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Determinants of Continuance Intention in Online Course Platforms: The Mediating Role of Attitude

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Abstract: This study investigates the determinants of continuance intention in online course platforms by integrating technological, psychological, and social perspectives. Specifically, it examines the influence of perceived usefulness, perceived enjoyment, and social influence on continuance intention, with attitude as a mediating variable. A survey of 392 Indonesian users was conducted, and data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that perceived usefulness does not directly influence continuance intention but rather exerts an indirect effect by shaping users' attitudes. In contrast, perceived enjoyment and social influence significantly affect continuance intention both directly and indirectly through attitude. Furthermore, attitude exerts a strong influence on continuance intention, serving as a full mediator between perceived usefulness and continuance intention and as a partial mediator in relationships involving perceived enjoyment and social influence. These findings emphasize that sustaining user engagement with online learning platforms is determined not only by functional benefits but also by emotional experiences and social dynamics. The study highlights the critical role of attitude as a psychological bridge between user perceptions and behavioral intentions, offering practical implications for designing platforms that foster enjoyable experiences and supportive social environments to enhance long-term user retention.

Keywords: Continuance intention, perceived usefulness, perceived enjoyment, social influence, attitude, online course platforms

Introduction

Online course platforms have become a crucial element of contemporary education, offering learners flexibility, accessibility, and personalized learning opportunities. They are widely acknowledged for their ability to overcome spatial and temporal barriers, support lifelong learning, and enhance digital skills development (Li, Wang, & Wei, 2022; Sun et al., 2017; Huang & Liu, 2024). In Indonesia, the adoption of online learning increased significantly during the COVID-19 pandemic and has since been recognized as a strategic approach to improving educational equity and competitiveness in the digital era (Ramadiani et al., 2019). Prior studies have emphasized that the sustainability of such platforms depends not only on initial adoption but also on learners' willingness to continue using them, a behaviour referred to as continuance intention (Lee, 2010; Sun et al., 2017).

Despite their potential, sustaining Continuance Intention (CI) remains a persistent challenge. Many learners engage enthusiastically at the beginning but later discontinue due to declining motivation, lack of enjoyment, or insufficient social support (Li et al., 2022; Taghizadeh et al., 2022). Moreover, empirical results across prior studies remain inconclusive. For example, while some studies confirm that perceived usefulness (PU) significantly influences continuance intention (Ashfaq et al., 2020; Liu & Pu, 2023), others report non-significant effects (Moorthy et al., 2019; Obeid et al., 2024). Similarly, perceived enjoyment (PE) has been found to enhance continuance intention in some cases strongly (Wang et al., 2019; Tao et al., 2022; Hussein, 2025) but not in others (Lee, 2010; Obeid et al.,

2024). Conflicting findings are also evident for social influence (SI), which some studies identify as a determinant (Huang, 2020; Roslan et al., 2023), while others report little or no impact (Kurniawan et al., 2024; Gao, 2023). These inconsistencies highlight the need for further empirical investigation, particularly in rapidly developing contexts such as Indonesia.

To address this gap, the present study incorporates attitude (AT) as a mediating variable, drawing on the Technology Acceptance Model (TAM) proposed by Davis (1989). According to TAM, attitude toward a behaviour is a central predictor of intention, including technology use. Attitude reflects an individual's overall positive or negative evaluation of using a system, which shapes their willingness to sustain engagement. Prior studies have confirmed the mediating role of attitude in linking perceptions of usefulness, enjoyment, and social influence to continuance intention (Amoroso & Lim, 2017; Ifinedo, 2017; Wu & Chen, 2017; Su & Chiu, 2021; Liu & Pu, 2023; Zhu et al., 2020). By positing attitude as a mediator, this study provides a stronger explanatory framework to reconcile prior inconsistent findings and to capture better how technological (PU), psychological (PE), and social (SI) factors jointly influence continuance intention.

Beyond addressing inconsistencies in prior research, this study introduces a conceptual novelty by updating the construct of social influence to reflect the realities of the digital era better. In the Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003), SI is typically interpreted as direct social pressure from family, peers, or authority figures. While relevant in earlier contexts, this interpretation is increasingly insufficient when digitally mediated interactions shape user behaviour. This study proposes the construct of Digital Social Influence, which encompasses online reviews, social media testimonials, endorsements from educational influencers, and participation in online learning communities. Recent evidence suggests that such digital validation can strongly influence learners' continuance intention, often more significantly than traditional face-to-face social pressures (Jiang et al., 2023; Yang et al., 2023).

