

Virtual campus tours as strategic marketing communication: The role of personal innovativeness

Kurnadi Gularso¹, Henilia Yulita², Michael Christian¹, Sajjad Hussain³

¹ Universitas Bunda Mulia, Jl. Lodan Raya No. 2 Ancol, Jakarta Utara, Indonesia

² Universitas Multimedia Nusantara, Jl. Boulevard Gading Serpong, Curug Sangereng, Kec. Klp. Dua, Kabupaten Tangerang, Banten, Indonesia

³ NUST Business School Islamabad, Sector H-12 Islamabad, Pakistan

*Correspondence: ✉ I1101@lecturer.ubm.ac.id

ABSTRACT

Background: Virtual campus tours (VCTs) have emerged as an important digital marketing communication tool in higher education, enabling universities to engage prospective students through immersive and accessible virtual experiences. However, empirical evidence regarding the factors influencing prospective students' intention to use VCTs remains limited.

Purpose: This study examines the effects of Personal Innovativeness in Information Technology (PIIT), Perceived Ease of Use (PEOU), and Perceived Enjoyment (PE) on prospective students' Behavioral Intention (BI) to use VCTs.

Method: A quantitative study was conducted using an online survey involving 108 prospective undergraduate students in Greater Jakarta, Indonesia. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS.

Findings: The results reveal that PIIT has a significant positive effect on PEOU. Furthermore, PEOU positively influences both PE and BI, while PE has a strong positive effect on BI. In addition, PE partially mediates the relationship between PEOU and BI. These findings suggest that designing VCTs that are both easy to use and enjoyable can effectively enhance prospective students' intention to adopt virtual campus tours.

Article History

Received: 5 June 2026

Revised : 30 June 2026

Accepted: 14 July 2026

Keyword

virtual campus tours;
behavioral intention; perceived
ease of use; perceived
enjoyment; personal
innovativeness in technology.

© 2026, Authors



This work is licensed under
a [Creative Commons](#)
[Attribution-ShareAlike 4.0](#)
[International License](#)

How to cite:

Gularso, K., Yulita, H., Christian, M., Hussain, S. (2026). Virtual campus tours as strategic marketing communication: The role of personal innovativeness. *Bulletin of Educational Management and Innovation*, 4(1). 237-255. <https://doi.org/10.56587/bemi.v4i1.151>

INTRODUCTION

Virtual campus tours (VCT) are increasingly used as a strategic marketing communication tool, part of the larger trend of digital innovation in higher education (HE). As colleges compete to attract potential students, digital recruitment strategies have shifted from traditional advertising to virtual tours, online events, and interactive information sessions, particularly during the COVID-19 epidemic (Bapat et al., 2021). These developments show how colleges are utilizing technology to create more accessible and relatable experiences for prospective students. This notion is also indicative of the fast

evolution of immersive technologies including virtual reality that have experienced significant growth in HE environments and been related to the increased student relationship and improved learning outcomes (Marks & Thomas, 2022; Sakr & Abdullah, 2024). Moreover, virtual tours and tour-based experiences offer flexible and interactive alternatives to campus visits, allowing institutions to more effectively communicate their value propositions given changing student expectations (Daniel et al., 2022; Maltais & Gosselin, 2022).

Recent empirical evidence shows that institutions of HE increasingly use VCT and other online experiences in their marketing communication and student recruitment strategies, especially as a consequence of the disruption generated by the COVID-19 epidemic (Bapat et al., 2021; Kisiółek et al., 2021). The increasing usage of virtual interviews, program videos and virtual tours shows the relevance of digital interaction in affecting prospective students' decisions (Daniel et al., 2022; Shah et al., 2021). These virtual experiences seem to be effective not just in regard to promotion but furthermore in user perception and engagement. Studies on virtual tourism and immersive environments have consistently shown that perceived ease of use (PEOU) leads to higher satisfaction and usefulness, and perceived enjoyment (PE) is a strong predictor of engagement and behavioral intention (BI) (Christian, Nan, et al., 2025a; Christian, Pardede, et al., 2025b; De Canio et al., 2022; Drew et al., 2025; Iswari & Afriliana, 2025; Lee, 2022; Y. Li et al., 2022). Similar results were also achieved in educational technology contexts where the fun and easy-to-use virtual environments are beneficial for intention to use and user experience (Al-Adwan et al., 2023; Christian et al., 2024; Koutromanos et al., 2024; Peanchitlertkajorn et al., 2024).

VCT are steadily gaining importance in HE marketing. However, the empirical research concerning the responses of potential students towards such encounters is missing. Previous studies in virtual reality, tourism and virtual learning environments have confirmed that PEOU and PE are two important factors influencing adoption intentions and behavioral outcomes in the real world (Li & Lv, 2024; Li et al., 2022; Yang et al., 2022). However, there is minimal understanding of how these elements influence prospective students' participation, institutional impressions and readiness to take VCT, which underscores the need for additional examination of this growing research topic. Therefore, based on the aforementioned empirical and theoretical concerns, this investigation seeks to explore prospective students' intent to use VCT in their decision-making process to pursue higher levels of education at HE institutions.

