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# Perception and Acceptance of Risk for Online Learning: Digitalization

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## ABSTRACT

This study determines the acceptance of online learning by identify the intention applied online learning. The study identifies the perception of risk and acceptance of risk for intention to use online learning. A questionnaire was voluntarily completed by 452 undergraduate technical and vocational students, online education has been generally accepted during covid 19 pandemic. The finding from structural equation modelling analyses indicated that perception of risk positively influence intention to use online learning and acceptance of risk negatively influence online learning. Furthermore, it proves that online learning is convenience and student prefer to enroll in synchronous and asynchronous online, however the negative relationship between acceptance of risk for intention to use online learning indicate that. Unwillingness for physical class due to mobility and safety. The findings of this study are remarkable to understand the acceptance of online learning that leads to digital nation in future. Online learning had accelerated the speed of digitalization. Digital is convenience and create a flexibility. Furthermore, digitalization creates a trend worldwide and gain more popularity.

**Keywords:** acceptance of risk, adaption of online learning, digitalization, flexibility learning online learning, perception of risk

## INTRODUCTION

Digital is the acceptable norm in the current global and modern world. Digitalization has able to speed up the process and reduce the use of paper. Digitalization has been adopt in various sector such as banking sector (Marafon et al., 2018), online shopping (Sayogo, 2016), tourism sector (Zare & Chukwunonso, 2015) and education sector (Stevens et al., 2021). Thus, is prove that every sector is adopt digitalization for efficiency and productivity. This study focuses on online learning that has been gain popularity since covid 19 outbreak at year 2020. In fact, online learning evolve from information and computer technology (Humaira et al., 2020), thus it not new to the education sector. Online learning has been introduced earlier before the outbreak, however still an option. The diseases are a blessing in disguise, that force the education sector to adapt online learning. Online learning is a new norm and has been continuedly applied during post covid. The purpose of this study is to determine the acceptance of online learning by identify the intention applied online learning. The study identifies the perception of risk and acceptance of risk for intention to use online learning.

## LITERATURE REVIEW

### Online learning

Technology is the force factor of online learning or digital education. Digital education is associated with blended learning in various institution that also include Politeknik Malaysia. Online learning has many advantages with greater access, cost-effectiveness and the able to operate in synchronous (real-time) and asynchronous modes (Stevens et al., 2021). Covid 19 has a great impact on education sector that force a new normal of online learning to ensure that everyone still has access to education, especially the higher education institution.

A comprehensive review of the history of online teaching and learning is beyond the scope of this paper, however, we highlight key aspects of the debate and evidence regarding the relative efficacy of F2F and online modalities, as well as "blended" approaches and their potential to optimize learning outcomes.

### Intention use online learning

Intention is a desire to perform an action (Schiffman & Kanuk, 2010), every individual have their intention to behave base on the situation. Intention is willingness to execute behavior (Ajzen, 2011). Intention is prediction of human behavior (Wel et al., 2018; Yuhanis & Chok, 2012). The purpose of this study is to examine the behaviour of online learning among student with acceptance of risk and perception of risk in the context of commerce department student in Politeknik Nilai.

### Perception of risk

Risk is something that may harm an individual. Risk is known to explain customer behavior since the 1960s. For Bauer (1960), perceived risk is focused on a sense of loss. Dowling (1986, p. 194) defines risk as "the situation where the decision maker has a priori knowledge of both the consequences of alternatives and their probabilities of occurrence". Thus, risk is a behavior that individual willing to perform even there may face a loss. In education is willingness to enroll in online learning. Millennial generations are confident and willing to enroll in online class even though with different technology readiness such as self-efficacy, engagement and achievement in online class and online class experience. However individual with less technology reediness was lower self-efficacy in social interaction. (Warden et al., 2022). Thus, Perception of risk positively influence intention to use online learning. Therefore:
Hypothesis 1: Perception of risk positively influence intention to use online learning.

