

Students' Perception Regarding Mode of Learning in the Post COVID-19

Nur Faezah Jamal, Nurhasniza Idham Abu Hasan & Nor Mariyah Abdul Ghafar

College of Computing, Informatics and Mathematics, Universiti Teknologi MARA, Perak Branch, Tapah Campus, Malaysia.

DOI: <https://dx.doi.org/10.47772/IJRISS.2023.7880>

Received: 07 August 2023; Accepted: 17 August 2023; Published: 13 September 2023

ABSTRACT

The global pandemic of COVID-19 has impacted the educational system in the way teaching and learning are conducted. The outbreak is almost over now, and the implications of the transition from online learning back to face-to-face learning from the students' viewpoint need to be investigated to improve the education system. Thus, the purpose of this study is to explore students' perceptions of face-to-face and online learning in terms of their experiences and perspectives, including engagement in the classroom, learning enjoyment, and self-motivation while learning. 130 undergraduate students were involved in this cross-sectional study using the convenience sampling method. Results show that most students prefer blended and face-to-face learning compared to online learning, where learning enjoyment recorded the highest mean scores, followed by students' interaction and motivation. However, the students were more motivated during online learning, with the highest mean scores followed by learning enjoyment and interaction.

Keywords: COVID-19, face-to-face learning, motivation, online learning, students' perception.

INTRODUCTION

The first case of COVID-19 was reported in December 2019 in China and has become a global pandemic that has adversely affected many elements of life, culminating in the closure of borders around the world. As of May 2023, over 688 million cases of COVID-19 had been reported, with over 6.8 million deaths [1]. The spread of the COVID-19 virus has also impacted educational institutions around the world. The impact of COVID-19 on educational institutions has led to the cancellation of lectures and the closure of teaching facilities [2], and all learning activities have changed from face-to-face learning to online or hybrid learning, which has presented various challenges to students [3]. The spread of the COVID-19 virus has also had an impact on Malaysia's educational system. The Malaysian government has implemented many preventive measures, including the National COVID-19 Immunization Programme, which has been in place since the beginning of 2021, to address the issue of this pandemic among all Malaysian students. In line with the high rate of complete vaccination by students and staff of higher education institutions, the Malaysian government has announced the reopening of higher education institutions on March 1, 2022, where students will follow face-to-face learning again [4]. At this time, the COVID-19 outbreak is almost over, daily life has returned to normal, and attention needs to be paid to the transition back to face-to-face education and its implications. Nevertheless, most of the research directed at student transition related to the pandemic and post-pandemic education has focused on the challenges during the online transition [5-7]. Among the most important aspects to remember in learning are students' experiences and perspectives, which include student engagement in the classroom, learning enjoyment, and motivation.

Student engagement in the classroom can vary between face-to-face and online learning environments. Face-to-face learning in the classroom involves students in a variety of interactive activities such as discussion,

group work, conducting experiments, receiving feedback from the teacher directly, and being physically present in the class [8]. Whereas, in an online learning environment, student engagement is fostered through various strategies and tools, including interactive online platforms, collaborative projects [9], engagement of multimedia resources, and online assessment and feedback. The sudden transition to online teaching at the beginning of the spread of COVID-19 resulted in instructors not being prepared for online learning, due to a lack of training and support from universities [10]. Students also have problems at the beginning of online learning, including problems related to internet connection and performance of the learning management system (LMS) [11], as well as issues related to interaction with instructors and friends that have affected their unfamiliarity with the learning system [12]. After more than three years of fighting with COVID-19, many studies have had conducted stating that students see the experience of online interaction as something positive [9], [13-15]. On the other hand, studies report that students have less contact with their classmates when learning online [16] and less interaction with student-teachers in online learning [17].

Apart from student interaction in the classroom, learning enjoyment is also an important aspect of learning. Learning enjoyment can be defined as positive emotions experienced during learning, such as interest, pleasure, and satisfaction. It is a critical aspect of increasing student enthusiasm and participation in academic pursuits. Many studies have been conducted, reporting that students who experience a high level of learning enjoyment are likely to have better academic performance and a positive attitude toward learning [18,19]. [20] and [21] discovered that a good learning environment, teacher support, and student-centered teaching practices are major predictors of learning enjoyment. Similarly, a study by [22] revealed that the use of technology-enhanced learning, such as gamification and multimedia, was positively associated with learning enjoyment among students. All the studies that have been conducted show that students see the experience of learning as having a positive impact on academic performance and can increase self-motivation.

