support them outside of scheduled class time (Mean = 3.53). These high-moderate scores suggest a good level of instructional support. However, students were slightly less certain about the personal concern shown by instructors during and after the pandemic (Mean = 3.36), and how well they created a comfortable learning atmosphere online (Mean = 3.37). These results show that while instructors did well in delivering lessons and being accessible, there is still room to grow in creating a more engaging and student-focused online environment. The students didn't strongly praise or criticize their instructors—but the responses suggest they were mostly satisfied, with some areas that could still be improved.

Table 11. Technology in online learning

Item	N	Mean	Interpretation
The platform used was effectively structured.	121	3.58	Moderate
The technology used for online learning is reliable.	121	3.56	Moderate
Technical issues are infrequent and don't significantly impact my comprehension.	121	2.94	Moderate
The instructor's voice is clear and easily heard.	121	3.30	Moderate
I lack the necessary technological resources for online learning at home.	121	2.97	Moderate

Table 11 shows that the students had moderate experiences with technology during online learning. The learning platforms were seen as fairly well-structured (Mean = 3.58) and the technology was mostly reliable (Mean = 3.56). However, technical issues—while not constant—still created some

difficulty (Mean = 2.94). The instructor's voice was sometimes clear, sometimes not (Mean = 3.30), which affected understanding. Students also reported moderate issues with access to proper technology at home (Mean = 2.97), showing that not everyone had the tools like laptops or cameras to learn comfortably.

Table 12. Home learning environment for online classes

Item	N	Mean	Interpretation
I had a quiet workspace with a desk and chair.	121	3.26	Moderate
I felt that I lacked the necessary resources to complete my schoolwork at home.	121	3.26	Moderate
I enjoyed being in the comfort of my home while having online class sessions.	121	3.60	Moderate

When it came to their home learning environment, students had mixed moderate experiences (Table 12). Many didn't have an ideal place to study, giving a moderate score of 3.26 for having a quiet workspace. They also felt they were missing some resources to do their work properly from home (Mean = 3.26). However, most students appreciated the comfort of being at home, giving a score of 3.60 to that experience. This shows that even if conditions weren't perfect, learning from home still felt comfortable and flexible for many.

5. DISCUSSION

Online learning has become a regular part of university life after the pandemic, but students' feelings about it remain mixed. This study found that most students were not overwhelmed by strong emotions, but many still felt anxious, bored, or uncertain during their online classes. The levels of anxiety were moderate, but steady, especially when students worried about falling behind or not understanding lessons clearly. These findings are similar to those in Lebanon and Indonesia, where students also struggled with stress and uncertainty during online learning (Fawaz & Samaha, 2020; Landra et al., 2022). One reason for this continued anxiety is the limited interaction in online classes. Without face-to-face contact, students felt less supported and more alone in managing their studies. They could not always ask questions or get immediate help, which made some topics harder to grasp.

Although online platforms provide access to recorded lectures, they do not fully replace the comfort of real-time feedback or in-person encouragement. This mirrors findings from Alam et al. (2021) and Siddique et al. (2022), who highlighted how digital learning can lead to feelings of disconnection. Students' mixed emotions—such as anxiety and boredom—can influence how well they stay focused, participate, and retain information during online classes. These emotional states may also affect how lecturers teach, especially if students appear disengaged or stressed. Understanding this connection is important to improve both learning outcomes and teaching approaches in online settings.

Still, not all experiences were negative. Many students in this study said they enjoyed the convenience of studying from home. They appreciated being able to control their own learning schedule, which helped reduce pressure for some. This shows that while online learning can be emotionally challenging, it also offers freedom and flexibility that students value. In fact, students reported feeling more confident using digital tools after the pandemic—pointing to a positive outcome that supports Bojovic et al. (2020) and Sharma and Alam (2022), who emphasised the importance of well-designed online platforms in boosting learning experiences. Lecturers played a big part in shaping how students felt. Students generally thought their instructors explained things well and were available to help outside of class. However, some were unsure if their lecturers truly understood what they were going through or whether the online classroom felt welcoming. These responses echo the ideas of Baltà-Salvador et al. (2021) and Deng et al. (2021), who stressed the importance of emotional support and engagement in online teaching.

Technology and home environment also affected how students felt about learning online. The platforms were mostly reliable, but problems like unclear audio, occasional tech glitches, and limited

devices at home still made learning difficult for some. Many students did not have ideal study spaces, and some lacked basic tools like laptops or cameras. Yet, most said they enjoyed the comfort of studying at home, showing that convenience can still be a strong positive factor—even when resources are limited. These findings are similar to those of Thandevaraj et al. (2021) and Putra et al. (2020), who pointed out how home conditions and internet access can greatly shape learning experiences. The students were not entirely sure if they wanted online learning to continue long-term. They did not reject it, but they also didn't fully embrace it. This suggests a growing interest in hybrid learning—a combination of online and in-person teaching that could offer the flexibility of digital platforms with the personal connection of face-to-face interaction.

6. CONCLUSION

In conclusion, this study highlights the need for Malaysian universities to continue improving their online learning experience. Moving forward, it is important to create learning spaces that support students emotionally and practically, so they feel more connected, motivated, and ready to succeed in a digital learning environment.

CONFLICT OF INTEREST

We declare no conflict regarding the publication of the study.

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