Literature Review and Hypothesis Development

Technology Acceptance Model and Unified Theory of Acceptance and Use of Technology

Subsequent studies have extended TAM by incorporating variables such as personal innovativeness, perceived enjoyment, self-efficacy, and system value to better explain individuals' willingness to accept new digital innovations. Several complementary theories of technology adoption and BI can explain prospective students' intention to use virtual campus visits. Along with these, the most commonly used model is Technology Acceptance Model (TAM), which highlights perceived usefulness and PEOU as the key variables that determine technology acceptance in virtual reality, digital learning, and virtual campus environments (Fussell & Truong, 2022; Granić, 2022; Rosli et al., 2022). In the subsequent research TAM has been extended with elements such as subjective inventiveness, PE, PE, self-esteem and system-wide value to better explain individuals' willingness to accept novel innovations (Al-Adwan et al., 2023; Chahal & Rani, 2022). The Unified Theory of Acceptance and Use of Technology (UTAUT) highlights the role of performance expectancy, effort expectancy, social influence, and enabling factors in recognizing the BI of enveloping technology for learning (Di Natale et al., 2024; Feng et al., 2025). In addition to technology acceptance, constructivist and experiential learning theories suggest that interactive and immersive virtual environments may increase engagement and motivation, leading students to consider VCT when choosing HE (Jiang & Fryer, 2024; Mallek et al., 2024).

Virtual campus tour

VCT is increasingly becoming popular as digital and immersive alternatives to the traditional campus visits, although a common definition has yet to be established (Stracke et al., 2025). Recent initiatives have integrated these experiences in larger virtual reality environments that can serve as a supplement or a partial replacement to actual campus visits, offering increased access and flexibility to prospective students (Rojas-Sánchez et al., 2023). Traditional campus tours are grounded in deep sensory and social involvement. Virtual tours allow consumers to experience the campus surroundings remotely, through 360° media or immersive technology, which is embedded in universities' digital strategy. As such, virtual campus visits are transitioning from experimental tools to integral elements of HE engagement and communication, even while conceptual and empirical gaps about their usefulness and impact on student decision-making remain (Mallek et al., 2024).

Behavioral intention

There is little data on prospective students' BI towards virtual campus visits. But the literature on virtual reality (VR) scholarship is a fantastic starting point to understand this new problem. VR is characterized as an interactive digital environment, which can be implemented in screen-based applications to complete immersive experiences. The more

elevated the level of immersion, the stronger the engagement and the sensation of presence (Haowen et al., 2021). The deployment of basic multimedia functions in VR applications in HE has developed into immersive and exploratory environments, which has garnered increased attention from academics regarding the role of motivation, participation, and experience value in predicting users' responses (Mallek et al., 2024; Rojas-Sánchez et al., 2023). Nonetheless, the BI of prospective students on virtual campus visits, especially in the aspect of enrolment decisions, still remain poorly understood and require further empirical investigation (Stracke et al., 2025).

Personal innovativeness in technology

The broader literature on PIIT related to a person's readiness to work with novel innovations ahead of others (Alshammari & Alshammari, 2024; Kim et al., 2021), can enrich the concept of prospective students' BI toward VCT. Over time, PIIT has morphed from a personality trait associated with diffusion to a critical component of technology acceptance models influencing PEOU and utility of new digital systems (Deng & Yu, 2023; Lan et al., 2026). More creative individuals are more likely to take on novel innovations and more willing to use them in the metaverse, AI, social media, and digital learning settings (Devisakti & Muftahu, 2022; Kang & Park, 2023). Although this relationship has not been specifically examined in the context of VCT, the existing research suggests that personal innovativeness may be a significant component to explain prospective students' willingness to participate in such experiences. Therefore, the present study postulates that PIIT positively affects the prospective students' PEOU of VCT tours in HE institutions (H1).

Perceived ease of use

PEOU is one of the common concepts in the study of innovation acceptance and is defined as the degree to which a system can be used with minimal effort, complexity, and mental load (Alyoussef, 2023; Mailizar et al., 2021). This concept has been transferred to HE through virtual reality, 360° tours, and immersive learning environments where ease of navigation and user-friendly interfaces are considered to be vital for a positive experience (Lei et al., 2022; Shen et al., 2022). Moreover, recent study has indicated that the more user-friendly the technologies are, the more likely they are to generate greater enjoyment, satisfaction, and engagement, which in turn reinforce users' attitudes and intents for continued use (Cabero-Almenara et al., 2023; Li & Lv, 2024). This has been demonstrated routinely in the setting of e-learning and VR where PEOU enhances perceived utility and enjoyment, which generates stronger behavioral intention (Humida et al., 2022; Rosli et al., 2022). Thus, its basic and easy-to-operate VCT are more likely to provide wonderful experiences and motivate the potential students to embrace and use them. As VCT become more comprehensible and manageable, prospective students tend to like the experience

more and show a greater inclination to utilize this technology. Therefore, PEOU is likely to have a beneficial impact on PE (H2) and BI (H3).

Perceived enjoyment

PE has transitioned from a peripheral element in technology acceptance studies to a central psychological concept in explaining why customers engage in digital environments. Perceived enjoyment is the fun, enjoyment and satisfaction experienced in the use of a system regardless of the functional benefits that system provides (Jo & Park, 2023; Li & Lv, 2024; Yang et al., 2023). PE is positively associated with attitudes, usage intentions and continued engagement in virtual reality, online museums, metaverse learning and virtual tourism (Al-Adwan et al., 2023; Chang & Suh, 2025; Li et al., 2025). Recent research also demonstrates that PEOU of technologies can lower cognitive effort and provide more enjoyable experiences, and enjoyment is a significant mechanism to connect PEOU with BI (Alyoussef, 2021b; Chen et al., 2025; Humida et al., 2022). Within the setting of VCT, this notion implies that the more natural and engaging the tour experience is, the more fun it will be, and the more probable that the prospective students will utilize and continue to use such platforms when looking for HE alternatives. Based on arguments, theory, and previous empirical evidence, this study suggests that PE positively contributes to prospective students' willingness to employ virtual campus visits in HE settings (H4). Moreover, the reported enjoyment is assumed to mediate its impact of PEOU on prospective students' desire to conduct virtual campus visits (H5).

