# Factors of Satisfaction in Online Arabic Language Learning From the Perspective of the TAM Model

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## ABSTRACT

The Covid-19 pandemic has profoundly influenced the educational landscape. Teaching and learning methods shifted completely from face-to-face classroom methods to online learning. UiTM students used various platforms such as U-Future, Google Classroom, Microsoft Teams, and others to continue their learning. However, there have been few studies examining student satisfaction using these platforms for learning Arabic subjects. Therefore, this study aims to identify the level of student satisfaction and the factors influencing their learning satisfaction. A total of 598 respondents from UiTM Kelantan Branch participated in this study, with data collected using Google Forms. This study utilized a questionnaire containing four sections: respondent demographics, perceived ease of use, perceived usefulness, and satisfaction with online learning. The data were analyzed using descriptive statistics (mean, frequency & percentage) with SPSS and SmartPLS. The analysis results show that the satisfaction level of online Arabic learning is moderately high (M=4.53-4.67, SD=1.333-1.425). The perceived usefulness of online media (β=0.685, t=11.250, p<.001) was the main predictor of learning satisfaction, followed by perceived ease of use (β=0.199, t=3.145, p<.001). The findings also prove that students are satisfied with online Arabic learning. This satisfaction is driven by their perception of the necessity for online learning during the Covid-19 pandemic and the ease of using online learning media. Other implications are also discussed in this article.

**Keywords:** Perceived usefulness, perceived ease of use, online learning satisfaction

## INTRODUCTION

Following the outbreak of the Covid-19 pandemic that affected the country and the world, classroom teaching methods shifted from face-to-face teaching to online teaching methods. This change has indirectly transformed the educational landscape completely (Chew, Peng & Zahwah, 2022). Numerous local universities, encompassing both public and private institutions, as well as educational establishments in Malaysia, were compelled to implement online teaching and learning strategies to facilitate the effective delivery of the curriculum and to prevent the postponement of educational activities (Mohamad Idham, 2020).

In the realm of online learning methodologies, students assume a pivotal role in the construction of their own educational experiences. Courses are meticulously crafted to accommodate individual learning requirements, thereby adopting a student-centered approach (Mohamad, Philips, Raghavan & Razzaly, 2013). Online instruction can occur synchronously, leveraging technological platforms such as Skype, Google Hangout, Google Meet, YouTube Live, Facebook Live, and Zoom Meeting. This modality enables educators to

disseminate lectures while not being physically co-located. Conversely, asynchronous teaching denotes educational interactions that transpire without the simultaneous presence of instructors and learners, utilizing platforms like Google Classroom, YouTube, Gmail, Facebook, Twitter, Microsoft Teams, Schoology, Padlet, and Edmodo.

However, the satisfaction of Arabic language students with online learning, based on their perceptions of the importance and usability of online platforms, remains unclear. Therefore, this study aims to determine the extent to which the Technology Acceptance Model (TAM) variables influence online Arabic learning. Specifically, the first objective of the study is to measure students' satisfaction levels with online Arabic learning. The second objective is to predict the factors of ease of use and usefulness of technology towards satisfaction with online Arabic learning.

## LITERATURE REVIEW

Online learning refers to the use of the internet to access information, interact with learning materials, and communicate with teachers and peers. More specifically, it is defined as the use of information and computer technology to create an online course learning experience (Horton, 2006). Online learning also pertains to methods in which the internet is used to obtain learning resources, engage with learning materials, and communicate with instructors and other students (Abdul Aziz & Aida Zuraina, 2020). A pivotal consideration is the necessity for students to attain proficiency in computer and internet technologies to guarantee the sustainability of online learning initiatives (Muhammad Saiful Anuar & Muhammad Luqman, 2022).

