A Research on the Impact of Perceived Enjoyment, Performance Expectancy and Effort Expectancy on E-Learning Continuance Intention

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Abstract
This paper investigates the relationship between perceived enjoyment, performance expectancy, effort expectancy and the intention of continuance usage of e-learning system. The research bases on UTUAT model with revised of independent variables due to impact of Covid-19. The widespread of the pandemic has forced governments to impose social distancing method for extended periods in most of the countries. Many activities were impacted including education which was forced to move to online mode to support continuous learning. Such powerful unforeseeable factor casted a significant impact on the use of e-learning system. Learners and teachers must use e-learning regardless of preferences, supporting opinions, essential equipment availability, internet connection stability, … In short, factors that were proved to prone impact on intention to use e-learning before in the UTUAT model such as social influence and facilitating condition are no longer applicable in the Covid-19 context. As the world is transiting into the "new normal" life after Covid-19 vaccine coverage is sufficient, the decision of continuing the use of e-learning mode become obvious for most education institutions and the learners as well. Research results shows that perceived enjoyment carries a positive impact on performance expectancy, effort expectancy and e-learning system continuance intention. In addition, performance expectancy also impacts e-learning system continuance intention in a positive way. This research found no statistical evidence of effort expectancy impact on e-learning system continuance intention.
Keywords: Perceived enjoyment, performance expectancy, effort expectancy, continuance intention.
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1. Introduction
Since the outbreak in late December 2019, the Covid-19 pandemic has created a sharp turning point in the socio-economic life of most countries. Among them, education is clearly one of the most heavily affected field. The United Nations Educational, Scientific and Cultural Organization (UNESCO) said that as of April 8, 2020, 91.3% of pupils and students around the world, approximately 1.6 billion people, were affected by the closure of training institutions in 188 countries. According to 2020 data from the United Nations Children's Fund (UNICEF), nearly 27% of countries globally continue to completely or partially close schools after 18 months of the pandemic. Results from initial surveys by the International Labor Organization (ILO) showed that 30% of vocational education institutions ceased operations completely in Latin America and the Caribbean and 85% of educational institutions career stops all live classes. After four "waves" of the pandemic, training and teaching in general in Vietnam have encountered many disruptions. UNESCO statistics showed that, at April 2020, all schools in 63 provinces and cities have stopped operating and all pupils and students stay at home to prevent the spread of the pandemic according to Decision No. 16/CT-TTG CP. In the context of the complicated new normal of Covid-19, the Vietnamese Government has repeatedly implemented social distancing measures across the province, city or even the whole country. Basic and secondary education, initial training, continuing training, and work-based learning all stop. Training programs and courses are not available, teaching and learning are disrupted, exams and qualifications completion are likely to be delayed and affect careers and future of millions.

It can be said that Covid-19 has completely changed the form of learning and working from traditional face-to-face to online method. Through the online e-learning system, learners can easily take the lesson without having to meet in person. In other words, the online e-learning system provides learners with a learning environment including data storage and transmission technologies (Ngo Thi Lan Huong and Hoang Minh Duc, 2020). Technological developments and advancements make it easier and more convenient to implement e-learning at many academic institutions. The use of technology to maintain the learning and working process during the crisis period caused by the pandemic demonstrates the unremitting efforts of the whole society in general and the education industry in particular. The impact of the Covid-19 pandemic, to a certain extent, is the factor that ushered in an unprecedented digital transformation revolution for education in Vietnam. The Ministry

of Education and Training has issued many guiding documents related to the education in lieu of safe prevention of the Covid-19 pandemic. The general policy of the Ministry is "for students to temporarily stop going to school but not stop learning". Besides, online learning is an opportunity to revise the quality of teaching and learning for educational institutions. The diversity of training methods helps offering more choices to learners and improving the quality of education in different aspects (UTC Online Education, 2020). In short, under the impact of Covid-19, online learning is applied so that learners can update their knowledge without violating social distancing regulation at schools, avoiding delay or discrepancy in training programs (Ministry of Education and Training, 2020).