METHODS

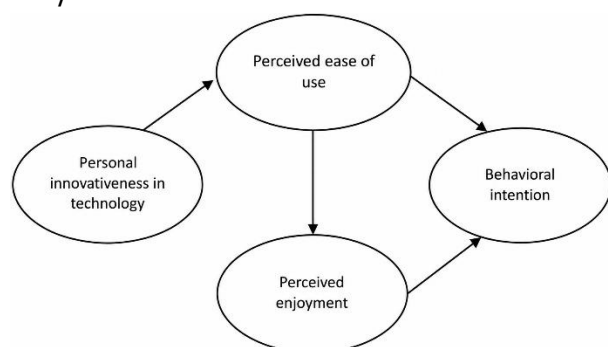
The research implemented a quantitative approach to examine the associations between PIIT, PEOU, PE and BI towards VCT. Figure 1 presents the proposed model with the correlations between the variables considered in this study. The main data were collected through a web-based survey on a Likert scale with five points, ranging from 1 (strongly disagree) to 5 (strongly agree). To improve data-collection transparency, the survey link was distributed to 110 eligible undergraduate students. A total of 108 responses were received, of which 2 were excluded because they were incomplete or did not meet the screening criteria. The final dataset consisted of 108 valid responses, resulting in a usable response rate of 98.18%.

Prior to completing the questionnaire, respondents were instructed to view and interact with a sample VCT provided by a university in Japan (as an experiment sample). The VCT was used only as a standardized stimulus to familiarize respondents with the visual, navigational, and interactive features of a virtual campus tour before they completed the questionnaire. The stimulus was presented in [insert language], and respondents were instructed to focus on the usability and experience of the VCT rather than on the national

context or institutional identity of the university. This procedure was intended to reduce conceptual ambiguity about VCT while keeping the research model focused on technology acceptance. This was intended to familiarize them with the concept and features of a VCT before answering the survey questions. The measurement indicators (Table 1) for all constructs were adapted from (Al-Adwan et al., 2023) and contextualized to reflect undergraduate students' intentions to pursue postgraduate (master's) studies through the use of VCT. The target population consists of undergraduate students in Greater Jakarta. The sample method used was purposive sampling, where the criteria for respondents were at least prior knowledge of typical campus visits. Following the indicator-based approach of (Hair et al., 2021), a minimum sample size of 108 respondents was required for the 15 measurement indicators. The results underwent analysis using SmartPLS (Partial Least Squares Structural Equation Modelling [PLS-SEM]) including evaluation of measurement model and structural model. The reliability and validity were assessed before defining the hypothesis, and the direct and mediating effects were analysed based on the path coefficients and p-value less than 0.05 (Hair et al., 2021).

Figure 1.

Proposed model.



RESULT AND DISCUSSION

Result

This research relied on the characteristics of respondents in Table 2 and the total number of undergraduate students. The number of females was higher than that of men, with 57.41% of the sample being female and 42.59% being male. As for age, majority of the responders were between 17-20 years old (16.67%), followed by 21-24 years old (9.26%) and above 24 years old (1.85%). The sample was fairly equal in terms of academic background, with Economics, Management, and Business students (50.93%) and students from Communication Studies degrees (49.07%). These features show that the respondents were mainly young undergraduate students in two key fields of study, offering important viewpoints on the usage of VCT for postgraduate education exploration.

Table 1.

Measurement indicators

Construct	Indicators	Adapted from
Personal innovativeness in technology	interest in trying the latest VCT technologies interest in experiencing innovative VCT features offered by a university being among the first to try VCT technologies compared to others openness to exploring digital or virtual reality technologies used in university promotion.	Al-Adwan et al. (2023)
Perceived ease of use	learning how to use a VCT is easy interactions within the VCT platform are easy to understand the VCT is easy to navigate and explore overall, using a VCT is effortless.	
Perceived enjoyment	enjoying the use of a VCT, feeling pleased while exploring a campus through a VCT perceiving the VCT experience as interesting and enjoyable enjoying the virtual campus environment provided by the university	
Behavioral intention	intending to use a VCT when seeking information about a desired study program being willing to use a VCT before deciding to pursue further study in a preferred study program being willing to recommend a VCT to other prospective students considering further education.	

Table 2.

Respondents' characteristics

Characteristics		Freq	%
Gender	Female	62	57.41%
	Male	46	42.59%
Age	17-20	18	16.67%
	21-24	10	9.26%
	>24	2	1.85%
Current Field of Study	Economics, Management, and Business	55	50.93%
	Communication Studies	53	49.07%

The measuring model (Table 3) showed a good level of reliability and validity. All indicator outer loadings (OL) were higher than the required level of 0.70, spanning 0.829 to 0.916, suggesting good item reliability. Internal consistency was also checked. Cronbach's alpha (CA), spanning 0.882 to 0.918 and composite reliability (CR), spanning 0.927 to 0.942, above the recommended cut-off of 0.70. Convergent validity was also confirmed with the average variance extracted (AVE) values of all constructs ranging from 0.740 to 0.810, higher than the threshold of 0.50. Discriminant validity was further supported by the Fornell–Larcker criterion with the square root of the AVE of each construct exceeding its correlation with other constructs. As an additional diagnostic check, the inner VIF values (Table 4) were examined to assess potential collinearity among the latent constructs. All inner VIF values were below the commonly accepted threshold of 5.0, indicating that severe multicollinearity was not present in the structural model. However, because Harman's single-factor test showed that the first factor explained 66.557% of the total variance (Table 5), common method bias remains a potential limitation and the findings should be interpreted with appropriate caution.

