

THE EFFECTIVENESS OF ONLINE LEARNING ON STUDENTS IN UNIVERSITI TEKNOLOGI MARA KELANTAN

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Article history

Received date : 10-12-2023
Revised date : 12-12-2023
Accepted date : 4-3-2024
Published date : 14-3-2024

To cite this document:

Omar, S. N. Z., Amran, N. A. A., Wan Ahmad, W. A., Mat Diah, N. F. S., Kamal Marzuki, N. A. I., & Aili @ Ghazali, A. A. F. (2024). The effectiveness of online learning on Students in Universiti Teknologi Mara Kelantan. *Journal of Islamic, Social, Economics and Development (JISED)*, 9 (61), 36 – 47.

Abstract: *The researchers doing this research to study if the factors influencing the effectiveness of online learning on students at UiTM Kelantan have any relationship between the independent variable and dependent variable. A total of 364 respondents have responded to this research, using a thorough research methodology and statistical analysis. The primary factors examined were technology, lecturer influence, surrounding environment, and self-efficacy. The strong positive correlation ($r = 0.636$, $p < .01$) between technology and online learning. The research found a strong relationship between lecturer influence and online learning, showing a significant positive correlation ($r = 0.693$, $p < .01$). The findings suggest that the quality of the surrounding environment significantly influences the effectiveness of online learning, as shown by a strong positive correlation ($r = 0.678$, $p < .01$). The study found a strong positive relationship ($r = 0.678$, $p < .01$) between self-efficacy and online learning. The findings suggest that individuals who have higher levels of self-efficacy tend to experience more effective online learning. This implies that learners who believe in their capabilities and have confidence in their ability to succeed in an online learning environment are more likely to perform well.*

Keywords: *Online learning, technology, lecturer influence, surrounding environment, self-efficacy*

Introduction

The term "online learning," sometimes referred to as "e-learning," describes the use of internet-based resources and digital platforms for training and education. Information Technology (IT) and the Internet have changed people's way of life and their access to education (Siau, 2018). The worldwide epidemic hurts schools and universities, involving study findings, educational programs, staff professional development, jobs in the academic sector, and more. According to Onyema et al., (2020) parents, instructors, and students felt the effects of these alterations in addition to the institutions. The closure of universities coincided with the implementation of lockdowns worldwide. For the public's protection educational institutions stopped holding in-person lessons and suspended other on-campus events (Filho et al., 2021). Certain colleges have effectively used remote learning, offering a variety of online courses to accommodate changing needs. For instance, Imperial College in London and Zhejiang University in China. To meet their needs and the available resources, they employed a variety of technologies (Omar et al., 2023).

Problem Statement

A wide range of factors, including technology can have an impact on how satisfied students are with their online learning experiences (Raja et al., 2018). Students learning and interaction enhance when they utilize current equipment, technology, and tools, according to the most recent research on how exactly today's students choose to use technology and how using it affects their learning (Raja et al., 2018). As the power of digital increases, there are and there will be more applications that will assist students in development and learning (Raja et al., 2018). However, in the era of globalization nowadays, many problems that the students need to face even though modern technology was created in education fields.

The integration of technology into virtual education has presented several obstacles for students to overcome. Students who have trouble controlling their work speed may find it difficult to be more accountable for their learning in totally asynchronous online learning courses, where they are held to a higher standard (Gillett, 2017). According to Paul et al., (2017), the various components of internet self-efficacy, such as search self-efficacy, communication self-efficacy, organizational self-efficacy, differentiation self-efficacy, and reactive/generative self-efficacy, have varying degrees of significance in predicting internet anxiety in blended learning environments. Hsiao et al., (2017) discovered a more complex relationship between internet anxiety and internet identification awareness of the importance of the internet, finding that internet anxiety did not have a significant relationship with internet identification among students with high internet self-efficacy, whereas there was a positive correlation between the two variables among students with low internet self-efficacy.