Satisfaction can be conceptualized as the emotional response that emerges after comparing the performance of a product or service's performance against personal expectations (Limna & Kraiwanit, 2022; Sitthipon et al., 2022). In the context of students, satisfaction refers to the assessment of the quality of teaching and academic services, support, infrastructure, and the social environment of the university. Online learning satisfaction represents the construct of student attitudes and measures the affective aspects of online learning, where students are satisfied and typically have positive online learning experiences (Goh et al., 2017). Students' positive evaluations of their learning experiences are recognized as learning satisfaction, which is crucial for assessing the quality of online learning. Student satisfaction is a subjective evaluation of educational outcomes and experiences (Limna et al., 2021). In this study, student satisfaction refers to the satisfaction of using learning media such as UFUTURE, Google Classroom, and Microsoft Teams, based on the factors of perceived usefulness and perceived ease of use in Arabic Communication learning at UiTM Kelantan Branch.

Previous studies have indicated numerous factors that influence online learning satisfaction. Abdu Wahad and Abdullah (2022) state that service quality, teaching quality, and engagement quality in the online environment are closely related to student satisfaction and learning effectiveness. According to Gray and Diloreto (2016), and Juwairiah & Roslinda (2021), four factors influence satisfaction with online learning: communication and interaction between lecturers and students, the amount of time spent on assignments, active engagement and learning, and collaboration among classmates. According to a study by San-Martin et al. (2020), students' inclination to continue using online learning platforms is also influenced by system quality and information quality.

Research by Tawafak et al. (2018) have revealed a significant relationship between student satisfaction and their intention to use the university's communication model. Rajeh et al. (2021) further corroborate the presence of a significant linkage between student satisfaction and the intention to use e-Learning. Furthermore, Shao (2020) concluded that the intention to learn online mediates perceived usefulness, perceived ease of use, attitude, and learning satisfaction. Lee (2011) summarized through his study that student learning satisfaction plays a fully mediating role in his research. Mansori et al. (2014) found a relationship between student satisfaction and the intention to continue their relationship with the institution.

### Factors Affecting Online Arabic Language Learning Satisfaction

Davis (1989) introduced the Technology Acceptance Model (TAM) to elucidate an individual's acceptance of information systems, grounded in the Theory of Reasoned Action as posited by Ajzen. Within the framework of the TAM, the utilization of a system is contingent upon behavioral intention. This behavioral intention is governed by two primary variables: attitude and perceived usefulness of the system. The attitude is influenced by perceived usefulness and perceived ease of use, whereas perceived usefulness is shaped by both perceived ease of use and external factors. Both perceived usefulness and perceived ease of use emerge as pivotal determinants in ascertaining an individual's behavioral intention, with both exerting a positive impact on this intention (Shao, 2020). Perceived usefulness is characterized as the degree to which an individual believes that engaging with a specific system will augment their performance. Previous empirical investigations have established that perceived usefulness serves as a robust and direct predictor of the utilization of information systems (Tella et al., 2021). Conversely, perceived ease of use pertains to the extent to which an individual perceives that engaging with a specific system will entail minimal effort. This concept correlates with an individual's perception towards utilizing a service, which is expected to be user-friendly (Junnonyang, 2021). In the context of this study, perceived usefulness signifies the extent to which students believe that the utilization of online media will enhance their satisfaction in the domain of online Arabic learning. Perceived ease of use, on the other hand, encapsulates the degree to which students believe that engaging with online learning platforms will require minimal effort and does not necessitate advanced technological competencies.

**Perceived Usefulness (PU)**

Perceived usefulness refers to the level of belief among students that the use of technology in teaching and learning will enhance the quality of their learning. It is an important aspect in determining who will use the technology and how often they will use it (Rose & Fogarty, 2006).

Previous studies have shown the influence of this factor on respondent satisfaction. For instance, research conducted by Tawafak et al. (2018) confirmed a significant relationship between perceived usefulness, perceived ease of use in the TAM model, and student satisfaction. Shao (2020) also found that perceived usefulness and perceived ease of use have a significant positive impact on expectations of satisfaction with online learning. Furthermore, Rajeh et al. (2021) discovered that perceived usefulness influences student satisfaction. Junnonyang (2021) revealed that perceived ease of use is seen to affect user satisfaction with m-Government platforms.

Considering the influence of perceived usefulness on the satisfaction derived from platform use and online learning mentioned above, it is anticipated that students will engage in online learning if they believe that online learning is beneficial for them. Therefore, the following hypothesis is proposed:

H2: Perceived usefulness will positively influence satisfaction with online Arabic learning.