The score of the coefficient of determination (Table 6) suggests the medium to large explanation ability of the proposed model. BI had an R^2 of 0.667, indicating that 66.7% of its variance was explained by the predictor factors. Similarly, the constructs of PEOU ($R^2 = 0.652$) and PE ($R^2 = 0.698$) show that the model determines a large amount of variance in both constructs and has acceptable predictive power.

The f^2 values (see Table 7) suggest that the relationships in the model have different sizes of influence. The influence of PIIT on PEOU is substantial ($f^2 = 1.872$), and the effect of PEOU on PE is also large ($f^2 = 2.315$). On the other hand, the impacts of PEOU ($f^2 = 0.151$) and PE ($f^2 = 0.178$) on BI are minor to moderate, indicating that these variables contribute considerably to explaining students' intention to use VCT.

Table 3.

Measurement model

Construct	Item code	OL	CA	CR	AVE	Fornell-Larcker Criterion			
						BI	PEOU	PE	PIIT
BI	BI1	0.911							
	BI2	0.916	0.883	0.927	0.810	0.900	-	-	-
	BI3	0.872							
PEOU	PEOU1	0.883							
	PEOU2	0.912	0.918	0.942	0.803	0.779	0.896	-	-
	PEOU3	0.891							
	PEOU4	0.898							
PE	PE1	0.885							
	PE2	0.859	0.906	0.942	0.780	0.785	0.836	0.883	0.906
	PE3	0.884							

Construct	Item code	OL	CA	CR	AVE	Fornell-Larcker Criterion			
						BI	PEOU	PE	PIIT
PIIT	PE4	0.903	0.882	0.942	0.740	0.775	0.807	0.814	0.860
	PIIT1	0.898							
	PIIT2	0.861							
	PIIT3	0.829							
	PIIT4	0.851							

Table 4.*Inner VIF Values*

	BI
BI	-
PEOU	3.315
PE	3.315
PITT	-

Table 5.*Total Variance Explained*

Component	Initial Eigenvalues	
	% of Variance	Cumulative %
1	66.557	66.557

Table 6.*Coefficient of determination results*

Construct	R Square	R Square Adjusted
BI	0.667	0.66
PEOU	0.652	0.648
PE	0.698	0.695

Table 7.*f² results*

Construct	BI	PEOU	PE	PIIT
BI	-	-	-	-
PEOU	0.151	-	2.315	-
PE	0.178	-	-	-
PIIT	-	1.872	-	-

Model fit results (Table 8) suggest an acceptable overall match between the proposed model and observed data. Both the saturated model (SRMR = 0.051) and estimated model (SRMR = 0.073) are below suggested criterion of 0.08 demonstrating a suitable fit.

Furthermore, the NFI values of 0.851 and 0.837 indicate a satisfactory model fit level, confirming the adequacy of the proposed structural model for further interpretation and hypothesis testing.

Table 8.

Model fit

Construct	Saturated Model	Estimated Model
SRMR	0.051	0.073
d_ULS	0.317	0.644
d_G	0.377	0.445
Chi-Square	227.595	249.048
NFI	0.851	0.837

The cross-validated communality (Q^2) results (Table 9) reveal substantial predictive relevance for all items in the model. All Q^2 values are far above zero (0.551 to 0.648 at the construct level), showing acceptable prediction accuracy of the model. The outcomes verify the predictive ability and robustness of the measurement model in that it can successfully collect and predict the observed data. The Chi-Square values are reported as part of the SmartPLS model-fit output and are not interpreted as conventional inferential CB-SEM chi-square tests with degrees of freedom and p-values. Therefore, the model-fit interpretation in this study is based primarily on SRMR and NFI.

The findings of the path coefficients (Table 10) show that all the provided assumptions are supported. The outcomes show that PIIT has a significant positive effect on PEOU ($\beta = 0.807$, $t = 15.419$, $p < 0.001$) which supports H1. PEOU has a positive effect on PE ($\beta = 0.836$, $t = 23.633$, $p < 0.001$) which supports H2. Moreover, PEOU ($\beta = 0.408$, $t = 3.497$, $p = 0.001$) and PE ($\beta = 0.444$, $t = 3.583$, $p < 0.001$) significantly increase BI, thus supporting H3 and H4. The indirect effect is significant ($\beta = 0.371$, $t = 3.649$, $p < 0.001$), thus supporting H5. Thus, PE partially mediates the relationship between PEOU and BI. The correlation in the Fornell–Larcker matrix represents a zero-order latent construct correlation, whereas the structural path coefficient represents the partial standardized effect of PE on BI after accounting for PEOU as another predictor. Therefore, the lower path coefficient does not indicate a data mismatch but reflects shared explanatory variance between PEOU and PE. The inner collinearity assessment also indicated that the predictor relationship remained within an acceptable range and did not show severe multicollinearity.

Table 9.

