Predicting Millennials E-Loyalty Through Compatibility and Innovativeness on E-Commerce

I Putu Wahyu Dwinata JS[1] Made Pradnyan Permana Usadi[2]
I Wayan Sucipta Wibawa[3]
Universitas Mahasaraswati Denpasar[1,2,3]
Jl. Kamboja No. 11A Denpasar, 80233, Indonesia
Correspondence Email: mdpradnyan@unmas.ac.id[2]

ARTICLE INFORMATION

ABSTRACT

Millennials have dominated the use of e-commerce. They tend to have characters with lower levels of loyalty to products or services. This will be a problem if e-commerce companies are unable to read the personal characteristics of its users. Millennials users are known to have innovativeness which is explained in their enjoyment of learning new systems. This perception also reflected through their assumptions about ease of use and usefulness of an e-commerce platforms. This study aims to examine the effect of perceived compatibility and perceived innovativeness to e-loyalty through perceived ease of use and perceived usefulness on millennials e-commerce users. Data are collected from 217 millennial customer's using purposive sampling method. Path analysis were done using SPSS Statistics 22. The results revealed both of perceived compatibility and perceived innovativeness affected e-loyalty significantly through perceived usefulness. The results of this study shows that ease of use does not necessarily make users loyal, because there are several other important factors such as price, promotion, service quality.

Keywords: Compatibility, E-Loyalty, Innovativeness, Technology Acceptance Model

JEL Classification: M41, L11

INTRODUCTION

Nowadays, e-commerce existance has answered consumer needs for today's lifestyle. The pattern of Indonesian consumers who are accustomed to shopping online through various platforms is increasingly accelerating the growth of e-commerce companies in Indonesia. This is proved by the increasing number of companies that are interested in joining e-commerce industry, making competition in this industry increasingly competitive. Consumers perceive e-commerce as a solution of today's fast-paced needs. This shows the perceived compatibility of consumers who use e-commerce because it fits their needs, lifestyle, and shopping preferences (Agag & El-Masry, 2016). Several studies have shown that millennial consumers prefer products and services, which are in accordance with their lifestyle and value (Purani et al., 2019).

Users must have a high level of innovation to be truly motivated to adopt the dynamic development of e-commerce platforms. Individuals who have a higher perceived innovativeness are likely to be more innovative when they carry out the process of adopting and interacting with a new system (Alalwan, 2018). The more novelty and innovation there is in a system, such as an increasingly complex user interface, or more shortcut menus, individuals with innovativeness characteristics will tend to be more interested in using it. This is similar to the tech savvy millennial character, where they have grown up with the technological revolution (Gurău, 2012).

The cost of customer acquisition more likely become higher than offline retailer due to the increasing competition in e-commerce industry. In addition to the cost of acquiring new customers, keeping existing customers from transacting or visiting again on the same e-commerce platform is also a serious concern. The similarity of products sold between one e-commerce and other e-commerce makes players in this industry carry out price war strategies and other promotional strategies to be able to attract new consumers and keep old ones loyal to one e-commerce service. Loyalty to the industry is a crucial factor in determining the profitability of any online business (Malhotra et al., 2017).

Millennials can easily understand technology quickly (Arsalan & Latif, 2021) and adapt to technological changes, especially those connected with the individual's lifestyle. According to Badan Pusat Statistik, which states that millennials are in the range from 1981 to 2000 (Budiati et al., 2018). However, millennials are often considered to have lower levels of loyalty to a product or service (Gurău, 2012). This may be a problem if the company is unable to read their users characteristics. Therefore, this study intends to examine how perceived compatibility and perceived innovativeness predict electronic loyalty through perceived ease of use and perceived usefulness on millennials users in Indonesia.

LITERATURE REVIEW

Perceived Compatibility

Perceived compatibility is the perception of individuals believe that using online retail is in accordance with their needs, shopping preferences and lifestyle (Agag & El-Masry, 2016). Perceived compatibility resulting innovation from potential users by looking at the previous experience and what are their needs (Ozturk et al., 2016). Compatibility is when users find new technologies familiar with their experiences and lifestyle, they can easily adopt to use this technology (Gumussoy et al., 2018). Otherwise, users have to struggle to use technology and takes time to learn.