There are many studies on e-learning and the factors that impact intention and behavior of individual in using e-learning throughout the years. However, the number of research on continuance intention of using e-learning is still humble. In addition, the formalization of conversion from tradition to online teaching method in respond to the pandemic is expected to change the relationship of some previously recognized impact factors. There is a need to study continuance intention of using e-learning in the new normal phase context and the factors that impacts it to gain a more comprehensive understanding of this matter.

2. Literature review and research hypotheses
2.1. E-learning and continuance intention to use e-learning
Previous studies suggest that there is no evidence to prove the origin of the term "e-learning" (Moore et al., 2011). However, there are some opinions that this definition was born in the 1980s, at the same time as some other learning terminologies such as digital learning, distance learning and mobile learning. According to a report from market research company Brands Vietnam, the concept of distance learning first appeared in the 20th century and changed continuously over time, from various forms of communication, through learning via radio or TV, to learn online on the Internet today (BrandsVietNam, 2020). The phrase "online learning" became widely used after it was mentioned in the international conference on computer-based training (CBT) in October 1999.

Nowadays, online learning has become a popular method of studying around the world. There are many different concepts of online e-learning, but the common point is they are often associated with technology. In 2003, Welsh et al introduced the concept of e-learning as the use of computer network technology to provide information and instruction to individuals. According to Zemsky and Massy (2004), there are three different interpretations of this term: First, online learning is a method of distance education, in the sense that learners do not need to go to class. Second, e-learning is software that supports online communication, this understanding emphasizes the role of LMS learning management systems. Finally, online learning is learning through electronic means. The third interpretation of Zemsky and Massy (2004) most closely reflects the nature of e-learning, while the first two are only concerned with the distribution and limits the nature of e-learning to a narrow scope. Based on this understanding, Vu Huu Duc (2020) have compiled several definitions of online learning from different angles:

- From the perspective of training/learning methods, e-learning is considered as a general term encompassing information and communication technology-based learning applications and processes, such as computer-based learning, web learning, virtual classrooms, digital collaboration, and networking (Urdan and Weggen, 2000). In 2001, the European Commission defined e-learning as the application of new multimedia technologies and the Internet to improve the quality of learning by improving access to services, exchange and collaborate remotely tools. OECD (2005) introduces a concept related to e-learning in the field of higher education. Specifically, e-learning is the use of information and communication technologies in a university's diverse educational processes for the purpose of supporting and encouraging learning.

- From a technology perspective, e- learning is teaching and learning that is digitized (Rosenberg, 2001; Govindasamy, 2001) with the transmission of activities, processes, training and learning events through media. electronic devices such as the Internet, video tapes and personal electronic devices.

- From the perspective of learners, online learning is simply understood as learning supported by information and communication technology.

Behavioral Intention is a variable that has been around for a long time, and in the early days, scholars used the concept of intent to describe this variable. The study overview shows that behavioral intention variable is defined based on many different aspects, but the most widely used definition is that of TPB. In addition, behavioral intention is considered to be very important in encouraging consumers to continue using technology voluntarily (Chang and Cheung, 2001) because at that time there were not many definitions of continuance intention. . The concept of this factor is continuously adjusted based on the behavioral intention variable of Venkatesh et al. (2012) (Indrawati and Putri, 2018). Psychosocial theories such as the theory of reasoned action (TRA) have recognized that intentions form and precede behaviour, so that intention is the best predictor of actual behavior. An individual may discontinue using certain technology if intention of discontinuance has been lingering in their mind long enough. Bhattacherjee (2001) also pointed out that continuance intention is a user's

intention to continue using an information system (Thong et al., 2006). After that, many researchers have applied and extended the scale of continuance intention variable from Bhattacherjee (2001) confirmation-expectation model (Liao et al., 2007; Chiu and Wang, 2008 ; Limayem and Cheung, 2008; Lee, 2010; Chang et al., 2015; Gao et al., 2015).