Cross-validated communality (Q^2) results

Construct – Item code	Q^2
Perceived Ease of Use	0.648

Construct – Item code	Q ²
Ease1	0.624
Ease2	0.680
Ease3	0.635
Ease4	0.653
Perceived Enjoyment	0.617
Enjoyment1	0.630
Enjoyment2	0.563
Enjoyment3	0.612
Enjoyment4	0.662
Personal Innovativeness in Technology	0.551
Innovativeness1	0.644
Innovativeness2	0.560
Innovativeness3	0.476
Innovativeness4	0.522
Behavioral Intention	0.585
Intention1	0.605
Intention2	0.630
Intention3	0.519

Table 10.*Path coefficient results*

Path	Hypothesis	OS	M	STDEV	t	p
Direct effect						
PIIT → PEOU	H1	0.807	0.806	0.052	15.419	0.000
PEOU → PE	H2	0.836	0.837	0.035	23.633	0.000
PEOU → BI	H3	0.408	0.413	0.117	3.497	0.001
PE → BI	H4	0.444	0.439	0.124	3.583	0.000
Mediating effect						
PIIT → PE → BI	H5	0.371	0.366	0.102	3.649	0.000

PIIT and PEOU of VCT

The outcomes show that the impact of PIIT on PEOU is significant and positive, supporting H1. This indicates that undergraduate students who are more open to investigate and experiment with new technologies, the greater the likelihood they are to discover VCT easier to understand, navigate and operate. Those that are more technologically creative are often more confident when dealing with the unknown digital environment, and hence are better able to adapt to the VCT platforms. The outcome is in line with earlier research that found individual innovativeness positively impacts the view of ease of use of technology-based educational settings such as digital learning systems, metaverse, and AI-supported learning applications (Alshammari & Alshammari, 2024;

[Devisakti & Muftahu, 2022](#); [Kim et al., 2021](#)). It also supports the concept that inventive users are more responsive to new technologies and face less impediments in adoption ([Deng & Yu, 2023](#); [Kang & Park, 2023](#)). Therefore, promoting students' willingness to accept technological innovation can improve the PEOU of VCT and encourage their adoption in HE.

PEOU as a Driver of Enjoyment in VCT

The outcomes show that PEOU has a strong positive impact on PE, H2 is supported. The implication of this result is that the easier it is for prospective students to understand, navigate and interact with a VCT platform, the more likely they are to enjoy it. When users are able to navigate virtual environments without technical barriers or high cognitive workload, they are able to focus more on the experience itself and generate more fun and engagement, a result in line with earlier research demonstrating that usability increases the satisfaction of users in different digital and immersive contexts such as e-learning systems, virtual reality applications, and online education platforms ([Alyoussef, 2021a](#); [Cabero-Almenara et al., 2023](#)). The finding also complements data from virtual reality exhibition and tourist contexts that intuitive solutions were found to provide more joyful and rewarding user experiences ([Chen et al., 2025](#); [Li & Lv, 2024](#)). Therefore, universities should pay special attention to simple interfaces and smooth navigation to make VCT as enticing as possible since these elements can significantly enhance students' enjoyment of the experience.

PEOU Driving Adoption of VCT

The outcomes reveal that PEOU has significant positive effect on BI, therefore confirming H3. This finding suggests that prospective students are more inclined to use VCT when they find the technology easy to grasp and operate. A straightforward, user-friendly platform minimizes the work to find information and enables students to focus on evaluating academic programs and school environments, rather than surmounting technical restrictions. This positive association also confirms previous studies that proved PEOU as an ongoing significant predictor of BI in the setting of e-learning, virtual reality and immersive educational technologies ([Mailizar et al., 2021](#); [Puiu & Udriștioiu, 2024](#); [Shen et al., 2022](#)), and supports the general reasons of the Technology Acceptance Model that people are more probable to adopt a technology that appears to be easy and effortless to use ([Rosli et al., 2022](#)). These outcomes imply that in the context of VCT, colleges might increase the willingness of prospective students to participate with such platforms by providing accessible interfaces, clear navigation patterns and smooth user interactions.

Fun Experiences Enhance Students' Intention of Using VCT

The outcomes show that PE has a large beneficial impact on BI, which supports H4. The finding demonstrates that prospective students are more probable to use VCT if they

consider the experience to be fun, interactive and emotionally fulfilling. More than sources of information, VCT seem to serve as experiential platforms that can foster good attitudes toward a university. If students want to explore college environments virtually, they will come back and use the platform, find it useful in their study decision process and suggest it to others. This outcome is in line with earlier research which found PE to be a significant predictor of BI in virtual reality, virtual tourism, metaverse learning and other immersive digital environments (Al-Adwan et al., 2023; Jo & Park, 2023; Li et al., 2025). It also suggests that enjoyment could be as or more essential than utilitarian reasons in promoting technology adoption (Chang & Suh, 2025; Yang et al., 2022). Therefore, the university should not only focus on the delivery of useful information through VCT but also on the creation of delightful and memorable experiences that increase potential students' propensity to interact with the technology.

The Mediating Effect of PE on VCT Adoption

The mediation analysis indicates that PE significantly mediates the relationship between PEOU and BI, supporting H5. This research suggests that simplicity of use affects prospective students' inclination to use VCT not just directly, but also indirectly through enjoyment with the experience. When a VCT is easy to learn, navigate and interact with, students are more probable to have pleasant emotions and satisfaction while exploring the platform. Such positive experiences increase their motivation and readiness to use the technology in their search for information on future learning opportunities. This outcome is in line with earlier research which has revealed PE as an important psychological mechanism that mediates the relationship between PEOU and technology acceptance in the virtual reality, metaverse learning, e-learning and virtual tourism contexts (Al-Adwan et al., 2023; Alyoussef, 2021a; Chen et al., 2025). This finding also corresponds with evidence suggesting pleasant digital encounters transform cognitive assessments of usability into stronger behavioral intentions (Humida et al., 2022; Li & Lv, 2024). Thus, institutions should acknowledge that better usability of a VCT may not suffice and that the platform should also provide a fun and engaging experience in order to optimize the prospective students' adoption intentions.

