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REVIEW ARTICLE

Integrating ECM, TAM, and SDT in Studying Accounting Lecturers' Continuance Intention for ODL: A Review

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ABSTRACT

Lecturers are increasingly expected to use technology to prepare their students for 21st century skills (Ahmad et al., 2019). As a result, online learning will become a common trend in university education in the near future, particularly in accounting (Sarea et al., 2021), especially since the COVID-19 pandemic has brought enormous changes to the educational landscape. Thus, given that the ultimate success of Open and Distance Learning (ODL) hinges on the continuance of intention to use it, it is important to discuss this intention. This review paper aims to explore the factors that could influence accounting lecturers' continuance intention to use ODL by integrating three prominent theoretical models: the Expectation-Confirmation Model (ECM), the Technology Acceptance Model (TAM), and the Self-Determination Theory (SDT). This paper included 23 articles that covered studies from 2008 to 2024. The key ECM, TAM, and SDT constructs that have been used in the literature to predict continuance intention are identified in this paper. The findings suggest that perceived usefulness, perceived ease of use, satisfaction, and intrinsic motivation are potentially critical predictors. It is posited that the integration of the ECM, TAM, and SDT frameworks provide a comprehensive understanding of both extrinsic and intrinsic factors that drive the continued use of ODL among accounting lecturers, offering insights for designing effective online learning environments.

Contribution/Originality: This study is one of very few studies which have investigated the continuance intention of accounting lecturers to use ODL by integrating the ECM, TAM, and SDT, providing a comprehensive understanding of both extrinsic and intrinsic factors influencing this intention.

1. Introduction

These days, the use of technology in the classroom has drastically changed the traditional classroom to accommodate 21st century learning styles. Gone are the days when students sat in rows, listened to lectures given from a podium in front of the room, and took notes. Students can instead participate in virtual classrooms where a wealth of information, including books, audios, images, and videos, is readily available online. Previous studies have defined and referred to this situation as a virtual learning environment, which includes various terms such as virtual learning (Anuar et al., 2022; Guasch et al., 2010), online schooling (Asadullah, 2023; Welch & Napoleon, 2015), distance learning education (Salvo et al., 2017), electronic mentoring (Bakkali, 2023; Dahalan et al., 2012), virtual education (Davies, 2001; Hussain et al., 2019; Msekelwa, 2023; Pando, 2018), and other related terms like distance, electronic, online tele-, and virtual (Baratian et al., 2018; Javier, 2020), and open and distance learning (Saidi et al., 2021; Shanthi et al., 2021).

After all, the advancement of information and communications technology (ICT) has transformed the field of education, specifically in the methods of teaching and learning (Tuma et al., 2020). Furthermore, following the implementation of the Sustainable Development Goals (SDGs) in 2015, there has been a significant effort to advocate for online learning as a strategy to accomplish the goals, particularly SDG 4, which focuses on ensuring quality education (Otto & Becker, 2019). Accordingly, online learning has emerged as a practical and economical means of expanding access to high-quality higher education (Asunka, 2008). The reason for this is that online learning has the capacity to grant learners from all geographical areas the opportunity to obtain an education, thus diminishing educational disparities (Adarkwah, 2021b). As a result, because education is a vital resource for every country, educational institutions must keep up with technological advancements in order to provide a better education. Hence, ICT is important in promoting educational transformation around the world, serving as a communication tool and a means of achieving SDG 4 (Adarkwah, 2021a).

Evidently, the education industry has also gone through changes since the first industrial revolution. For instance, undeniably, the 4th Industrial Revolution has had a significant impact on how we work and learn in the modern world (Oke & Fernandes, 2020). The term Industry 4.0, or simply IR 4.0, is commonly used to refer to this 4th industrial revolution. Education 4.0 was implemented in line with IR 4.0 to guarantee that graduates are capable and well-prepared for employment in the modern world. Education 4.0 encompasses the integration of online learning platforms and applications into the learning process, allowing for virtual learning. Consequently, higher education institutions (HEIs) are required to use digital tools and online communication for learning purposes and expand their distance learning offerings (Safiullin & Akhmetshin, 2019) in order to adapt to the advancements of the Education 4.0 era. Furthermore, the industry has recently been refocusing on Industrial Revolution 5.0 (IR 5.0), which is an upgrade to IR 4.0. Hence, the widespread use of distance learning, also known as online learning, e-learning, and, more recently, Open and Distance Learning (ODL), which is a classroom environment where students can study from any location without the need to physically attend lectures in a classroom, is not that surprising.

According to the Malaysian Institute of Accountants (2018), accountants will increasingly have to use new digital and smart technologies to supplement their traditional working methods and, in some cases, completely replace them. As a result, universities should

prepare accounting students to be qualified employees capable of meeting the challenges of IR 4.0 (Bonekamp & Sure, 2015). In this IR 4.0 environment, universities must adjust their accounting student teaching and learning activities to match employers' expectations. The accounting students must be equipped with the necessary skills and knowledge to prepare them for the profession while also increasing their employability (Shamsudin et al., 2023). Hence, universities and lecturers must incorporate technology into accounting education to better prepare students for the demands of IR 4.0 (Ghani & Muhammad, 2019). Online learning is critical in assisting accounting students in meeting the demands of IR 4.0 as it offers adaptable, up-to-date training in advanced technologies required for modern accounting practices.

In addition, the recent 2020 coronavirus pandemic (COVID-19) brought about the rapid global adoption of digital transformation, necessitating mandatory changes in all aspects of our lives. In essence, this pandemic has impacted a diverse range of sectors. Unquestionably, it has impacted educational practices (Korkmaz & Toraman, 2020). All of this began in March 2020, when the World Health Organization (WHO) declared the COVID-19 outbreak a pandemic. Globally, the COVID-19 pandemic has caused schools and universities to quickly adapt to distance education systems, tools, and platforms to control the virus's spread. The education sector has abruptly shifted to online/ODL platforms all over the world (Aziz et al., 2022). For the first time, all courses had to be delivered entirely online (Daumiller et al., 2021). Javier (2020) argued that the pandemic promoted the shift in teaching mode. Thus, it is said that this unexpected pandemic has accelerated the demand for education digitalization, which is poised to become the "new normal" way of teaching and learning (Shamsudin et al., 2023). Since then, the educational system has undergone significant changes in its teaching and learning practices.