**Perceived Ease of Use (PEU)**

Perceived ease of use refers to the level of belief among students that the technology is easy to understand and use without requiring significant technological skills (Rose & Fogarty, 2006; Rigopoulos & Askounis, 2007). It is an important aspect in determining who will use the technology and how frequently they will use it.

Sankaran and Saad (2021) stated that an interactive design of a software application will be well received by lecturers and students when the software design is consistent and easily identifiable by both students and lecturers, with information access on the software being straightforward and user-friendly. In line with the findings from Ishak and Yamin (2016), it is noted that online learning systems pay attention not only to functionality and appearance but also to the pleasant user experience encountered by students and lecturers when using the online learning system. Theresiawati et al. (2020) noted that quality online learning is characterized by the availability of updated, clear, and well-defined usage instructions.

Moreover, a good online learning system should have clear and consistently updated usage instructions. For each added function, online learning administration should update usage instructions so that lecturers and students can learn new applications in online learning conveniently.

Considering the influence of perceived ease of use on the satisfaction derived from using online platforms mentioned above, it is expected that online platforms that are perceived as easy to use will influence user satisfaction because platforms that are difficult to navigate are seen as less useful and may lead users to adopt a negative attitude toward using them. Therefore, the following hypothesis is proposed:

H2: Perceived ease of use will positively influence satisfaction with online Arabic learning.

## RESEARCH METHODOLOGY

This study adopts a quantitative approach. The study population consists of students currently enrolled at UiTM Kelantan Branch. To ensure that the selected respondent sample is representative of the study population, a simple random sampling technique was used. The minimum sample size required to achieve the predictive power of this study was determined using G*power 3.1 software (Faul et al., 2009), considering the number of variables and items in the study. Using the parameters $f2 = 0.15$ (medium), $\alpha = 0.05$, number of predictors = 2, and power set at 80% (Gefen et al., 2011), the required sample size to test this model was 77.

Data were collected through the distribution of a questionnaire. The Technology Acceptance Model (TAM) instrument by Davis (1989) was utilized with minor modifications to measure satisfaction with online Arabic learning. A pilot test was conducted to ensure the instrument's reliability, where the Cronbach's Alpha value exceeded 0.6, indicating that the questionnaire items were at an acceptable level (Kline, 2011). All items used a 7-point Likert scale. While the minimum required sample size was only 77, a total of 234 questionnaires were distributed, and 224 completed forms were successfully collected, resulting in a response rate greater than 95.72% (Nulty, 2008). After the data cleaning process, 222 responses were retained for further analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM), which involves two stages of analysis: the item measurement model and the structural model measurement.

## STUDY FINDINGS

### Demographic Profile of Respondents

The study respondents comprised 476 (79.6%) females and 122 (20.4%) males who are students at UiTM Kelantan Branch. Many respondents were from the Faculty of Business Management, totalling 344 (57.5%), followed by the Faculty of Accounting with 59 (20.4%), the Faculty of Computer Science with 170 (28.4%), and the Faculty of Mathematics and Information Studies with 25 (4.2%). A significant portion of the respondents was from degree programs, 470 (78.6%), while 128 (21.4%) were from diploma programs. In Arabic language studies, 39 respondents (6.5%) were enrolled in TAC101, 91 (15.2%) in TAC151, 148 (24.7%) in TAC401, 94 (15.7%) in TAC451, and 226 (37.8%) in TAC501. The complete profile of the respondents can be seen in Table 1 below.

Table 1: Respondent Profile

| Respondent Profile | Category | Frequency | Percentage |
|---|---|---|---|
| Gender | Male | 122 | 20.4 |
| | Female | 476 | 79.6 |
| Faculty | Accounting | 59 | 9.9 |
| | Business Management | 344 | 57.5 |

| | | | |
|---|---|---|---|
| | Computer Science and Mathematics | 170 | 28.4 |
| | Information Studies | 25 | 4.2 |
| Program of Study | Diploma | 128 | 21.4 |
| | Degree | 470 | 78.6 |
| Arabic Course Code | TAC101 | 39 | 6.5 |
| | TAC151 | 91 | 15.2 |
| | TAC401 | 148 | 24.7 |
| | TAC451 | 94 | 15.7 |
| | TAC501 | 226 | 37.8 |