Accordingly, this research contributes in two ways: first, by empirically examining the effects of PU, PE, and SI on continuance intention with AT as a mediator; and second, by advancing the theoretical scope of UTAUT through the introduction of Digital Social Influence, which offers a more relevant framework for understanding technology usage in highly digitalized and socially connected contexts such as Indonesia.

Literature Review

Continuance Intention (CI)

Continuance intention (CI) denotes a learner's willingness to persist in using an online learning system after initial adoption, thereby capturing the sustainability of post-adoption behavior rather than one-off acceptance. Early research showed that beliefs formed through actual use—not merely pre-use expectations—shape ongoing participation in e-learning (Lee, 2010). As MOOCs and blended formats proliferated, subsequent studies emphasized that CI emerges from the joint influence of utilitarian value (e.g., performance gains and efficiency), affective value (e.g., enjoyment and interest), and contextual supports such as task–technology fit and social legitimation (Wu & Chen, 2017). In rapidly digitizing settings, including Indonesia, pandemic-driven adoption exposed a structural gap between initial uptake and long-term retention, which positions CI as a core indicator of platform viability and learner success (Li, Wang, & Wei, 2022). More recent evidence indicates that learners tend to continue when platforms demonstrably improve learning outcomes, facilitate pleasant experiences, and are endorsed by relevant social groups and communities (Huang & Liu, 2024; Sun et al., 2017).

Perceived Usefulness (PU)

Within the Technology Acceptance Model (TAM), perceived usefulness (PU) is defined as the belief that using a system enhances task performance (Davis, 1989). In educational contexts, PU reflects the extent to which a platform supports comprehension, grades, efficiency, or mastery, and higher PU is typically associated with more favorable evaluations and stronger intentions to continue (Lee, 2010). Evidence from MOOCs and blended learning indicates that PU relates to CI both directly and indirectly through attitude (AT), suggesting that performance value is internalized into positive evaluations that sustain usage (Wu & Chen, 2017). Nevertheless, the magnitude and directness of the PU–CI relationship vary across studies; while some report strong positive effects, others observe weak or non-significant coefficients once enjoyment and social cues are modeled, which points to suppression, context dependence, or mediation (Moorthy et al., 2019; Liu & Pu, 2023). These discrepancies are plausibly tied to task structure, assessment culture, platform features, and prior experience. In such heterogeneous conditions, positioning AT as a mediator is both theoretically warranted and empirically common, because AT functions as a proximal conduit translating perceived performance value into CI (Lee, 2010; Wu & Chen, 2017; Su & Chiu, 2021).

Perceived Enjoyment (PE)

Perceived enjoyment (PE) represents hedonic motivation, namely the degree to which system use is enjoyable in and of itself, independent of extrinsic outcomes (Davis et al., 1992). As online learning platforms embed richer media, interactivity, and gamified features, enjoyment has shifted from a peripheral attribute to a central determinant of sustained engagement. Empirical studies consistently show that PE is associated with continuance intention (CI) through a dual pathway: it displays a direct positive association with CI and an indirect association operating through attitude (AT) by cultivating favorable affective evaluations of the learning experience (Wang et al., 2019; Su & Chiu, 2021). Engagement-oriented designs implemented during and after the COVID-19 pandemic—such as enhanced social presence and collaborative tools—further underscored the importance of enjoyment for sustained participation (Li et al., 2022; Huang & Liu, 2024). At the same time, several studies document attenuated or non-significant effects, implying sensitivity to task demands, cultural preferences for intrinsic versus extrinsic rewards, or the maturity of platform features (Lee, 2010; Obeid et al., 2024). A flow-based interpretation helps reconcile these inconsistencies by positing that intrinsically rewarding, focused activity encourages re-engagement, a mechanism that aligns with the frequently observed pattern in which PE shapes AT, and AT subsequently supports CI (Wang et al., 2019; Su & Chiu, 2021).

