Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/19470
DOI URL: http://dx.doi.org/10.21474/IJAR01/19470

RESEARCH ARTICLE

OPEN & DISTANCE LEARNING (ODL) AMONG UNIVERSITY STUDENTS DURING THE COVID-19 ENDEMIC IN MALAYSIA: AN EVIDENCE FROM PUBLIC UNIVERSITY

Muhammad Faizuddin Ahmad Fadullah[1], Mohd Khairi Ismail[1], Nor Asiah Mahmood[2], Haslinawati Mohd Mustapha[3], Nur Idayu Ah Khaliludin[3], Nur Ilyana Ismarau Tajuddin[3], Nur Diyana Bt Mustapha[4]

1. Faculty of Business and Management, Universiti Teknologi MARA Cawangan Terengganu, Malaysia
2. College of Business Administration, Prince Sultan University, 66833 Riyadh, Saudi
3. Pusat Tamhidi, Universiti Sains Islam Malaysia, Nilai, Malaysia
4. Faculty of Business and Communication, INTI International University, Malaysia

Manuscript Info

Manuscript History
Received: 15 July 2024
Final Accepted: 17 August 2024
Published: September 2024

Key words:-
Exploratory Factor Analysis, ODL Challenges, Online Learning, Pandemic

Abstract

Because of the COVID-19 epidemic, several educational institutions all around the world had to postpone classes. In Malaysia, the suspension began in March 2020. Throughout the first semester, this scenario persisted, requiring educational institutions to move to online classrooms and changing the academic calendar for the following years. The reality of online learning has sparked a discussion about a new pedagogical approach in which teachers and students must learn how to manage online learning and make the most of online tools. Students must first understand the challenges presented by online distance learning in order to do this (ODL). This essay will examine how students perceive the difficulties of online education in the wake of the COVID-19 epidemic. 495 UiTM Terengganu students who actively participated in online learning activities served as the study's sample. Exploratory Factor Analysis (EFA) and Logistic Regression were used to examine the difficulties of online learning. In this study, the data was analysed using EFA and Logistic Regression to determine what factors account for the ODL issues that UiTM Terengganu students face. The results show that for most students, the internet and technology provide the biggest obstacles. Interaction between students and lecturers, psychological problems, challenging examinations, and self-management were also mentioned as obstacles.

Introduction:-

In the first half of 2020, people all across the world are engaged in combat with an invisible foe known as the COVID-19 breakout. Due to the epidemic, the majority of people's daily routines have changed. This includes anything from personal habits to work habits to outside-the-home activities. One of the most significant organizations that must make modifications in order to carry out its regular operations is an institution like a university that functions as a well-known institution of higher learning. The reason for this is that universities play a crucial role in the development of the future workforce.The usage of internet networking technology has spread throughout the world since the COVID-19 virus outbreak in 2020. The Malaysian Ministry of Education (MOE) has

Corresponding Author:-Mohd Khairi Ismail
Address**:-**Faculty of Business and Management, Universiti Teknologi Mara Cawangan Terengganu.

ordered that all teaching and learning (T&L) sessions be conducted online in order to limit the spread of viruses among students and to guarantee that no student falls behind in their studies. Higher education institutions have employed a variety of teaching techniques, such as direct online lectures, audio and video recordings of lectures, shared online materials, and blended learning. Also, they made advantage of online assessment tools including quizzes, tests, and projects. The COVID-19 pandemic's shift to online education in higher education had an effect on learners, teachers, and academic outcomes. However, this novel experience left teachers and students in many educational institutions unprepared for the situation.