1.1. Problem of the study

Online learning or ODL, is not a new phenomenon (Zulkifli & Ab Latif, 2021), particularly in the 21st century (Hussin et al., 2020). But, the COVID-19 pandemic has led to its widespread use. At universities, this pandemic has forced lecturers to adapt and change in order to accommodate this new educational method. Based on Hodges et al. (2020), lecturers of different backgrounds and ages were all struggling to effectively prepare and deliver online learning, despite numerous challenges and often a lack of adequate technical support. This modern way of learning is also expected to be fully implemented by 2025 (Isaias, 2018). Rahmi et al. (2018) opined that since online learning has clearly grown in potential, it can only be fulfilled if users are fully prepared for it. Therefore, research on educators deserves attention, particularly when Rienties et al. (2013) mentioned that the majority of educators appear to be resistant to using technology in the classroom. Moreover, this issue becomes increasingly grave when the pandemic has significantly boosted the popularity of online learning, leading to the expectation that lecturers will spend more time online. Therefore, COVID-19 can be considered a natural metaphor that emphasizes how faculty perceive and manage online teaching and learning (Daumiller et al., 2021). The longer COVID-19 persists, the more likely it is that the world will accept online learning as a mode of teaching and learning (Adarkwah, 2021b). Thus, because the post-pandemic future is unpredictable, it is critical to focus on the implementation of ODL, particularly in universities (Wotto, 2020).

The use of online learning in accounting education is not new, nor was the shift towards it unexpected (Husain et al., 2023). This is because accounting lecturers are being pushed

to innovate in their teaching (Brink & Stoel, 2019). The pandemic hastened its emergence, brought it to the forefront, and necessitated its implementation. Nevertheless, accounting educators are facing difficulties in embracing online teaching practices because of the intricate, technical, and practical nature of the subject (Grabinski et al., 2020; Sangster et al., 2020). Qhosola (2016) pointed out that it may be necessary to conduct research on the teaching practices of university accounting lecturers. Furthermore, given the evolution of online learning in accounting education, which its ultimate success hinges on the continuance intention to use it. So, it is important to keep in mind that the perspective of lecturers specifically must be considered when the willingness of educators to continue using online learning determines its success (Najmul Islam, 2011). Gaining insight into accounting lecturers' continuation intention to use ODL is crucial for ensuring the sustainability and effectiveness of remote education in accounting, especially considering the growing digital transformation in accounting education. Following that, accounting lecturers' continuance intention to use ODL is worth discussing.

It is apparent that, online learning will be around long after the pandemic is over (Önal & Önal, 2023). It is no longer an option (Aziz et al., 2022). As Bhattacherjee et al. (2008) asserted, in terms of online learning, the emphasis should also be on its continuous use. Continuance intention is an individual's intention to continue using or reusing a system based on their satisfaction with prior use (Bhattacherjee, 2001). Thus, considering the significant financial investment in online learning, it is critical to understand the factors influencing its continuance intention (Panigrahi et al., 2018). This is because identifying such factors can help predict the continuance intention of using online learning and design successful online learning environments (Dağhan & Akkoyunlu, 2016). However, there have been only a few studies conducted to investigate the factors that influence users continued use of educational technologies (Luo et al., 2021; Ramadiani et al., 2019; Wu & Chen, 2017). Mathew and Chung (2020) suggested that future research should consider educators' perspectives, particularly in order to meet the expectations of both students and educators regarding the use of online learning. Therefore, based on the issue mentioned above and gap research, this paper will review the integration of ECM (Expectation-Confirmation Model), TAM (Technology Acceptance Model), and SDT and provide insights into factors that could influence accounting lecturers' continuance intention to use the ODL.

1.2. Research Objectives

This paper aims to accomplish the following research objectives:

i. To review existing literature on the integration of ECM (Expectation-Confirmation Model), TAM (Technology Acceptance Model), and SDT (Self-Determination Theory) in order to provide a comprehensive understanding of the continuance intention.
ii. To identify the ECM, TAM, and SDT constructs that could serve as predictors of accounting lecturers' continuance intention to use ODL.

2. Methodology

This review paper consists of three (3) stages. The process involves planning, conducting, and reporting the review. During the planning stages, this paper emphasizes the importance of identifying the research objectives for this study. Next, in the conducting stage, this paper locates relevant literature by selecting relevant keywords

and manually applying the inclusion and exclusion criteria. In particular, the initial goal of this paper was to review only articles published within the last five years. This paper, however, extended the search timeframe because the number of articles identified remained limited. Due to a scarcity of articles on this topic, the chosen articles were from 2008 to 2024. The articles were chosen based on the following criteria: articles obtained from an electronic database, articles written in English, and articles specifically focused on continuance intention. The article that studied continuance intention but did not use the combined framework of these three theories, or at least two of them, has been removed. Following a comprehensive review, the results of the investigation are presented.

3. Results

A number of theoretical frameworks have been developed to investigate and predict users' continuance intention. However, this review paper argues that there is a need to develop an integrated theoretical framework that elucidates the process of shaping continuance intention since existing models such as ECM, TAM, and SDT provide valuable insights but may not fully capture the complex interplay of factors influencing continued use of technology. Especially, in the context of continuance intention to use ODL, this paper believes that combining these three models will add to the body of knowledge as the ECM provides post-acceptance and continuous use, while the TAM and SDT have undergone extensive testing in the context of online learning. An integrated framework builds on the strengths of these models to provide a more complete understanding of intrinsic and extrinsic motivation, user satisfaction, and behavioural intentions. This review paper has identified 23 articles that have examined continuance intention that either combined these three theories or only used two of them: the Expectation Confirmation Model (ECM), the Technology Acceptance Model (TAM), and the Self-Determination Theory (SDT). Table 1 evidently shows that researchers have used such integrated theoretical frameworks to understand and predict continuance intention to capture the multifaceted nature of continuance intention.

