ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue X, October 2025

Student Preferences towards Online Learning in Open University Malaysia

Mariatul Liza Meor Gheda, Suhaila Abdul Hamid, Nurul Fairuz Buang, Nor Aisyah Fadil, Nor Aslina Abd Jalil

Faculty of Technology and Applied Sciences, Open University Malaysia

DOI: https://doi.org/10.51583/IJLTEMAS.2025.1410000056

Received: 17 September 2025; Accepted: 26 September 2025; Published: 10 November 2025

Abstract: Countries all across the world have been placed under lockdown as a result of the unexpected emergence of the worldwide health disaster known as the Coronavirus Disease (or COVID-19). The crisis has also put the world's educational systems under strain, forcing academics to switch from face to face to online learning. Open and Distance Learning (ODL) method is one of the most suitable strategies that integrates virtual technology which consequently allows the continuation of the teaching and learning process. As an open university that already has ODL, learning methods and student service should be more robust. Quantitative research was conducted using a 34-item questionnaire to explore the challenges students face in the context of online learning; and to identify the student's preferences for their convenience for the adoption of quality improvement in online learning. Data was collected from sixty-four (64) postgraduates students enrolled in the Faculty of Technology and Applied Sciences, Open University Malaysia. The study revealed that staying motivated and engaged in online classes, with a Relative Importance Index (RII) of 0.6188, stands out as the most significant challenge for the students. On a positive note, the availability of clear learning objectives, with the highest RII of 0.8188, emerged as the top preference among students for adopting quality improvement in online learning. These findings underscore the importance of addressing motivational factors and emphasising clear learning objectives to enhance the overall online learning experience.

Keywords: online learning, open distance learning, student challenges, student preferences

I. Introduction

In the last two decades, the landscape of education has swiftly evolved, propelled by significant advancements in the understanding of learning processes (Dervan *et al.*, 2006). While online learning in open distance settings offers unprecedented opportunities for education, it is crucial to recognise that not all students may embrace this mode of learning with the same enthusiasm. The evolving nature of technology and the diverse backgrounds of students contribute to a wide spectrum of preferences and attitudes towards online learning. The problem at hand lies in comprehensively understanding and addressing the factors that influence student preferences in the context of open distance learning. Some students may thrive in the digital world, finding it conducive to their learning method, while others may encounter challenges or harbour reservations that impede their engagement with online educational platforms. Identifying these factors is essential for developing effective strategies that cater to the diverse needs of students, ensuring that open distance learning (ODL) remains an inclusive and effective mode of education for all. Understanding user experiences and emotions in the online learning environment has become crucial through direct reviews, surveys, and feedback (Liu *et al.*, 2016). Technological challenges arise from unreliable internet connections and insufficient digital equipment, while social challenges stem from a lack of family support, conflicting roles, emotional needs, and unfavorable learning environments (Kamaludin & Sundasen, 2023). Thus, adopting online learning in open-distance settings offers special potential as education changes to keep up with technology advancements. To ensure the inclusion and efficacy of open distance learning, it is imperative to acknowledge and tackle a range of student choices, technological obstacles, and societal considerations.

Hence, this research aimed to investigate the students' challenges in online learning and to identify the students' preferences for their convenience for the adoption of quality improvement in online learning. This research sought to unravel the complexities surrounding student preferences towards online learning in open distance education, thereby contributing valuable insights to the ongoing discourse on the future of education.

II. Literature Review

Open and Distance Learning (ODL) is a mode of education that provides flexible and accessible learning opportunities, allowing students to study remotely and at their own pace. Traxler (2018) highlighted the significant potential of formal distance education to broaden access to higher education and enhance student diversity through the flexibility provided by online technologies. The ability to learn anywhere and anytime from diverse sources contributes to this potential. The integration of new technologies fosters collaboration on both global and local scales. However, Traxler acknowledges a conservative culture within European higher education that necessitates change, particularly in recognizing the challenges posed by innovative models like open online courses (Clegg, Hudson & Steel, 2003). The incorporation of technology in education is seen as a response to market demands, as institutions use online and distance learning to extend their reach.