The ability of lecturers and students to adequately utilise technology in the classroom is put to the test in today's educational environment. As a result, many college students during the Covid 19 outbreak had to figure out how to complete their studies at home. For students, frequent obstacles include slow internet, poor technological equipment, difficulties concentration, and other problems (Ag-Ahmad, 2020). These difficulties affected and undermined the motivation of many pupils during the learning process. So, this study uses an exploratory factor analysis (EFA) to look at the difficulties that university students have when pursuing open and remote learning.Although many earlier studies (Agarwal & Dewan, 2020; Bahasoan et al., 2020; Karuppannan & Mohammed, 2020; Pham et al., 2021) explored the effectiveness of online learning during the COVID-19 pandemic, there is a paucity of research focusing on the difficulties of online learning faced by university students using the EFA method. Few studies have utilised EFA and Logistic Regression to look at the issues with online learning, despite the fact that a lot of research has been done to find out how preparedness, acceptability, results, and other aspects affect the success or failure of online learning. In order to determine the elements that account for the difficulties UiTM students have with online distance learning, we applied EFA and Logistic Regression to the data that were collected for this study. This essay will examine how students perceive the difficulties of online education in the wake of COVID-19.

Literature Review:-

There are five problems that students face during their ODL courses, according to literature reviews and earlier studies. The journal articles, conference proceedings, and books that are relevant to the study field and keywords form the basis of the literature review.

The Challenges of ODL: Technology and Internet

Due to their enormous significance for development, information and communications technologies (ICTs), a collection of communication and information processing tools, are a subject of discussion on a worldwide scale (Mir, 2019). All educational institutions are under pressure to create IT systems immediately quickly because of the limitations imposed by the pandemic-related emergency. Due to the confinement, many schools have been forced to expedite their emergency measures and switch from in-person instruction to emergency distance education while using already available virtual resources, just as many colleges across the globe have been forced to do (Bardales Mendoza et al., 2020).In order to stop the spread of COVID-19 across the nation, Malaysian colleges have also taken the unexpected but necessary step of switching face-to-face learning settings to e-learning and compelling students to study from home (Adams et al., 2022). The rapid transition to an e-learning environment has raised questions about pupils' readiness for it (Kundu & Bej, 2021).

Nonetheless, higher education institutions in southeast Asian nations, including Malaysia, have a poor degree of virtual learning adaptability (Adams, D et al., 2021). The use of gadgets and ICT has thus become a matter of rising relevance in the present climate of epidemic and confinement; they have become crucial for education, but students are under pressure due to their level of proficiency in the use of ICTs (Bardales Mendoza et al., 2020). In a study to examine students' readiness for e-learning during the COVID-19 pandemic (Adams et al., 2022), discovered that a few of the issues that have been raised include limited Internet connectivity, low Internet bandwidth to facilitate e-learning, availability of electronic equipment like PCs or laptops at home, and economically disadvantaged students who rely on the university's computer labs. Students who cannot engage in e-learning run the danger of falling behind in their coursework. Also, they found that among the main reasons students found it difficult to adjust to the switch from conventional to virtual classrooms was a lack of basic amenities and resources, such as high-speed internet connection, as well as a lack of student interest and computer literacy skills.

According to a study by (Natsir et al., 2020), students find it difficult to participate in online courses since not all of the areas where they reside have internet access, and even those who do often have slow connections. On occasion, this causes students to be late with their lecture content and homework submissions. The results showed that most students utilised cellular connections, with WIFI being used by a far smaller proportion of them. As the study at

home policy was put into place, several students decided to go back to their hometowns. Since not every location where students reside has access to the internet, and even if they have, it is often sluggish, this makes it challenging for certain students to attend online courses. On occasion, this causes students to be late with their lecture content and homework submissions. Students have another difficulty in addition to the accessibility of the internet. A study by (Mohd Ghani et al., 2021), which found that students' inability to afford an unlimited internet membership, poor internet access, and the use of outdated smartphone devices are just a few of the major barriers preventing them from accepting online learning, provided additional support for this.