Table 1: Articles Examining Continuance Intention Using Integrated Theoretical Models (ECM, TAM, and SDT)

Integrated Theories	References
ECM + TAM + SDT	Ho (2010), Chibisa and Mutambara (2022)
ECM + TAM	Cheng (2014), Malik and Rao (2019), Darmawan et al. (2020), Rekha and Timothy (2020), Xie et al. (2020), Nikou (2021), Cai et al. (2022), Sarassina (2022), Taveira and Barbosa (2024)
ECM + SDT	Rahi et al. (2021), Wang et al. (2021), Rahi et al. (2022), Faozi and Handayani (2023), Lim et al. (2024)
TAM + SDT	Roca and Gagné (2008), Joo et al. (2018), Nikou and Economides (2021), Hsieh et al. (2022), He and Li (2023), Magno and Cassia (2024), Şahin et al. (2024)

3.1. The integration of the ECM, TAM, and SDT in order to provide a comprehensive framework for understanding the factors influencing the accounting lecturers' continuance intention to use ODL.

Continuance intention is an intent to continue using a specific technology or system (Shanshan & Wenfei, 2022). Bhattacherjee (2001) asserted that the ECM is more

effective than other models in forecasting the continuance intention to use IT products and services. Originally, the ECM is based on the Expectation Confirmation Theory (ECT) adaptation. ECM consisted of four variables: confirmation, perceived usefulness, satisfaction, and continuance intention (Bhattacherjee, 2001). This model is predicated on the following premise: when users use a product, they compare perceived performance to their initial expectation and determine how much of their expectation is confirmed (confirmation). Meanwhile, based on their usage experience and confirmation level, users form a post-acceptance expectation (perceived usefulness), which may differ from their pre-acceptance or initial expectation. Their level of confirmation and post-acceptance expectation help to increase satisfaction and satisfied users are more likely to develop a desire to continue. The ECM model has been commonly used in various fields for investigating continued information system (IS) or information technology (IT) usage (Kang et al., 2009; Lee, 2010). However, ECM has rarely been used to evaluate intentions to use educational technologies (Chibisa & Mutambara, 2022). Like any other educational technology, the success of an online learning system depends on both its initial acceptance and continuous use. It is important to take into account the use of ECM when examining the continuance intention to use online learning. Conversely, the integration of ECM with other models can enhance its explanatory power and offer a more comprehensive perspective. Accordingly, ECM has been integrated with a number of adoption models to examine IT or IS continuance intention (Yuan et al., 2016), as adding other constructs to this model will provide a better understanding of the continuance intention.

In recent years, IS researchers have given the ECM a lot of consideration and attention when studying post-adoption behavior (Pradana, 2022). Post-adoption behavior includes users' continuance intention to use a technology or system. However, since the model only considers variables such as confirmation, perceived usefulness, and satisfaction to explain behavioral intention, it is worth noting that there may be additional factors that can influence factors that influence a user's behavioral intention to adopt IT (Le et al., 2020). Wherein, TAM and ECM are the two most commonly used models for assessing factors influencing users' continuance intention (Le et al., 2020). ECM is similar to TAM in that it hypothesizes that users' perceived usefulness (post-adoption expectation) is an antecedent to their satisfaction (an evaluation of attitude) with the IS or IT, which in turn leads to their continuance intention of the IS or IT (Bhattacherjee, 2001; Hong et al., 2006). TAM postulates that users' perceived usefulness affects their attitude toward using the IS or IT, which in turn determines their intention to use the IS or IT (Davis et al., 1989; Hong et al., 2006). However, according to Huda (2023), there is a gap in the literature in which the use of these two theoretical models, TAM and ECM, is uncommon; thus, the suggestion is to combine the TAM and ECM models. Furthermore, Rahi et al. (2022) stated that integrating theories such as ECM and SDT into the context of technological continuance intention would contribute to the literature. Besides that, Nikou and Economides (2017) proposed combining the TAM and SDT to observe users' intentions, particularly in online learning settings, because the SDT is important in technology acceptance. Both models, TAM and SDT, can complement each other in establishing a robust research framework (Sharma, 2019). For such reasons, this paper argues that this integration may offer a more thorough and comprehensive perspective than analyzing each theory independently. Thus, this review paper proposes a theoretical framework that incorporates ECM, TAM, and SDT as deemed appropriate and comprehensive.

TAM is based on the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) and the Theory of Planned Behavior (TPB) by Ajzen (1985). It is a well-known theoretical framework that explains ICT user acceptance (Davis, 1986; Kim et al., 2010; Xia et al., 2018). TAM focuses on two key factors that influence people's intentions to use IT: perceived usefulness and perceived ease of use, which influence users' attitudes and intentions to use technology. These two factors serve as antecedents to attitude (Mishra et al., 2023). Perceived usefulness is defined as the belief that using IT will improve one's work performance, while perceived ease of use is defined as the belief that using IT will require no significant effort (Venkatesh & Bala, 2008; Weng et al., 2018). Attitudes toward technology foster intentions to use it, which leads to actual behavior (Mishra et al., 2023). Attitude refers to a person's personal attachment to technology (Papadakis, 2018), which can be positive or negative and influences their behavioral intention to use technology. While the primary goal of TAM is to predict users' initial acceptance of IS, many TAM-based studies assume that continuance use is an extension of acceptance and use TAM for post-acceptance continuance use (Luo et al., 2017). A positive attitude towards IS or IT would promote greater continuance intention. According to Luo et al. (2017), the TAM emphasizes the intention to use technology from an attitude perspective, implying that perceived usefulness and ease of use influence users' attitudes toward IS acceptance, which in turn influences their use intention. So, this paper contends that perceived usefulness and perceived ease of use could serve as predictors of lecturers' continuance intention to use ODL.