Social Influence (SI)

In the Unified Theory of Acceptance and Use of Technology (UTAUT), social influence (SI) is the degree to which important others are perceived as expecting a person to use the technology (Venkatesh et al., 2003). In education, SI shapes perceived norms and injunctive expectations and can reinforce adoption and continuance, particularly in collectivist settings (Lee, 2010; Wu & Chen, 2017). Empirical findings on SI are mixed: some studies identify SI as a significant antecedent of CI, whereas others report negligible effects, suggesting boundary conditions linked to culture, stage of use, and the salience or credibility of one's social network (Roslan et al., 2023; Kurniawan et al., 2024; Gao, 2023). As learning increasingly unfolds in networked environments, SI often materializes through digitally mediated cues. Peer communities, identity signaling, public endorsements, and social-media content shape learners' attitudes and ongoing use, motivating a refined construct, Digital Social Influence (DSI), that includes user reviews, social-media testimonials, endorsements from educational influencers, and participation in online learning communities (Ruangkanjanase et al., 2020; Li et al., 2022). Recent evidence indicates that such digital validation can rival or even exceed face-to-face pressures among digital natives, thereby shaping AT and CI (Alshurideh et al., 2020; Jiang & Liang, 2023; Yang et al., 2023)

Attitude (AT)

In TAM, attitude (AT) is a user's overall positive or negative evaluation of using a system and serves as a proximal determinant of intention (Davis, 1989). Across e-learning contexts, AT consistently mediates the effects of PU and PE on CI by transforming perceived performance value and enjoyment into a willingness to persist (Amoroso & Lim, 2017; Su & Chiu, 2021; Liu & Pu, 2023). AT also helps reconcile inconsistent direct effects reported for PU or SI on CI by revealing stronger indirect pathways through evaluative orientations (Lee, 2010; Wu & Chen, 2017; Roslan et al., 2023). Conceptually, AT functions as a psychological bridge that integrates technological inputs from PU, hedonic inputs from PE, and social cues from SI or DSI and converts these signals into a relatively stable orientation toward the platform that predicts sustained use. In empirical applications using PLS-SEM, AT typically exhibits strong reliability and serves as a central mediator; indirect effects are therefore examined with bias-corrected bootstrapping while controlling for plausible covariates such as prior experience and demographics.

Research Model and Hypotheses

Synthesizing the literature, the research model conceptualizes CI as jointly determined by technological (PU), psychological (PE), and social (SI) factors. Attitude (AT) is positioned as the central mediating mechanism that converts these inputs into sustained usage. In view of contemporary learning ecologies, SI is extended to Digital Social Influence (DSI) to explicitly represent online reviews, testimonials, influencers, and learning-community participation. The proposed model of this research is presented in Figure. 1, and the following ten hypotheses were formulated.

H1: Perceived usefulness (PU) positively influences continuance intention (CI).

H2: Perceived enjoyment (PE) positively influences continuance intention (CI).

H3: Social influence (SI) positively influences continuance intention (CI).

H4: Perceived usefulness (PU) positively influences attitude (AT).

H5: Perceived enjoyment (PE) positively influences attitude (AT).

H6: Social influence (SI) positively influences attitude (AT).

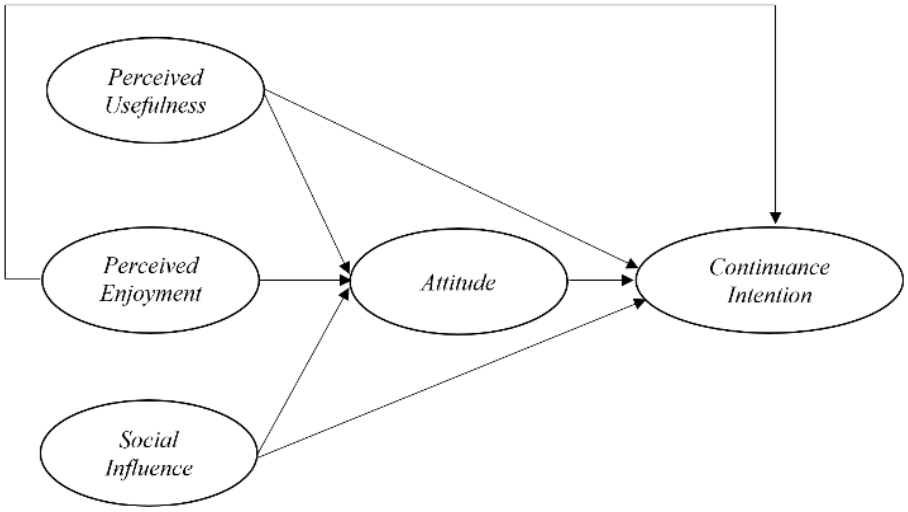
H7: Attitude (AT) positively influences continuance intention (CI).