Motivation plays an important role in providing energy and maintaining positive student behavior to always be actively involved in the learning process, where it can influence the development of student learning [23,24]. Students who have high learning motivation can foster a positive attitude toward their learning, for example, by focusing on following the learning process, actively engaging in-class activities, always asking the teacher questions, and always having enough time to study [25]. According to research conducted by [26], the learning environment is a crucial component in helping students to have high motivation and self-control skills. In addition, many factors such as teacher-student relationships, classroom atmosphere, and teaching practices have been extensively studied to understand their effects on student motivation [27,28].

Although face-to-face learning has now been fully implemented, online learning and blended learning continue according to the needs of the course. Online learning providers, need more understanding of how students understand and respond to elements of blended learning, because students' perceptions and attitudes are important to motivate themselves to learn by applying this approach most effectively to improve learning [29]. Therefore, the importance of this research lies in the investigation of students' perceptions regarding the way of learning, either face-to-face or online, in this post-COVID-19 era. More specifically, the purpose of this study is to explore students' perceptions of face-to-face and online learning in terms of their experiences and perspectives, which include student engagement in the classroom, learning enjoyment, and self-motivation while learning. Therefore, students' experiences and perceptions of this issue may help improve the education system after the COVID-19 pandemic.

MATERIAL AND METHOD

Study design and sampling

A cross-sectional study using the convenience sampling method was conducted in this study, involving 130

undergraduate students who had experience conducting face-to-face and online learning. Data was collected in January 2023, involving students from the UiTM Perak Branch, Tapah Campus. The link to this survey is provided through two platforms, namely WhatsApp and Telegram Messenger. All respondents in this survey volunteered to participate and were asked to complete an online survey that took an average of 5 minutes.

Research instrument

In this study, the questionnaire contains 33 items that have been divided into two main parts: Part A: Demographic Profile (3 questions) and Part B: Student’s Perception of Online Learning (15 questions) and Face-to-Face Learning (15 questions), where the student’s perception includes aspects of engagement with both learning methods, student’s interaction, enjoyment of the learning experience and student motivation. A five-type Likert scale was used for respondents to choose between 1 (Strongly disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly agree).

Statistical analysis

In this study, descriptive statistics were calculated by using the mean score to analyze the interaction, learning environment, and motivation in learning between online learning and face-to-face learning. The internal consistency reliability of the questionnaire was tested using Cronbach’s alpha. According to [30], the consistency value of the reliability coefficient should be greater than 0.7. Table 1 shows that Cronbach’s alpha reliability test for items in each construct is above 0.8. Therefore, all items used to measure students’ perceptions of learning modes are sufficient and reliable.

Table 1. Cronbach Alpha for student’s perception of online learning and face-to-face learning

Indicator	Cronbach’s Alpha	
	Online learning	Face-to-face learning
Interaction	0.911	0.894
Learning enjoyment	0.936	0.939
Motivation	0.923	0.922

RESULT

Demographic background

In this study, a total of 130 participants completed the survey. Table 2 summarizes the socio-demographic characteristics of the respondents. Most of the respondents in this study are female, 77.7% of the total participants, while 22.3% of them are male. Concerning the CGPA, most participants’ CGPA from this study was 3.00 – 3.50 at 43.8%, followed by 3.50 – 4.00 at 28.5%. Meanwhile, the least of them get a CGPA of less than 2.50 with 6.2%.

Table 2. Socio-demographic characteristics of respondents

Characteristics	n=130	Percentage (%)
Gender		
Male	29	22.3
Female	101	77.7
CGPA		
<2.50	8	6.2

2.50 – 3.00	28	21.5
3.00 – 3.50	57	43.8
3.50 – 4.00	37	28.5

Figure 1 shows the respondents’ preference for their learning method. More than half (51.54%) of the respondents opted for the blended learning delivery method, which is the combination of face-to-face and online distance learning or pre-recorded video lecture. Meanwhile, 36.15% of the students preferred face-to-face learning, while only 12.31% prefer online learning.