The Challenges of ODL: Student and Lecturer Interaction

Interaction and social connections are essential in online learning activities. Online learning may be more enjoyable when teachers and students get along (Richardson et al., 2017). In reality, students now face challenges such a lack of social interaction and the inability to form study groups, which they formerly enjoyed (Chung et al., 2020). According to a research conducted by UNITAR International University, students have found that once they are comfortable utilising the technology used at their institution, they prefer to participate in discussion forums between teachers and course partners. When students can use UNIEC Virtual features without any instruction and complete tasks using their current computer abilities, they feel more competent(Mohd Nasir et al., 2021)

E-learning has various drawbacks, one of which is that it inhibits instructor and student interaction. In the modern period of learning, there is no direct communication and personal contact, so there is excellent two-way communication between teachers and pupils(Favale et al., 2020). (Parkes et al., 2015)research revealed that students were ill-equipped to manage their time between employment, family, and social obligations and their academic obligations in an online learning environment. Also, it was shown that pupils lacked several e-learning and academic-type abilities. Also, pupils are not adequately trained to utilise the learning management system.

The Challenges of ODL: Self-Management

Self-monitoring tasks including self-evaluation, self-reflection, progress indicators, and group projects are another difficulty that affects students' online learning. According to (Zhu et al., 2022)students' self-management techniques (such as time and resource management) varied depending on their different reasons. Different students and learners have different skills and degrees of confidence. Other instructional components that benefited online learning were self-assessment and discussion forums, teacher feedback, flexibility, clearly stated learning objectives, genuine content, and compact learning units (Zhu et al., 2022).

(Crawford et al., 2020) examined responses to digital pedagogy in higher education across 20 countries, including Malaysia, and found that most countries experience substantial challenges when converting face-to-face teaching to an online format, with students' readiness being the main concern. Online education may sometimes be boring and unattractive for students. Students who do not effectively organise their study time never have time for online learning since it takes so much flexibility and time. Personal attention is as essential for online learning. Students want two-way interactions, but achieving them might be difficult. The results indicate that these students have specific difficulties with the time management and self-evaluation aspects(Onah et al., 2022).

The Challenges of ODL: Psychological Issues

Due to the COVID-19 epidemic, Malaysia has seen a surge in the usage of remote learning; thus, it is crucial to comprehend students' experiences, opinions, and preferences in addition to other important variables. (Maqableh & Alia, 2021) found that 80.5% of undergraduate respondents had psychological problems as a result of the lockdown. The results also reveal that 84.8% of respondents found it difficult to concentrate during online courses. These results are consistent with a prior research by (Hussein et al., 2020) which found that 53.3% of people had this issue. Moreover, according to (Maqableh & Alia, 2021), 72.1% of respondents felt less committed since the teacher wasn't physically there. According to a focus group study by (Maqableh & Alia, 2021), 27% of respondents felt lonely during their regular class hours, and 60% of respondents reported feeling bored, nervous, and dissatisfied with online distance learning.(Rahiem, 2021) further detailed a few psychological issues that develop during emergency remote learning (term used referring to online distance learning in Indonesia). The kids acknowledge that spending time alone in their rooms made them feel uninspired and bored. Students have also struggled with concentration, not being able to ask questions of the lecturer directly, a lack of printed educational tools, little interaction with classmates, trouble finding information, and a lack of group discussions, among other concerns. They need social interaction with pals to help them generate energy for class sessions.

In order to increase their learning abilities via hands-on experiences in the online learning system, students must be motivated and dedicated—either by their own initiative or by following instructor directions. In their research, (Chung et al., 2020) also found that distractions from their surroundings make it difficult for the majority of university students to concentrate on their online studying. Also, they lack motivation since they don't interact with peers and lecturers in person. Nevertheless, (Markova et al., 2017) believe that since there is no direct interaction with the teacher and a focus on working independently, online distance learning is best suited for those who are goal-oriented and disciplined.

Research Methodology:-

This study is quantitative and implemented at UniversitiTeknologi MARA (UiTM) Cawangan Terengganu. The study population was diploma and bachelor's degree students. This study used non -probability sampling which is purposive sampling. A total of 495 students were sampled. The data collection process of this study uses a questionnaire. The questionnaire consists of four sections, namely Section A: Profile of respondents; Part B: ODL Challenges throughout the MCO; Part C: Effectiveness of ODL throughout the MCO period; and Part D: Medium Selection In ODL. However, this article only focuses on this only ODL Challenge throughout the Movement Control Order (MCO).