Source: Author (2025)

**Descriptive Analysis**

The findings obtained from the questionnaire were evaluated using the mean (M) and standard deviation (SD) to determine respondents' perceptions of satisfaction with online Arabic learning. On a seven-point Likert scale, values of 5.6 and above are considered high, values between 3.5 and 5.5 are considered moderate, and values between 0 and 3.4 are considered low. For the standard deviation values, a range of 0.00 to 0.25 is considered to reflect very low respondent agreement, 0.26 to 0.50 indicates low agreement, 0.51 to 0.75 indicates moderate agreement, 0.76 to 1.00 indicates high agreement, and values greater than 1.01 indicate very high agreement (Ramlee, 1999).

Table 2 displays the results of the descriptive analysis for the five satisfaction items examined. The analysis results show that the mean values range from 4.53 to 4.67. The mean for the first item is higher than the other four items. The fifth item, "I am satisfied with my choice to study Arabic online," has the lowest mean satisfaction level at 4.53. Meanwhile, the first item, with the highest mean satisfaction level of 4.67, indicates that students are interested in pursuing Arabic language learning online. The overall mean satisfaction is 4.61, indicating a moderate level of satisfaction.

Table 2: Descriptive Analysis of Satisfaction with Online Arabic Learning

| Item | M | SP | Level |
|---|---|---|---|
| I am satisfied with the engaging online Arabic learning. | 4.67 | 1.413 | Moderate |
| I am satisfied with the valuable time spent on online Arabic learning. | 4.63 | 1.333 | Moderate |
| I am satisfied with the enjoyment gained from online Arabic learning. | 4.61 | 1.393 | Moderate |
| I am satisfied with the online Arabic learning that stimulates my interest in learning. | 4.57 | 1.388 | Moderate |
| I am satisfied with my choice to study Arabic online. | 4.53 | 1.425 | Moderate |

| | | | |
|---|---|---|---|
| **Overall** | **4.61** | **1.323** | **Moderate** |

M: Mean, SD: Standard Deviation.
Source: Author (2025)

**Measurement Model Assessment**

Table 3 and Figure 1 present the results of the reliability and convergent validity tests. Convergent validity refers to the extent to which a construct or factor correlates positively with other constructs or factors theoretically related within the study model. This convergent validity is crucial in confirming that the measured constructs truly reflect the concepts intended to be studied (Hair et al., 2014). The findings indicate that all items achieved high internal consistency with a Cronbach's Alpha value exceeding 0.7 (Nunnally & Bernstein, 1994; Chin, 1998), an Average Variance Extracted (AVE) exceeding 0.5, and Composite Reliability (CR) exceeding 0.7, which is sufficient to confirm convergent validity (Hair et al., 2014).

Table 3: Convergent Validity

| Construct | Item | Loading | Cronbach's Alpha | CR | AVE |
|---|---|---|---|---|---|
| PU (Perceived Usefulness) | PU1 | 0.927 | 0.967 | 0.967 | 0.880 |
| | PU2 | 0.923 | | | |
| | PU3 | 0.936 | | | |
| | PU4 | 0.966 | | | |
| PEU (Perceived Ease of Use) | PEU1 | 0.923 | 0.898 | 0.899 | 0.694 |
| | PEU2 | 0.650 | | | |
| | PEU3 | 0.872 | | | |
| | PEU4 | 0.860 | | | |
| SAT (Satisfaction) | SAT1 | 0.937 | 0.981 | 0.981 | 0.894 |
| | SAT2 | 0.942 | | | |
| | SAT3 | 0.950 | | | |
| | SAT4 | 0.952 | | | |
| | SAT5 | 0.939 | | | |
| | SAT6 | 0.954 | | | |

PU: Perceived Usefulness, PEU: Perceived Ease of Use, SAT: Satisfaction. CR: Composite Reliability, AVE: Average Variance Extracted.
Source: Author (2025)

Convergent validity was previously assessed using the criteria proposed by Fornell-Larcker (1981). However, this method has been criticized because it fails to detect insufficient discriminant validity in typical research

situations (Henseler et al., 2015). Therefore, as a replacement for the above method, the HTMT values will be examined.