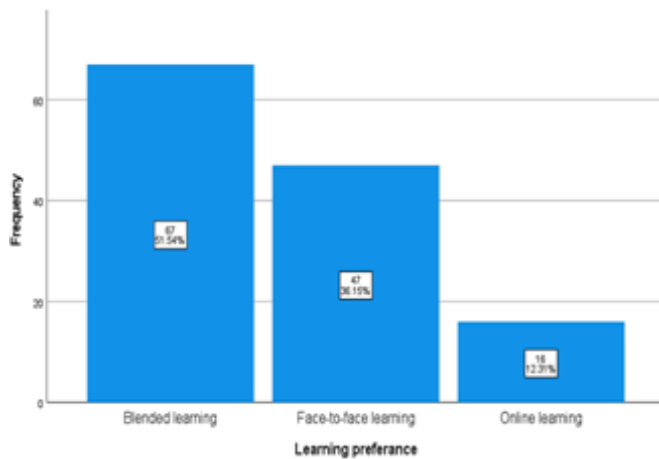


Fig. 1 Learning preference method

As depicted in Fig. 1, it shows that there is a significant difference between students who prefer blended or face-to-face learning and online learning. The results show that most students prefer face-to-face learning over online learning. Contributing factors to this issue will be discussed further in the next section.

Respondents’ Perceptions regarding online learning versus face-to-face learning

This study was conducted to see students’ preferences and perceptions of online and face-to-face learning, covering aspects of student interaction, enjoyment in the learning experience, and student motivation in learning. The results in Table 3 show that 50–63.9 percent of students strongly agreed and agreed that they easily interact with peers and instructors, and engagement during online learning and easy communication helped them manage their time. During online learning, 52.3–66.2 percent of students enjoy it. Meanwhile, 55.3–70 percent of the students supported the statement regarding online learning motivating them to get better marks.

Table 3. Students’ perception regarding Online Learning

Item	Items Description	Strongly Disagree & Disagree	Neutral	Strongly Agree & Agree
		n (%)	n (%)	n (%)
Interact1	I am more engaged in my class.	25 (19.3)	38 (29.2)	67 (51.5)
Interact2	I can easily communicate with the instructor and classmates.	29 (22.3)	36 (27.7)	65 (50.0)
Interact3	I have more opportunities to reflect on what I have learned.	15 (11.5)	32 (24.6)	83 (63.9)

Interact4	My classmates helped me a lot in completing the assignment.	15 (11.5)	43 (33.1)	72 (55.4)
Interact5	There are more time and opportunities to collaborate with my friends.	24 (18.5)	30 (23.1)	76 (58.5)
Enjoy1	I have fun learning with my classmates.	21 (16.1)	40 (30.8)	69 (53.0)
Enjoy2	I am happy when discussing assignments/group work together with my classmates.	21 (16.1)	41 (31.5)	68 (52.3)
Enjoy3	I enjoy the learning environment.	23 (17.7)	27 (20.8)	80 (61.6)
Enjoy4	I am happy to get fast feedback from the instructor.	16 (12.3)	28 (21.5)	86 (66.2)
Enjoy5	I enjoy being able to reflect on what I have learned.	14 (10.8)	30 (23.1)	86 (66.1)
Motivation1	I can improve my motivation and enthusiasm to complete the course	23 (16.2)	33 (25.4)	76 (58.4)
Motivation2	I got encouragement to learn from the instructor.	17 (13.1)	40 (30.8)	73 (56.2)
Motivation3	My friends give me support and encouragement during my studies.	22 (16.9)	36 (27.7)	72 (55.3)
Motivation4	I believe I can get a good grade in my study.	18 (13.8)	28 (21.5)	84 (64.6)
Motivation5	I believe I can complete all the assignments given by the instructor within the set time.	14 (10.8)	25 (19.2)	91 (70.0)

Table 4 shows the students' perception regarding face-to-face. It indicates that 74.6–81.6 percent of students strongly agreed and agreed that they easily interact with peers and instructors and engagement in face-to-face learning. During face-to-face learning, 76.9–85.4 percent of students enjoy face-to-face learning. Meanwhile, 70.7-79.3 percent of the students supported the statement regarding face-to-face learning motivating them to get better marks.