Data were analyzed using Statistical Package for Social Science (SPSS) version 22.0 involving Exploratory Factor Analysis (EFA) and Logistic Regression. Exploratory factor analysis is a multivariate technique for reducing factors to several smaller sets of variables. This technique is used to explore large data sets to produce a set of variables known as factors to be more easily and meaningfully interpreted (Hussin et al., 2014). Meanwhile to describe data and explain the connection between one dependent binary variable and one or more independent nominal, ordinal, interval, or ratio-level variables, we employ Logistic Regression. In this study if the student faced challenge on the Open & Distance Learning (ODL) we categorized as 1 and not faced a challenge is 0. The challenge in ODL considered as dependent variable for Logistic Regression. The factor of ODL considered as independent variable.

Results and Findings:-

Respondent's Profile:

Table 1 summarizes the study's demographic findings. There are 495 students in this study, with 91 (18.4%) male students and 404 (81.6%) female students. Malays make up 99.2% of the respondents. Most respondents (36.8%) are in semester 5, followed by semester 3 (27.5%), semester 1 (21.0%), semester 4 (6.9%), semester 6 (4.2%), semester 2 (3.4%), and 0.2 percent in semesters 7 and above. Many students live in rural areas, with 57.4% living in rural areas and the rest living in rural areas. There are 72% of the students stated that they faced the challenges during ODL

Table 1:- Respondents' Profile.

Gender:	**Percentage (%)**	**Residential area:**	
Male	18.4	Urban area	57.4
Female	81.6	Rural area	42.6
Ethnicity:		**Semesters of Study:**	
Malay	99.2	Semester 1	21.0
Bumiputera Sabah	0.6	Semester 2	3.4
Orang Asli	0.2	Semester 3	27.5
Facing the challenge during ODL:		Semester 4	6.9
Yes	72	Semester 5	36.8
No	28	Semester 6	4.2
		Semester 7 and above	0.2

Exploratory Factor Analysis – ODL Challenge:

The results of the Exploratory Factor Analysis (EFA) for the ODL Challenge are shown in Table 2. In order to determine if the analysis performed is sufficient and the outcomes analysis is acceptable, the Exploratory Factor Analysis (EFA) analysis's goodness of fit component has to be carefully considered. The Bartlett's Test of Sphericity result is less than 0.005, or 0.000, which suggests that the EFA run is acceptable based on the EFA. Moreover, EFA analysis demonstrated that the study's sample size was enough for conducting EFA. The Kaiser-Mayer Olkin test surpasses 0.6, or 0.874, from the perspective of sample adequacy, suggesting that there are enough samples to

undertake factor analysis. As a result, it may be said that the performed EFA is valid since it satisfies the goodness of fit EFA criteria.

According to exploratory factor analysis (EFA), the ODL difficulty is caused by six different components. The first issue is the difficulties associated with using technology and the internet. Using technology and the internet might be difficult when the loading factor ranges from 0.709 to 0.789. Lack of appropriate electronic equipment (laptops and smartphones) for ODL, budgetary issues that restrict student internet access, a very poor internet network, and a poor internet network when there are many users online at once are some of the hurdles ODL face with technology and internet usage.

The second element via EFA relates to the difficulties in instructors and students interacting during ODL. The difficulties in engaging with lecturers during ODL include difficulties in approaching lecturers, difficulties in engaging with lecturers, difficulties in engaging with classmates, and students' feelings of marginalisation and lack of confidence in completing group tasks. For this second component, all factor loading values range from 0.731 to 0.849.

EFA discovered psychological aspects or obstacles during ODL in addition to issues related to technology usage, internet use, and student-lecturer interaction. According to the EFA research, students' psychological issues during ODL include feeling bored with online courses, lonely, and behind during ODL, as well as feeling "burned out" from too many homework. For this factor, all factor loading values range from 0.646 to 0.815.