To ensure the success of an ODL class, collaboration among students is crucial, given the flexibility and practicality of this learning approach, which ideally fosters enthusiasm for studying. However, the effectiveness of ODL hinges on addressing fundamental questions concerning what to teach, how to teach, and the provision of necessary educational infrastructure within a

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue X, October 2025

country. Gray and DiLoreto (2016). underscored the importance of factors such as student consent and the satisfaction of both students and educators, recognizing their pivotal role in sustaining the success of ODL. Despite the benefits, students have identified challenges concerning internet stability, network coverage and device compatibility (Samat *et al*., 2020; Wikramanayake, 2014). Moreover, unique issues emerge inside every nation. Limited research has been conducted in Malaysia that focuses just on ODL, particularly on students happiness and commitment to the online approach. The recent global health crisis, as emphasised by Mohamad *et al.* (2020), has reinforced the importance for extensive and comprehensive study in this field.

In order to optimize the benefits of ODL, students must shift from traditional perspectives and embrace the expansive opportunities offered by technology. The integration of technology into ODL facilitates access to a plethora of new resources, potentially enhancing the educational process and leading to increased satisfaction among students. Universities and colleges play a pivotal role in ensuring student satisfaction by emphasizing the utility and significant value of ODL. According to Lin and Wang (2012), to enhance students' perceived usefulness of ODL, instructors must share high-quality teaching materials and promote effective interactivity through ODL platforms. Alqurashi (2019) found that self-efficacy and learner satisfaction are crucial factors affecting students' perceived learning outcomes, thus stressing the importance of fostering student confidence in ODL platforms. This collaborative effort between instructors and students is vital to create an enjoyable and effective learning experience, emphasizing the importance of both parties embracing technology for its full potential in teaching and learning (Nasir & Hameed, 2021). Martin and Bolliger (2018) highlighted various engagement strategies, such as instructor presence and active learning, as critical to maintaining student interest and improving outcomes. Additionally, Devisakti and Ramayah (2021) explored the role of sense of belonging and grit in the effective use of e-learning portals, emphasizing that fostering a sense of community and persistence is essential for successful learning experiences in higher education. Furthermore, Kahu and Nelson (2018) emphasized the significance of emotional, behavioral, and cognitive engagement, noting the role of supportive environments in promoting meaningful interactions. In brief, fostering a productive learning environment requires cooperation among students and instructors, supportive institutions, cutting-edge technology, and efficient teamwork.

This literature review examined the evolving landscape of online learning in higher education, which has experienced a significant shift in recent years. Focused on understanding student preferences, the review covers various dimensions, including clear learning objectives, video recording, structured content, flexibility, self-paced learning, visual content, online support, Learning Management Systems (LMS), EdTech enhancement, real-time discussion, and engagement. Clear learning objectives are fundamental in guiding students through their online learning experiences. According to Lee and Choi (2011), recent research emphasised the importance of well-defined objectives and results in online courses and emphasises their critical role in raising student motivation and engagement. The incorporation of video recordings in online courses has become a popular instructional method. Recent research highlighted the positive impact of video content on student comprehension, engagement and overall satisfaction (Guo *et al.*, 2014). This literature reviews synthesised findings on the use of video recording as an effective tool for delivering the course content and explored best practices in creating engaging and pedagogically sound video materials. The analysis underscores the fundamental role of clear learning objectives in guiding online learners and emphasizes the positive impact of video recording on comprehension and engagement. It explores the significance of structured content in facilitating effective learning outcomes and the influence of flexible course structures on student satisfaction. The concept of self-paced learning is discussed in the context of accommodating diverse learner needs. The review highlighted the importance of visual elements in enhancing comprehension and engagement and emphasised the role of online support services, LMS, and EdTech in shaping student preferences. Educational technology (EdTech) continues to evolve, offering innovative tools and resources to enhance online learning. Recent studies investigate the impact of EdTech enhancements, such as gamification, virtual reality, and adaptive learning platforms, on student engagement and outcomes (Huang *et al.*, 2021). The research results on the use of EdTech in online higher education and its effects on student preferences are compiled in this review of the literature. It also explores how to improve student involvement in the online higher education environment by implementing real-time discussions and initiatives. In conclusion, the study presents a comprehensive analysis of current studies and offers insightful information about how the field of online education is changing. In order to better meet and surpass student expectations, it also makes recommendations for directions for further study and advancements.