A teacher's lack of knowledge leads to poor connections with students (Coristine et al., 2022). An important aspect of learning is the interaction between instructors and students, which is changing quickly as more people turn to online resources (Alshahrani et al., 2017). To understand how to preserve and strengthen this link in online learning contexts, more research is required. A teacher's lack of empathy might lead to a poorly performing student-teacher relationship (Coristine et al., 2022). However, more research is necessary to fully understand

how educators can create strong online identities, develop learning communities, and promote healthy relationships in blended and online learning contexts (Nortvig et al., 2018).

Furthermore, lecturer charismatic leadership is significantly related to student engagement, which predicts students' learning outcomes in online education (Hazzam et al., 2023). According to the findings of field observations made during the introduction of online learning, there were still instructors who had not demonstrated their professionalism (Adi et al., 2022). For instance, when it comes to lesson planning, some educators still obtain their Semester Learning Plans (RPS) from the Internet rather than creating themselves (Adi et al., 2022).

Some commonly observed challenges in the online learning environment include connectivity issues, limited resources, time management difficulties, lack of personal interaction and engagement, and the need for strong self-motivation and discipline (Al-Mubasher, 2022). According to Nambiar (2020), it is more difficult for students to focus in an unstructured learning environment when they are taking classes online and are faced with extra distractions at home. The physical environment can present various challenges for online learners, including distractions, limited space, lack of resources, and family interruptions (Ahmad et al., 2022). According to Zamani et al., (2022) a lack of research on certain elements of the environment that affect online learning, such as the environment at home and the way it supports learning activities.

Rahman (2021), emphasized that one of the biggest obstacles to online learning is low student engagement. Consequently, there's a compelling need to explore deeper into the characteristics that influence learners' online educational involvement (Gamage et al., 2022; Salas et al., 2022). The truth is that adopting online learning presents a variety of challenges, including involvement, socioeconomic position, place of residence, and confidence among learners in the culture and setting of online learning (Lau et al., 2021; Osorio et al., 2021). According to Taipjutorus et al., (2018) on research, online courses with embedded student management have been found to enhance behaviors, boost self-efficacy, and promote learning.

Literature Review

Online Learning

According to Ratheeswari (2018), using information and communications technology (ICT) in the digital age enables students to acquire and put into practice the skills they will need in the twenty-first century. According to Harrison (2018), young children can interact and take part in age-appropriate activities and digital apps, view images and videos, and browse "YouTube." Generations Y and Z have the most experience with ICT resources, which facilitates their use of online learning. According to Fauziana (2020), to further solidify their understanding, students can watch the instructor's recorded courses again and supplement their learning with information from books or the internet lecturers and students can also communicate bilaterally since they can use the chat column the meeting software, video conferences, phone calls, Telegram, WhatsApp, and other messaging apps to exchange messages during a lesson. Education TV, available on DIDIKTV channels, allows students to evaluate their classes as well.

Relationship between technology and online learning

Every potential subject is affected by technology, and education is one of those fields (Raja et al., 2018). Information and communication technology are referred to as ICT. It relates to

technological advancements that facilitate communication-based information access (Ratheeswari, 2018).

The use of digital tools and resources to support teaching and learning in an online setting is referred to as technology in online education. In today's classroom, technology plays a significant role (Winter et al., 2021). The factors influencing user populations' adoption of computers are explained by technology acceptance models (Abdullah & Ward, 2016; Chan, 2013; Kemp et al., 2019; Teran-Guerrero, 2019). Artificial intelligence, for example, has transformed the conventional method of teaching into the current method of learning (Di Vaio et al., 2020). Thus, E-learning is a subset of technology-based learning, which includes websites, learning portals, video conferencing, YouTube, mobile applications, and a plethora of other free websites for blended learning resources. Currently, E-learning is improving students' knowledge as well as academic staff and professional and industry people's abilities over the Internet (Adams et al., 2018; Chopra et al., 2019). With the use of technology, some teachers are adopting the flipped classroom approach. This allows students to study the material at home and come to school to engage in more discussions, exercises, and activities. (Carstens et al., 2021). Based on Singh and Thurman (2019), in their study, mention that online learning has evolved with the evolution of technology in the last three decades.