In 2018, Joia and Altieri adapted the concept of behavioral intention by Ajzen (1991) and defined continuance intention as an individual's intention to reuse an information technology system. At the same time, when studying intention to continue using e-wallets, Indrawati and Putri (2018) argue that continuance intention is the degree to which a person has intended to continuously perform certain action in   the future. Two years later, Pang et al. (2020) emphasized that this factor may reflect the willingness of users to reuse the information system and the most recent review of continuance intention in using e-learning of Rajeh et al. (2021) refer to this variable as students' beliefs about the hope to continue the implementation of online learning.

2.2. Perceived enjoyment

Perceived enjoyment or enjoyment is an intrinsic motivation often added in models extending behavioral theory. Ryan and Stiller (1991) acknowledge intrinsic motivation as an important factor capable of promoting the learning process. Some researchers have found that intrinsic motivation is important in information technology adoption and acceptance (Igbaria et al. 1995; Lee et al. 2005; Teo and Noyes 2011; Zhao et al. 2011). In 1992, Davis et al. first gave the definition of intrinsic motivation factor, and this concept has been used by many technology studies for perceived enjoyment variable (Wang et al., 2012; Park et al., 2012; Balog and Pribeanu, 2016; Ogunsola and Adekola, 2021). Accordingly, perceived enjoyment refers to the degree to which computer use is considered enjoyable in its own right, excluding any foreseeable performance outcomes (Davis et al. 1992). Webster et al. (1993) also showed that perceived enjoyment is the joy and exploration of an individual psychological experience in the context of information technology and computer-controlled environments.

Venkatesh (2000) has inherited the perceived enjoyment definition by Davis et al. (1992) in the survey of factors affecting intention of use, most other experimental works in this period also based on this concept. The few papers that develop their own definitions emphasize that perceived enjoyment is the feeling of pleasure that information systems bring to users during utilization (Moon and Kim, 2001; van der Heijden, 2004; Hsu and Lin, 2008). By the 2020s, perceived enjoyment is mainly exploited by scholars based on the user's feeling when using technology, continuing to inherit and expand from past studies. Typically, the concept of perceived enjoyment is the degree to which users feel happy when using e-commerce (Aguilar-Illescas et al., 2020); e-wallets (To Anh Tho and Trinh Thi Hong Minh, 2021) or add to the above definition the relationship between the value of enjoying new technology and the perception of interest (Holdack et al., 2020).

In the 1990s, the influence of perceived enjoyment on perceived usefulness and perceived ease of use was not examined by many scholars. Although Davis et al. (1992) found that perceived enjoyment, perceived usefulness and perceived ease of use are antecedents of behavioral intention to use computers, but they did not reveal the relationship between perceived enjoyment with perceived usefulness, and between perceived enjoyment with perceived ease of use. Later, Venkatesh et al (2002) based on perceived usefulness to build Performance expectancy and on perceived ease of use to build Effort expectancy in the UTUAT model. Towards the end of the 20th century and the beginning of the 21st century, many studies investigated with the aim of exploring the impact of perceived enjoyment on perceived usefulness and perceived ease of use (Dias, 1998; Agarwal and Karahanna, 2000; Venkatesh et al., 2002; Yi and Hwang, 2003; van der Heijden, 2004). Most of those confirmed a positive impact of perceived enjoyment on both performance expectancy (Liaw and Huang, 2003; Lou et al., 2005; Thong et al., 2006; Fagan et al., 2008; Balog and Pribeanu, 2010; Sung and Yun, 2010; Zhou and Lu, 2011; Haryani et al., 2014; Lai and Zainal, 2015; Alalwan et al, 2018; Chiu and Cho, 2020) and effort expectancy (Ayeh et al., 2013; Koenig-Lewis et al, 2015; Lee et al, 2016; Chao, 2019; Su and Chiu, 2020; Li et al, 2021).