Joo et al. (2018) stated that while TAM primarily focuses on the initial acceptance of new technology, researchers are increasingly emphasizing the importance of understanding its continuous use in the future. In other words, continuous use should support the success of new technology, not just its initial acceptance. The TAM model still lacks components for addressing controlled and autonomous motivation, while SDT uses both intrinsic and extrinsic motivation to predict user satisfaction and intent to continue (Wang & Khan, 2021). Often, SDT was used to address the limitations of TAM (He & Li, 2023). Fundamentally, human well-being is the primary focus of the SDT (McEown & Oga-Baldwin, 2019; Ryan & Deci, 2017). As stated by Rahi et al. (2022), it focuses on individual motivation, emphasizing the role of intrinsic and extrinsic factors in driving behavior. Intrinsic motivation occurs when an individual does something they enjoy or want for their own sake (Farah et al., 2020). Extrinsic motivation comes from outside of oneself and drives a person to pursue a specific outcome (Ryan & Deci, 2000). Indeed, motivation is a critical factor in driving user adoption and continuance intention for a technology or service (Liébana-Cabanillas et al., 2021). SDT is closely related to the aspect of basic psychological needs (Ryan & Deci, 2017). The SDT model addresses three psychological needs that people have: autonomy (a sense of one's own will), competency (the ability to use one's skills and capabilities), and relatedness (a sense of social belonging) (Deci & Ryan, 2000; Ryan & Deci, 2017). More precisely, based on Ryan and Deci (2017), autonomy represents an individual's desire to be independent and take voluntary actions. Meanwhile, competence refers to an individual's need to feel mastery over skills and perform activities effectively. Whereas, relatedness refers to an individual's desire to be interconnected and feel a sense of ownership. Meeting individuals' psychological needs leads to positive attitudes and intentions toward using technology. In their study, Luo et al. (2021) applied the SDT to explain motivation for continued use of online learning. It is thought to be beneficial to use or integrate SDT to forecast users' continuance intention (Mobarhan & Rahman, 2015).

SDT focuses on the intrinsic motivational factors that influence behavior. In terms of when accounting lecturers use ODL for teaching, the sense of autonomy in using it, proficiency in navigating and using it, and interaction with peers and students within the ODL environment may significantly influence accounting educators' intention to continue using ODL. Essentially, addressing these psychological needs can increase their intrinsic motivation to continue using ODL. On the other hand, extrinsic motivation is referred to as engaging in an activity to achieve a distinct outcome, such as rewards, recognition, or avoidance of negative repercussions. Correspondingly, extrinsic motivation might play a significant role alongside intrinsic motivation to influence their continuance intention. Components of TAM, both perceived usefulness and perceived ease of use, are extrinsic motivators (Liao et al., 2022) because they are external to the individual and influence their intention to use technology based on expected outcomes. Hence, accounting lecturers who perceive that ODL is easy to use and improves their teaching effectiveness and job performance are less likely to experience frustration or resistance, making them more likely to continue using it. All things considered, ECM focuses on satisfaction derived from meeting expectations; TAM emphasizes perceived usefulness and ease of use; and SDT emphasizes intrinsic motivation through autonomy, competence, and relatedness. Thus, this holistic model takes into account both extrinsic and intrinsic motivators, resulting in a more comprehensive and effective understanding of what influences educators' intention to continue using ODL.

3.2. The ECM, TAM, and SDT constructs that could serve as predictors of accounting lecturers' continuance intention to use ODL.

Studies examining the factors that influence lecturers' continuance intention to use ODL are scarce, particularly in the context of accounting education. The COVID-19 crisis has highlighted the need to go one step further in studying lecturers, as their roles are changing, particularly in determining their continuance intention to use ODL. Furthermore, it is crucial for improving the sustainability and effectiveness of its implementation in a post-pandemic educational environment. Even more when the accounting discipline is considered extremely practical (Grabinski et al., 2020). If lecturers do not intend to continue using the ODL, it could jeopardize the future of accounting education. Take into account that most lecturers used the ODL during the pandemic crisis, extensive research is required to provide valuable information on a number of factors that could influence faculty members' intentions to continue using ODL. Given the various factors that influence technology adoption and usage, there may also be factors that influence its continued use.

Based on Table 2, perceived usefulness and perceived ease of use are recurring constructs across most studies, highlighting their critical role in influencing continuance intention. Roca and Gagné (2008), Cheng (2014), and Joo et al. (2018), for instance, included them in their studies. The constructs of autonomy, competence, and relatedness, which are derived from SDT, are used to address the intrinsic motivational factors that drive behavior. They appear in studies by Ho (2010), Wang et al. (2021), and Faozi and Handayani (2023). Next, satisfaction and confirmation are central to the ECM; these constructs are used to assess users' satisfaction with previous use and the extent to which their expectations were met. Cheng (2014), Malik and Rao (2019), and Xie et al. (2020) utilized them in their studies. Furthermore, some studies incorporate additional factors such as perceived playfulness (Roca & Gagné, 2008), facilitating conditions and social influence (Nikou & Economides, 2021), and instructor support (He & Li, 2023). This paper found that the literature frequently uses perceived usefulness, perceived ease

of use, satisfaction, and intrinsic motivation as predictors, making them the potentially critical constructs to study continuance intention.

Farsawang and Songkram (2022) suggested conducting future research to identify the factors that influence the intention to continue using online learning. Based on the selected articles, the constructs of ECM, TAM, and SDT, as shown in Table 2, were used to predict the continued intention of the users. Thus, this paper believes that such constructs could provide a thorough and comprehensive perspective on the various factors that may influence the continuance intention to use ODL. So, this paper posits that the application of these constructs as predictors in investigating accounting lecturers' continuance intention to use ODL can create a supportive and conducive environment for them, resulting in the successful and sustained integration of ODL into their teaching practices.

Table 2: The constructs of ECM, TAM, and SDT which could serve as predictors of accounting lecturers' continuance intention to use ODL.

No.	Predictor Variable	References
1	• Perceived usefulness • Perceived playfulness • Perceived ease of use	Roca and Gagné (2008)
2	• Perceived autonomy • Perceived competence • Perceived relatedness • Perceived usefulness • Perceived ease of use • Attitude • Confirmation • Satisfaction	Ho (2010)
3	• Perceived usefulness • Perceived ease of use • Confirmation • Satisfaction	Cheng (2014)
4	• Self-determination • Perceived usefulness • Perceived ease of use • Satisfaction	Joo et al. (2018)
5	• Perceived usefulness • Perceived ease of use • Confirmation • Satisfaction	Malik and Rao (2019)
6	• Perceived usefulness • Perceived ease of use • Attitude • Confirmation • Satisfaction	Darmawan et al. (2020)
7	• Perceived usefulness • Perceived ease of use • Attitude • Satisfaction	Rekha and Timothy (2020)
8	• Perceived usefulness • Perceived ease of use • Confirmation	Xie et al. (2020)