In the context of online retail, perceived usefulness is how much an online retail provider can improve individual tasks in shopping (Purani et al., 2019). Research shows compatibility has significant effect on the perceived usefulness of using e-commerce. Past studies found perceived compatibility has significant effect on the perceived usefulness (Purani et al., 2019); (Gumussoy et al., 2018; Sahin & Sahin, 2021).

Compatibility in the context of technology adoption is a meeting point between a new technology or system with the habits and needs of users. After going through the learning process, the more often users interact with technology, it will create a habit that will create a need for the user himself. This is an assumption that the higher a person's perceived compatibility with a new technology or system, the easier it will be for someone to learn the technology or system. Several past studies found that perceived compatibility positively and significantly affects perceived ease of use (Gumussoy et al., 2018; Purani et al., 2019; Puspitasari et al., 2021). Therefore, the hypothesis is obtained as follows:

H1: Perceived compatibility have positive and significant impact to perceived ease of use
H2: Perceived compatibility have positive and significant impact to perceived usefulness

Perceived innovativeness

Innovativeness refers to the innate willingness of a person to use and embrace new technologies (Lim et al., 2020). Perceived innovativeness is human nature to want to learn or try something new, in this case the desire to adopt something related to the latest information technology. Individual attitudes towards a technology can be either positive or negative. When the individual's attitude is positive, the individual will accept an innovation and be willing to adopt the innovation which may influence consumption decisions and behavior, and vice versa. A person with high innovation will develop a positive perception of a particular technology compared to others (Agarwal & Karahanna, 1998).

Users who have a high level of perceived innovativeness are considered less likely to find it difficult to learn to use and have a positive perception of the usefulness of e-commerce. Past studies have found perceived innovativeness was found to have a significant effect on perceived usefulness and perceived ease of use (Lim et al., 2020; Purani et al., 2019; Shi, 2018; Wang & Lin, 2021). The explanation is suspected that individuals with high perceived innovativeness will have a positive impact on perceived usefulness and perceived ease of use in using e-commerce. Therefore, the hypothesis is obtained as follows:

H3: Perceived innovativeness have positive and significant impact to perceived usefulness

H4: Perceived innovativeness have positive and significant impact to perceived ease of use

Perceived Ease of Use

Perceived ease of use is one of the important components in the Technology Acceptance Model (TAM), which refers to the extent of the beliefs toward adopting the particular system, which will bring convenience for them in terms of physical and mental effort (Lim et al., 2020). Perceived ease of use arises when the user believes that a given technology or system is useful for him. This means that users do not feel burdened by difficulties when using the technology or system. Perceived ease of use is defined as a system that is easy to use, especially for someone who does not have good skills with a technology (Kumar et al., 2018). Perceived ease of use in this research measures the extent to which users feel it is easy to use e-commerce and do not feel that it requires a great effort to operate it.

In online retail, when the perceived cognitive load is lower due to ease of use, users can focus more on making transactions without thinking about or being distracted by other things, which ultimately impacts the perception that the system is useful (Saadé & Bahli, 2005). Perceived ease of use in a system will positively affect perceived usefulness. Previous studies found a strong relationship between ease of use and usefulness (Kim et al., 2021; Rattanaburi & Vongurai, 2021; Sahin & Sahin, 2021). Thus, the hypothesis is obtained as follows:

H5: Perceived ease of use have positive and significant impact to perceived usefulness

Perceived Usefulness

Perceived usefulness is the user's perception of the expected usefulness of using an information system (Oghuma et al., 2016). Another definition of perceived usefulness is that individual perceptions of whether a new technology could change the way they do business, and whether it could make their performance better (Wilson et al., 2021). Perceived usefulness is an important component of TAM, which refers to the extent to which individuals believe in adopting a particular system that will improve their work (Lim et al., 2020).

Based on the explanation above, perceived usefulness is an important concept in explaining an acceptance of information technology. E-commerce which is the object of this research includes information technology. The measurement of the benefits of using e-commerce is based on how much benefit will be received when users use e-commerce to make transactions.TAM explains that there is a causal relationship between perceived ease of use and perceived usefulness. When users perceive an application as easier to use, then the user will tend to feel the application is more useful because of the low cognitive load due to the ease of use (Kumar et al., 2018).