H8: Attitude (AT) mediates the effect of perceived usefulness (PU) on continuance intention (CI).

H9: Attitude (AT) mediates the effect of perceived enjoyment (PE) on continuance intention (CI).

H10: Attitude (AT) mediates the effect of social influence (SI) on continuance intention (CI).

Figure 1: Proposed research model



Source : Developed by the authors

Research Methodology

Sample and Data Collection

The target population comprised adult users of upskilling-oriented online course platforms in Indonesia (e.g., Binar Academy, Purwadhika, Hacktiv8, RevoU, Kuncie, Udemy Indonesia, Dicoding, Arkademi, Edu AMD Academy Indonesia, etc.). We employed purposive sampling to reach experienced learners whose evaluations are most pertinent to post-adoption behavior. Eligibility criteria were: (i) age ≥ 18 years; (ii) access to at least one upskilling course within the past 6 months (e.g., digital marketing, data science, programming, UI/UX, cloud, cybersecurity, AI); (iii) completion of ≥ 60% of at least one course; and (iv) provision of informed consent.

The determination of sample size was guided by the Lemeshow formula (1997), which is commonly applied when the total population size is unknown or difficult to estimate. Assuming a 95% confidence level, a 5% margin of error, and maximum variability ($p = 0.5$), the Lemeshow calculation yields a minimum sample requirement of approximately 384 respondents. The achieved sample size of 392 therefore exceeds this minimum threshold, providing sufficient statistical precision and reducing sampling error. In addition, the sample size is adequate for Partial Least Squares Structural Equation Modeling (PLS-SEM), which requires a relatively large number of observations to ensure stable parameter estimation and sufficient statistical power for testing direct and mediated relationships. Collectively, these considerations support the adequacy and robustness of the sample used in this study.

The questionnaire was delivered online via Google Forms and circulated through program coordinators, alumni and learner communities of the platforms listed above, and relevant WhatsApp groups. We emphasized voluntary participation. Data-quality controls excluded responses from non-users, straight-liners, failed attention-check cases and duplicate submissions.

Research Instruments

The questionnaire comprised two sections. Section one captured demographics and usage profile (7 items: age, gender, education, employment/study status, primary platform, weekly learning time, prior duration of use). Section two measured focal constructs with 5-point Likert scales (1 = strongly disagree … 5 = strongly agree). All items were reflective, adapted from validated sources, and contextualized to Indonesian online-course platforms.

Perceived Usefulness (PU) was operationalized with five indicators, namely learning effectiveness, productivity, learning quality, competence development, and skills enhancement, and was captured by eight items drawn from established sources (Davis, 1989; Lee, 2010; Wu & Chen, 2017). Perceived Enjoyment (PE) included three indicators, namely enjoyable learning experience, enjoyment of platform features, and motivation uplift, and was measured by seven items (Davis et al., 1992; Wang et al., 2019; Su and Chiu, 2021). Social Influence (SI) comprised four indicators, namely family influence, peer influence, institutional or professional support, and Digital Social Influence (DSI) that reflects user reviews, influencer endorsements, and discussions in online communities, and was measured by seven items (Venkatesh et al., 2003; Li et al., 2022; Yang et al., 2023; Alshurideh et al., 2020). Attitude (AT) was represented by two indicators, namely overall affective and cognitive evaluation and perceived learning value, and was captured by six items (Davis, 1989; Ajzen, 1991; Su & Chiu, 2021). Continuance Intention (CI) covered three indicators, namely intention to continue, expected frequency of use, and willingness to recommend, and was measured by six items (Bhattacherjee, 2001; Wu & Chen, 2017; Lee, 2010). In total, the instrument included seventeen indicators and thirty four items.