9	• Satisfaction • Autonomy • Perceived ease of use • Satisfaction	Nikou (2021)
10	• Perceived usefulness • Perceived ease of use • Facilitating conditions • Social influence • Confirmation • Satisfaction	Nikou and Economides (2021)
11	• Perceived usefulness • External regulation • Intrinsic regulation • Introjected regulation • Identified regulation • Confirmation • Satisfaction	Rahi et al. (2021)
12	• Perceived usefulness • Autonomy • Competence • Relatedness • Confirmation • Satisfaction	Wang et al. (2021)
13	• Perceived usefulness • Perceived ease of use • Confirmation • Satisfaction	Cai et al. (2022)
14	• Perceived autonomy • Perceived competence • Perceived usefulness • Perceived ease of use • Confirmation • Satisfaction	Chibisa and Mutambara (2022)
15	• Perceived usefulness • Perceived ease of use • Perceived autonomy	Hsieh et al. (2022)
16	• Perceived usefulness • External regulation • Intrinsic regulation • Introjected regulation • Identified regulation • Confirmation • Satisfaction	Rahi et al. (2022)
17	• Perceived usefulness • Perceived ease of use • Satisfaction	Sarassina (2022)
18	• Instructor support • Autonomy • Competence • Relatedness • Perceived ease of use	He and Li (2023)
19	• Perceived autonomy • Perceived competence	Faozi and Handayani (2023)

	• Perceived relatedness • Perceived usefulness • Confirmation • Satisfaction	
20	• Artificial autonomy • Subjective well-being	Lim et al. (2024)
21	• Perceived ease of use • Economic motivation • Environmental motivation	Magno and Cassia (2024)
22	• Perceived usefulness • Perceived ease of use • Autonomy • Competence • Relatedness	Şahin et al. (2024)
23	• Perceived usefulness • Satisfaction	Taveira and Barbosa (2024)

4. Conclusion

The integration of the ECM, TAM, and SDT offers a robust framework for understanding the continuance intention of accounting lecturers towards ODL. This review posits that factors such as perceived usefulness, perceived ease of use, intrinsic motivation, and satisfaction could serve as predictors that influence accounting lecturers' continuance intention to use ODL. By addressing both the technological and psychological needs of lecturers, educational institutions can foster a more supportive environment for the sustained use of ODL. This is also critical for the ongoing digital transformation of accounting education, as well as successfully preparing lecturers for new ways of teaching that align with Industry 4.0 and beyond. Future research should continue to explore these integrated models to further validate and refine the understanding of continuance intention in various educational field and contexts.

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Conflict of Interests

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References

Adarkwah, M. A. (2021a). "I'm not against online teaching, but what about us?": ICT in Ghana post Covid-19. *Education and Information Technologies*, *26*(2), 1665-1685. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7492135/pdf/10639_2020_Article_10331.pdf

Adarkwah, M. A. (2021b). An Outbreak of Online Learning in the COVID-19 Outbreak in Sub-Saharan Africa: Prospects and Challenges. *Global Journal of Computer Science and Technology, 21*(2), 1-10.

Ahmad, S. A., Yoke, S. K., Yunos, R. M., & Amin, J. M. (2019). Exploring Lecturers' Readiness for 21st Century Education in Malaysian Higher Learning Institutions. *European Journal of Teaching and Education*, *1*(1), 15-29.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Springer.

Anuar, R., Zulkifli, F. N., Zakaria, W. Z. W., Sabri, M. F., Zulkapli, M. F., & Abidin, S. Z. (2022). Overcoming Learning Obstacles and Improving Online Distance Learning (ODL) among Art and Design Education Students during Covid-19. *DESIGN-DECODED 2021: Proceedings of the 2nd International Conference on Design Industries & Creative Culture*, DESIGN DECODED 2021, 24-25 August 2021, Kedah, Malaysia,

Asadullah, M. N. (2023). Home Schooling during the COVID-19 Pandemic. *Journal of Southeast Asian Economies*, *39*, S34-S61.

Asunka, S. (2008). Online learning in higher education in Sub-Saharan Africa: Ghanaian University students' experiences and perceptions. *The International Review of Research in Open and Distributed Learning*, *9*(3).

Aziz, A. A., Aziz, A. A. A., Norwahi, N. A., Nordin, N. A., Zaini, N., Shaidin, S., & Azhar, S. B. H. J. (2022). TPACK Readiness among English-Language Lecturers for Open Distance Learning (ODL) Adoption in a Malaysian Public University. Proceedings, *82*(1), 12-22.

Bakkali, I. (2023). E-Learning and Development of Digital Skills for Future Teachers in Morocco. In *Handbook of Research on Scripting, Media Coverage, and Implementation of E-Learning Training in LMS Platforms* (pp. 414-431). IGI Global.

Baratian, M., Farajollahi, M., Sarmadi, M. R., & Mosakazemi, S. M. (2018). Assessment of Electronic Education Student's Perception of Effective Distance Education Components to Explain Satisfaction of Electronic Education. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, *9*(1).

Bhattacherjee, A. (2001). Understanding Information Systems Continuance: An Expectation-Confirmation Model. *MIS quarterly*, *25*(3), 351-370.

Bhattacherjee, A., Perols, J., & Sanford, C. (2008). Information Technology Continuance: A Theoretic Extension and Empirical Test. *Journal of Computer Information Systems*, *49*(1), 17-26. https://doi.org/10.1080/08874417.2008.11645302

Bonekamp, L., & Sure, M. (2015). Consequences of Industry 4.0 on human labour and work organisation. *Journal of Business and Media Psychology*, *6*(1), 33-40.

Brink, W. D., & Stoel, M. D. (2019). Analytics Knowledge, Skills, and Abilities for Accounting Graduates. In T. G. Calderon (Ed.), *Advances in Accounting Education: Teaching and Curriculum Innovations* (Vol. 22, pp. 23-43). Emerald Publishing Limited. https://doi.org/10.1108/S1085-462220190000022002

Cai, J., Zhao, Y., & Sun, J. (2022). Factors influencing fitness app users' behavior in China. *International Journal of Human–Computer Interaction*, *38*(1), 53-63.

Cheng, Y. M. (2014). Why do users intend to continue using the digital library? An integrated perspective. *Aslib Journal of Information Management*, *66*(6), 640-662. https://doi.org/10.1108/AJIM-05-2013-0042

Chibisa, A., & Mutambara, D. (2022). Determinants of High School Learners' Continuous Use of Mobile Learning during the Covid-19 Pandemic. *International Journal of Learning, Teaching and Educational Research*, *21*(3), 1-21.