Relationship between Lecturer influence and online Learning

Lecturers are skilled educators and researchers whose main mission is to transform, create, and disseminate science, creativity, and craftsmanship through research, education, and local government (Yasin, 2022). Lecturer competence is the capacity to perform a job or task using knowledge and abilities that significantly affect how well students learn (Aziz, 2021). The COVID-19 epidemic that has ravaged the world has compelled the government to enact several new laws to stop the virus from spreading (Leindarita, 2021). The COVID-19 pandemic is a significant obstacle for educational institutions (Daniel, 2020). To lessen the impact on students' academic progress, numerous higher education institutions suspended in-person classes because of the COVID-19 outbreak and switched to online delivery (Tang et al., 2021). To attain learning outcomes, education providers need to implement policies about the execution of learning activities. In other words, in online learning, lecturer-student interaction has a significant impact on how well students learn Zhang et al., (2020). Furthermore, when examining classroom delivery, Zhang et al., (2020) discovered that a positive classroom environment is helpful to enhancing the teaching effect.

Effective teaching frequently stems from a successful interaction between the instructor and the student, which also increases the students' enthusiasm to learn (Diso, 2020). The lack of learning motivation in distance learning is caused by the process of learning, where students can become less active in conveying their opinions and thoughts, causing a boring learning process (Setena et al., 2021). Based on the study by Sun et al., (2022) found that the interaction between learners and teachers has a significant positive impact on the learning effects of students engaged in online education.

Relationship between the surrounding environment and online learning

The learning environment is precisely defined as everything that takes place in the educational facility (Ahmed et al, 2018). Based on Ng, (2021), a crucial part of online distance learning is the physical environment, and effective learning requires that students be able to select or manage their physical learning environment. Studies have indicated that learning ability can be impacted by factors such as lighting, noise level, color, and seating arrangements (Hendrix,

2019). In online learning, learners' beliefs, behaviors, and environments interact with one another, and their immediate environment has a significant and direct impact on their behavior (Abouzeid et al., 2021).

The learning environment has a big influence on students' learning experiences and results since it decides what, how, and why they learn. It also affects their interest levels and the efficiency of their learning (Zamani et al., 2022). Given that studies have shown that students' access to learning materials and their learning environment at home has a major influence on their ability to study effectively and meet learning objectives (Drane et al., 2020; Suryaman et al., 2020). Hence, the research indicates that there is a positive relationship correlation between online learning and the surrounding environment, with the environment having a significant impact on students' overall learning experience and level of engagement with the material (Abouzeid et al., 2021).

Relationship between self-efficacy and online learning

According to Namaziandost et al., (2020), self-efficacy plays a crucial role as a core component impacting learners' encouragement for performance and academic success. Derakhshesh et al., (2022) claim that students' cognitive, emotive, and physiologic resources are greatly enhanced by self-efficacy, which supports the accomplishment of learning objectives. The relevance of self-efficacy for students to achieve maximal academic results even in difficult circumstances is demonstrated by the evaluation of self-efficacy during online learning (Cahyani et al., 2020). Students' actions during online learning are frequently the result of their procrastinating on assignments that need to be finished (Erdianto et al., 2020). Permatasari et al., (2021) also found that reducing educational burnout is influenced by a high level of self-efficacy.

Academic burnout, which manifests as emotions of exhaustion, pessimism, disengagement from acquiring knowledge, and unworthiness, is caused by a global crisis and the shift in education from in-person to distant learning that has academic self-efficacy increased learners' learning engagement in a range of learning situations, including online learning according to Alamri (2022). To be more precise, Sökmen (2019) found that self-efficacy was positively correlated with intellectual, emotional, behavioral, and agentic involvement with learning. The relationship between outcomes for learning and self-efficacy is positively correlated.