E-loyalty

Consumer loyalty can be defined as an individual's commitment to make another purchasing activities again from the same company in the future (Wilson et al., 2021). It has become the main goal of all companies to get and retain loyal customers to a company or brand of the company. This study discusses about electronic loyalty (e-loyalty), which can be defined as a customer's willingness to maintain a relationship in the future and engage in repeat visits, using an e-commerce site as the first choice among available alternatives, regardless of situational influences and marketing efforts

that can lead consumers to switch. E-loyalty is based on quality customer service support, timely delivery, convincing product presentation, easy product handling, low prices, and trustworthy security and privacy policies (Lopez-Miguens & Vazquez, 2017). Systems that are considered easy to operate and have uses that suit their needs will certainly be more liked and their use tends to be sustainable. Thus, the hypothesis is obtained as follows:

H6: Perceived ease of use have positive and significant impact to e-loyalty
H7: Perceived usefulness have positive and significant impact to e-loyalty

From the literature review and empirical studies described above, this study formulates the conceptual framework of the research model in Figure 1.

Figure 1. Conceptual Framework
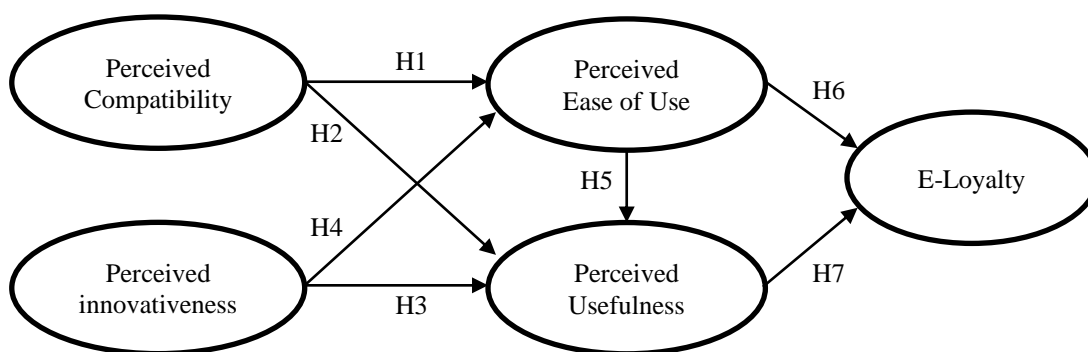
RESEARCH METHOD

The population of this study is the millennial generation in Yogyakarta. Respondents who were sampled in this study were men and women who lived in Yogyakarta with the age of 18 to 38 years who represented the population. The sample that will be used is 200 respondents. The sample size was taken based on the opinion of Roscoe, the sample size must be more than 30 and less than 500 (Sekaran & Bougie, 2010). This study uses a questionnaire distributed online through the Google Form and distributed through social media such as Whatsapp.

Primary data was collected by conducting a survey through the distribution of a structured questionnaire. Respondents were asked to think about the most used e-commerce in the last six months and then asked the respondents to respond based on the experience of the last six months with the selected e-commerce. Respondents were given questions using a scale to measure and determine the attitude of the respondents to the questions in the questionnaire based on the respondent's point of view. A Likert scale of 1 to 5 (1 = strongly disagree and 5 = strongly agree) was used. Path analysis was used in this study with SPSS software.

RESULTS

As a precaution, the total number of questionnaires distributed exceeded 200, but only 259 questionnaires were returned, and only 217 data could be processed. The validity test used in this study is construct validity with SPSS in conducting factor analysis. Kaiser Mayer Olkin's Test of Sampling Adequacy showed a score of 0.874 (> 0.5), while Barlett's

Test of Sphericity showed a significance value of 0.000 (< 0.05). These results indicate that factor analysis can be continued. The result of factor analysis from the rotated component matrix output also shows that each indicator grouping is in accordance with its variables because it has a value > 0.5. All variables also passed the reliability test, which is indicated by the Cronbach Alpha value < 0.6. The following is Table 1 of the results of the regression analysis on all the hypotheses tested in this study.