III. Methodology

This preliminary study employed quantitative research method, employing online survey techniques to collect data while prioritising logical reasoning, numerical analysis, and maintaining objectivity in its operations, as emphasised by Mohajan (2020). The study opted for purposive sampling, aligning with the recommendations of Etikan *et al.* (2016), who underscored the strategic selection of respondents possessing specific characteristics relevant to the study's objectives. This sampling approach was chosen to ensure a targeted and purposeful selection of participants for the research. Students from postgraduate program in Faculty of Technology and Applied Sciences, Open University Malaysia were involved as the target sample. In order to guarantee a homogeneous sample selection, the researchers used two (2) criteria: (i) enrolment in master's programmes in the scientific field, such as Master of Project Management (MPM), Master of Facility Management (MFM), Master of Safety and Health Risk Management (MOSRHM), and Master of Quality Management (MQM), and (ii) status as a second-year student. The quantitative data was analysed using SPSS. The utilisation of the Cronbach's alpha coefficient in evaluating the internal consistency of survey items underscores the exceptional reliability of both constructs, where excellent (0.90 and above), good (0.80 – 0.89), acceptable (0.70 – 0.79), questionable (0.6 – 0.69), poor (0.5 – 0.59) and unacceptable (less than 0.59) (Mallery & George, 2003). The

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue X, October 2025

researchers concurred with Rooshdi *et al.* (2018) in using the Relative Importance Index (RII) for assessing the significance of Student Challenges in Online Learning and Students Preferences in Adoption of Quality Improvement in Online Learning. Five (5) importance levels are derived from RII values from high (H) (0.8 < RI < 1), high-medium (H–M) (0.6 <RI < 0.8), medium (M) (0.4 < RI <0.6), medium-low (M-L) (0.2 <RI < 0.4) and low (L) (0 < RI < 0.2) as described by Chen *et al.* (2010), offered a thorough framework for assessing these factors.

IV. Results

This section presents the findings from the survey carried out. The Cronbach's alpha coefficient, used to evaluate the internal consistency of items in the online survey, indicates exceptional reliability for both constructs. The values surpass 0.89 and 0.915, as illustrated in Table 1, emphasising the robust internal consistency of the data gathered from the online survey.

Table 1: Reliability results

Constructs	**Cronbach's Alpha**	**Number of Items**
Student Challenges in Online Learning	0.890	14
Students Preferences in Adoption of Quality Improvement in Online Learning	0.915	20

Table 2 shown the program enrolled by the respondents. MOSHRM has the highest representation among respondents, accounting for 48.4% of the total.

Table 2: Program enrolled

Program	**Frequency**	**Percentage**
MPM	20	31.3
MOSHRM	31	48.4
MQM	9	14.1
MFM	4	6.3

Table 3 shows the majority of respondents (89.1%) predominantly use laptops for online learning. Both tablets and desktops have a relatively low percentage of usage (3.1% each), indicating that they are less favoured for online learning compared to laptops. While not as predominant as laptops, smartphones still show a moderate level of usage (4.7%). This suggests that a portion of respondents relies on smartphones for online learning.

Table 3: Device typically utilised for online learning.

Device	**Frequency**	**Percentage**
Laptop	57	89.1
Tablet	2	3.1
Desktop	2	3.1
Smartphone	3	4.7

Table 4 shown the findings on the respondents degree of comfort with online learning. The high percentages for "Comfortable" (45.3%) and "Very Comfortable" (42.2%) categories highlight the overall positive sentiment and acceptance of online learning among the surveyed population. The low percentage in the "Not Comfortable at All" (1.6%) category indicates that a vast majority of respondents feel at least somewhat comfortable with online learning, with a minimal proportion expressing strong discomfort.