Heterotrait-Monotrait (HTMT) is a ratio used to assess discriminant validity in PLS 3 (Henseler et al., 2015). As detailed in Table 2, the discriminant validity among the constructs of the study is below the established threshold of 0.90. If the HTMT value is 0.90 or greater (Gold et al., 2001), this indicates a discriminant validity problem. All obtained values are below the HTMT threshold of 0.90 (Gold et al., 2001), indicating that discriminant

validity has been achieved. The Heterotrait-Monotrait (HTMT) ratio is detailed in the following table:

Table 4: Heterotrait-Monotrait Ratio (HTMT)

| | **PU** | **PEU** | **SAT** |
|---|---|---|---|
| **PU** | | | |
| **PEU** | 0.839 | | |
| **SAT** | 0.852 | 0.771 | |

PU: Perceived Usefulness, PEU: Perceived Ease of Use, SAT: Satisfaction with Online Arabic Learning. Source: Author (2025)

The results of the HTMT ratio analysis indicate that there are no issues of collinearity among the study items, and all items effectively measure their intended constructs. Once the measurement model assessment criteria have been satisfied, further analysis will proceed, including testing the structural model and the research hypotheses.

**Structural Model Assessment**

Before conducting the structural analysis, a lateral collinearity test (predictor-criterion collinearity) was performed. Although the results of the discriminant validity analysis (vertical collinearity) and HTMT ratio indicate that there are no issues of collinearity among all study items, the lateral collinearity test is necessary as the presence of this type of collinearity can sometimes compromise study findings due to its tendency to disrupt strong cause-and-effect relationships between predictors and dependent variables in the study model. This occurs when two variables that are expected to have a relationship are found to measure the same construct (Kock & Lynn, 2012).

Table 3 below describes the results of the lateral collinearity test. All Variance Inflation Factor (VIF) values for the dependent variables (ATT, SN & PBC) are less than 5 (Hair et al., 2017), indicating that lateral collinearity is not an issue in this study.

Table 5: Lateral Collinearity Test

| **Construct** | **SAT (VIF Value)** |
|---|---|
| PU | 3.354 |
| PEU | 3.354 |

PU: Perceived Usefulness, PEU: Perceived Ease of Use, SAT: Satisfaction with Online Arabic Learning VIF ≤ 5.0 (Hair et al., 2017)

Source: Author (2025)

Before the structural model assessment is conducted, the quality of the model will be evaluated by reporting the beta values (β), $R^2$ values, effect sizes ($f^2$), and predictive relevance ($Q^2$). Subsequently, a bootstrap analysis

using 5000 resamples will be conducted to test the research hypotheses (Hair et al., 2017). The results of the analysis are shown in Figure 2 and Table 6.

Table 6: Path Coefficient Test

| Hypothesis | Relationship | Beta | SE | t-value | Decision | $R^2$ | $f^2$ | $Q^2$ |
|---|---|---|---|---|---|---|---|---|
| H1 | PU -> SAT | 0.685 | 0.061 | 11.25 | Supported | 0.737 | 0.534 | 0.637 |
| H2 | PEU -> SAT | 0.199 | 0.063 | 3.145 | Supported | | 0.045 | |

PU: Perceived Usefulness, PEU: Perceived Ease of Use, SAT: Satisfaction with Online Arabic Learning

$p<0.01$, t-value greater than 2.33.

$p<0.05$, t-value greater than 1.645.

Source: Author (2025)

Table 6 shows the results of the hypothesis testing and model quality. Both perceived usefulness and perceived ease of use significantly predict satisfaction with online Arabic learning at a high level. The $R^2$ value of 0.737 indicates that 73.7% of the variance in satisfaction with online Arabic learning is explained by the two study variables (PU & PEU). This value is considered high according to the thresholds established by Chin (1998): 0.67 (High), 0.33 (Moderate), and 0.19 (Low). The effect size ($f^2$) ranging from 0.045 to 0.534 indicates small to large effect sizes based on the guidelines provided by Cohen (1988): 0.02 (small), 0.15 (medium), and 0.35 (large). The predictive relevance ($Q^2$) of 0.637 exceeds 0, indicating that all dependent variables are capable of predicting satisfaction with online Arabic learning (Hair et al., 2014).