CONCLUSION

This study shows that cognitive and affective aspects influence prospective students' inclination to use virtual campus visits. All given hypotheses were supported suggesting that PIIT positively promotes PEOU which in turn enhances PE and BI. Among the findings, the considerable effect of PEOU on reported satisfaction underscores the importance of user-friendly virtual experiences in HE marketing. This investigation contributes to the field by extending the technology adoption research to the setting of postgraduate study

exploration via virtual campus visits, which has received little empirical attention. The results confirm the combination of personal innovativeness, PEOU, and reported enjoyment to explain BI from a theoretical point of view. In practice, institutions need to offer VCT that are intuitive, engaging, and fun. This study is limited in the cross-sectional design, purposeful sample, and undergraduate students in Greater Jakarta. Another limitation concerns the use of a VCT stimulus from a foreign university. Although the stimulus was used only to introduce respondents to the features and interaction mode of a VCT, its language, interface design, and cultural cues may have influenced students' perceptions of ease of use and enjoyment. Future research may compare VCT stimuli from local and international universities to examine whether institutional and cultural context affects prospective students' responses. Future research should analyze other geographies, adopt longitudinal methodologies and include other variables such as perceived utility, social influence, immersion or university image.

DECLARATIONS

Author Contribution

Gularso, K., Christian, M.; Conceptualization, Methodology and Writing - Review & Editing; **Christian, M.;** Software and Formal Analysis; **Yulita, H., Hussain, S.:** Resources and Visualization.

Funding Statement

This research received no external funding.

Conflict of Interest

The authors declare no conflict of interest.

Declaration of AI Use

ChatGPT and Quillbot was used to improve language clarity, academic structure, and English editing under author supervision. The authors reviewed, verified, and approved all final content. No AI tool was used to replace the authors' intellectual contribution, data analysis decisions, or interpretation of findings.

Additional Information

The data are available upon reasonable request.

REFERENCES

- Al-Adwan, A. S., Li, N., Al-Adwan, A., Abbasi, G. A., Albelbisi, N. A., & Habibi, A. (2023). Extending the Technology Acceptance Model (TAM) to Predict University Students' Intentions to Use Metaverse-Based Learning Platforms. *Education and*

Information Technologies, 28(11), 15381–15413. <https://doi.org/10.1007/s10639-023-11816-3>

- Alshammari, S. H., & Alshammari, M. H. (2024). Modelling the effects of perceived system quality and personal innovativeness on the intention to use metaverse: a structural equation modelling approach. *PeerJ Computer Science*, 10(e2331), 1–22. <https://doi.org/10.7717/peerj-cs.2331>
- Alyoussef, I. Y. (2021a). E-Learning acceptance: The role of task–technology fit as sustainability in higher education. *Sustainability*, 13(11), 6450.. <https://doi.org/10.3390/su13116450>
- Alyoussef, I. Y. (2021b). Massive open online course (MOOCs) acceptance: The role of task-technology fit (TTF) for higher education sustainability. *Sustainability*, 13(13), 7374.. <https://doi.org/10.3390/su13137374>
- Alyoussef, I. Y. (2023). Acceptance of e-learning in higher education: The role of task-technology fit with the information systems success model. *Heliyon*, 9(3). <https://doi.org/10.1016/j.heliyon.2023.e13751>
- Bapat, G. S., Mahale, P., Kumar, A., & Srinivasan, R. (2021). The Impact of Television Advertisements on Student Decision-Making Process for College Admission: An exploratory study in India. *Asia Pacific Journal of Health Management*, 16(4), 266–273. <https://doi.org/10.24083/apjhm.v16i4.1299>
- Cabero-Almenara, J., Llorente-Cejudo, C., Palacios-Rodríguez, A., & Gallego-Pérez, Ó. (2023). Degree of acceptance of virtual reality by health sciences students. *International Journal of Environmental Research and Public Health*, 20(8), 5571. <https://doi.org/10.3390/ijerph20085571>
- Chahal, J., & Rani, N. (2022). Exploring the acceptance for e-learning among higher education students in India: combining technology acceptance model with external variables. *Journal of Computing in Higher Education*, 34(3), 844–867. <https://doi.org/10.1007/s12528-022-09327-0>
- Chang, S., & Suh, J. (2025). The Impact of Digital Storytelling on Presence, Immersion, Enjoyment, and Continued Usage Intention in VR-Based Museum Exhibitions. In *Sensors*, 25(9), 2914. <https://doi.org/10.3390/s25092914>
- Chen, L., Wu, X., Liu, Y., Hu, Z., Chen, X., & Zhang, Z. (2025). Integrating TAM–ISSM–SOR framework to explore how virtual tourism experience influences tourists' travel intention. *Scientific Reports*, 15(1), 38826. <https://doi.org/10.1038/s41598-025-24793-z>
- Christian, M., Nan, G., Dewantara, Y. F., Geng, B., Muzammil, O. M., & Gularso, K. (2025a). Imagination Over Intelligence? Assessing Determinants of Willingness to Accept AI-Based Tourism Advertising in the Chinese Digital Landscape. *2025 International Conference on Information Management and Technology (ICIMTech)*, 788–793. <https://doi.org/10.1109/ICIMTech67074.2025.11265008>