Table 1. Hypothesis Testing Results

Hypothesis	Coefficient	t-statistics	Decision
Perceived compatibility have positive and significant impact to perceived ease of use (H1)	0,237	3,952***	Supported
Perceived compatibility have positive and significant impact to perceived usefulness (H2)	0,236	4,374***	Supported
Perceived innovativeness have positive and significant impact to perceived usefulness (H3)	0,148	3,746***	Supported
Perceived innovativeness have positive and significant impact to perceived ease of use (H4)	0,103	2,293*	Supported
Perceived ease of use have positive and significant impact to perceived usefulness (H5)	0,198	3,334**	Supported
Perceived ease of use have positive and significant impact to e-loyalty (H6)	-0,022	-0,373	Not Supported
Perceived usefulness have positive and significant impact to e-loyalty (H7)	0,562	9,766***	Supported

Note. *p < 0,05, **p < 0,01, *** p < 0,001 are significant

DISCUSSION

The results showed that perceived compatibility had a positive and significant effect on perceived ease of use. Thus, hypothesis 1 (H1) is supported. When millennials think that e-commerce system is fit with their lifestyle and habits, they will find the system easier to learn. The results of this study show that when an e-commerce is in accordance with the lifestyle, needs and habits of the individual, it will be easy to use, so no great effort is needed in using the e-commerce service. Thus, the higher the perceived compatibility, the higher the perceived ease of use in using e-commerce. This finding is in line with the previous research (Gumussoy et al., 2018; Purani et al., 2019; Sahin & Sahin, 2021).

The results showed that perceived compatibility had a positive and significant effect on perceived usefulness. Thus, hypothesis 2 (H2) is supported. Compatibility with technology encourages the perceived usefulness of using e-commerce, when the individual is functionally consistent in operating the e-commerce system, either in making a transaction or choosing a product, then consumers find the system useful. Millennials who believed that the use of e-commerce was to fulfill their needs would adopt it without hesitation. Thus, the higher the perceived compatibility, the higher the perceived usefulness in using e-commerce. This finding is in line with the previous research (Gumussoy et al., 2018; Purani et al., 2019; Puspitasari et al., 2021)

The results showed that perceived innovativeness had a positive and significant effect on perceived usefulness. Thus, hypothesis 3 (H3) is supported. When individuals have high courage to try a technology, they will tend to feel that the technology has benefits. The results of this study indicate that when individuals with high perceived innovativeness or in other words have a great curiosity about an e-commerce system, the individual will be willing to try new e-commerce because they feel the potential benefits of the e-commerce service. This finding is in line with the previous research (Purani et al., 2019; Shi, 2018; Wang & Lin, 2021)

The results showed that perceived innovativeness had a positive and significant effect on perceived ease of use. Thus, hypothesis 4 (H4) is supported. This means that individuals who have high curiosity tend to be easy to adapt to any changes in e-commerce systems or technology. The higher a person's perceived innovativeness, the higher the perceived ease of use. This finding is in line with the previous research (Lim et al., 2020; Purani et al., 2019; Shi, 2018).

The results showed that perceived ease of use had a positive and significant effect on perceived usefulness. Thus, hypothesis 5 (H5) is supported. This shows that when individuals use an e-commerce for good in choosing products, the shopping cart checkout process, until the payment feels a high cognitive load, it will have an impact on their low perception of the usefulness of the e-commerce system itself. The higher a person's perceived ease of use, the higher the perceived usefulness. This finding is in line with the previous research (Kim et al., 2021; Rattanaburi & Vongurai, 2021; Sahin & Sahin, 2021).

The results showed that perceived ease of use did not have a significant effect on e-loyalty. Thus, hypothesis 6 (H6) is not supported. This finding is different from previous studies (Bahari et al., 2018; Khan & Khan, 2020; Wilson et al., 2021), which state that perceived ease of use has a significant effect on loyalty. However, a study found that perceived ease of use has no impact on loyalty to social media users based on Online Brand Community (Potgieter & Naidoo, 2017)

The perceived ease of use in conducting transactions using e-commerce, apparently does not necessarily make millennials loyal. This can be happened because ease of use is not the only one factor that make individual loyal, but there is other such as price, promotions, and availability. In addition, e-commerce companies will always try to make their platforms better by researching about online users' habit and what competitors are doing. This causes many e-commerce platforms have pretty similar interface and payments mechanism. On average, users also think that all e-commerce are easy to operate because they have similarities, and that doesn't make them loyal.