Based on motivational model, Davis et al. (1992) found that perceived enjoyment plays an important role in intention to use personal computers. This means that individuals will use technology if it can bring them happiness and enjoyment. Koufaris (2003) also mentioned perceived enjoyment of shopping as a good indicator in predicting consumers' intention to return to online stores while van der Heijden (2004) in his empirical work on the factors affecting intention to use a common portal in the Netherlands conclude that perceived enjoyment has a direct and positive influence on intention. Perceived enjoyment is a major intrinsic driver of user adoption of new technology (Bruner and Kumar, 2005), and this positive relationship has been empirically tested by researchers in many other fields such as learning through internet medium (Lee et al, 2005), mobile learning (Wang et al, 2009); live game usage (Hsu and Lu, 2007); livestream shopping intention (Ma, 2021) with similar conclusion. From the above findings, this paper proposes the following hypotheses:

H1a: Perceived enjoyment has a positive impact on performance expectancy.

H1b: Perceived enjoyment has a positive impact effort expectancy.

H2: Perceived enjoyment has a positive impact on e-learning continuance intention.

2.3. Performance expectancy

Performance Expectancy first appeared in a study by Venkatesh et al (2002) in the area of   intention to accept and use technology. This variable is the result of a synthesis based on similarities between 5 constructs from different models: perceived usefulness in the TAM model (Davis et al., 1989; 1992), TAM2 (Venkatesh and Davis, 2000) and C-TAM-TPB (Taylor and Todd, 1995); exogenous dynamics in the MM model (Davis et al., 1992); job fit in the MPCU model (Thompson et al., 1991), relative advantage in the IDT model (Rogers, 1995) and outcome expectations in the SCT model (Compeau and Higgins, 1995).

From 2003 to present, researchers have mainly defined "performance expectations" in two dimensions: users and technology systems. Performance expectations, from the user's perspective, refer to two main factors that are users' beliefs or perceptions (perceptions) that using a system or technology will help them improve their work performance. Venkatesh et al. (2002) first defined performance expectancy with relation to the belief factor. According to Venkatesh and his partners, performance expectancy is the degree to which an individual believes that using the system will help them to be effective at work. This is a typical idea in the perspective of the users and has been adapted by many authors in their research of many different fields such as medicine and healthcare (Chang et al., 2007; Kijsanayotin et al., 2009; Chiu and Eysenbach, 2010; Cohen et al., 2013), education and training (Keller et al., 2007; Chen, 2011; Jambuligam, 2013; Tosuntaş et al., 2015), e-government (Wang and Shih, 2009; Alraja et al., 2016; Taiwo, 2018).

Literature review shows that many scholars have concluded about the positive influence of performance expectancy on continuance intention in technology use. For example, the short-term benefits of learning through the web make existing customers continue to use web browsers for learning (Chiu and Wang, 2008) or in the survey of Lwoga and Komba (2015), students stated that a web-based learning management system (LMS) help them complete the course tasks quicker. This means that a student with high performance expectations will be more likely to remain using the LMS than a student with lower performance expectations. Students are willing to adopt the e-learning system for the long term because they perceived that it will improve their academic performance. This result is also supported by other studies in the field of education and training such as Bellaaj et al. (2015), Sirianni et al. (2017), Wan et al. (2020), Chen et al. (2021), Rabaa'i and AlMaati (2021) and Razak et al (2021). Thus, this paper proposes to examine the following hypothesis:

H3: Performance expectancy have a positive impact on e-learning continuance intention.

2.4. Effort expectancy

Appearing at the same time as efficiency expectations, effort expectations are an important factor in shaping users' intention to use and accept new technology. According to Venkatesh et al. (2002), this variable originates from three constructs: perceived ease of use in the TAM model (Davis et al., 1989; 1992), complexity in the MPCU model (Thompson et al., 1991) and ease of use in the IDT model (Rogers, 1995).