Table 4. Students' perception regarding face to face

Item	Items Description	Strongly Disagree & Disagree	Neutral	Strongly Agree & Agree
		n (%)	n (%)	n (%)
Interact1	I am more engaged in my class.	8 (6.1)	25 (19.2)	97 (74.7)
Interact2	I can easily communicate with the instructor and classmates.	3 (2.3)	21 (16.2)	106 (81.6)
Interact3	I have more opportunities to reflect on what I have learned.	7 (5.3)	26 (20.0)	97 (74.6)
Interact4	My classmates helped me a lot in completing the assignment.	4 (3.1)	22 (16.9)	94 (80.0)
Interact5	There are more time and opportunities to collaborate with my friends.	5 (5.4)	19 (14.6)	104 (80.0)
Enjoy1	I have fun learning with my classmates.	9 (6.9)	19 (14.6)	102 (78.4)

Enjoy2	I am happy when discussing assignments/group work together with my classmates.	7 (5.4)	22 (16.9)	101 (77.7)
Enjoy3	I enjoy the learning environment.	10 (7.7)	20 (15.4)	100 (76.9)
Enjoy4	I am happy to get fast feedback from instructors.	5 (3.8)	14 (10.8)	111 (85.4)
Enjoy5	I enjoy being able to reflect on what I have learned.	8 (6.1)	16 (12.3)	106 (81.5)
Motivation1	I can improve my motivation and enthusiasm to complete the course.	9 (6.9)	24 (18.5)	97 (74.6)
Motivation2	I got encouragement to learn from the instructor.	4 (3.0)	23 (17.7)	103 (79.3)
Motivation3	My friends give me support and Encouragement during my studies.	6 (4.6)	22 (16.9)	102 (78.5)
Motivation4	I believe I can get a good grade in my study.	10 (7.7)	29 (22.3)	91 (70.7)
Motivation5	I believe I can complete all the assignments given by the instructor within the set time.	3 (2.3)	34 (26.2)	93 (71.5)

To sum up, Fig. 2 reveals the mean scores for each construct (interaction, learning enjoyment, and motivation) for online versus face-to-face learning. The results demonstrate that the mean scores for face-to-face learning for all the constructs are slightly higher compared to online learning. Most of the students show that they enjoy learning face-to-face, with the highest mean scores followed by students' interaction and students' motivation. However, the students were more motivated during online learning, with the highest mean scores followed by learning enjoyment and interaction. Interaction during online learning and motivation for face-to-face learning is the lowest mean score for these two modes of learning.

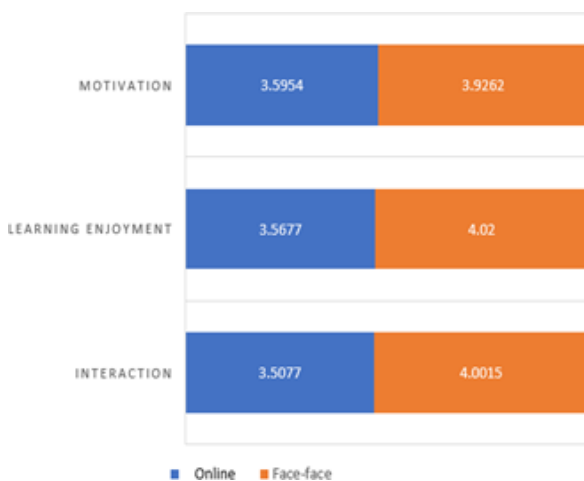


Fig. 2. Mean scores for motivation, learning environment, and interaction between online and face-face learning

DISCUSSION

Before the outbreak of the COVID-19 pandemic, most instructors had no experience teaching online and had made face-to-face learning their main method of learning. In 2020, after the outbreak of the COVID-19

pandemic, all universities and schools in the world used online teaching modes. This is a new challenge for instructors in this change in teaching mode [31]. Although the COVID-19 pandemic has a variety of perceptions and implications on educational institutions, this study highlights several features of the experience gained while performing online learning that can be used to better face-to-face activities.

Based on the results that have been conducted, most participants claim that they do not like online learning and prefer blended and face-to-face learning. This selection is based on the factor of clearer understanding and easier to understand a subject if implemented face-to-face which can further increase the academic achievement of students. This result has been supported by the study of [32], who claim that the main reasons for choosing face-to-face learning are classroom interaction with peers, relationships with the faculty, and course content. In addition, several previous studies have been conducted showing that students often have a negative perception of online learning because of various problems encountered, and often they cannot overcome these difficulties and challenges [33,34], including constraints such as internet connection, lack of necessary electronic devices, interaction constraints between instructors and students, a lack of support and encouragement from parents, and no suitable space for learning [35-37].