Perceived usefulness found to have a positive and significant effect on e-loyalty. Thus, hypothesis 7 (H7) is supported. This explains that individuals who feel that what is considered useful in helping their daily lives, especially online shopping, will certainly think about using it again in the future. The higher user's perceived usefulness of e-commerce, the higher their loyalty. This finding is in line with the previous research (Lu et al., 2019; Purani et al., 2019; Wilson et al., 2021)

CONCLUSION

This study was conducted on e-commerce millennial users who live in Yogyakarta, found several findings that (1) the higher the user's perceived compatibility, the higher the perceived ease of use and perceived usefulness, (2) the higher the user's perceived innovativeness, the higher the user's perceived innovativeness. Also, the perceived ease of use and perceived usefulness (3) the higher the perceived ease of use of users, the higher the perceived usefulness, (4) the higher the perceived usefulness of users, the higher their e-loyalty in using e-commerce, and (5) Perceived ease of use has no significant effect on e-loyalty in using e-commerce. This result shows that high perceived ease of use of e-commerce will not always lead to e-loyalty. The findings of this study are expected to be an empirical study that is able to contribute to the context of digital consumer behavior in the existing marketing literature.

LIMITATION

The first limitation of this research is that it only covers one area in Indonesia, namely Yogyakarta. For future research, it can expand the scope of the research area in other big cities such as Jakarta, Bali, Surabaya, Bandung, so that it can represent Indonesian e-commerce users as a whole. The second limitation is that this study only focuses on perceived compatibility, innovativeness, ease of use, usefulness, and e-loyalty variables. Thus, future research can examine other variables that have not been used in this study such as the user's intrinsic and extrinsic motivation.

ACKNOWLEDGMENT
-

DECLARATION OF CONFLICTING INTERESTS
The researcher stated that there was no conflict of interest during the research.

REFERENCES

Agag, G., & El-Masry, A. A. (2016). Understanding consumer intention to participate in online travel community and effects on consumer intention to purchase travel online and WOM: An integration of innovation diffusion theory and TAM with trust. *Computers in Human Behavior*, *60*, 97–111. https://doi.org/10.1016/j.chb.2016.02.038

Agarwal, R., & Karahanna, E. (1998). On the multi-dimensional nature of compatibility beliefs in technology acceptance. *Digit*, 1–22. https://pdfs.semanticscholar.org/0d67/5482ed99bfb243b442a923e5f92ef55183ef.pdf

Alalwan, A. A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information Management*, *42*(April), 65–77. https://doi.org/10.1016/j.ijinfomgt.2018.06.001

Arsalan, S., & Latif, D. V. (2021). *Technology Adoption Of Millennial Generations In Implementation Of Self Ordering Machine In Fast Food Restaurant*. *12*(8), 556–560.

Bahari, K. A., Abdullah, D., Kamal, S. B. M., Johari, N. R., & Zulkafli, M. S. (2018). the Influence of Hotel Website Design Quality, Perceived Ease of Use and Perceived Usefulness on Loyalty Intention. *Turkish Online Journal of Design Art and Communication*, *8*(SEPT), 701–710. https://doi.org/10.7456/1080sse/102

Budiati, I., Susianto, Y., Adi, W. P., Ayuni, S., Reagan, H. A., Larasaty, P., Setiyawati,

N., Pratiwi, A. I., & Saputri, V. G. (2018). *Profil Generasi Milenial Indonesia*. 1–153. www.freepik.com

Gumussoy, C. A., Kaya, A., & Ozlu, E. (2018). *Determinants of Mobile Banking Use: An Extended TAM with Perceived Risk, Mobility Access, Compatibility, Perceived Self-efficacy and Subjective Norms*. 225–238. https://doi.org/10.1007/978-3-319-71225-3_20

Gurău, C. (2012). A life-stage analysis of consumer loyalty profile: Comparing Generation X and Millennial consumers. *Journal of Consumer Marketing*, *29*(2), 103–113. https://doi.org/10.1108/07363761211206357

Khan, S., & Khan, A. (2020). Consumer E-Loyalty for E-Grocery Shopping in a Metro City of India. *International Journal of E-Adoption*, *12*(2), 16–33. https://doi.org/10.4018/ijea.2020070102

Kim, E. J., Kim, J. J., & Han, S. H. (2021). Understanding student acceptance of online learning systems in higher education: Application of social psychology theories with consideration of user innovativeness. *Sustainability (Switzerland)*, *13*(2), 1–14. https://doi.org/10.3390/su13020896

Kumar, D. S., Purani, K., & Viswanathan, S. A. (2018). Influences of 'appscape' on mobile app adoption and m-loyalty. *Journal of Retailing and Consumer Services*, *45*(August), 132–141. https://doi.org/10.1016/j.jretconser.2018.08.012