Instrument quality was assessed in two steps. Validity was examined via item–total Pearson correlations in the pilot ($\alpha = .05$; r-table = 0.334), with revisions/removals applied before the main study. Reliability in the full sample indicated acceptable to excellent internal consistency (Cronbach's alpha $\geq .80$ across PU, PE, SI, AT, and CUI), supporting use in latent-variable modeling.

Instrument Validation and Data Quality Control

To ensure the validity and reliability of the collected data and to mitigate potential internal biases, several methodological procedures were applied. First, **instrument validation** was conducted through a pilot test involving a subset of respondents with characteristics similar to the target population. The pilot study was used to assess item clarity, wording accuracy, and construct consistency, allowing ambiguous or redundant items to be revised or removed prior to the main survey. Second, all constructs were measured using a **five-point Likert scale with balanced and neutral anchors** ranging from "strongly disagree" to "strongly agree," reducing acquiescence bias and encouraging respondents to express their true perceptions without directional pressure. Third, **standardization of questionnaire presentation** was ensured by administering the survey online using a uniform layout, consistent scale formatting, and neutral visual design across all sections, preventing visual priming effects. Finally, **data cleaning procedures** were systematically implemented prior to analysis. Responses with missing values, duplicate submissions, straight-lining patterns, or failed attention checks were excluded. Outliers were examined using descriptive and distributional diagnostics to ensure that extreme values did not distort parameter estimates. Collectively, these procedures strengthen data quality and support the internal validity of subsequent Partial Least Squares Structural Equation Modeling (PLS-SEM) analyses.

Results

Demographic Information

Table 1 summarizes the demographic profile of the 392 respondents. The sample is balanced by gender (52.81% male; 47.19% female) and skewed toward young adults: 76.02% are 18–30 years old, 18.11% are 31–40, and 5.87% are over 40. Educational attainment is relatively high—Bachelor's degree holders dominate (45.92%), followed by upper-secondary graduates (33.16%) and diploma holders (11.99%); Master's and Doctoral degrees account for 7.91% and 0.77%, respectively.

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Table 1: Respondents' demographic characteristics

Category	Subcategory	Frequency	Percentage
Gender	Male	207	52.81%
	Female	185	47.19%
Age	18–30 years	298	76.02%
	31–40 years	71	18.11%
	> 40 years	23	5.87%
Education	Lower-secondary	1	0.26%
	Upper-secondary	130	33.16%
	Diploma (D1/D2/D3)	47	11.99%
	Bachelor (S1/D4)	180	45.92%
	Master (S2)	31	7.91%
	Doctoral (S3)	3	0.77%
Status	Student	150	38.27%
	Civil servant	46	11.73%
	Private employee	112	28.57%
	Entrepreneur	38	9.69%
	Lecturer/Teacher	5	1.28%
	Freelancer	4	1.02%
	Homemaker	9	2.30%
	Unemployed	24	6.12%
	Other	4	1.02%
Domicile	Java	224	57.14%
	Sumatra	59	15.05%
	Kalimantan	40	10.20%
	Sulawesi	38	9.69%
	Bali/Nusa Tenggara	25	6.38%
	Maluku/Papua	6	1.53%
Platform-use experience	6 months–1 year	228	58.16%
	> 1–2 years	115	29.34%
	> 2 years	49	12.50%

Source: Own elaboration

In terms of economic and occupational context, students constitute the largest group (38.27%), with substantial representation from private employees (28.57%) and smaller shares of civil servants (11.73%) and entrepreneurs (9.69%). Geographically, Java is the predominant domicile (57.14%), followed by Sumatra (15.05%), Kalimantan (10.20%), Sulawesi (9.69%), Bali/Nusa Tenggara (6.38%), and Maluku/Papua (1.53%). Experience with online course platforms is predominantly recent to moderate: 58.16% report 6 months to 1 year of use, 29.34% report more than 1 to 2 years, and 12.50% report more than 2 years.

Reliability and Validity

Before testing the hypotheses, we established the psychometric adequacy of all reflective measures. As summarized in Table 2, internal consistency was evaluated using Cronbach's alpha and Composite Reliability (CR), both of which exceeded the conventional 0.70 benchmark for every construct, indicating good to excellent reliability. Convergent validity was assessed using the Average Variance Extracted (AVE), and all AVE values exceeded 0.50, indicating that each latent construct accounts for more than half of the variance in its indicators. These results support the reliability and convergent validity of the measurement model for subsequent analyses.