The main goal of this study is to explore students' perceptions of face-to-face and online learning in terms of their experiences and perspectives, which include student engagement in the classroom, learning enjoyment, and self-motivation while learning. In terms of aspects of student interaction and involvement in the classroom during online learning, the results of the study show that around 50% to 64% of students state that they strongly agree and agree, while face-to-face learning shows that around 75% to 82% claim that they strongly agree and agree that they easily interact with peers and instructors while learning. The percentage of this study shows that it is easier for students to interact with instructors and peers through face-to-face learning than online learning. The outcomes of this study are consistent with the findings of [32], emphasizing the importance of interacting with peers and the faculty to improve student learning through immediate feedback. During online learning, the researcher highlights the flaws and takes a long time to receive feedback from the faculty. In addition, if there is less connection between instructors and peers, online learning generally results in decreased student engagement and satisfaction [38,39]. It can be stated that interaction between students and instructors plays a vital role in not only improving learning performance but also increasing student satisfaction with their learning.

Apart from the interaction of students with the instructor, another aspect that has been studied is the enjoyment of learning. According to the results of this study, around 52% to 66% and 77% to 85% of students agree that they are happy to learn online and face-to-face, respectively. Online learning provides a significant portion of the enjoyment of face-to-face learning. This study is also like the results of a study conducted by [40], who claim that the fun of learning on campus face-to-face can integrate learning pedagogy, instructor involvement, a safe learning space, and a low-pressure environment. Nevertheless, this study shows a relatively high percentage of enjoyment of online learning due to online classes being very beneficial for students in dealing with the situation of COVID-19 pandemic [41], although some issues arise when conducting online classes [42] such as internet constraints, financial problems, and environmental problems that can reduce the level of enjoyment of learning.

This study also revealed that motivational needs in students are essential for both learning methods, whether face-to-face or online. The results of this study show that students agree that encouragement to learn from the instructor can increase motivation by around 55% to 70% to learn online and by 71% to 79% to learn face-to-face. Through this study, it is revealed that both of these learning methods require high motivation and encouragement to learn. Academic self-efficacy serves as a motivational force to encourage students to use more learning strategies and improve their cognitive efficiency to deal with challenges in learning [43]. Therefore, students who have high academic self-efficacy will show high involvement in their learning activities, whether learning online or face-to-face. In addition, a study by [44] revealed that students'

motivation towards online learning is intrinsically more influenced by their ambition to learn new knowledge and the fun of experiencing new learning methods. According to [45], motivation should be investigated, particularly in online learning, because students participate less in online classrooms, which leads to a decline in motivation and passion for learning. Even though the tendency of students to learn through these two methods still requires a high level of motivation to achieve excellent goals and achievements in their learning.

CONCLUSION

The impact of the COVID-19 pandemic has sparked a new revolution in the country's education system that introduces online learning. Despite the many constraints faced during this pandemic, educational institutions are still able to deal with the changes that occur. In this study, it has been revealed that the three aspects studied, namely interaction in the classroom, learning enjoyment, and self-motivation of the students, play a very important role in the learning of a student, whether learning online or face-to-face. The findings of the study show a deep interest in both methods at the same time because they get good benefits from both of them. Therefore, the findings from the study hope to help educational institutions better understand the needs and perceptions of students in achieving their ambitions to succeed in their studies and to be able to upgrade the education system, especially in Malaysia.

ACKNOWLEDGEMENT

The authors would like to express their gratitude to the researchers and all the students who have provided their feedback in this survey. All contributions are greatly appreciated and gratefully acknowledged.