Based on the similarities of the three definitions above, effort expectations represent "the degree of ease associated with using the system" (Venkatesh et al., 2003, 2012). This is the premise of many studies in the 2000s (Chang et al., 2007; Keller et al, 2007; Wang and Shih, 2009; Kijsanayotin et al., 2009). At the same time, Chiu and Wang (2008) show that effort expectation is the degree to which learners believe effort is not needed to use a system. A system that is believed to be easy to use is more likely to create awareness among users about the usefulness and intention to use the system. The aspect of user trust and perception continues to be exploited by researchers in many fields, typically: study and work (Chiu and Wang, 2008; Barker et al., 2009; Yoo et al., 2009, 2012; Jambulingam, 2013; Tosuntaş et al., 2015), economics (Zhou et al., 2010), social life (Kang et al., 2015), health (Mallet et al., 2015) and e-government services (Rodrigues et al., 2016).

Since Venkatesh et al. (2003) incorporated effort expectancy into their UTAUT model, scholars have discovered an important influence of this variable on continuance intention of technology use. Moreover, Davis et al (1992) assumes that a system that is perceived as simple or easy to use is more likely to lead to users' perceptions of usefulness and intention to use. Effort expectancy also indicates the ease associated with individuals' use of technology (Venkatesh et al., 2012) and the extent of information access, flexibility, ease of use, and clear interaction with the system (Sabah, 2019). Sanchez-Franco (2010) recognizes that users are more likely to use an information system if they believe it is easy to use. Some previous work has also shown that the more complex an innovation or new technology is, the lower the adoption rate or intention to continue using it, especially among consumers (Venkatesh and Brown, 2001; Brown and Venkatesh, 2005). In contrast, In addition, some other works conclude that effort expectations are not related positively or negatively on continuance intention (Sirianni et al., 2017; Erwanti et al., 2018; Hutabarat et al., 2021; Rahadi et al., 2021). This finding can be explained because users are familiar with technological systems, so they find it easy to use them competently (Jones et al, 2009). Results from previous studies are still in debate thus this paper proposes to test the following hypothesis:

H4: Effort expectancy have a positive impact on e-learning continuance intention.

2.5. Research model

The theoretical review shows that, with the exception of Theory of Purposeful Behavior (TRA), which is less commonly used experimentally because its successor is the highly popular Theory of Planned Behavior (TPB), then models such as Theory of Technology Acceptance (TAM), Theory of Integration and Use of Technology (UTUAT1 and UTUAT2) are also widely applied in empirical studies in many contexts, with many subjects. and in many different countries around the world. In which, it can be said that TPB is the most commonly applied model with a larger number of empirical studies (Ajzen, 2011). However, in studies related to technology and innovation, TAM has an advantage over TPB in the research process with variables set close to the user's experiences and feelings with the systems. and new technology. In contrast, UTUAT1 and 2 have a smaller number of empirical studies used, but it is reasonable that one model appeared more than a decade after the other models, but anyway from the way Venkatesh et al. (2003) By developing this model, it can be seen that UAUAT has fully inherited the advantages of many previous models including TAM and TPB. What UTUAT needs is more empirical evidence to test the accuracy of the model in many different contexts and research subjects. This is one reason why the authors choose this model as the original model for their research because UTUAT is a suitable model for the research objective of this work, which is to clarify the impact and extent of the factors on the environment. Factors affecting the intention to maintain online learning in the context of the new normal of Covid-19.