Table 2: Reliability and Validity Results

Construct	Cronbach's Alpha	Composite Reliability	AVE
Perceived Usefulness (PU)	0.909	0.912	0.926
Perceived Enjoyment (PE)	0.919	0.920	0.935
Social Influence (SI)	0.879	0.885	0.906
Attitude (AT)	0.902	0.903	0.631
Continuance Intention (CI)	0.879	0.883	0.909

Note: AVE = Average Variance Extracted.

Source: Own elaboration

Table 3 reports the Fornell–Larcker matrix to evaluate discriminant validity among the reflective constructs. According to the criterion, the square root of AVE for each construct (bold diagonal) should be greater than its correlations with other constructs in the same row and column. As shown, the diagonal values for PU (0.782), PE (0.820), SI (0.761), AT (0.794), and CUI (0.791) each exceed the corresponding off-diagonal correlations. This pattern indicates that each construct shares more variance with its own indicators than with those of other constructs, thereby providing evidence of discriminant validity.

Table 3: Fornell-Larcker criterion

Variable	PU	PE	SI	AT	CUI
Perceived Usefulness (PU)	**0.782**				
Perceived Enjoyment (PE)	0.771	**0.820**			
Social Influence (SI)	0.562	0.661	**0.761**		
Attitude (AT)	0.726	0.723	0.677	**0.794**	
Continuance Intention (CI)	0.628	0.699	0.646	0.715	**0.791**

Note: Correlation matrix of constructs and the square root of AVE (in bold) Hypotheses Testing

Source: Own elaboration

Hypothesis Testing

The hypothesis test results of the research model were as follows (see Table 4 and Tabel 5). Table 4 reports the direct paths in the structural model. The path from Perceived Usefulness to Continuance Intention is not significant ($\beta = 0.046$, $p = 0.464$), indicating that functional value alone does not immediately translate into continued use. In contrast, Perceived Enjoyment and Social Influence both show significant positive effects on Continuance Intention ($\beta = 0.251$, $p < 0.001$ for each), implying that hedonic experience and social cues directly encourage ongoing engagement. All three antecedents, namely Usefulness, Enjoyment, and Social Influence, also have significant positive effects on Attitude ($\beta = 0.447$; 0.350; 0.195 respectively, all $p < 0.001$). Finally, Attitude itself has a significant positive effect on Continuance Intention ($\beta = 0.300$, $p = 0.001$). Taken together, these results position Attitude as a pivotal driver of continuance that is nourished by technological, psychological, and social inputs.

Table 4: Hypothesis Testing (Direct Effects)

Hypothesis	Path	Path Coefficient	t-Statistic	p-Value	Decision
H1	PU → CI	0.046	0.733	0.464	Rejected
H2	PE → CI	0.251	3.777	0.000	Supported
H3	SI → CI	0.251	4.233	0.000	Supported
H4	PU → AT	0.447	8.648	0.000	Supported
H5	PE → AT	0.350	6.271	0.000	Supported
H6	SI → AT	0.195	5.362	0.000	Supported
H7	AT → CI	0.300	3.313	0.001	Supported

Note: PU = Perceived Usefulness, PE = Perceived Enjoyment, SI = Social Influence, AT = Attitude, CI = Continuance Intention

Source: Own elaboration

Table 5 examines mediation through Attitude. The indirect effect of Perceived Usefulness on Continuance via Attitude is significant ($\beta = 0.105$, $p = 0.005$), whereas the corresponding direct path from Perceived Usefulness to Continuance Intention is not significant. This pattern constitutes full mediation, indicating that usefulness promotes continuance primarily by improving Attitude. For Perceived Enjoyment and Social Influence, both indirect effects through Attitude are significant ($\beta = 0.134$, $p = 0.001$; $\beta = 0.058$, $p = 0.005$), and their direct effects on continuance remain significant as reported in Table 4. This combination indicates partial mediation, meaning that enjoyment and social cues operate in two ways: they directly encourage continued use and they also enhance Attitude, which in turn strengthens continuance intention.