### Acceptance of risk

Digital learning or online learning during in the pandemic. There are many risks at occur if students and academic staff return to campus and physical classrooms. This is to perform face to face mode. However F2F teaching frequently defaults to a "teacher-centered" approach that promotes a passive, disengaged relationship between students and educational content while growing evidence that well-structured online courses which promote "active learning" (characterized by group problem-solving requiring higher-order thinking, task completion and reflection) and have high perceived levels of tutor leadership (Warden et al., 2022). There is risk for physical class and also risk to perform online banking (Marafon et al., 2018). In banking sector level acceptance of risk (self-confident) determine the intention to use online banking. Thus, Acceptance of risk positively influence intention to use online learning. Therefore:
Hypothesis 2: Acceptance of risk positively influence intention to use online learning

## RESEARCH METHOD

### Data collection and sample

A web-based survey was conducted on a convenience sample of 452 respondent that were voluntarily answer the survey. Respondent were invited to participate in the study by online class channel. The sample consisted of 100 per cent senior students from semester two until six. The sample from all age range of semester who had experience in online learning. Convenient sampling was used to obtain data from available population as stated by Sekaran and Bougie (2016). It is in to determine the intention to use online learning.

### Analysis

The research model was analysed using partial least squares structural equation modelling using SmartPLS 3.0 software (Ringle et al., 2015). PLS is preferred because it does not require normal distribution of data. PLS is able to deal with formative and reflective constructs, fit for theory development than for theory testing and PLS is also useful for prediction (Urbach & Ahlemann, 2010). Thus SmartPLS 3.0 is the best suited software to test the prediction on perception of risk and acceptance of risk for intention to use online learning.

### Measures

The measurement construct to investigate models were adapted from previous studies, with minor wording changes to tailor them to the current study setting which intention for online learning. Items for this study were adapted from (Marafon et al., 2018). All items were measured using a 6-point Likert-type scale that determine by *1=strongly disagree* and 6=*strongly agree* respectively. The 6 point Likert scale was use to force the respondent to answer either positive of negative response (Kumar et al., 2013). This to avoid bias responds for the respondent that tends to answer middle value of 4 (neutral).

### Measurement Model

Convergent validity is the degree to which multiple items measuring the same concept are in agreement (J. F. Hair et al., 2010). The convergence validity of the measurement is usually ascertained by examining the loadings, average variance extracted and also the composite reliability (J. F. J. Hair et al., 2017). The result reveals that 14 indicators as shown in Table 1 has loading above the cut off value of 0.7 with 5 indicators having loading below 0.7. The average variance extracted (AVE) of all constructs exceeded 0.5. The value of 0.50 or higher indicates that the construct explains more than half of the variance of its indicators (J. F. J. Hair et al., 2017). The composite reliability (CR) are all higher than 0.7 that is considered satisfactory reliability and Cronbach Alpha are all higher than 0.7 that indicate the item is reliable (J. F. J. Hair et al., 2017). Therefore, it can be concluded that convergent validity is achieved.

**Table 1.** Item Loading

| Construct | Item | Loading | | | Cronbach's Alpha | Composite Reliability | Average Variance Extracted (AVE) |
|---|---|---|---|---|---|---|---|
| **Perception of Risk** | P1 | 0.873 | | | 0.882 | 0.914 | 0.682 |
| | P2 | 0.836 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | P3 | 0.709 | | | | | |
| | P4 | 0.874 | | | | | |
| | P5 | 0.826 | | | | | |
| **Intention use online learning** | RK1 | | 0.878 | | 0.858 | 0.899 | 0.640 |
| | RK2 | | 0.529 | | | | |
| | RK3 | | 0.911 | | | | |
| | RK4 | | 0.928 | | | | |
| **Aceptance of risk** | R01 | | | 0.709 | 0.839 | 0.894 | 0.686 |
| | R02 | | | 0.824 | | | |
| | R03 | | | 0.801 | | | |
| | R04 | | | 0.868 | | | |
| | R05 | | | 0.790 | | | |

The result for discriminant validity test is show in Table 2. As recommended by (Henseler et al., 2015), HTMT can be applied to detect discriminant validity. The rules of thumb for HTMT criterion of 0.90 (Henseler et al., 2015) As shown in Table 2, all constructs meet this criterion indicating the constructs have discriminant validity. The loading of measured variables should be higher than cross loading at least 0.1 to indicate adequate discriminant validity (J. F. J. Hair et al., 2017). Table 2 shows loadings of all constructs satisfy this criterion. Thus, the discriminant validity is accomplished.