The EFA research also discovered that a factor or obstacle during the implementation of the ODL was the degree of difficulty of quizzes, examinations, and other assessments. In terms of the level of difficulty of quizzes, tests, and other assessments, there are four difficulties that students must overcome: the length of time required to complete lecture assignments, the need for critical thinking in examination questions, and the difficulty of the assignments themselves. For this factor, all factor loading values range from 0.630 to 0.819.

Self-factors were also a barrier for students during ODL, according to the study's EFA analysis. This indicates that how effectively students regulate their own behaviour during ODL has an impact on them. According to the EFA findings, two factors—student attitude and time management—are involved in the problem of ODL from the perspective of the self. Self-management in terms of time has five (5) components, including making time for interests and hobbies, having downtime during ODL, and spending quality time with loved ones. Although the sixth (6) aspect is self-management, which encompasses the attitude of students, it includes being very organised and thorough, smart to manage time and accomplish all assignments in the allocated time. The loading factor values for this factor range from 0.749 to 0.900. According to the EFA, these criteria imply that if all students have excellent time and attitude management, they won't have any difficulties throughout ODL.

Table 2:- Exploratory Factor Analysis (EFA) for students' dissatisfaction from online learning during COVID-19 Pandemic.

Students' dissatisfaction from online learning during COVID-19 Pandemic	**Factor**					
	1	**2**	**3**	**4**	**5**	**6**
I have lack of adequate devices for ODL	0.789					
I cannot afford to buy good electronic devices (laptop and smartphone) due to financial problem	0.778					
My internet access is limited due to financial problems.	0.775					
I have poor internet connection in my area	0.763					
I have poor internet connection due to simultaneous users	0.709					
I faced a problem approaching my lecturer.		0.849				
I have poor interaction with my lecturers.		0.840				
I have poor interaction with my classmates.		0.775				
I feel inferior and have less confidence doing grouping tasks.		0.731				
I feel anxious and unmotivated during ODL.			0.815			

I feel bored participating in online classes.			0.799			
I feel lonely and left out during ODL			0.717			
Sometimes I feel burnout when having too many tasks.			0.646			
The quizzes and exams are very difficult				0.819		
The assignments given are very complicated				0.789		
The exam questions required critical thinking				0.761		
The assignments given are very time consuming to be completed				0.630		
I don't have time for my hobby/interest					0.900	
I don't have any leisure time during ODL.					0.879	
I don't have quality time with my family and friends during ODL					0.749	
I am not a well-organised and detailed oriented person						0.827
I am not good at managing my time						0.806
I didn't manage to do all my task within time frame						0.785
Bartlett's Test of Sphericity	**0.000**					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	**.874**					
Eigenvalue	**7.916**	**2.490**	**1.853**	**1.787**	**1.334**	**1.283**
Percent variance (%)	**34.419**	**10.826**	**8.058**	**7.770**	**5.802**	**5.579**
Cumulative variance	**34.419**	**45.245**	**53.303**	**61.073**	**66.875**	**72.454**
Cronbach alpha	**0.862**	**0.889**	**0.884**	**0.824**	**0.852**	**0.769**

Logistic Regression – ODL Challenge:

Since the objective of this research is to investigate the student`s perception towards the ODL challenge or the difficulties of online learning, we set the dependent variable (Y) as the difficulties of online learning. The score of 1 (one) was given when the student said Yes or faced the challenge in online learning, while the score of 0 (zero) was given to the opposite answer. For the set of independent variables (Xj) includes the ODL difficulty is caused by six different components (Factor 1 to 6) based on EFA. The model is then as follows:

$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 + \varepsilon$,
where $\beta 0$ is a constant; βj is the regression coefficient ($j = 1 \ldots 15$); X1 is a independent variable.

Table 3:- Logistic Regression.