Table 5: Hypothesis Testing (Indirect Effects via Attitude)

Hypothesis	Indirect Path	Path Coefficient	t-Statistic	p-Value	Mediation Type
H8	PU→AT→CI	0.105	2.793	0.005	Full mediation
H9	PE→AT→CI	0.134	3.242	0.001	Partial mediation
H10	SI→AT→CI	0.058	2.799	0.005	Partial mediation

Note: PU = Perceived Usefulness, PE = Perceived Enjoyment, SI = Social Influence, AT = Attitude, CI = Continuance Intention

Source: Own elaboration

Table 6 aggregates direct plus indirect influences to rank the overall importance of the predictors for Continuance Intention. Perceived Enjoyment has the largest total effect (0.385), followed by Social Influence (0.309), and Perceived Usefulness (0.151).

Table 6: Total Effects

Predictor	Direct Effect	Indirect Effect	Total Effect
Perceived Usefulness (PU)	0.046	0.105	0.151
Perceived Enjoyment (PE)	0.251	0.134	0.385
Social Influence (SI)	0.251	0.058	0.309

Source: Own elaboration

The ordering highlights that affective experience and social legitimation are more consequential than pure functionality for sustaining use. From a managerial standpoint, retention strategies should prioritize engaging, enjoyable learning experiences and visible digital social proof (e.g., user reviews, influencer testimonials, community interaction), while ensuring that perceived usefulness continues to strengthen Attitude, the key psychological bridge to long-term continuance.

Discussion

This study investigates the determinants of continuance intention in online course platforms by integrating technological, psychological, and social perspectives. Specifically, it examines the influence of perceived usefulness, perceived enjoyment, and social influence on continuance intention, with attitude as a mediating variable.

Results for H1 and H8 indicate that perceived usefulness does not translate straight into continuance intention once other evaluative and experiential routes are modeled, but it becomes consequential when it lifts attitude. This matches the original placement of usefulness in the Technology Acceptance Model as an input to evaluation and the Expectation Confirmation Model's account that confirmation of benefits works through post-use evaluation before sustaining continued use (Bhattacherjee, 2001). In markets where baseline functionality is already common, usefulness tends to work via evaluative states such as satisfaction/attitude rather than as a sole direct driver, a tendency visible in continuance models for higher education learners and in ECM extensions with quality antecedents (Roca et al., 2006; Zhang et al., 2023; Shanshan et al., 2022).

Findings for H2 and H9 show that perceived enjoyment operates through two routes. It bears a direct link to continuance intention and also strengthens intention indirectly by improving attitude. This aligns with adoption extensions that place intrinsic and hedonic motivation near the point of action and with evidence in online learning that enjoyment is a robust proximal predictor of returning behavior and favorable evaluations (van der Heijden, 2004; Venkatesh et al., 2012; Zhou, 2013; Deng et al., 2023). In our sample, many participants study after work or lectures; enjoyable interaction reduces effort, renews curiosity, and turns the next session into a choice.

Results for H3 and H10 show that social influence matters directly for continuance intention while also improving attitude, creating a smaller but meaningful indirect path. This aligns with the unified view of acceptance that highlights normative and informational signals, and maps well to digital social environments with user reviews, influencer testimonials, and learning communities (Venkatesh et al., 2003). In contemporary online learning, social presence and peer/community cues bolster satisfaction and continuance—especially among younger, socially connected cohorts (Richardson et al., 2017; Deng et al., 2023; Ermilinda et al., 2024).

Findings for H4, H5, and H6 confirm that perceived usefulness, perceived enjoyment, and social influence all shape attitude in positive ways. Attitude thus integrates beliefs about performance, affective experience, and social legitimation into a coherent evaluation—consistent with TAM's belief-to-attitude pathway and ECM's emphasis on post-use evaluation (Davis, 1989; Bhattacherjee, 2001). Contemporary e-learning studies similarly show that quality, enjoyment, and support consolidate into satisfaction/attitude and, in turn, sustain continuance (Roca et al., 2006; Shanshan et al., 2022; Liu et al., 2023)

The result for H7 shows that attitude is a close and significant predictor of continuance intention, which is precisely what foundational intention theory suggests since evaluative orientation guides intention and behavior (Ajzen, 1991). In our data, most respondents are within their first two years of use, a period when evaluations consolidate; attitude naturally serves as the psychological bridge converting beliefs and day-to-day experiences into the decision to keep

learning on the same platform. Recent work in online learning likewise maintains the centrality of attitude as an immediate driver of continuance (Tang et al., 2023; Roca et al., 2006; Deng et al., 2023)