In addition, due to the government's requirement to move learning to online form, social influences and facilitating conditions of UTUAT in the context of Covid-19 do not have the same impact as in other contexts. After 2 years of enforced e- learning, the intention to continue using e-learning now depends on users' personal feelings and expectations rather than on social influences (which has been neutralized within the past 2 years of e-learning enforcement) and facilitating conditions (after 2 years of use most learners have sufficiently equipped themselves). Therefore, the authors separate 2 variables Performance Expectancy and Effort Expectancy of UAUAT and conducted a review of previous studies to screen more variables to supplement and expand the independent variable for the research model. Literature review found Perceived enjoyment, which affects both Effort Expectancy and Performance Expectancy, and this variable itself also affects intention in previous studies. Therefore, the authors propose a model to test the impact of factors on the intention to maintain the form of online learning, including Intent, Effective Expectation, Effort Expectation and Perception of interest. Perceived interest is recognized as a very important intrinsic driver in technology adoption and acceptance (Igbaria et al. 1995; Lee et al. 2005; Teo and Noyes 2011; Zhou, 2011). Research overview shows that if users are interested in a certain system, they will be more inclined to use that system.
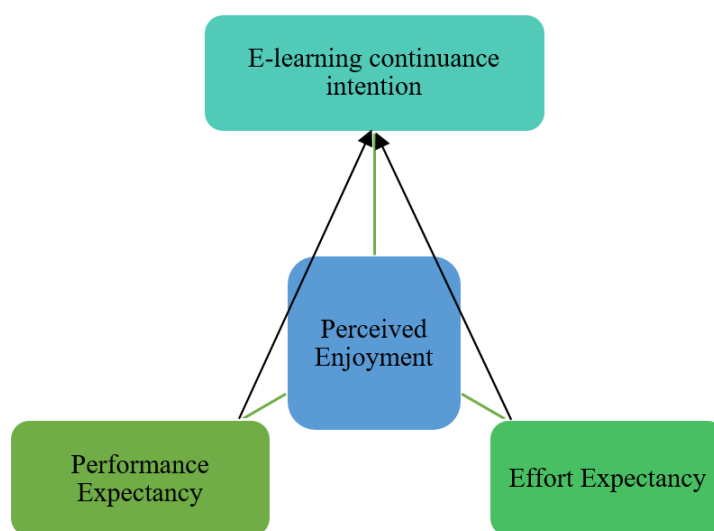

Figure 2: Research model

3. Research methods

The chosen research sample is e-learning system users in Vietnam. The survey invitation was sent using email lists, social media groups and fanpages, study groups list... There were 756 returned answers. After scanning, the response with no previous exposure to e-learning system was removed, and the remaining 590 valid answers (78%) were input for data analysis. Since the respondents are Vietnamese, the questionnaire was translated to Vietnamese from the English version using a qualified notary service and sent to a pilot sample of 50 e-learning learners for comments. Several wording issues were fixed to ensure the questionnaire is user-friendly. The final Vietnamese version was translated back into English using the same method to compare for any loss in

translation.

Table 3: Origin of scales

Variable name	Source
Performance Expectancy	Venkatesh et al. (2012)
Effort Expectancy	Venkatesh et al. (2012)
Perceived Enjoyment	Chao (2019)
E-learning continuance intention	Ajzen (1991)

The questionnaire consists of 2 parts: i) General information; and ii) Statements related to 3 independent variables (perceived enjoyment, performance expectancy, effort expectancy) and 1 dependent variables (e-learning continuance intention). Data collected were analyzed using SPSS and AMOS including reliability testing, discriminant & convergent validity (EFA, CFA), and hypotheses testing using SEM.

4. Research results

A reliability test for the scales results show that most variables of the model achieved satisfactory benchmarks in which Cronbach's Alpha for Performance expectancy is 0.852; for Effort expectancy is 0.881; for Perceived enjoyment is 0.873 and for E-learning continuance intention is 0.906. All variables in the model are kept for next analysis step. EFA results show that the KMO value of this sample is 0.941, which is within the satisfactory range of 0<KMO<1; Bartlett's sig. is 0.000<0.05 with Eigenvalue, total variances explained and factor loading in Pattern Matrix all achieved satisfactory level (Hair et al., 2009) which indicates that the variables fulfill discriminant and convergent validity.
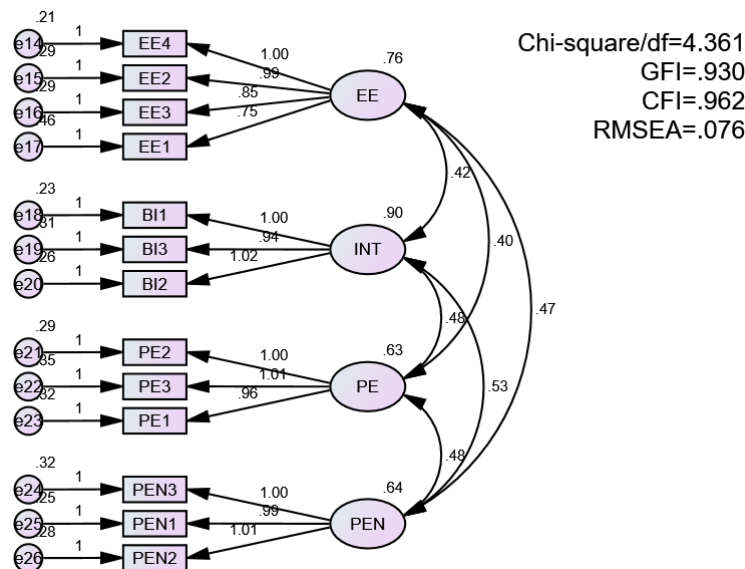