REFERENCES

1. Worldometer.(2023).Number of deaths cases, Covid-19 Coronavirus Pandemic <https://www.worldometers.info/coronavirus/>
2. Marinoni, G., Van't Land, H., & Jensen, T. (2020). The impact of Covid-19 on higher education around the world. *IAU global survey report*, 23, 1-17.
3. Lemay, D. J., Bazalais, P., & Doleck, T. (2021). Transition to online learning during the COVID-19 pandemic. *Interactive Learning Environments*, 1-12.
4. FMT. (2022) Tertiary students can return to campus from March 1. Retrieved from <https://www.freemalaysiatoday.com/category/nation/2022/02/09/tertiary-students-can-return-to-campus-from-march-1/> (Accessed on 10 May 2023)
5. Saikat, S., Dhillon, J. S., Wan Ahmad, W. F., & Jamaluddin, R. A. D. (2021). A systematic review of the benefits and challenges of mobile learning during the COVID-19 pandemic. *Education Sciences*, 11(9), 459.
6. Gupta, R., Aggarwal, A., Sable, D., Chahar, P., Sharma, A., Kumari, A., & Maji, R. (2022). Covid-19 pandemic and online education: Impact on students, parents and teachers. *Journal of Human Behavior in the Social Environment*, 32(4), 426-449.
7. Szopiński, T., & Bachnik, K. (2022). Student evaluation of online learning during the COVID-19 pandemic. *Technological Forecasting and Social Change*, 174, 121203.
8. Tsang, J. T., So, M. K., Chong, A. C., Lam, B. S., & Chu, A. M. (2021). Higher education during the pandemic: The predictive factors of learning effectiveness in COVID-19 online learning. *Education Sciences*, 11(8), 446.
9. Amrullah, A., & Nanzah, Z. (2022). Student-student interaction in an online learning during the covid-19 pandemic. *Journal of Applied Studies in Language*, 6(1), 37-45.
10. Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, 49(1), 91-96.
11. Naddeo, A., Califano, R., & Fiorillo, I. (2021). Identifying factors that influenced well-being and

- learning effectiveness during the sudden transition into eLearning due to the COVID-19 lockdown. *Work*, 68(1), 45-67.
12. Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The internet and higher education*, 7(1), 59-70.
 13. Ayanbode, O. F., Fagbe, A., Owolabi, R., Oladipo, S., & Ewulo, O. R. (2022). Students' interactions, satisfaction and perceived progress in an online class: Empirical evidence from Babcock University Nigeria. *Cogent Education*, 9(1), 2060783.
 14. Liu, X., Zhang, Y., & Zhao, D. (2022, May). What Is the Status of Interactions in University Online Teaching? A Survey on 371 Students. In *Proceedings of the 7th International Conference on Distance Education and Learning*(pp. 150-156).
 15. Nurtaat, L., Fadri, M., & Nanzah, Z. (2022). Student-Student Interaction in Online Learning during the COVID-19 Pandemic: A Case Study.
 16. Hollister, B., Nair, P., Hill-Lindsay, S., & Chukoskie, L. (2022). Engagement in online learning: student attitudes and behavior during COVID-19. In *Frontiers in Education*(Vol. 7, p. 851019). Frontiers Media SA.
 17. Kamble, A., Gauba, R., Desai, S., & Golhar, D. (2021). Learners' perception of the transition to instructor-led online learning environments: Facilitators and barriers during the COVID-19 pandemic. *International Review of Research in Open and Distributed Learning*, 22(1), 199-215.
 18. Mao, P., Cai, Z., He, J., Chen, X., & Fan, X. (2021). The relationship between attitude toward science and academic achievement in science: A three-level meta-analysis. *Frontiers in Psychology*, 12, 784068.
 19. Li, S., Xu, M., Zhang, Y., & Wang, X. (2023). The more academic burnout students got, the more problematic mobile phone use they suffered? A meta-analysis of mainland Chinese adolescents and young adults. *Frontiers in Psychology*, 13, 1084424.
 20. Martin, A. J., Colmar, S. H., Davey, L. A., & Marsh, H. W. (2010). Longitudinal modelling of academic buoyancy and motivation: Do the 5Cs hold up over time?. *British Journal of Educational Psychology*, 80(3), 473-496.
 21. Ma, L., Luo, H., & Xiao, L. (2021). Perceived teacher support, self-concept, enjoyment and achievement in reading: A multilevel mediation model based on PISA 2018. *Learning and Individual Differences*, 85, 101947.
 22. Recabarren, M., Corvalán, B., & Villegas, M. (2021). Exploring the differences between gamer and non-gamer students in the effects of gamification on their motivation and learning. *Interactive Learning Environments*, 1-14.
 23. Velayutham, S., Aldridge, J., & Afari, E. (2013). Students' learning environment, motivation and self-regulation: A comparative structural equation modeling analysis. In *Application of structural equation modeling in educational research and practice*(pp. 115-133). Brill.
 24. Law, K. M., Geng, S., & Li, T. (2019). Student enrollment, motivation and learning performance in a blended learning environment: The mediating effects of social, teaching, and cognitive presence. *Computers & Education*, 136, 1-12.
 25. Maison, Kurniawan, D. A., and Solihah, L. R., "Description of the Attitudes of Public Senior High School Students in Physics Subjects (in Bahasa)," *Edusains*, vol. 10, no. 1, pp. 160-167, 2018.
 26. Baeten, M., Dochy, F., & Struyven, K. (2013). The effects of different learning environments on students' motivation for learning and their achievement. *British journal of educational Psychology*, 83 (3), 484-501.
 27. Wentzel, K. R. (2012). Teacher-student relationships and adolescent competence at school. In *Interpersonal relationships in education*(pp. 17-36). Brill.
 28. Skinner, E. A., & Belmont, M. J. (2019). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of educational psychology*, 111(6), 1022-1033.
 29. Koohang, A., & Durante, A. (2003). Learners' perceptions toward the web-based distance learning activities/assignments portion of an undergraduate hybrid instructional model. *Journal of Information Technology Education: Research*