Table 4: Degree of comfort with online learning

Degree of comfort	**Frequency**	**Percentage**
Very comfortable	27	42.2
Comfortable	29	45.3
Somewhat comfortable	7	10.9
Not comfortable at all	1	1.6

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue X, October 2025

Table 5 data revealed that individual assignments are the most preferred method, with a substantial percentage of 73.4%. Group assignments and project-based learning have lower percentages at 10.9% and 6.3%, respectively. The data suggests a strong inclination towards individualised learning approaches, indicating that respondents find personal engagement more prevalent in activities like individual assignments compared to collaborative or project-based methods.

Table 5: Methods engage personally to learn digitally

Methods	**Frequency**	**Percentage**
Individual assignment	47	73.4
Group assignment	7	10.9
Project based learning	4	6.3
Assignment with presentation	6	9.4

Table 6 shows that the Learning Management System (LMS) is the predominant choice, with 9.4%, while social media has a lower percentage at 1.6%.

Table 6: The communication of class updates, discussions, and interaction preferences

Type of Communication	**Frequency**	**Percentage**
Social Media	31	1.6
LMS	33	9.4

In this study, students were asked to state the extent to which they agreed or disagreed* with a series of statements about the challenges in online learning and these findings are summarised in Table 7.

Table 7: Student's challenges in online learning

Item	**RII**	**Rank**
Staying motivated and engaged in online classes is a challenge for me.	0.6188	1
Collaborating with peers in online group projects is challenging.	0.6000	2
I have experienced technical issues (e.g., internet connectivity) during online learning.	0.5750	3
The volume of coursework in online courses can be overwhelming.	0.5750	3
Lack of educational technology (EdTech) online learning for special needs of students	0.5750	3
Managing my time effectively when learning online is difficult.	0.5688	4
Finding a suitable study environment at home for online learning is a challenge.	0.5156	5
I feel isolated and lack a sense of community in online courses.	0.5094	6
There are Issues with the accessibility and usability of the learning management system	0.4906	7
Online exam proctoring or invigilation processes create difficulties for me.	0.4781	8
I lack of discipline to participate in online class	0.4719	9
Adapting to the online learning environment has been stressful for me.	0.4594	10
The university has insufficient equipment and facilities to support online learning.	0.4500	11
The communication of class updates, discussions, and interaction preferences	0.3031	12

The data findings, presented as Relative Importance Index (RII) scores and corresponding ranks, provide insights into the challenges faced by students in online learning. Table 7 demonstrates that the highest-ranked challenge, with an RII of 0.6188, is staying motivated and engaged in online classes, highlighting the significant struggle students face in maintaining focus and enthusiasm in virtual learning environments. Collaborating with peers in online group projects follows closely as the second-ranked challenge (RII = 0.6000), emphasising the difficulties associated with virtual teamwork. Technical issues during online learning, the overwhelming volume of coursework, and the lack of educational technology for special needs are all equally ranked as the third most challenging aspects (RII = 0.5750). Notably, the communication of class updates, discussions, and interaction preferences is perceived as the least challenging aspect (RII = 0.3031), suggesting relative satisfaction in this particular dimension of online courses. Overall, these findings highlight the multifaceted nature of online learning issues, underlining the importance

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue X, October 2025

of tailored interventions to improve motivation, collaboration, technical support, and overall student experience in virtual education.

In addition, The Relative Importance Index (RII) study has also been used to identify the students' preferences for their convenience for the adoption of quality improvement in online learning. Table 8 showed clear learning objectives, with an RII of 0.8188 and ranking first, are highly valued by students, emphasising the importance of well-defined goals in enhancing the online learning experience. Class video recording, with an impressive RII of 0.9375 and securing the second position, is deemed crucial for revision, highlighting the significance of flexibility and access to course materials. The preference for structured and organised content, with an RII of 0.9031 and ranking third, underscores the importance of logically arranged course materials. Notable preferences include flexibility in accessing course materials (RII = 0.9000) and a preference for self-paced learning (RII = 0.8906), emphasising convenience and autonomy. The use of visual content (RII = 0.8844) is also highlighted for its value in enhancing the learner's experience. Areas of improvement include online class attendance (RII = 0.7656) and gamified elements (RII = 0.8188), indicating varying levels of student interest. Continuous assessment and a mix of assessment types (RII = 0.8281/0.8219) are considered important but rank twelfth and thirteenth, indicating a moderate preference. Overall, these findings emphasised on the importance of prioritising clear learning objectives, video recording, and well-structured content while continuously refining and adapting assessment strategies to meet students' evolving preferences in the online learning environment.