- Christian, M., Pardede, R., Dewantara, Y. F., Nan, G., Geng, B., & Irlandra, F. (2025b). Impact of AI-Generated Tourism Ads on Consumer Intent in Indonesian Market Using PLS-SEM. *2025 4th International Conference on Creative Communication and Innovative Technology (ICCIT)*, 1–7. <https://doi.org/10.1109/ICCIT65724.2025.11167619>
- Christian, M., Pardede, R., Yulita, H., Dewi, Y. K., Wibowo, S., & Sunarno, S. (2024). Anxiety-Related AI Configuration and AI Usage Behavior Among Lecturers: Gender's Moderating Role. *2024 IEEE International Conference on Control & Automation, Electronics, Robotics, Internet of Things, and Artificial Intelligence (CERIA)*, 1–6. <https://doi.org/10.1109/CERIA64726.2024.10914840>
- Daniel, M., Gottlieb, M., Wooten, D., Stojan, J., Haas, M. R. C., Bailey, J., Evans, S., Lee, D., Goldberg, C., Fernandez, J., Jassal, S. K., Rudolf, F., Guluma, K., Lander, L., Pott, E., Goldhaber, N. H., Thammasitboon, S., Uraiby, H., Grafton-Clarke, C., ... Dolmans, D. (2022). Virtual interviewing for graduate medical education recruitment and selection: A BEME systematic review: BEME Guide No. 80. *Medical Teacher*, 44(12), 1313–1331. <https://doi.org/10.1080/0142159X.2022.2130038>
- De Canio, F., Martinelli, E., Peruzzini, M., & Cavallaro, S. (2022). Experiencing a Food Production Site Using Wearable Devices: The Indirect Impact of Immersion and Presence in VR Tours. In *Sustainability* 14(5), 3064. <https://doi.org/10.3390/su14053064>
- Deng, X., & Yu, Z. (2023). An extended hedonic motivation adoption model of TikTok in higher education. *Education and Information Technologies*, 28(10), 13595–13617. <https://doi.org/10.1007/s10639-023-11749-x>
- Devisakti, A., & Muftahu, M. (2022). Digitalization in higher education: does personal innovativeness matter in digital learning? *Interactive Technology and Smart Education*, 20(2), 257–270. <https://doi.org/10.1108/ITSE-10-2021-0182>
- Di Natale, A. F., Repetto, C., Costantini, G., Riva, G., Bricolo, E., & Villani, D. (2024). Learning in the Metaverse: Are University Students Willing to Learn in Immersive Virtual Reality? *Cyberpsychology, Behavior, and Social Networking*, 27(1), 28–36. <https://doi.org/10.1089/cyber.2022.0395>
- Drew, Z. B., Setiawan, J., Fernando, E., Faza, A., Fianty, M. I., Winanti, W., & Murad, D. F. (2025). Interactive 360° Virtual Tour for Dark Tourism Promotion: A Digital Heritage Case Study of Makam Syekh Mubarak. *2025 8th International Conference on New Media Studies (CONMEDIA)*, 198–203. <https://doi.org/10.1109/CONMEDIA67140.2025.11290285>
- Feng, J., Yu, B., Tan, W. H., Dai, Z., & Li, Z. (2025). Key factors influencing educational technology adoption in higher education: A systematic review. *PLOS Digital Health*, 4(4), e0000764. <https://doi.org/10.1371/journal.pdig.0000764>
- Fussell, S. G., & Truong, D. (2022). Using virtual reality for dynamic learning: an

- extended technology acceptance model. *Virtual Reality*, 26(1), 249–267. <https://doi.org/10.1007/s10055-021-00554-x>
- Granić, A. (2022). Educational Technology Adoption: A systematic review. *Education and Information Technologies*, 27(7), 9725–9744. <https://doi.org/10.1007/s10639-022-10951-7>
- Hair, J., Hult, G. T. M., Ringle, C., Sarstedt, M., Danks, N., & Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A workbook*. Springer Cham. <https://doi.org/10.1007/978-3-030-80519-7>
- Haowen, J., Vimalasvaran, S., Myint Kyaw, B., & Tudor Car, L. (2021). Virtual reality in medical students' education: a scoping review protocol. *BMJ Open*, 11(5). <https://doi.org/10.1136/bmjopen-2020-046986>
- Humida, T., Al Mamun, M. H., & Keikhosrokiani, P. (2022). Predicting behavioral intention to use e-learning system: A case-study in Begum Rokeya University, Rangpur, Bangladesh. *Education and Information Technologies*, 27(2), 2241–2265. <https://doi.org/10.1007/s10639-021-10707-9>
- Iswari, N. M. S., & Afriliana, N. (2025). Enhancing Aspect-Based Sentiment Analysis in Tourism Reviews Through Hybrid Data Augmentation. *Journal of Applied Data Sciences*, 6(3). <https://doi.org/10.47738/jads.v6i3.842>
- Jiang, J., & Fryer, L. K. (2024). The effect of virtual reality learning on students' motivation: A scoping review. *Journal of Computer Assisted Learning*, 40(1), 360–373. <https://doi.org/10.1111/jcal.12885>
- Jo, H., & Park, D.-H. (2023). Affordance, usefulness, enjoyment, and aesthetics in sustaining virtual reality engagement. *Scientific Reports*, 13(1), 15097. <https://doi.org/10.1038/s41598-023-42113-1>
- Kang, D., & Park, M. J. (2023). Learner innovativeness, course interaction, and the use of a new educational technology system after the COVID-19 pandemic. *The International Journal of Management Education*, 21(3), 100824. <https://doi.org/10.1016/j.ijme.2023.100824>
- 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*, 13(2), 896. <https://doi.org/10.3390/su13020896>
- Kisiołek, A., Karyy, O., & Halkiv, L. (2021). The utilization of Internet marketing communication tools by higher education institutions (on the example of Poland and Ukraine). *International Journal of Educational Management*, 35(4), 754–767. <https://doi.org/10.1108/IJEM-07-2020-0345>
- Koutromanos, G., Mikropoulos, A. T., Mavridis, D., & Christogiannis, C. (2024). The mobile augmented reality acceptance model for teachers and future teachers.