Figure 2: Confirmatory factor analysis (CFA) results

Confirmatory factor analysis (CFA) was performed to check the suitability of the model with the research data. CFA results show that model fit is satisfactory with Chi-square/df of 4.361 < 5; GFI =0.930>0.9; CFI =0.962>0.95; RMSEA is 0.076<0.08 (Hair et al., 2009). Test of discriminant and convergence validity are also satisfied. The research model and its variables are now qualified to test for SEM.

SEM results show that model fit is satisfactory with Chi-square/df of 4.374 < 5; GFI =0.930>0.9; CFI =0.962>0.95; RMSEA is 0.076<0.08 (Hair et al., 2009). Results from Regression Weights confirm all but the impact of Effort expectancy on e-learning continuance intention where there is no evidence to show a statistically significant effect as the p-value of the underlying relationship is 0.509>0.05. The remaining relationships are all statistically significant (p-value < 0.05). In short, hypothesis H4 is rejected and the remaining hypotheses (H1a, H1b, H2, H3) are all supported.
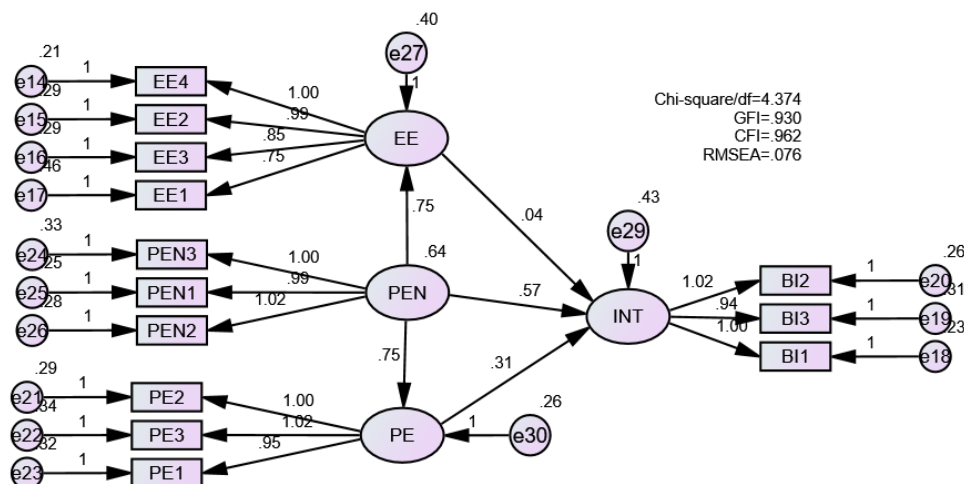
Figure 3: Results of hypotheses testing using structural equation model (SEM)

Results from Standardized Regression Weights shows that: i) the strongest influence in this research is from Perceived enjoyment to Performance expectancy with estimated standardized regression weight of 0.761; ii) the second most influencing impact is from Perceived enjoyment to Effort expectancy (0.687); iii) Perceived enjoyment also impact e-learning continuance intention (0.479) more than Performance expectancy (0.260).