The bootstrap analysis shown in Figure 3 also indicates that both hypotheses are supported, with all t-values exceeding or equal to 1.645. Specifically, the factor perceived usefulness (ß = 0.685, t = 11.250, $p< 0.01$, $f^2$ = 0.534) and perceived ease of use (ß = 0.199, t = 3.145, $p< 0.02$, $f^2 = 0.045$) positively influence satisfaction with online Arabic learning, with the greatest variance in satisfaction explained by perceived usefulness. Therefore, H1 and H2 have been fully supported.

## DISCUSSION

This study was conducted to measure the level of student satisfaction with online Arabic language learning and to predict the factors of perceived ease of use and perceived usefulness of online applications on student satisfaction with online Arabic learning at UiTM Kelantan Branch. The level of student satisfaction with online Arabic learning is moderate. The two factors studied, namely perceived usefulness and perceived ease of use of online applications, influence satisfaction with online Arabic learning, with perceived usefulness being the primary contributor. In other words, both hypotheses are fully supported.

In this study, both factors are seen to collectively influence satisfaction with online Arabic learning. Together, they account for 73.7% of the variance in predicting satisfaction with online Arabic learning among students at UiTM Kelantan Branch. Nevertheless, the strength of the relationships differs. Perceived usefulness is found to make the largest contribution to predicting satisfaction with online Arabic learning compared to the factor of perceived ease of use. These findings align with previous studies that examined the relationship between perceived usefulness and online learning satisfaction (Tawafak et al., 2018; Shao, 2020; Rajeh) as well as satisfaction with e-Government platform use (Junnonyang, 2021).

Perceived ease of use is the second important factor influencing satisfaction with online Arabic learning among students at UiTM Kelantan Branch. This study's findings also correspond with prior research that highlights perceived ease of use as a crucial factor influencing the acceptance of consistent and easily identifiable software designs and user-friendly information access (Sankaran & Saad, 2021). Clear, updated, and well-explained usage instructions provide a pleasant experience for students (Theresiawati et al., 2020; Ishak & Yamin, 2016).

Through this study, students expect that the use of technology in online Arabic learning is essential and beneficial in facilitating their Arabic language learning process, thereby encouraging them to use online applications in the future.

## CONCLUSION

In conclusion, this study makes significant contributions from several perspectives. The factors of perceived usefulness and perceived ease of use were confirmed to influence satisfaction with online Arabic learning, and both factors collectively affect the satisfaction of students taking Arabic courses at UiTM Kelantan Branch. Notably, the greater contribution of perceived usefulness to satisfaction with online Arabic learning compared to perceived ease of use may be attributed to the use of synchronous applications like Google Meet within the UFUTURE platform, which does not require extensive skills and effort from students to learn. However, perceived ease of use may become an important predictor when online Arabic learning utilizes various applications that demand effort and diverse skills to implement. Additionally, this study's contribution lies in the use of SEM analysis with PLS 4.0 software, which provides clear and accurate analytical results.