Lim, F.-W., Fakhrorazi, A., Ikhsan, R., Silitonga, K., Loke, W.-K., & Abdullah, N. (2020). The Role of Personal Innovativeness and Facilitating Conditions in Shaping the Attitudes of Mobile Internet Banking (MIB) Adoption among Generation Y in Malaysia. *Preprints*, *March*, 1–12. https://doi.org/10.20944/preprints202003.0407.v1

Lopez-Miguens, M. J., & Vazquez, E. G. (2017). An integral model of e-loyalty from the consumer's perspective. *Computers in Human Behavior*, *72*, 397–411. www.elsevier.com/locate/comphumbeh

Lu, C. C., Wu, I. L., & Hsiao, W. H. (2019). Developing customer product loyalty through mobile advertising: Affective and cognitive perspectives. *International Journal of Information Management*, *47*(May 2018), 101–111. https://doi.org/10.1016/j.ijinfomgt.2018.12.020

Malhotra, N., Sahadev, S., & Purani, K. (2017). Psychological contract violation and customer intention to reuse online retailers: Exploring mediating and moderating mechanisms. *Journal of Business Research*, *75*, 17–28. https://doi.org/10.1016/j.jbusres.2017.01.013

Oghuma, A. P., Libaque-Saenz, C. F., Wong, S. F., & Chang, Y. (2016). An expectation-confirmation model of continuance intention to use mobile instant messaging. *Telematics and Informatics*, *33*(1), 34–47. https://doi.org/10.1016/j.tele.2015.05.006

Ozturk, A. B., Nusair, K., Okumus, F., & Hua, N. (2016). The role of utilitarian and hedonic values on users' continued usage intention in a mobile hotel booking environment. *International Journal of Hospitality Management*, *57*, 106–115. https://doi.org/10.1016/j.ijhm.2016.06.007

Potgieter, L. M., & Naidoo, R. (2017). Factors explaining user loyalty in a social media-based brand community. *SA Journal of Information Management*, *19*(1), 1–9. https://doi.org/10.4102/sajim.v19i1.744

Purani, K., Kumar, D. S., & Sahadev, S. (2019). e-Loyalty among millennials: Personal characteristics and social influences. *Journal of Retailing and Consumer Services*, *48*(November 2018), 215–223. https://doi.org/10.1016/j.jretconser.2019.02.006

Puspitasari, I., Wiambodo, A. N. R., & Soeparman, P. (2021). The impact of expectation confirmation, technology compatibility, and customer's acceptance on e-wallet continuance intention. *AIP Conference Proceedings*, *2329*.

https://doi.org/10.1063/5.0042269

Rattanaburi, K., & Vongurai, R. (2021). Factors Influencing Actual Usage of Mobile Shopping Applications: Generation Y in Thailand. *Journal of Asian Finance, Economics and Business, 8*(1), 901–913. https://doi.org/10.13106/jafeb.2021.vol8.no1.901

Saadé, R., & Bahli, B. (2005). The impact of cognitive absorption on perceived usefulness and perceived ease of use in on-line learning: An extension of the technology acceptance model. *Information and Management, 42*(2), 317–327. https://doi.org/10.1016/j.im.2003.12.013

Sahin, F., & Sahin, Y. L. (2021). Examining the Acceptance of E-Learning Systems during the Pandemic: The Role of Compatibility, Enjoyment and Anxiety. *International Technology and Education Journal, 5*(1), 1–10. https://eric.ed.gov/?id=EJ1312891%0Ahttps://files.eric.ed.gov/fulltext/EJ1312891.pdf

Sekaran, U., & Bougie. (2010). *Research Methods for Business A skill Building Approach: A John Wiley and Sons, Ltd Publication*.

Shi, Y. (2018). The Impact of Consumer Innovativeness on the Intention of Clicking on SNS Advertising. *Modern Economy, 09*(02), 278–285. https://doi.org/10.4236/me.2018.92018

Wang, W. T., & Lin, Y. L. (2021). An integrated theoretical investigation of healthcare students' perceived compatibility using online learning systems on their learning performance. *Journal of Internet Technology, 22*(1), 143–155. https://doi.org/10.3966/160792642021012201014

Wilson, N., Keni, K., & Tan, P. H. P. (2021). The role of perceived usefulness and perceived ease-of-use toward satisfaction and trust which influence computer consumers' loyalty in china. *Gadjah Mada International Journal of Business, 23*(3), 262–294. https://doi.org/10.22146/gamaijb.32106