Independent Variables	**b**	**exp (b)**	**Standard of Error**	**Significance**
Constant	–5.198	0.006	3.497	0.138
Factor 1	–0.651	0.522	0.445	0.003[a]
Factor 2	–0.023	0.977	0.168	0.068[c]
Factor 3	–0.601	0.548	0.783	0.043[b]
Factor 4	–1.288	0.276	0.565	0.072[c]
Factor 5	–0.719	0.487	0.435	0.053[c]
Factor 6	–0.322	0.725	0.699	0.060[c]

[a]Level of significance at 1%
[b]Level of significance at 5%
[c]Level of significance at 10%

Refer to Table 3, all independent variables/ the challenge of ODL (6 factors) are statistically significant are at the level of 1%, 5% and 10%. The model gives the Nagelkerke R^2 of 0.618. which is considered as high. It means that the independent variables could explain 61.8% of the total (100%) variability of the dependent variables. Next, the Hosmer and Lemeshow test shows that the model is significant, i.e., the model has significance value of 0.876, which is above the significance level of 5%. The result of this Logistic Regression are acceptable to explain the challenge on the Open & Distance Learning (ODL) among University Students during the COVID-19.

Conclusion:-

Several students at UiTM originate from low-income backgrounds, and the majority of them struggle to afford technical equipment. To ensure that these students have an equitable chance to study well and become better prepared for online learning, it is important to give them with the tools they need for ODL, such as an internet connection, a laptop, and other course-related equipment. There are additional difficulties with ODL since not all UiTM courses are appropriate for online study. Arts and skill-based courses must be taught face-to-face; as a result, much more study is needed to make changes. Instead of relying just on the complexity of the available technology, effective learning, on the other hand, should be founded on empathy and interpersonal traits. In order to further adapt to the implementations of online learning, lecturers and UiTM students must develop approaches. All parties involved must overcome these obstacles and make these sacrifices in order to ensure the continued success of our educational system (Mohd Ghani et al., 2022).

In conclusion, the largest hurdle students encounter during ODL is to technology and the internet as the majority of them cite lack of sufficient gadgets for ODL, inability to purchase excellent electronic devices, and restricted internet access owing to financial issues. The relationship between students and lecturers, psychological problems, challenging exams, and self-management, among other elements, can have notable effects. Most students assume that face-to-face instruction will continue because of ongoing problems with digital applications. The systems must thus be modified to meet the demands of the students if ODL is to continue.

Acknowledgement:-

(Ifany otherwise delete) This research was funded by the PerkhidmatanPembiayaan Yuran Penerbitan Artikel (PYPA), UniversitiTeknologi MARA and conducted by SIGni-Finomics (600-UiTMCTKD (PJI/RMU 5/1) SIG 1/2022 (20)).

References:-

1. Adams, D., Chuah, K. M., Sumintono, B., & Mohamed, A. (2022). Students' readiness for e-learning during the COVID-19 pandemic in a South-East Asian university: a Rasch analysis. Asian Education and Development Studies, 11(2), 324–339.
2. Ag-Ahmad, N. (2020). Open and distance learning (odl): Preferences, issues and challenges amidst Covid-19 pandemic. Creative Practices in Language Learning and Teaching (CPLT), 8(2), 1–14.
3. Agarwal, S., & Dewan, J. (2020). An analysis of the effectiveness of online learning in colleges of Uttar Pradesh during the COVID 19 lockdown. J. Xi'an Univ. Archit. Technol, 12, 2957–2963.
4. Bahasoan, A. N., Ayuandiani, W., Mukhram, M., & Rahmat, A. (2020). Effectiveness of online learning in pandemic COVID-19. International Journal of Science, Technology & Management, 1(2), 100–106.
5. Bardales Mendoza, O., Fernandez Bringas, T., & Saavedra Bendezú, L. (2020). Perspectives of the use of ICT for the teaching-learning process among Peruvian university students and lecturers during the COVID-19 pandemic. 2020 2nd International Workshop on Artificial Intelligence and Education, 49–53.
6. Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online learning readiness among university students in Malaysia amidst COVID-19. Asian Journal of University Education, 16(2), 45–58.
7. Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P., & Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. Journal of Applied Learning & Teaching, 3(1), 1–20.
8. Favale, T., Soro, F., Trevisan, M., Drago, I., & Mellia, M. (2020). Campus traffic and e-Learning during COVID-19 pandemic. Computer Networks, 176, 107290.
9. Hussein, E., Daoud, S., Alrabaiah, H., & Badawi, R. (2020). Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. Children and Youth Services Review, 119, 105699.
10. Hussin, F. Bin, Ali, J., & Noor, M. S. Z. (2014). Kaedah Penyelidikan & Analisis Data SPSS (UUM Press). UUM Press.
11. Karuppannan, S., & Mohammed, L. A. (2020). Predictive factors associated with online learning during COVID-19 pandemic in Malaysia: A conceptual framework. International Journal of Management and Human Science (IJMHS), 4(4), 19–29.
12. Kundu, A., & Bej, T. (2021). COVID-19 response: students' readiness for shifting classes online. Corporate Governance: The International Journal of Business in Society, 21(6), 1250–1270.
13. Maqableh, M., & Alia, M. (2021). Evaluation online learning of undergraduate students under lockdown amidst