## REFERENCES

1. Abdul Wahab, S., & Abdullah, H. (2022). Tahap Kesediaan Dan Kepuasan Pembelajaran Bagi Pembelajaran Dalam Talian Guru Pelatih Institut Pendidikan Guru. International Journal of Education and Pedagogy, 4(2), 123-135.
2. Abdul Aziz, I. & Aida Zuraina, M. A. T. (2020). Pembelajaran dalam talian: Tinjuan terhadap kesediaan dan motivasi dalam kalangan pelajar diploma logistik dan pengurusan rantaian bekalan, politeknik seberang perai, pulau pinang. Jurnal Dunia Pendidikan, 2(4), 68- 82.
3. Ahmad Mohamad, John Arul Philips, Santhi Raghavan, & Wahid Razzaly. (2013). Code of Practice For Open and Distance Learning - Kod Amalan Pembelajaran Terbuka dan Jarak Jauh (duallanguage). Malaysian Qualifications Agency.
4. Chew, Fong Peng and Zahwah Jamaludin, (2022) Kesediaan, motivasi dan kepuasan pelajar Tingkatan 1 dalam pembelajaran KOMSAS secara dalam talian. Jurnal Pendidikan Bahasa Melayu, Malay Language Education (MyLEJ), 12(1). pp. 29-39. ISSN 2180-4842
5. Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), Modern methods for business research (pp. 295-358). Mahwah, NJ Lawrence Erlbaum Associates.
6. Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Erlbaum.
7. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS quarterly, 319-340.
8. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of marketing research, 18(1), 39-50.
9. Goh, C. F., Leong, C. M., Kasmin, K., Hii, P. K., & Tan, O. K. (2017). Students' experiences, learning outcomes and satisfaction in e-learning. Journal of E-Learning and Knowledge Society. https://doi.org/10.20368/1971-8829/1298
10. Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: an organizational capabilities perspective. Journal of Management Information Systems, 18(1), 185–214.
11. Gray, J.A., DiLoreto, M. (2016). The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments. Int. J. Educ. Leadersh. Prep.**,** 11(1), 89-111. Available Online: https://www.researchgate.net/publication/310672442
12. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks, CA: Sage.
13. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Sage Publications.
14. Hashim, F., Rosli, F. F., Elias, F., Mat, M. R. L., & Yusof, C. N. M. (2020). Pengajaran dan Pembelajaran dalam Talian dan Impaknya Terhadap Guru Novis Pendidikan Islam [Online Teaching and Learning by

Novice Teachers of Islamic Education and Its Impact]. BITARA International Journal of Civilizational Studies and Human Sciences, 3(4), 151-162.

15. Henseler, J., Ringle, C.M., Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science, 43(1), 115-135.
16. Ishak, W. H. W., & Yamin, F. M. (2016). Learning Management System And Online Storage: A Study On Student Acceptance. Proceeding-Kuala Lumpur International Communication, Education, Language and Social Sciences 4, (KLiCELS 4), 23 – 24 July 2016. Hotel Putra, Kuala Lumpur, Malaysia, 227-234. ISBN: 978-967-13952-5-7
17. Junnonyang, E. (2021). Integrating TAM, Perceived Risk, Trust, Relative Advantage, Government Support, Social Influence and User Satisfaction as Predictors of Mobile Government Adoption Behavior in Thailand. International Journal of eBusiness and eGovernment Studies, 13(1), 159-178.
18. Juwairiah M. & Roslinda R. (2021). Tahap kepuasan pembelajaran matematik atas talian semasa pendemik COVID-19, Malaysian Journal of Sciences and Humanities (MJSSH), 6(4), 1 – 20.
19. Kline, R. B. (2011). Convergence of structural equation modeling and multilevel modeling. The SAGE handbook of innovation in social research methods, 562-589.
20. Kock, N., & Lynn, G. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. Journal of the Association for information Systems, 13(7), 546-580. DOI: 10.17705/1jais.00302 Available at: https://aisel.aisnet.org/jais/vol13/iss7/2
21. Lee, Y. J. (2011). A Study on the Effect of Teaching Innovation on Learning Effectiveness with Learning Satisfaction as a Mediator. World Transactions on Engineering and Technology Education, 9(2), 92-101.
22. Limna, P., & Kraiwanit, T. (2022). Service Quality and Its Effect on Customer Satisfaction and Customer Loyalty: A Qualitative Study of Muang Thai Insurance Company in Krabi, Thailand. Journal for Strategy and Enterprise Competitiveness, 1(2), 1-16.
23. Limna, P., Siripipatthanakul, S., & Siripipattanakul, S. (2021). A Conceptual Review on the Mediating Role of Student Satisfaction Between Twenty-First Century Learning Style and Student Performance-Effectiveness. Journal of Management in Business, Healthcare, and Education, 1(1), 1-16. Available at SSRN: 3992227.
24. Mansori, S., Vaz, A. F., & Ismail, Z. (2014). Service Quality, Satisfaction and Student Loyalty in Malaysian Private Education. Asian Social Science, 10(7), 57-66.
25. Mohamad Idham Md Razak. (2020). COVID-19: Pembelajaran atas talian suatu keperluan ke arah menuju Malaysia maju. Retrieved from https://www.astroawani.com/berita-malaysia/covid19-pembelajaran-atas-talian-suatu-keperluan-ke-arah-menuju-malaysia-maju-237496.
26. Muhammad Saiful Anuar bin Yusoff & Muhammad Luqman Ibnul Hakim Mohd Saad. (2022). Kesediaan Pembelajaran Bahasa Arab Secara Dalam Talian Sebagai Peramal Utama Penguasaan Bahasa Arab. Online Journal of Language, Communication, and Humanities, 5(2), 1-14.
27. Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: what can be done?. Assessment & evaluation in higher education, 33(3), 301-314.
28. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory (3rd ed.). New York, NY: McGraw-Hill.
29. Rajeh, M. T., Abduljabbar, F. H., Alqahtani, S. M., Waly, F. J., Alnaami, I., Aljurayyan, A., & Alzaman, N. (2021). Students' Satisfaction and Continued Intention toward e-Learning: A Theory-Based Study. Medical Education Online, 26(1), 1961348.
30. Ramlee, M. (1999). The Role of Vocational and Technical Education in the Industrialization of Malaysia as Perceived by Educators and Employers [Unpublished PhD Thesis, Purdue University].
31. Rigopoulos, G., & Askounis, D. (2007). A TAM framework to evaluate user's perception toward online electronic payments. Journal of Internet Banking and Commerce, 12(3), 1–5.
32. Rose, J., & Fogarty, G. J. (2006). Determinants of perceived usefulness and perceived ease of use in the technology acceptance model: senior consumers' adoption of self-service banking technologies. In Proceedings of the 2nd biennial conference of the academy of world business, marketing and management development: Business across borders in the 21st century (Vol. 2, pp. 122– 129). Academy of World Business, Marketing and Management Development.