Dağhan, G., & Akkoyunlu, B. (2016). Modeling the continuance usage intention of online learning environments. *Computers in Human Behavior*, *60*, 198-211.

Dahalan, N., Hassan, H., & Atan, H. (2012). Student engagement in online learning: Learners attitude toward e-mentoring. *Procedia-Social and Behavioral Sciences*, *67*, 464-475.

Darmawan, A. K., Siahaan, D. O., Susanto, T. D., Hoiriyah, Umam, B. A., & Bakir, B. (2020, 24-25 Sept. 2020). Understanding Indonesian Citizen's Continuance Intention to Use Mobile-based Smart City: A Perspective of Modified Expectation Confirmation Model (M-ECM). 2*020 7th International Conference on Information Technology, Computer, and Electrical Engineering (ICITACEE)*.

Daumiller, M., Rinas, R., Hein, J., Janke, S., Dickhäuser, O., & Dresel, M. (2021). Shifting from face-to-face to online teaching during COVID-19: The role of university faculty achievement goals for attitudes towards this sudden change, and their relevance for burnout/engagement and student evaluations of teaching quality. *Computers in Human Behavior*, *118*, 106677.

Davies, J. L. (2001). Borderless higher education in continental Europe. *Minerva*, *39*(1), 27-48.

Davis, F. D. (1986). *A technology acceptance model for empirically testing new end-user information systems: Theory and results* Massachusetts Institute of Technology].

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management science*, *35*(8), 982-1003.

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, *11*(4), 227-268.

Faozi, F. H., & Handayani, P. W. (2023). The Antecedents of Mobile-Assisted Language Learning Applications Continuance Intention. *Electronic Journal of e-Learning*, *21*(4), 299-313.

Farah, N., Ahmad, I., & Hanapi, A. (2020). The Implementation of Augmented Reality in Increasing Student Motivation: Systematic Literature Review. *IOP Conference Series: Materials Science and Engineering*, *854*, 012043. https://doi.org/10.1088/1757-899X/854/1/012043

Farsawang, P., & Songkram, N. (2022). Factors Influence Students' Continuance Intention toward Online Learning Transition After the COVID-19 Pandemic Unfolds. *13th International Conference on Society and Information Technologies.*

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Addison - Wesley.

Ghani, E. K., & Muhammad, K. (2019). Industry 4.0: Employers' Expectations of Accounting Graduates and Its Implications on Teaching and Learning Practices. *International Journal of Education and Practice*, *7*(1), 19-29.

Grabinski, K., Kedzior, M., Krasodomska, J., & Herdan, A. (2020). Embedding E-learning in accounting modules: the educators' perspective. *Education Sciences*, *10*(4), 97.

Guasch, T., Alvarez, I., & Espasa, A. (2010). University teacher competencies in a virtual teaching/learning environment: Analysis of a teacher training experience. *Teaching and Teacher Education*, *26*(2), 199-206.

He, L., & Li, C. (2023). Continuance intention to use mobile learning for second language acquisition based on the technology acceptance model and self-determination theory. *Front Psychol*, *14*, 1185851. https://doi.org/10.3389/fpsyg.2023.1185851

Ho, C. H. (2010). Continuance intention of e-learning platform: Toward an integrated model. *International journal of electronic business management*, *8*(3), 206.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*, *27*.

Hong, S. J., Thong, J. Y., & Tam, K. Y. (2006). Understanding continued information technology usage behavior: A comparison of three models in the context of mobile internet. *Decision support systems*, *42*(3), 1819-1834.

Hsieh, H. L., Lai, J. M., Chuang, B. K., & Tsai, C. H. (2022). Determinants of telehealth continuance intention: A multi-perspective framework. *Healthcare*, *10*(10), 2038.

Huda, M. N. (2023). Analysis the Critical Factors of M-government Service Acceptance: An Integrating Theoretical Model between TAM and ECM. *Policy & Governance Review*, *7*(2), 109-124.

Husain, E. J., Hamdan, A., & Binsaddig, R. (2023). The Accounting Education, Between Digitalization and the COVID-19 Crisis. In *From Industry 4.0 to Industry 5.0: Mapping the Transitions* (pp. 727-738). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-28314-7_63

Hussain, I., Hussain, I., & Ramzan, M. (2019). Future prospects of virtual education in Pakistan: Opportunities and challenges. *Journal of Research in Social Sciences*, *7*(1), 149-163.

Hussin, N. S., Awang, N., & Fatzel, F. H. M. (2020). Students' experience in learning accounting via open and distance learning (ODL). *Insight Journal*, *7*, 29-40.

Isaias, P. (2018). Model for the enhancement of learning in higher education through the deployment of emerging technologies. *Journal of Information, Communication and Ethics in Society*, *16*(4), 401-412.

Javier, C. L. (2020). The Shift towards New Teaching Modality: Examining the Attitude and Technological Competence among Language Teachers teaching Filipino. *Asian ESP*, *16*(2.1), 210-244.

Joo, Y. J., So, H. J., & Kim, N. H. (2018). Examination of relationships among students' self-determination, technology acceptance, satisfaction, and continuance intention to use K-MOOCs. *Computers & education*, *122*, 260-272.

Kang, Y. S., Hong, S., & Lee, H. (2009). Exploring continued online service usage behavior: The roles of self-image congruity and regret. *Computers in Human Behavior*, *25*(1), 111-122. https://doi.org/https://doi.org/10.1016/j.chb.2008.07.009

Kim, T., Suh, Y. K., Lee, G., & Choi, B. G. (2010). Modelling roles of task‐technology fit and self‐efficacy in hotel employees' usage behaviours of hotel information systems. *International Journal of Tourism Research*, *12*(6), 709-725.

Korkmaz, G., & Toraman, Ç. (2020). Are We Ready for the Post-COVID-19 Educational Practice? An investigation into What Educators Think as to Online Learning. *International Journal of Technology in Education and Science (IJTES)*, *4*(4), 293-309.

Le, T. T., Pham, H. M., Chu, N. H., Nguyen, D. K., & Ngo, H. M. (2020). Factors affecting users' continuance intention towards mobile banking In Vietnam. *American Journal of Multidisciplinary Research & Development (AJMRD)*, *2*(4), 42-51.