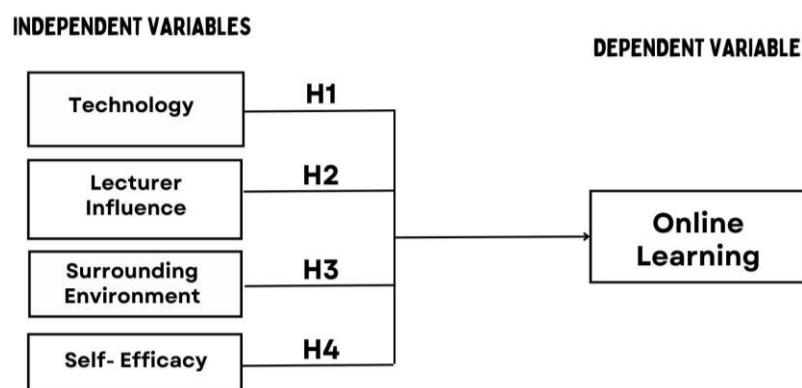


Figure 1: The Hypothesized Model of Online Learning

The hypothesized model of online learning is shown in Figure 1 and the hypotheses developed a relationship between technology, lecturer influence, surrounding environment, and self-efficacy.

H1: Technology has a positive and significant influence on online learning

H2: Lecturer influence has a positive and significant influence on online learning

H3: Surrounding environment has a positive and significant influence on online learning

H4: Self-efficacy has a positive and significant influence on online learning

Methodology

The method of primary data collection that has been chosen is the questionnaire method. The survey was composed in English and subsequently translated into Malay to encourage participants' participation and finally reach the intended outcome. We may refer responses to Google using the URL. The respondents just need to click the link and there are also instructions for filling out the Google form on the link to the final version. This will facilitate our respondents' ability to complete the survey. Data collection will be carried out on 11th December 2023. Data were obtained from students at the University Technology Mara (UiTM) campus in Kota Bharu and Machang. This scope was chosen because we did not find any related research that conduct the same or slightly same with this research in UiTM areas. Other than that, the data collection is much easier since the students engagement of UiTM Kelantan are close relationship. This data was analyzed using 22 SPSS, it was used to remove missing cases and outliers from 364 records. According to Krejcie and Morgan, the total number of students at UiTM Kelantan was 7,729 students and the sample size for this study is 364.

Result and Analysis

Reliability Test

Table 1 Reliability

Reliability Test

| Variables | Cronbach's Alpha | N of terms |
|-----------------------------|-------------------------|-------------------|
| Dependent Variables | | |
| Online Learning | 0.828 | 6 |
| Independent Variable | | |
| Technology | 0.810 | 6 |
| Lecturer Influence | 0.782 | 6 |
| Surrounding Environment | 0.839 | 6 |
| Self-efficacy | 0.844 | 6 |

The table above shows the result of the reliability test. This result implies that all six parameters can be utilized in the effectiveness of online learning. The value for technology on the alpha scale is 0.810, which indicates that it is "Good". This means that all six aspects of technology can be measured. On the other hand, the alpha value for lecturer influence is 0.782, which corresponds to the phrase "Acceptable", and all six items can be used together to quantify the effect of the lecturer during online learning. In addition, the surrounding environment was shown as 0.839 for alpha value, which was interpreted as "Good". It also indicates that it is possible to rely on all six components combined as a whole to the surrounding environment.

The value for self-influence on the alpha scale is 0.844, which indicates that it is “Good”, and it means all six different aspects of self-efficacy can be measured.

Cronbach’s Alpha’s value for the dependent variable which is online learning recorded as 0.828, which indicates that it is “Good”. It is clear from the fact that alpha values for both, independent and dependent variables are high, and as a result, the items in the instruments can be combined to measure the elements that affect online learning. As a result, the reliability alphas for all variables in this study are considered good.

Single Linear Regression Analysis

Table 2 Linear Regression between technology with online learning

| Dependent Variable | β Coefficient | T value | P value | Result |
|-----------------------------|---------------------|---------|----------|------------|
| Technology | 0.594 | 15.675 | ***0.001 | Supporting |
| R ₂ : 0.404 | | | | |
| Adj. R ₂ : 0.403 | | | | |
| F-statistic: 245.715 | | | | |
| Note: | | | | |
| *** Significant at 0.01 | | | | |
| ** Significant 0.05 | | | | |

- a. Predictor (constant), Technology
b. Dependent Variable: Online Learning

Based on the table above it shows a significant, positive relationship between technology and online learning. The correlation value of $r^2 = 0.404$ and r^2 adjusted = 0.403 showed that 40.4% of online learning is explained by technology. Meanwhile, the remaining 59.6% are explained by other factors that were not investigated in this study. Furthermore, the ANOVA test found that the F-statistic was equal to 245.715. A high F-value indicates that the regression model is statistically significant. The regression model is considered statistically significant if the p-value is small, usually less than 0.05. Therefore, technology is significantly positive ($\beta = 0.594$, $t=15.675$, $p<0.01$) and contributes to online learning.