- , 2(1), 105-113.
30. Kline, P. (Ed.). (2000). *A psychometrics primer*. London, England: Free Association Books.
 31. Hong, J. C., Liu, X., Cao, W., Tai, K. H., & Zhao, L. (2022). Effects of self-efficacy and online learning mind states on learning ineffectiveness during the COVID-19 lockdown. *Educational Technology & Society*, 25(1), 142-154.
 32. Mather, M., & Sarkans, A. (2018). Student perceptions of online and face-to-face learning. *International Journal of Curriculum and Instruction*, 10(2), 61-76.
 33. Besser, A., Flett, G. L., & Zeigler-Hill, V. (2022). Adaptability to a sudden transition to online learning during the COVID-19 pandemic: Understanding the challenges for students. *Scholarship of Teaching and Learning in Psychology*, 8(2), 85.
 34. Paechter, M., Maier, B., & Macher, D. (2010). Students' expectations of, and experiences in e-learning: Their relation to learning achievements and course satisfaction. *Computers & education*, 54(1), 222-229.
 35. Almendingen, K., Morseth, M. S., Gjølstad, E., Brevik, A., & Tørris, C. (2021). Student's experiences with online teaching following COVID-19 lockdown: A mixed methods explorative study. *PloS one*, 16(8), e0250378.
 36. Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online learning and emergency remote teaching: Opportunities and challenges in emergency situations. *Societies*, 10(4), 86.
 37. Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak. *Journal of Risk and financial management*, 13(3), 55.
 38. Martin, F., Wang, C., & Sadaf, A. (2018). Student perception of helpfulness of facilitation strategies that enhance instructor presence, connectedness, engagement and learning in online courses. *The Internet and Higher Education*, 37, 52-65.
 39. Rahmatpour, P., Peyrovi, H., & Sharif Nia, H. (2021). Development and psychometric evaluation of postgraduate nursing student academic satisfaction scale. *Nursing Open*, 8(3), 1145-1156.
 40. Whitton, N., & Langan, M. (2018). Fun and games in higher education: an analysis of UK student perspectives. *Teaching in Higher Education*.
 41. Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of educational technology systems*, 49(1), 5-22.
 42. Al-Amin, M., Zubayer, A., Deb, A., & Hasan, B. M. (2021): Status of Tertiary Level Online Class in Bangladesh: Students' Response on Preparedness, Participation and Classroom Activities.
 43. Zhen, R., Liu, R. D., Ding, Y., Wang, J., Liu, Y., & Xu, L. (2017). The mediating roles of academic self-efficacy and academic emotions in the relation between basic psychological needs satisfaction and learning engagement among Chinese adolescent students. *Learning and individual differences*, 54, 210-216.
 44. Gustiani, S. (2020). Students' motivation in online learning during covid-19 pandemic era: A case study. *Holistics (Hospitality and Linguistics): Jurnal Ilmiah Bahasa Inggris*, 12(2).
 45. Kyewski, E., & Krämer, N. C. (2018). To gamify or not to gamify? An experimental field study of the influence of badges on motivation, activity, and performance in an online learning course. *Computers & Education*, 118, 25-37.