Table 8: Students' preferences in adoption of quality improvement in online learning

Item	**RII**	**Rank**
The availability of clear learning objectives enhances my online learning experience.	0.8188	1
The class video recording is important to me for my revision.	0.9375	2
Content more structured and organised in simple way and easy to understand.	0.9031	3
The flexibility to access course materials at any time and from any device is important to me.	0.9000	4
I prefer online courses that allow me to self-pace my learning to fit my schedule.	0.8906	5
The use of visual content helping in enhancing learner's experience (teaching slides, video etc)	0.8844	6
The availability of online support resources (e.g., tutoring, technical assistance) is crucial for my success in online learning.	0.8750	7
Real-time discussion and Q&A sessions with instructors are valuable in online courses.	0.8750	7
The availability of well-structured and organized course materials is essential for my learning experience.	0.8750	7
Having access to additional supplementary materials for in-depth study is beneficial for my learning.	0.8719	8
EdTech tools need to be tailored to the needs of special needs students.	0.8656	9
Regular and timely feedback from instructors is essential for my online learning success.	0.8625	10
The option to choose from a variety of multimedia resources (e.g., videos, interactive content) positively impacts my learning.	0.8625	10
The option to interact with peers and engage in group projects enhances my online learning experience.	0.8531	11
Continuous assessment, rather than just end-of-term exams, promotes a deeper understanding of course content.	0.8281	12
I believe that online courses should offer a mix of self-assessment and end-of-term exams.	0.8219	13
The option to choose between shorter and longer online courses according to my needs is important to me.	0.8219	13
The inclusion of gamified elements (e.g., quizzes, challenges) in online courses makes earning more engaging.	0.8188	14
The online class attendance is an important predictor of my academic success.	0.7656	15

V. Discussion

Staying motivated and engaged underscores the considerable struggle students face in maintaining focus in virtual learning, supported by recent research (Smith *et al.*, 2023). Collaborating with peers in online group projects highlighted the complexities of virtual teamwork, aligning with studies on the challenges of collaborative learning in online environments (Lu *et al.*, 2022). The equal ranking of technical issues, overwhelming coursework and inadequate educational technology as the third most challenging aspects accentuates the multifaceted nature of difficulties encountered by learners, substantiated by current literature (Brown & Johnson, 2022). The perception of communication aspects as the least challenging aligns with a relative satisfaction in this dimension of online courses, as suggested by existing research (Jones & White, 2021). In summary, students in online

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue X, October 2025

learning face with challenges related to motivation, virtual teamwork, technical issues, coursework load, and communication dynamics.

Students' preferences for clear learning objectives as the highest-ranked preference resonate with the significance of well-defined goals in enhancing the online learning experience, supported by recent studies (Brown & Johnson, 2022). The crucial role of class video recording for revision, securing the second position, aligns with findings emphasizing the importance of flexible access to course materials (Wang *et al.*, 2023). The preference for structured and organised content as the third-ranked preference underscored the importance of logically arranged course materials, corroborated by current literature on effective content design (Kizilcec *et al.*, 2017). Notable preferences, including flexibility in accessing course materials and a preference for self-paced learning, highlight the significance of convenience and autonomy, consistent with research on the advantages of flexible course structures (Betts et al., 2020). The emphasis on the use of visual content for enhancing the learner's experience aligns with the recognition of visual elements in improving comprehension and engagement in online courses (Mayer, 2019). Areas of improvement, such as online class attendance and gamified elements indicate varying student interest and preferences, necessitating ongoing refinement in these aspects. Continuous assessment and a mix of assessment types are considered important but rank twelfth and thirteenth, indicating a moderate preference for diverse assessment strategies (Vahed *et al.*, 2021). Thus, it is essential to ensure quality improvement in online learning through clearly defined learning objectives, flexible access to course materials, organized content, autonomy and flexibility, visual content, and continual improvement in response to varied student preferences.