**Table 2.** HTMT

| | Aceptance of risk | Intention use online learning | Perception of Risk |
|---|---|---|---|
| Aceptance of risk | | | |
| Intention use online learning | 0.426 | | |
| Perception of Risk | 0.455 | 0.972 | |

## RESULTS

Upon establishing the measurement model, the analysis then shifted to the structural model evaluation. Hair et al. (2017) suggested an assessment of the Coefficient of Determination ($R^2$) Beta and corresponding t-values to assess the structural model. The rule of thumb for an acceptable level of $R^2$ value as it depends on the model complexity with $R^2$ value ranges from 0 to 1 (Hair et al. 2017) . Table 3 show the $R^2$ result is 0.725 that show the overall condition for the model is satisfied with the overall model explaining about 72.5% of the variance. The $R^2$ values are well above 0.26, as suggested by Cohen (1988), indicating a substantial model. In addition we examined the predictive capacity of the model by checking Stone-Geisser's $Q^2$ value. The $Q^2$ value can be obtained by appling the blindfolding procedure for omission distance of 7. The results reveal that the

consumer behavioral intention had $Q^2$ value of 0.459 which is greater than 0. Thus supporting that the model has predective relevance.

**Table 3:** Coefficient of determination $R^2$ and Stone-Geisser's criterion $Q^2$

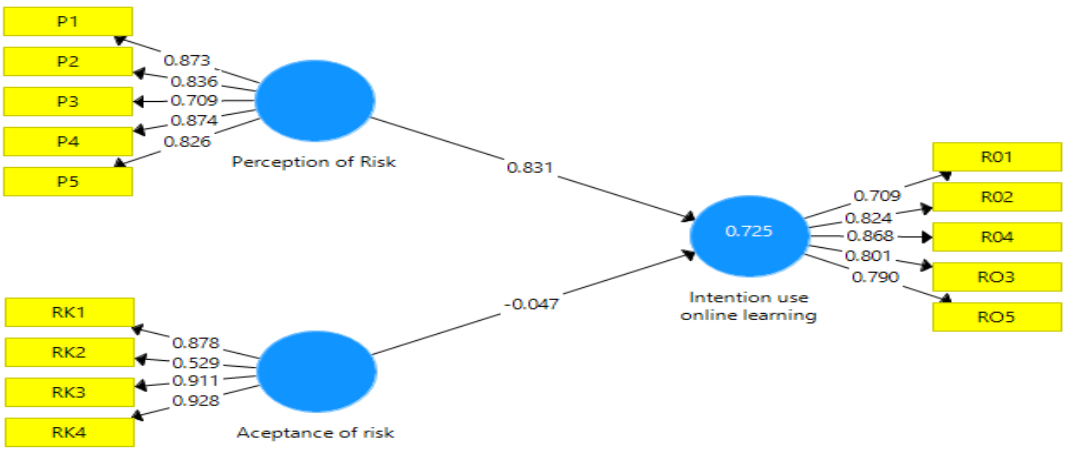
| | R Square | R Square Adjusted | $Q^2$ |
|---|---|---|---|
| Intention use online learning | 0.725 | 0.723 | 0.459 |

**Table 4.** Result of the hypothesis testing

| Hypothesis | Relationship | Std Beta | Std Deviation | T-value | P value | Decision |
|---|---|---|---|---|---|---|
| H1 | PI > RK | 0.831 | 0.018 | 45.686 | 0.000 | Supported** |
| H2 | RO - > RK | -0.047 | 0.028 | 1.687 | 0.092 | Not Supported |

To assess the hypothesized relationship between the constructs, we applied a bootstrapping sample of 5000. The result is shown in Table 4. The result indicates that Perception of Risk positively influence Intention use online learning (β = 0.831 t=45.686 p< 0.01) hence H1 is supported. The result is similar with (Warden et al., 2022). The result shows insignificant relationship for Acceptance of risk -> Intention use online learning (β = -0.047, t=1.687 p> 0.01). Thus, H2 is rejected. The result is in consistent with (Marafon et al., 2018). That indicate different level acceptance of risk in performing online learning. One direct relationship is significant while only one relationship not supported. Figure 1 show the model of the study for intention to use online learning.