Finally, SEM Squared Multiple Correlations confirm that the model can explain 52% of e-learning continuance intention changes thus there are still other impact factors that were not identified and included in this research.

5. Discussion and implications

This paper has several findings that is inline with previous studies. First, performance expectancy has a direct positive effect on e-learning continuance intention. In other words, learners with high performance expectancy tend to continue using this form of learning. Similar results were found in previous studies (Bellaaj et al., 2015; Lwoga and Komba, 2015; Sirianni et al., 2017; Wan et al., 2020; Chen et al., 2021; Rabaa'i and AlMaati., 2021; Razak et al., 2021). Second, effort expectancy has no impact on continuance intention, a result that has also been demonstrated in previous studies, especially the more recent ones (Sirianni et al., 2017; Erwanti et al., 2018; Hutabarat et al., 2021; Rahadi et al., 2021). This was explained in previous research by the inflow of younger users who usually having no problem with exploring new technology. In this research, most of the research subjects are within the 18-22 years old range, the Z generation. This digital generation are used to using online technologies; therefore, they do not face much difficulty in getting used to e-learning and can generally improve any required skills over time. Hence, Effort expectancy impact on continuance intention is neutralized in e-learning context. Third, perceived enjoyment has a positive impact on e-learning continuance intention, or the more learner find it interesting to use an e-learning system, the more they intend to keep using this method. Similar conclusions are also discovered in the studies of Lin and Lu (2011), Lankton and Tripp (2013), Duyen Nguyen (2015). Fourth, perceived enjoyment has a positive effect on both Performance expectancy and Effort expectancy. Many past works have drawn conclusions to support this point with performance expectancy (Venkatesh, 2000; Sung and Yun, 2010; Lee et al., 2016; Chao, 2019; To Anh Tho and Trinh Thi Hong Minh, 2021) and effort expectancy (Venkatesh, 2000; Venkatesh et al., 2002).

From the above findings, for individual learners, it is necessary to actively update their knowledge and skills in using e-learning platforms. In addition, learners need to proactively provide feedback on problematic areas or suggestion for improvement so that e-learning providers can upgrade and alter their system to better fit with user need. In addition, educational institutions that organize online teaching also need to improve their facilities, ensure uninterrupted teaching, and provide learner with the most professional yet user-friendly online education environment. Lectures also need to be revamped and enriched with new technology and virtual interaction tools to create more enjoyment in the context of no face-to-face interaction. Different and active feedback channels must be maintained so that learners can always reach for help and received personalized support to upkeep their interest in continuing their use of e-learning. Even though online learning is mandatory in the pandemic situation, as the world is moving toward the new normal situation now, learners can choose to return to traditional education method or continue with online learning. With that being said, the unbeatable advantage of e-learning is convenience and thus support a better study-work-life balance. From the education provider side, it is undeniable that e-learning help them accommodate more courses with cheaper price and automatic management system. The biggest obstacle is social prejudice of e-learning effectiveness versus

traditional one has been neutralized after 2 years of enforced e-learning during Covid-19 social distancing periods thus it is reasonable to believe that e-learning can be the main method of study and knowledge transfer in the near future.

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Appendix1: Questionnaire items
E-learning Continuance Intention
I intend to use e-learning system in the future
I will recommend others to use e-learning system.
I decide to use e-learning system in the future.

Perceived Enjoyment
I find using e-learning enjoyable.
The actual process of using the e-learning is pleasant.
I have fun using the e-learning.

Performance Expectancy
I would find the E-Learning System useful in my learning.
Using the E-Learning System enables me to accomplish learning tasks more quickly.
Using the e-learning system increases my learning productivity.

Effort Expectancy
I would find the E-Learning system easy to use.
Learning how to use E-Learning system is easy for me.
It would be easy for me to become skillful at using the E-Learning system.
My interaction with the E-Learning system would be clear and understandable.