Lee, M. C. (2010). Explaining and predicting users' continuance intention toward e-learning: An extension of the expectation–confirmation model. *Computers & education*, *54*(2), 506-516. https://doi.org/https://doi.org/10.1016/j.compedu.2009.09.002

Liao, Y. K., Wu, W. Y., Le, T. Q., & Phung, T. T. T. (2022). The integration of the technology acceptance model and value-based adoption model to study the adoption of e-learning: The moderating role of e-WOM. *Sustainability*, *14*(2), 815.

Liébana-Cabanillas, F., Singh, N., Kalinic, Z., & Carvajal-Trujillo, E. (2021). Examining the determinants of continuance intention to use and the moderating effect of the gender and age of users of NFC mobile payments: A multi-analytical approach. *Information Technology and Management*, *22*(2), 133-161.

Lim, X. J., Cheah, J. H., Chang, J. Y. S., Lim, W. M., Morrison, A. M., & Dwivedi, Y. K. (2024). Pay with a smile? Modelling the continuance use intention of facial recognition payment. *Internet Research*.

Luo, Y., Lin, J., & Yang, Y. (2021). Students' motivation and continued intention with online self-regulated learning: A self-determination theory perspective. *Zeitschrift für Erziehungswissenschaft*, *24*(6), 1379-1399.

Luo, Y., Ye, Q., & Meng, L. (2017). An Empirical Research on Influence Factor of College Students' Continued Intentions of Online Self-Regulated Learning Based on the Model of ECM and TAM. *2017 3rd International Conference on Social Science and Higher Education*.

Magno, F., & Cassia, F. (2024). Predicting restaurants' surplus food platform continuance: Insights from the combined use of PLS-SEM and NCA and predictive model comparisons. *Journal of Retailing and Consumer Services*, *79*, 103820. https://doi.org/https://doi.org/10.1016/j.jretconser.2024.103820

Malaysian Institute of Accountants. (2018). *MIA Digital Technology Blueprint: Preparing the Malaysian Accountancy Profession for the Digital World,* 1-35.

Malik, G., & Rao, A. S. (2019). Extended expectation-confirmation model to predict continued usage of ODR/ride hailing apps: role of perceived value and self-efficacy. *Information Technology & Tourism*, *21*(4), 461-482.

Mathew, V. N., & Chung, E. (2020). University Students' Perspectives on Open and Distance Learning (ODL) Implementation Amidst COVID-19. *Asian Journal of University Education*, *16*(4), 152-160.

McEown, M. S., & Oga-Baldwin, W. Q. (2019). Self-determination for all language learners: New applications for formal language education. *System*, *86*, 102124.

Mishra, A., Shukla, A., Rana, N. P., Currie, W. L., & Dwivedi, Y. K. (2023). Re-examining post-acceptance model of information systems continuance: A revised theoretical model using MASEM approach. *International Journal of Information Management*, *68*, 102571.

Mobarhan, R., & Rahman, A. A. (2015). Understanding E-Portfolio Continuance Intention among Students: A Self-Determination Perspective. *PACIS*, 45.

Msekelwa, P. Z. (2023). Beyond The Borders Global Collaboration in Open Distance Education through Virtual Exchanges. *Journal of Knowledge Learning and Science Technology*, *2*(2), 1-13.

Najmul Islam, A. K. M. (2011). Antecedents of Post-adoption Expectations: A Study in the e-Learning Context. *Building the e-World Ecosystem*, *353*(13E), 269-281.

Nikou, S. A. (2021). Web-based videoconferencing for teaching online: Continuance intention to use in the post-COVID-19 period. *Interaction Design and Architecture*, *47*(Winter), 123-143.

Nikou, S. A., & Economides, A. A. (2017). Mobile-Based Assessment: Integrating acceptance and motivational factors into a combined model of Self-Determination Theory and Technology Acceptance. *Computers in Human Behavior*, *68*, 83-95.

Nikou, S. A., & Economides, A. A. (2021). Continuance intention to use mobile learning in terms of motivation and technology acceptance. *Research on E-Learning and ICT in Education: Technological, Pedagogical and Instructional Perspectives*, 1-14.

Oke, A., & Fernandes, F. A. P. (2020). Innovations in Teaching and Learning: Exploring the Perceptions of the Education Sector on the 4th Industrial Revolution (4IR). *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(2), 31.

Önal, N. T., & Önal, N. (2023). Online learning and teaching experiences of preservice science teachers during Covid-19 pandemic. *Journal of Educational Technology and Online Learning*, *6*(2), 295-314.

Otto, D., & Becker, S. (2019). E-Learning and sustainable development. *Encyclopedia of Sustainability in Higher Education*, 475-482.

Pando, V. F. (2018). Teaching Trends in Virtual Education: An Interpretative Approach. *Journal of Educational Psychology-Propositos y Representaciones*, *6*(1), 485-505.

Panigrahi, R., Srivastava, P. R., & Sharma, D. (2018). Online learning: Adoption, continuance, and learning outcome—A review of literature. *International Journal of Information Management*, *43*, 1-14.

Pradana, B. P. (2022). Investigating the Repurchase Intention of E-Commerce Users from Service Quality and Expectation-Confirmation Theory Perspective. *Jurnal Informasi Dan Teknologi*, *4*(3), 127-135.

Qhosola, M. R. (2016). *Creating sustainable learning environments for a Grade 10 accounting classroom: A critical accounting approach*. University of the Free State].

Rahi, S., Alghizzawi, M., & Ngah, A. H. (2022). Factors influence user's intention to continue use of e-banking during COVID-19 pandemic: the nexus between self-determination and expectation confirmation model. *EuroMed Journal of Business*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/EMJB-12-2021-0194

Rahi, S., Othman Mansour, M. M., Alharafsheh, M., & Alghizzawi, M. (2021). The post-adoption behavior of internet banking users through the eyes of self-determination theory and expectation confirmation model. *Journal of Enterprise Information Management*, *34*(6), 1874-1892. https://doi.org/10.1108/JEIM-04-2020-0156

Rahmi, B., Birgoren, B., & Aktepe, A. (2018). A meta analysis of factors affecting perceived usefulness and perceived ease of use in the adoption of e-learning systems. *Turkish Online Journal of Distance Education*, *19*(4), 4-42.