**Figure 1**




## DISCUSSION

The finding from this study gives fresh insight for literature on online learning. The findings of this study contribution, on intention to use online learning and provide support for perception of risk and acceptance of risk. The main objective of this study is to (i) determine the relationship between perception of risk and intention to use online learning

and (ii) acceptance of risk and intention to use online learning. The finding on online learning has revealed remarkable findings that perception of risk significantly influence the intention to use online learning. Online learning provide opportunity for student experience digital transformation and supporting student to access to education during difficult period (Webb et al., 2021). Online learning offer flexibility and convenience that encourage student to enroll. Technology awareness and technology acceptance is the key with the key success factor are skills, knowledge, resources, how academician expended new technology to change classroom practice (Lichy et al., 2013). Academician must be able to take the challenge and adapt the new norm to suit the current trend and need of digitalization in education. The finding of the study shows insignificant relationship for acceptance of risk and intention to use online learning. The results are contra from (Marafon et al., 2018). That level acceptance of risk is because the harm on physical class and safety issue. Uncertainty arise during online class as it in the process of adaptation. This suggests that online learning is applicable as it offer flexibility, enhance time management, increase collaboration, access to course material, flexibility in space, active engagement with student (Kawane et al., 2022) Thus, they are online learning is important for digitalization of education sector.

## CONCLUSION

Finally, the study examines the perception of risk and acceptance of risk for online learning. The combination of different result for perception of risk and acceptance of risk is a strong prediction on student behavioral intention for online learning. Perception of risk influence behavioral intention that may lead to continues online learning mode real. Acceptance of risk indicate that the level of risk will decrease as post pandemic phase, and everything will slowly adapt and move to normal norm in education sector.

The current study has identified several important theoretical contributions. First, this study focused on student perspective for online learning. Many literatures concentrate from e commerce perspective rather than education perspective in digitalization. Second, the study examines the level of risk in online learning, there have been limited studies. Finally, this study focused on perception of risk, acceptance of risk and intention to use online learning.

## REFERENCES

Aghekyan-Simonian, M., Forsythe, S., Suk Kwon, W., & Chattaraman, V. (2012). The role of product brand image and online store image on perceived risks and online purchase intentions for apparel. *Journal of Retailing and Consumer Services*, *19*(3), 325–331. https://doi.org/10.1016/j.jretconser.2012.03.006

Ahmad, A., Mohd Noor, S., & Che Wel, C. A. (2014). Factors Influencing Consumers' Purchase Decision of Private Label Brand Products. *International Journal of Economic Practice and Theories*, *4*(2), 101–110.

Ajzen, I. (2011). The theory of planned behaviour: reactions and reflections. *Psychology & Health*, *26*(9), 1113–1127. https://doi.org/10.1080/08870446.2011.613995

Bang, H., Odio, M. a., & Reio, T. (2014). The moderating role of brand reputation and moral obligation: An application of the theory of planned behavior. *Journal of Management Development*, *33*(4), 282–298. https://doi.org/10.1108/JMD-12-2010-0102

Bao, Y., & Mandrik, C. A. (2004). Discerning Store Brand Users from Value

Consciousness Consumers : The Role of Prestige Sensitivity and Need for Cognition. *Advances in Consumer Research*, *31*(Association for Consumer Research), 707–712.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. In *Statistical Power Analysis for the Behavioral Sciences* (Vol. 2nd, p. 567). https://doi.org/10.1234/12345678

Govers, P. C. M., & Schoormans, J. P. . (2005). Product personality and its influence on consumer preference. *Journal of Consumer Marketing*, *22*(4), 189–197. https://doi.org/10.1108/07363760510605308

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (2010). Multivariate Data Analysis (7th Edition). In *Uppersaddle River, New Jersey: Pearson Education International.* https://doi.org/10.1016/j.ijpharm.2011.02.019

Hair, J. F. J., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Premier On Partial Least Squares Structural Equation Modeling (PLS-SEM)* (Second Edi). SAGE Publication.