Table 3 Linear Regression of lecturer influence on online learning

| Dependent Variable | β Coefficient | T value | P value | Result |
|-----------------------------|---------------------|---------|----------|------------|
| Lecturer Influence | 0.641 | 18.284 | ***0.001 | Supporting |
| R ₂ : 0.480 | | | | |
| Adj. R ₂ : 0.479 | | | | |
| F-statistic: 334.314 | | | | |
| Note: | | | | |
| *** Significant at 0.01 | | | | |
| ** Significant 0.05 | | | | |

- a. Predictor (constant), Lecturer Influence
b. Dependent Variable: Online Learning

Based on the table above it shows a significant, positive relationship between lecturer influence and online learning. The correlation value of $r^2 = 0.480$ and r^2 adjusted = 0.479 showed that 48.0% of online learning is explained by lecturer influence. Meanwhile, the remaining 52% are explained by other factors that were not investigated in this study. Furthermore, the ANOVA test found that the F-statistic was equal to 334.314. Therefore, lecturer influence is significantly

positive ($\beta = 0.641$, $t=18.284$ $p<0.01$) and contributes to online learning. For the p-value, it's only 0.001 which is good because below 0.05.

Table 4 Linear Regression between the surrounding environment with online learning

| Dependent Variable | β Coefficient | T value | P value | Result |
|-------------------------|---------------------|---------|----------|------------|
| Surrounding Environment | 0.604 | 17.534 | ***0.001 | Supporting |

R₂: 0.459
Adj. R₂: 0.458
F-statistic: 307.433

Note:
*** Significant at 0.01
** Significant 0.05

- a. Predictor (constant), Surrounding Environment
b. Dependent Variable: Online Learning

A significant, positive relationship between the surrounding environment and online learning. The correlation value of $r^2 = 0.459$ and r^2 adjusted = 0.458 showed that 45.9% of online learning is explained by the surrounding environment. Meanwhile, the remaining 54.1% are explained by other factors that were not investigated in this study. Furthermore, the Anova test found that the F-statistic was equal to 307.433. Therefore, the surrounding environment is significantly positive ($\beta = 0.604$, $t=17.534$ $p<0.01$) and contributes to online learning. For the p-value it's only 0.001 which is good because below 0.05.

Table 5 Linear Regression Between self- efficacy with Online Learning

| Dependent Variable | β Coefficient | T value | P value | Result |
|--------------------|---------------------|---------|----------|------------|
| Self-efficacy | 0.615 | 17.541 | ***0.001 | Supporting |

R₂: 0.459
Adj. R₂: 0.458
F-statistic: 307.696

Note:
*** Significant at 0.01
** Significant 0.05

- a. Predictor (constant), Self-efficacy
b. Dependent Variable: Online Learning

The table above illustrates a significant, positive relationship between self-efficacy and online learning. The correlation value of $r^2 = 0.459$ and r^2 adjusted = 0.458 showed that 45.9% of online learning is explained by self-efficacy. Meanwhile, the remaining 54.1% are explained by other factors that were not investigated in this study. Furthermore, the ANOVA test found that the F-statistic was equal to 307.696. Therefore, self-efficacy is significantly positive ($\beta=0.615$, $t=17.541$, $p<0.01$) and contributes to online learning. For the p-value it's only 0.001 which is good because below 0.05.