Sadeghi (2019) stated that the future potential for distant education are limitless. Clearly, ODL education programmes and courses are here to stay and will grow in the future, but there are still many uncertain issues to be clarified and investigated. The quality of instruction has a significant impact on student satisfaction. This is a very significant concern for university administrators and decision-makers who may organise distance learning so that they can give continual guidance and improvement plans for teaching personnel.

VI. Conclusion

The integration of online learning platforms has revolutionized education, offering students unprecedented flexibility and accessibility to educational resources. This transformative shift has fundamentally altered how students engage with their academic pursuits. Recognizing student preferences in the realm of online learning, particularly within the context of ODL, is imperative for educational institutions, policymakers, and educators. This study reveals that students' preferences align with established literature, highlighting the crucial role of motivation in fostering engagement in online classes. Additionally, it underscores the significance of clear learning objectives as a key factor in ensuring the high-quality delivery of online learning experiences. While acknowledging the promising future of ODL education, the conclusion underscores the necessity for further research to address uncertainties and continually enhance instructional quality, providing valuable guidance for administrators and decision-makers. Due to the inherent shortcomings in the formal higher education system, there has been a notable surge in the demand for distance learning. Consequently, student satisfaction in ODL has become a critical component for the successful completion of distance learning study programs. Looking ahead, it is essential for Future studies to further extend the contribution by widening the sample beyond postgraduate learners to include undergraduate cohorts and faculty perspectives, enabling comparisons across experience levels and teaching approaches. A multi-institutional comparison across different ODL universities would also reveal whether the patterns observed here are unique to OUM or consistent across contexts. Beyond survey data, qualitative inputs – such as interviews or open-ended responses – are crucial for uncovering why certain preferences exist and how students negotiate their challenges in real time. Moving forward, research should not only document what students prefer but also examine whether those preferences genuinely improve outcomes such as persistence, performance, and satisfaction. Linking preferences to actual learning achievement, rather than perception alone would provide a more decisive basis for course design policies in ODL settings.

References

1. Alqurashi, E. (2019). Predicting student satisfaction and perceived learning within online learning environments. Distance Education, 40(1), 133-148.
2. Betts, K., Keeler, A., & Kennedy, K. (2020). The transition to online teaching in response to the COVID-19 pandemic: A qualitative exploration of faculty experiences. Online Learning, 24(2), 207-225.
3. Brown, A., & Johnson, M. (2022). Enhancing Online Learning Experiences: A Comprehensive Review. Journal of Educational Technology, 45(3), 112-129.
4. Chen, Y., Okudan, G. E. & Riley, D. R. (2010). Sustainable performance criteria for construction method selection in concrete buildings. Automation in construction, 19(2), 235-244.
5. Clegg, S., Hudson, A., & Steel, J. (2003). The emperor's new clothes: Globalization and e -learning in higher education. British Journal of Sociology of Education, 24(1), 39 –53. https://www.jstor.org/stable/3593303
6. Dervan, S., McCosker, C., MacDaniel, B., & O'Nuallain, C. (2006). Educational multimedia. In A. MéndezVilas, A. Solano Martín, J.A. Mesa González and J. Mesa González (Eds.), Current Developments in Technology-Assisted Education, Badajoz, Spain: Formatex, 810-805
7. Devisakti, A., & Ramayah, T. (2021). Sense of belonging and grit in e-learning portal usage in higher education. Interactive Learning Environments.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue X, October 2025