Ramadiani, R., Azainil, A., Frisca, F., Hidayanto, A. N., & Herkules, H. (2019). An integrated model of e-learning continuance intention in Indonesia. *International Journal of Innovation and Learning*, *26*(1), 1-26.

Rekha, I., & Timothy, P. S. (2020). Understanding the antecedents to smart watch user's continuance intention. *International Journal of Business*, *25*(4), 367-381.

Rienties, B., Brouwer, N., & Lygo-Baker, S. (2013). The effects of online professional development on higher education teachers' beliefs and intentions towards learning facilitation and technology. *Teaching and Teacher Education*, *29*, 122-131.

Roca, J. C., & Gagné, M. (2008). Understanding e-learning continuance intention in the workplace: A self-determination theory perspective. *Computers in Human Behavior*, *24*(4), 1585-1604.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology*, *25*(1), 54-67.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.

Safiullin, M., & Akhmetshin, E. (2019). Digital transformation of a university as a factor of ensuring its competitiveness. *International Journal of Engineering and Advanced Technology*, *9*(1), 7387-7390.

Şahin, F., Doğan, E., & İlic, U. (2024). Instructors' Continuance Intention to Use Technology in Online and Hybrid Settings: Integrating Psychological Needs and Emotions. *International Journal of Human–Computer Interaction*, 1-14.

Saidi, R. M., Sharip, A. A., Abd Rahim, N. Z., Zulkifli, Z. A., & Zain, S. M. M. (2021). Evaluating students' preferences of Open and Distance Learning (ODL) tools. *Procedia Computer Science*, *179*, 955-961.

Salvo, S., Shelton, K., & Welch, B. (2017). African American males and online education: A review of the literature. *Online Journal of Distance Learning Administration*, *20*(4), 1-20.

Sangster, A., Stoner, G., & Flood, B. (2020). Insights into accounting education in a COVID-19 world. *Accounting Education*, *29*(5), 431-562. https://doi.org/10.1080/09639284.2020.1808487

Sarassina, R. R. F. (2022). Understanding mobile payment continuance in Indonesia: A brand equity perspective continuance model. *CommIT (Communication and Information Technology) Journal*, *16*(1), 105-115.

Sarea, A., Alhadrami, A., & Taufiq-Hail, G. A.-M. (2021). COVID-19 and digitizing accounting education: empirical evidence from GCC. *PSU Research Review*, *5*(1), 68-83. https://doi.org/10.1108/PRR-10-2020-0034

Shamsudin, A., Mamat, S. N., Pauzi, N. F. M., & Karim, M. S. (2023). Adapting to Changing Expectations: Accounting Students in the Digital Learning Environment. *International Journal of Information and Education Technology*, *13*(1).

Shanshan, S., & Wenfei, L. (2022). Understanding the impact of quality elements on MOOCs continuance intention. *Education and Information Technologies*, *27*(8), 10949-10976.

Shanthi, A., Adnan, A. A., Jamil, N. I., Rosle, A. N., & Sharminnie, E. (2021). Exploring University Students' Acceptance of Open Distance Learning Using Technology Acceptance Model (TAM). *International Journal of Academic Research in Business and Social Sciences*, *11*(10), 250-262.

Sharma, S. K. (2019). Integrating cognitive antecedents into TAM to explain mobile banking behavioral intention: A SEM-neural network modeling. *Information Systems Frontiers*, *21*(4), 815-827.

Taveira, F., & Barbosa, B. (2024). Older Adults' Continuance Intentions for Online Physical Exercise Classes. *Behavioral Sciences*, *14*(5), 393.

Tuma, L. A., Stanley, C., & Stansbie, P. (2020). Teaching innovation grant COVID-19 online social distance teaching project & virtual event. *Journal of Teaching in Travel & Tourism*, *20*(4), 395-401.

Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*, *39*(2), 273-315.

Wang, Q., & Khan, M. S. (2021). Impact of motivation and technology factors to predict satisfaction and continued intentions toward online courses. *International Journal of Research in Business and Social Science (2147-4478)*, *10*(3), 501-513.

Wang, T., Fan, L., Zheng, X., Wang, W., Liang, J., An, K., Ju, M., & Lei, J. (2021). The Impact of Gamification-Induced Users' Feelings on the Continued Use of mHealth Apps: A Structural Equation Model With the Self-Determination Theory Approach. *J Med Internet Res*, *23*(8), e24546. https://doi.org/10.2196/24546

Welch, A., & Napoleon, L. (2015). Professional teaching dispositions of online instructors: Why they matter. *Procedia-Social and Behavioral Sciences*, *171*, 584-589.

Weng, F., Yang, R.-J., Ho, H.-J., & Su, H.-M. (2018). A TAM-based study of the attitude towards use intention of multimedia among school teachers. *Applied system innovation*, *1*(3), 36.

Wotto, M. (2020). The future high education distance learning in Canada, the United States, and France: Insights from before COVID-19 secondary data analysis. *Journal of Educational Technology Systems*, *49*(2), 262-281.

Wu, B., & Chen, X. (2017). Continuance intention to use MOOCs: Integrating the technology acceptance model (TAM) and task technology fit (TTF) model. *Computers in Human Behavior*, *67*, 221-232. https://doi.org/https://doi.org/10.1016/j.chb.2016.10.028

Xia, M., Zhang, Y., & Zhang, C. (2018). A TAM-based approach to explore the effect of online experience on destination image: A smartphone user's perspective. *Journal*

of Destination Marketing & Management, *8*, 259-270. https://doi.org/https://doi.org/10.1016/j.jdmm.2017.05.002

Xie, C., Jia, S., & He, C. (2020). An Empirical Study on the Factors Affecting Elderly Users' Continuance Intention of Shared Nurses. *Risk Management and Healthcare Policy*, *13*(null), 1849-1860. https://doi.org/10.2147/RMHP.S261827

Yuan, S., Liu, Y., Yao, R., & Liu, J. (2016). An investigation of users' continuance intention towards mobile banking in China. *Information Development*, *32*(1), 20-34.

Zulkifli, C. N., & Ab Latif, N. A. (2021). The rise of new norms in COVID-19 crisis: learning barriers and opportunities. *Creative Practices in Language Learning and Teaching (CPLT)*, *9*(2), 68-82.