Correlation

Table 6 Correlation Analysis of The Variables

| Hypothesis | Statement | Findings |
|------------|---|----------|
| H1 | There is a significant relationship between technology and online learning | Accepted |
| H2 | There is a significant relationship between lecturer influence and online learning | Accepted |
| H3 | There is a significant relationship between the surrounding environment and online learning | Accepted |
| H4 | There is a significant relationship between self-efficacy and online learning. | Accepted |

The summary result of the correlation test and hypothesis in this study is shown in Table 4.9. All hypotheses are accepted and there is a strong correlation between independent and dependent variables. Based on regression analysis, it reveals technology shows a positively significant influence on online learning as given by r value, $r = .636$, $p = 0.000$ where $p > .0.01$. Therefore, the first hypothesis (H1) is accepted. Meanwhile, lecturer influence also shows a significant positive influence (strong relationship) with online learning when the value of the coefficient is, $r = .693$, $p = 0.000$ where $p < .0.01$. As a result, the second hypothesis (H2) is accepted. Next, the surrounding environment shows a significant positive influence (strong relationship) with online learning when the value of the coefficient is, $r = .678$, $p = 0.000$ where $p < .0.01$. As a result, the third hypothesis (H3) is accepted. Lastly, the result indicates a strong correlation between perceived usefulness and online learning when the value of the coefficient is, $r = .678$, $p = 0.000$ where $p < .0.01$. The result for the fourth hypothesis (H4) is accepted.

Conclusion and Recommendation

In conclusion, several factors, including technology, the impact of lecturers, the surrounding environment, and self-efficacy, are closely linked to the success of online learning. The seamless integration of contemporary technology tools creates a dynamic and participative learning environment by enabling students to access a multitude of resources and engage in several learning modes. However, the effectiveness of online learning is significantly impacted by the teachers' and students' capacity to use these tools with competence and flexibility.

The first suggestion for future research is to improve the use of other variables. Other variables can also be used as factors that encourage the effectiveness of online learning supporting self-assessment and reflection supports a proactive attitude to learning, boosting the total efficacy of the online education session. To sum up, to maximize the advantages of learning via the Internet for students, a comprehensive strategy is taken into consideration. Next is, in terms of time management is also one of the suggestions for future improvement for the researcher. Time management was essential to allocate a task and collect all sample respondents in a certain period. Based on the time given, we had minimal time. So, researchers need to manage enough time to collect data on a specific site that has been chosen. For example, we can do several interviews and meet with those who tell the details of this information to be carried out in more depth.

References

- Adi, N. H., Riyanda, A. R., Sagala, M. K., Ambiyar, A., Islami, S., & Zaus, M. A. (2022). Analysis of Lecturer Performance in the Application of The Online Learning Process. *JTEV (Jurnal Teknik Elektro dan Vokasional)*, 8(1), 144-150.
- Abouzeid, E., O'Rourke, R., Wazir, E. Y., Hassan, N., Ra'oof, R. A., & Roberts, T. (2021). Interactions between learner's beliefs, behavior and environment in online learning: Path analysis. *The Asia Pacific Scholar*, 6(2), 38-47.
- Aguilera-Hermida, A. P. (2020). College students' use and acceptance of emergency online learning due to COVID-19. *International journal of educational research open*, 1, 100011.
- Ahmad, S. N., Thangal, T. B. T., Misman, F. N., Yunos, N. M., Alimon, N. I., & Heng, E. H. (2022). Exploring Social Cognitive Learning in The Online Learning Environment.
- Ahmed, Y., Taha, M. H., Al-Neel, S., & Gaffar, A. M. (2018). Students' perception of the learning environment and its relation to their study year and performance in Sudan. *International journal of medical education*, 9, 145.
- Alamri, M. M. (2022). Investigating students' adoption of MOOCs during COVID-19 pandemic: students' academic self-efficacy, learning engagement, and learning persistence. *Sustainability*, 14(2), 714.
- Al-Mubasher, Z. M. A. (2022). The challenges faced by primary school students in Jordan in learning Islamic education online.
- Alshahrani, S., Ahmed, E., & Ward, R. (2017). The influence of online resources on student-lecturer relationship in higher education: a comparison study. *Journal of Computers in Education*, 4, 87-106.
- Azis, S. N. (2021). Tingkat Kecerdasan, Perilaku Belajar, dan Kompetensi Dosen dalam Peningkatan Pemahaman Akuntansi (Sarana Pendidikan sebagai Pemoderasi). *JAK (Jurnal Akuntansi) Kajian Ilmiah Akuntansi*, 8(2), 142-158.
- Banik, R., Rahman, M., Sikder, M. T., Rahman, Q. M., & Pranta, M. U. R. (2021). Knowledge, attitudes, and practices related to the COVID-19 pandemic among Bangladeshi youth: a web-based cross-sectional analysis. *Journal of Public Health*, 1-11. Chicago
- Cahyani, N. M. W. S., Suwastini, N. K. A., Dantes, G. R., Jayantini, I. G. A. S. R., & Susanthi, I. G. A. A. D. (2021). Blended online learning: Combining the strengths of Synchronous and Asynchronous Online learning in EFL context. *Jurnal Pendidikan Teknologi Dan Kejuruan*, 18(2), 174-184.
- Carstens, K. J., Mallon, J. M., Bataineh, M., & Al-Bataineh, A. (2021). Effects of Technology on Student Learning. *Turkish Online Journal of Educational Technology-TOJET*, 20(1), 105-113.
- Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, 49(1), 91-96.
- Diso, M. A. (2020). History students' preference for lecturers' gender and achievement in a history course in Colleges of Education in Kano State. *History*, 2(2).
- Di Vaio, A., Palladino, R., Hassan, R., & Escobar, O. (2020). Artificial intelligence and business models in the sustainable development goals perspective: A systematic literature review. *Journal of Business Research*, 121, 283-314.
- Drane, C., Vernon, L., & O'Shea, S. (2020). The impact of 'learning at home' on the educational outcomes of vulnerable children in Australia during the COVID-19 pandemic. Literature Review Prepared by the National Centre for Student Equity in Higher Education. Curtin University, Australia.
- Filho, L. W., Wall, T., Rayman-Bacchus, L., Mifsud, M., Pritchard, D. J., Lovren, V. O., & Balogun, A. L. (2021). Impacts of COVID-19 and social isolation on academic staff and students at universities: a cross-sectional study. *BMC public health*, 21(1), 1-19.
- Gillett-Swan, J. (2017). The challenges of online learning: Supporting and engaging the isolated