- Education and Information Technologies*, 29(7), 7855–7893.
<https://doi.org/10.1007/s10639-023-12116-6>
- Lan, Y., Liu, S., Chen, H., & Xia, L. (2026). Configurational effects of personal innovativeness, self-efficacy, and perceived risk on AI adoption in media students. *Scientific Reports*, 16(1), 5681. <https://doi.org/10.1038/s41598-026-36538-7>
- Lee, U.-K. (2022). Tourism using virtual reality: Media richness and information system successes. *Sustainability*, 14(7), 3975.. <https://doi.org/10.3390/su14073975>
- Lei, M., Clemente, I. M., Liu, H., & Bell, J. (2022). The Acceptance of Telepresence Robots in Higher Education. *International Journal of Social Robotics*, 14(4), 1025–1042. <https://doi.org/10.1007/s12369-021-00837-y>
- Li, J., Jin, M., & Chen, X. (2025). Understanding continued use of smart learning platforms: psychological wellbeing in an extended TAM-ISCM model. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1521174>
- Li, J., & Lv, C. (2024). Exploring user acceptance of online virtual reality exhibition technologies: A case study of Liangzhu Museum. *PLOS ONE*, 19(8), e0308267. <https://doi.org/10.1371/journal.pone.0308267>
- Li, Y., Liang, J., Huang, J., Yang, M., Li, R., & Bai, H. (2022). Would You Accept Virtual Tourism? The Impact of COVID-19 Risk Perception on Technology Acceptance from a Comparative Perspective. In *Sustainability* 14(7), 12693. <https://doi.org/10.3390/su141912693>
- Mailizar, M., Burg, D., & Maulina, S. (2021). Examining university students' behavioural intention to use e-learning during the COVID-19 pandemic: An extended TAM model. *Education and Information Technologies*, 26(6), 7057–7077. <https://doi.org/10.1007/s10639-021-10557-5>
- Mallek, F., Mazhar, T., Shah, S. F. A., Ghadi, Y. Y., & Hamam, H. (2024). A review on cultivating effective learning: synthesizing educational theories and virtual reality for enhanced educational experiences. *PeerJ Computer Science*, 10(e2000), 1–41. <https://doi.org/10.7717/peerj-cs.2000>
- Maltais, L.-G., & Gosselin, L. (2022). Visiting central heating plant and mechanical rooms in buildings: A case study of virtual tours to foster students' learning in a distance course. *International Journal of Mechanical Engineering Education*, 50(4), 1007–1024. <https://doi.org/10.1177/03064190221105078>
- Marks, B., & Thomas, J. (2022). Adoption of virtual reality technology in higher education: An evaluation of five teaching semesters in a purpose-designed laboratory. *Education and Information Technologies*, 27(1), 1287–1305. <https://doi.org/10.1007/s10639-021-10653-6>
- Peanchitlertkajorn, S., Reynolds, P. A., Chaisawas, M., Krungthong, Y., Boonkaew, B., & Sipiyyaruk, K. (2024). The impact of an online gamified virtual tour on cognitive

- enhancement in dental practice management. *Scientific Reports*, 14(1), 26975. <https://doi.org/10.1038/s41598-024-75128-3>
- Puiu, S., & Udriștioiu, M. T. (2024). The Behavioral Intention to Use Virtual Reality in Schools: A Technology Acceptance Model. In *Behavioral Sciences* 14(7). 615. <https://doi.org/10.3390/bs14070615>
- Rojas-Sánchez, M. A., Palos-Sánchez, P. R., & Folgado-Fernández, J. A. (2023). Systematic literature review and bibliometric analysis on virtual reality and education. *Education and Information Technologies*, 28(1), 155–192. <https://doi.org/10.1007/s10639-022-11167-5>
- Rosli, M. S., Saleh, N. S., Md. Ali, A., Abu Bakar, S., & Mohd Tahir, L. (2022). A Systematic Review of the Technology Acceptance Model for the Sustainability of Higher Education during the COVID-19 Pandemic and Identified Research Gaps. In *Sustainability* 14(8).11389. <https://doi.org/10.3390/su141811389>
- Sakr, A., & Abdullah, T. (2024). Virtual, augmented reality and learning analytics impact on learners, and educators: A systematic review. *Education and Information Technologies*, 29(15), 19913–19962. <https://doi.org/10.1007/s10639-024-12602-5>
- Shah, N. L., Miller, J. B., Bilal, M., & Shah, B. (2021). Smartphone Apps in Graduate Medical Education Virtual Recruitment During the COVID-19 Pandemic. *Journal of Medical Systems*, 45(3), 36. <https://doi.org/10.1007/s10916-021-01720-z>
- Shen, S., Xu, K., Sotiriadis, M., & Wang, Y. (2022). Exploring the factors influencing the adoption and usage of Augmented Reality and Virtual Reality applications in tourism education within the context of COVID-19 pandemic. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 30, 100373. <https://doi.org/10.1016/j.jhlste.2022.100373>
- Stracke, C. M., Bothe, P., Adler, S., Heller, E. S., Deuchler, J., Pomino, J., & Wölfel, M. (2025). Immersive virtual reality in higher education: a systematic review of the scientific literature. *Virtual Reality*, 29(2), 64. <https://doi.org/10.1007/s10055-025-01136-x>
- Yang, C., Yan, S., Wang, J., & Xue, Y. (2022). Flow Experiences and Virtual Tourism: The Role of Technological Acceptance and Technological Readiness. In *Sustainability* 14(9)5361. <https://doi.org/10.3390/su14095361>
- Yang, H., Cai, M., Diao, Y., Liu, R., Liu, L., & Xiang, Q. (2023). How does interactive virtual reality enhance learning outcomes via emotional experiences? A structural equation modeling approach. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1081372>