COVID-19 Pandemic: The online learning experience and students' satisfaction. Children and Youth Services Review, 128, 106160.
14. Markova, T., Glazkova, I., & Zaborova, E. (2017). Quality issues of online distance learning. Procedia-Social and Behavioral Sciences, 237, 685–691.
15. Mir, S. A. (2019). ICT integrated higher education: Prospects and challenges. International Journal of Research in Economics and Social Sciences (IJRESS), 8(2), 1–4.
16. Mohd Ghani, N. H., Abdullah, S., & Ismail, M. K. (2021). Teaching and Learning (T&L) among university students during the Movement Control Order (MCO). Jurnal Intelek, 16(2), 79–88.
17. Mohd Ghani, N. H., Abdullah, S., Ismail, M. K., Ahmad, N., Affandi, S., Mohamad Azmin, N. A., & Abdul Manaf, S. M. (2022). An Exploratory Factor Analysis on the Open and Distance Learning among University Students during the COVID-19 Pandemic in Malaysia. Asian Journal of University Education, 18(3), 724–734.
18. Mohd Nasir, F. D., Hussain, M. A. M., Mohamed, H., Mohd Mokhtar, M. A., & Abdul Karim, N. (2021). Student Satisfaction in Using a Learning Management System (LMS) for Blended Learning Courses for Tertiary Education. Asian Journal of University Education, 17(4), 442–454.
19. Natsir, I., Munfarikhatin, A., Mayasari, D., & Taufik, A. R. (2020). Implementation online lectures in Covid-19 Pandemic: A student perception. Proceedings of the 4th International Conference on Learning Innovation and Quality Education, 1–5.
20. Onah, D. F. O., Pang, E. L. L., & Sinclair, J. E. (2022). Investigating self-regulation in the context of a blended learning computing course. The International Journal of Information and Learning Technology, 39(1), 50–69.
21. Parkes, M., Stein, S., & Reading, C. (2015). Student preparedness for university e-learning environments. The Internet and Higher Education, 25, 1–10.
22. Pham, T. T. T., Le, H. A., & Do, D. T. (2021). The factors affecting students' online learning outcomes during the COVID-19 pandemic: a Bayesian exploratory factor analysis. Education Research International, 2021, 1–13.
23. Rahiem, M. (2021). Indonesian university students' likes and dislikes about emergency remote learning during the COVID-19 pandemic.
24. Richardson, J. C., Maeda, Y., Lv, J., & Caskurlu, S. (2017). Social presence in relation to students' satisfaction and learning in the online environment: A meta-analysis. Computers in Human Behavior, 71, 402–417.
25. Zhu, M., Bonk, C. J., & Berri, S. (2022). Fostering Self-Directed Learning in MOOCs: Motivation, Learning Strategies, and Instruction. Online Learning, 26(1), 153–173.