Finally, the ranking of total effects places perceived enjoyment as the strongest overall predictor of continuance intention, followed by social influence and then perceived usefulness. This ordering converges with findings that affective experience and social legitimation become decisive once baseline utility and access are in place, while usefulness continues to matter indirectly as a builder of attitude (Venkatesh et al., 2012; Deng et al., 2023; Shanshan et al., 2022; Zheng et al., 2025)

Conclusion

This study set out to explain why learners continue using online course platforms by integrating technological, psychological, and social determinants with attitude as a mediating mechanism. The model shows a coherent pattern. Perceived usefulness does not reliably predict continuance intention when other routes are present, yet it remains important because it improves attitude. Perceived enjoyment is the most decisive driver because it relates directly to continuance intention and also elevates attitude. Social influence contributes both directly and indirectly by shaping attitude. Attitude itself emerges as a close and significant predictor of continuance intention, confirming its role as the evaluative bridge that converts beliefs and ongoing experience into the decision to stay.

The results contribute to theory by clarifying how belief based, affective, and social processes jointly operate in the post adoption stage. Usefulness primarily supports continuance through evaluation rather than through a direct path. Enjoyment operates as a proximal mechanism that links day to day interaction with the intention to return. Social influence integrates normative and informational cues into both evaluation and choice. Together these findings position attitude as the focal junction where performance beliefs, affective experience, and social legitimation are synthesized before intention is formed.

The findings carry practical implications for platform designers, educators, and administrators. First, invest in experiences that are enjoyable and effortless to use, since enjoyment is the strongest overall lever for returning behaviour. Second, cultivate social proof and community features such as peer discussion, visible progress, and instructor presence, since these cues reduce uncertainty and legitimize continued participation. Third, maintain and communicate functional benefits while ensuring that those benefits are personally endorsed, because usefulness matters most when it translates into a favourable evaluation. In contexts where many learners study after work or after lectures, small improvements that reduce effort and renew curiosity can have an outsized effect on the choice to start the next session.

In drawing conclusions from the empirical results, careful consideration was given to minimizing the influence of internal data biases and ensuring objective interpretation. Although the study relies on self-reported survey data, potential biases were mitigated through validated measurement instruments, standardized questionnaire design, and systematic data cleaning procedures prior to analysis. Conclusions were derived strictly from statistically supported relationships estimated using Partial Least Squares Structural Equation Modeling (PLS-SEM), which operates at the latent-construct level and reduces the impact of random measurement error. Mediation effects were interpreted based on the combined assessment of direct, indirect, and total effects using bootstrapping, and theoretical claims were aligned with observed significance patterns. Non-significant paths were reported and interpreted conservatively, avoiding overgeneralization beyond the empirical evidence. These safeguards enhance confidence that the conclusions reflect substantive behavioural mechanisms underlying continuance intention rather than artifacts of response or measurement bias.

This research has limitations that suggest caution and invite further work. The design is cross sectional and relies on self-report, which restricts causal inference and may introduce common method bias. The sample is youthful and drawn from one national context, which may limit generalization to other age groups and regions. Platform types and course subjects vary, and unobserved differences may affect continuance dynamics. The model does not include other relevant factors such as habit, perceived cost, self-efficacy, content quality, or flow, which could refine the explanatory power.

Future research can strengthen the evidence base through longitudinal designs that track behaviour over time, field experiments that manipulate enjoyment or social cues, and the use of behavioural telemetry to complement surveys. Comparative studies across cultures and age segments can test the stability of the mechanisms identified here. Model extensions can incorporate quality antecedents and additional post adoption constructs, and can test moderators such as digital literacy, prior experience, goal orientation, and workload. Together these steps would provide a more complete account of how evaluations form and change, and how platforms can sustain participation at scale.

In summary, continuance on online course platforms is anchored in attitude and powered most strongly by enjoyment, with social influence providing both a direct push and an evaluative lift, while usefulness contributes mainly by building a favourable attitude. Designing for enjoyable interaction, visible social legitimation, and personally endorsed utility offers a practical route to sustained engagement.

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