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*, *45*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Humaira, M. A., Djuanda, U., Barat, J., Riana, A., Tambunan, S., Medan, U. N., Utara, S., Rachmadtullah, R., Timur, J., Samsudin, A., Indonesia, U. P., & Barat, J. (2020). Using Blended Learning Approach ( BLA ) in Inclusive Education Course : A Study Investigating Teacher Students ' Perception. *Journal of Emerging Technologies in Learning*, *15.2*(72), 72–85.

Kawane, T., Adu-gyamfi, B., & Shaw, R. (2022). *Exploring the elements of strengthening online higher education in disaster risk reduction : a perspective of sustained strategy in*. https://doi.org/10.1108/IJDRBE-12-2022-0125

Kim, H.-S., & Hong, H. (2011). Fashion Leadership and Hedonic Shopping Motivations of Female Consumers. *Clothing and Textiles Research Journal*, *29*, 314–330. https://doi.org/10.1177/0887302X11422819

Kumar, M., Salim, A. T., & Ramayah, T. (2013). *Business research methods* (1st Editio). Oxford Fajar.

Lichy, J., Khvatova, T., Pon, K., & Lyon, C. De. (2013). *Engaging in digital technology : one size fits all ?* https://doi.org/10.1108/JMD-12-2012-0153

Marafon, D. L., Kenny Basso, Espartel, L. B., Barcellos, M. D. de, & Rech, E. (2018). Perceived risk and intention to use internet banking the effects of self confidence and risk acceptance. *International Journal of Bank Marketing*.

Ringle, C. M., Wende, S., & Becker, J. . (2015). *SmartPLS 3.0*. Http://Www.Smartpls.De.

Sayogo, D. S. (2016). Online traceability for Halal product information: perceptions of Muslim consumers in Indonesia. *Journal of Islamic Marketing*, *7*(1). https://doi.org/10.1108/17590831311306336

Schiffman, L. G., & Kanuk, L. L. (2010). Consumer Behavior 10th Edition. In *Pearson Education* (Global Edi).

Sekaran, U., & Bougie, R. (2016). Research Methods for Business 7th Edition. In *Research methods for business* (p. 420). Wiley.

Stevens, G. J., Bienz, T., Wali, N., & Condie, J. (2021). *Online university education is the new normal : but is face-to-face better ? 18*(3), 278–297. https://doi.org/10.1108/ITSE-08-2020-0181

Urbach, N., & Ahlemann, F. (2010). Structural Equation Modeling In Information Systems Research Using Partial Least Squares. *Journal of Information Technology Theory and Application*, *11*(2), 5–40. https://doi.org/10.1037/0021-9010.90.4.710

Warden, C. A., Yi-shun, W., Stanworth, J. O., & Chen, J. F. (2022). Millennials ' technology readiness and self-efficacy in online classes. *Innovations in Education*

*and Teaching International*, *59*(2), 226–236.

Webb, A., Mcquaid, R. W., & Webster, C. W. R. (2021). *Moving learning online and the COVID-19 pandemic : a university response*. *18*(1), 1–19. https://doi.org/10.1108/WJSTSD-11-2020-0090

Wel, C. A. C., Alam, S. S., Khalid, N. R., & Mokhtaruddin, S. A. (2018). Effect of Ethnocentrism and Patriotism on the Buying Intention of Malaysian National Car. *Jurnal Pengurusan*, *52*.

Yuhanis, A. A., & Chok, N. V. (2012). The Role of Halal Awareness, Halal Certification, and Marketing Components in Determining Halal Purchase Intention Among Non-Muslims in Malaysia: A Structural Equation Modeling Approach. *Journal of International Food & Agribusiness Marketing*, *25*(1), 1–23. https://doi.org/10.1080/08974438.2013.723997

Zare, S., & Chukwunonso, F. (2015). How Travel Agencies can Differentiate Themselves to Compete with Online Travel Agencies in the Malaysian Context. *E-Review of Torism Research*, *12*.