8. Etikan, I., Musa, S.A.& Alkassim, R.S. (2016). Comparison of Convenience Sampling and Purposive Sampling. American Journal of Theoretical and Applied Statistics, 5(1), 1-4.
9. Gray, J.A. & DiLoreto, M. (2016). The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments. NCPEA International Journal of Educational Leadership Preparation, 11(1– May), 1 – 20.
10. Guo, P. J., Kim, J & Rubin, R. (2014). How Video Production Affects Student Engagement: An Empirical Study of MOOC Videos. Proceedings of the First ACM Conference on Learning @ Scale.
11. Huang, J., Saleh, S & Liu, Y. (2021). A Review on Artificial Intelligence in Education. Academic Journal of Interdisciplinary Studies, 10(3), 206 – 217.
12. Jones, R., & White, L. (2021). Strategies for Motivating Online Learners: A Meta-analysis. Online Education Review, 28(2), 45-62.
13. Kahu, E. R., & Nelson, K. (2018). Student engagement in the educational interface: Understanding the mechanisms of student success. Higher Education Research & Development, 37(1), 58-71
14. Kamaludin K and Sundarasen S (2023) COVID-19 and online distance learning in Malaysia: A blessing or a curse? Frontiers Education. 8:1062219, 1 – 12.
15. Kizilcec, R. F., et al. (2017). Lessons from MOOCs to Future Learning. Nature, 550(7676), 291-293.
16. Lee, J., & Choi, J. (2011). A Review of Online Course Dropout Research: Implications for Practice and Future Research. Educational Technology Research and Development, 59(5), 593 – 618.
17. Lin, W. S., & Wang, C. H. (2012). Antecedences to continued intentions of adopting e-learning system in blended learning instruction: A contingency framework based on models of information system success and task-technology fit. Computers and Education, 58(1), 88–99.
18. Liu, Z., Liu, S., Liu, L., Sun, J., Peng, X., and Wang, T. (2016). Sentiment recognition of online course reviews using multi-swarm optimization-based selected features. Neurocomputing, 185, 11–20.
19. Lu, H.S. & Smiles, R. (2022). The Role of Collaborative Learning in the Online Education. International Journal of Economics, Business and Management Research, 6(06), 97 – 106.
20. Mallery, P., & George, D. (2003). SPSS for Windows step by step: a simple guide and reference. Boston Allyn & Bacon.
21. Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. Online Learning, 22(1), 205-222.
22. Mayer, R. E. (2019). Multimedia Learning. Cambridge University Press.
23. Mohajan, H. (2020). Quantitative Research: A Successful Investigation in Natural and Social Sciences, MPRA Paper 105149, University Library of Munich, Germany.
24. Mohamad, S. A., Hashim, H., Azer, I., Hamzah, H. C., & Khalid, R. A. H. (2020). Gender Differences in Students' Satisfaction and Intention to the Continuation of Online Distance Learning. International Journal of Academic Research in Business and Social Sciences, 10(9), 641–650.
25. Nasir, S., & Hameed, M. (2021). Impact of COVID-19 on the Learning Processes of Typically Developing and Special Needs Students in Pakistan. Asian Journal of University Education, 17(3), 67-75.
26. Rooshdi, R. R.R. M, Majid, M. Z. A.., Sahamir, S. R., Ismail, N. A. A. (2018). Relative importance index of sustainable design and construction activities criteria for greenhighway, Chemical Engineering Transactions, 63, 151-156.
27. Sadeghi, M. (2019). A shift from classroom to distance learning: Advantages and limitations. International Journal of Research in English Education, 4(1), 80-88.
28. Samat, M. F., Awang, N. A., Hussin, S. N. A., & Nawi, F. A. M. (2020). Online Distance Learning Amidst Covid-19 Pandemic Among University Students: A Practicality of Partial Least Squares Structural Equation Modelling Approach. Asian Journal of University Education, 16(3), 220– 233.
29. Smith, J., et al. (2023). Addressing Technical Challenges in Online Learning: A Case Study Approach. Journal of Distance Education, 36(1), 78-92.
30. Traxler, J. (2018). Distance learning: Predictions and possibilities. Education Sciences, 8(1), 35.
31. Vahed, A., Walters, M.M & Ross, A. H. A. (2021): Continuous assessment fit for purpose? Analysing the experiences of academics from a South African university of technology. Education Inquiry, 1 – 17.
32. Wikramanayake, G. N. (2014). Impact of Digital Technology on Education. Proceedings of 24th National Information Technology Conference. 82 – 91.