- learner. *Journal of Learning Design*, 10(1), 20-30.
- Hazzam, J., & Wilkins, S. (2023). The influences of lecturer charismatic leadership and technology use on student online engagement, learning performance, and satisfaction. *Computers & Education*, 200, 104809.
- Hendrix, E. (2019). How your surroundings affect the way you study. Retrieved Feb, 2, 2022.
- Hsiao, C. C. (2020). Understanding content sharing on the internet: test of a cognitive-affective-conative model. *Online Information Review*, 44(7), 1289-1306.
- Kantcheva, R., & Bickle, E. (2023). Inclusive learning development practices: the consequences of flexibility and choice in the hybrid era. *Journal of Learning Development in Higher Education*, 26(Feb).
- Leindarita, B. (2021). Influence of communication and teaching lecturers' competencies towards students online learning satisfaction in the time of Covid-19. In *International Conference on Educational Sciences and Teacher Profession (ICETeP 2020)* (pp. 98-102).
- Ma, Y., & Siau, K. L. (2018). Artificial intelligence impacts on higher education. Nambiar, D. (2020). The impact of online learning during COVID-19: students' and teachers' perspective. *The International Journal of Indian Psychology*, 8(2), 783-793.
- Ng, C. F. (2021). The physical learning environment of online distance learners in higher education—a conceptual model. *Frontiers in Psychology*, 12, 635117.
- Nong, W., Ye, J. H., Chen, P., & Lee, Y. S. (2023). A study on the blended learning effects on students majoring in preschool education in the post-pandemic era: An example of a research-method course in a Chinese university. *Frontiers in Psychology*, 13, 962707.
- Nortvig, A. M., Petersen, A. K., & Balle, S. H. (2018). A literature review of the factors influencing e-learning and blended learning in relation to learning outcome, student satisfaction and engagement. *Electronic Journal of E-learning*, 16(1), pp46-55.
- Onyema, E. M., Eucheria, N. C., Obafemi, F. A., Sen, S., Atonye, F. G., Sharma, A., & Alsayed, A. O. (2020). Impact of Coronavirus pandemic on education. *Journal of education and practice*, 11(13), 108-121.
- Omar, S. N. Z., Musa, R., Mohamad, M., Cob, C. M. S. C., Othman, A. Y., & Ramli, R. (2023). Efficiency of online learning during Covid-19 pandemic. *WSEAS Transactions on Business and Economics*, 20, 30-39.
- Paul, N., & Glassman, M. (2017). Relationship between internet self-efficacy and internet anxiety: A nuanced approach to understanding the connection. *Australasian Journal of Educational Technology*, 33(4).
- Permatasari, A. N., & Oktiawati, U. Y. (2021). Preferred online learning method during COVID-19 pandemic: a students' perspective. *Parole: Journal of Linguistics and Education*, 11(1), 1-9.
- Raja, R., & Nagasubramani, P. C. (2018). Impact of modern technology in education. *Journal of Applied and Advanced Research*, 3(1), 33-35.
- Ratheeswari, K. (2018). Information communication technology in education. *Journal of Applied and Advanced research*, 3(1), 45-47.
- Setena, M., Mariyatni, N. P. S., & Meitri, I. S. (2021). Impact of online learning application and lecturer performance on student learning motivation at Faculty of Economics and Business Warmadewa University. *Jurnal Ekonomi & Bisnis JAGADITHA*, 8(2), 157-163.
- Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education*, 33(4), 289-306.
- Sokmen, Y. (2021). The role of self-efficacy in the relationship between the learning environment and student engagement. *Educational Studies*, 47(1), 19-37.53243
- Sun, H. L., Sun, T., Sha, F. Y., Gu, X. Y., Hou, X. R., Zhu, F. Y., & Fang, P. T. (2022). The