33. Sankaran, S., & Saad, N. (2021). Reka Bentuk LMS dan Pengurusan Pembelajaran berasaskan Blended Learning dalam kalangan Pelajar Sarjana Pendidikan: LMS Design and Blended Learning-Based Learning Management among Master of Education Students. Sains Insani, 6(1), 59-65.
34. San-Martin, S., Jiménez, N., Rodríguez-Torrico, P., & Piñeiro-Ibarra, I. (2020). The determinants of teachers' continuance commitment to e-learning in higher education. Education and Information Technologies, 25(4), 3205–3225. https://doi.org/10.1007/s10639-020-10117-3
35. Shao, C. (2020). An Empirical Study on the Identification of Driving Factors of Satisfaction with Online Learning based on TAM. In 5th International Conference on Economics, Management, Law and Education (EMLE 2019) (pp. 1067-1073). Atlantis Press.
36. Sitthipon, T., Limna, P., Jaipong, P., Siripipattanakul, S., & Auttawechasakoon, P. (2022). Gamification Predicting Customers' Repurchase Intention Via E-Commerce Platforms Through Mediating Effect of Customer Satisfaction in Thailand. Review of Advanced Multidisciplinary Sciences, Engineering & Innovation, 1(1), 1-14.
37. Tawafak, R. M., Romli, A. B., & Arshah, R. B. A. (2018). Continued Intention to Use UCOM: Four Factors for Integrating with a Technology Acceptance Model to Moderate the Satisfaction of Learning. IEEE Access, 6, 66481-66498.
38. Tella, A., Tsabedze, V., Ngoaketsi, J., & Enakrire, R. T. (2021). Perceived Usefulness, Reputation, and Tutors' Advocate as Predictors of MOOC Utilization by Distance Learners: Implication on Library Services in Distance Learning in Eswatini'. Journal of Library & Information Services in Distance Learning, 15(1), 41-67.
39. Theresiawati, T., Seta, H. B., Hidayanto, A. N., & Abidin. Z. (2020). Variables affecting e-learning services quality in Indonesian higher education: Students' perspectives. Journal of Information Technology Education: Research, 19, 259-286. https://doi.org/10.28945/4489