- influence of teacher–student interaction on the effects of online learning: Based on a serial mediating model. *Frontiers in psychology*, 13, 779217.
- Suryaman, M., Cahyono, Y., Muliansyah, D., Bustani, O., Suryani, P., & Fahlevi, M. & Juliana, H. (2020). COVID-19 pandemic and home online learning system: Does it affect the quality of pharmacy school learning. *Systematic Reviews in Pharmacy*, 524-530.
- Tang, Y. M., Chen, P. C., Law, K. M., Wu, C. H., Lau, Y. Y., Guan, J., & Ho, G. T. (2021). Comparative analysis of Student's live online learning readiness during the coronavirus (COVID-19) pandemic in the higher education sector. *Computers & education*, 168, 104211.
- Taipjutorus, W., Hansen, S., & Brown, M. (2012). Investigating a relationship between learner control and self-efficacy in an online learning environment. *Journal of Open, Flexible and Distance Learning*, 16(1), 56-69.
- Vanner, C., Quenneville, Z., Baerstoen, V., Tsangari, V., Arsenault-Carter, T., Doan, T., & Chomiak, K. (2022). The Importance of Student-Teacher Relationships. *Classroom Practice in 2022*
- Winter, E., Costello, A., O'Brien, M., & Hickey, G. (2021). Teachers' use of technology and the impact of Covid-19. *Irish educational studies*, 40(2), 235-246.
- Wu, R. (2023). The relationship between online learning self-efficacy, informal digital learning of English, and student engagement in online classes: the mediating role of social presence. *Frontiers in Psychology*, 14, 1266009.
- Yasin, I. (2022). Guru Profesional, Mutu Pendidikan dan Tantangan Pembelajaran. *Ainara Journal (Jurnal Penelitian Dan PKM Bidang Ilmu Pendidikan)*, 3(1), 61-66.
- Yeh, C. Y., & Tsai, C. C. (2022). Massive distance education: barriers and challenges in shifting to a complete online learning environment. *Frontiers in Psychology*, 13, 928717.
- Zamani, N. D., Khalid, R. M., Shamala, P., Aziz, N. A., Othman, D., & Whanchit, W. (2022). Exploring Learning Environment in Online Learning. *International Journal of Academic Research in Business and Social Sciences*, 12(10), 585 – 600.
- Zhang, W. P., Chen, M. T., Zhao, X. N., & Bai, X. (2020). Influence of teacher-student interaction on classroom learning in special delivery classroom: a case of art delivery class in Chongyang Primary School. *Res. Audio-Vis. Educ*, 41, 90-96.