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Customer Experience and Business Model Transformation in Training Providers: The Enabling Roles of Digital Curriculum and Teachers' Self-Efficacy

Lola Fitria Sari¹, Agustinus Miranda Wijaya², Yunita³¹Universitas Pancasila, Jakarta, Indonesia, lola.fitria@univpancasila.ac.id²Universitas Pancasila, Jakarta, Indonesia.³Universitas Pancasila, Jakarta, Indonesia.Corresponding Author: lola.fitria@univpancasila.ac.id¹

Abstract: The rapid digitalisation of the education and training industry is reshaping how training providers create and deliver value for digitally oriented learners. This study examines the effects of teachers' self-efficacy and digital curriculum on customer experience and investigates the mediating role of business model transformation. Drawing on Dynamic Capabilities Theory and Service-Dominant Logic, the study develops a model comprising four constructs and seven hypotheses. A survey of 180 respondents from PT Citra Prestasi Gemilang, a training provider, was analysed using partial least squares structural equation modelling (PLS-SEM). The measurement model demonstrated reliability, with Cronbach's alpha ranging from 0.724 to 0.800, composite reliability from 0.876 to 0.895, and average variance extracted from 0.702 to 0.810. The structural model explained 28.0% of the variance in business model transformation and 42.3% of customer experience. Teachers' self-efficacy had effects on business model transformation ($\beta = 0.146$, $t = 3.467$, $p = 0.019$) and customer experience ($\beta = 0.062$, $t = 2.987$, $p < 0.001$). Digital curriculum had stronger positive effects on business model transformation ($\beta = 0.426$, $t = 4.689$, $p < 0.001$) and customer experience ($\beta = 0.332$, $t = 4.520$, $p < 0.001$). Business model transformation positively affected customer experience ($\beta = 0.370$, $t = 4.280$, $p < 0.001$). Effect-size analysis showed that business model transformation had a medium-to-large effect on customer experience ($f^2 = 0.171$), whereas digital curriculum had small-to-medium effects on business model transformation ($f^2 = 0.155$) and customer experience ($f^2 = 0.102$). Overall, business model transformation emerges as an important mechanism through which digital curriculum and human capabilities contribute to customer experience.

Keywords: Business Model Transformation, Customer Experience, Digital Curriculum, Teachers' Self-Efficacy, Training Providers, PLS-SEM.

INTRODUCTION

The education and training industry is undergoing a period of profound structural change driven by the diffusion of digital technologies, shifting learner expectations, and intensifying

competition among providers. Business model transformation (BMT) refers to the fundamental redesign of the way an organisation creates, delivers, and captures value in order to strengthen its value proposition, competitive position, and operational effectiveness in the face of dynamic market conditions (Chuunga & Mpundu, 2025). Such transformation is frequently triggered by external pressures and emerging opportunities that push organisations to explore new markets or to adapt to competitive threats (Kaukab & Bachtiar, 2022). For training providers in particular, BMT has become highly relevant because the integration of digital strategy reshapes how educational services are designed, delivered, and experienced by learners (Yuen, 2023).

Within this context, customer experience (CX) has emerged as a decisive determinant of learner satisfaction, engagement, and retention. Customer experience encompasses the entire set of interactions between the learner and the provider, from enrolment and the learning journey through to post-course support (Stein & Ramaseshan, 2016). Enhancing experience in the education sector is therefore not merely a matter of refining curriculum content, but of orchestrating a seamless and enjoyable learner journey from the first to the last touchpoint (Lipkin, 2016). In digital settings, this experience can be further strengthened through omnichannel approaches that allow learners to interact with content across multiple digital touchpoints (Meutter et al., 2024; Babu & Babar, 2025).

Two organisational antecedents are especially salient in explaining how training providers pursue such transformation. First, teachers' self-efficacy (TSE) captures instructors' beliefs in their capacity to manage, motivate, and inspire learners, including their confidence in adopting new methods and technologies (Revenko & Polezhaieva, 2025; Babu & Babar, 2025). Second, digital curriculum (DC) refers to an educational framework that integrates digital technologies—such as multimedia, learning management systems, and interactive tools—into teaching and learning to improve the quality and accessibility of the learning experience (Fristianingroem, 2025; Tiwow et al., 2023). Both are widely regarded as key enablers of digital service innovation, yet their combined influence on customer experience, and the mechanism through which that influence operates, remains underexplored.

Although prior research has separately examined business model innovation (Keiningham et al., 2020; Kostov, 2023), customer experience (Lipkin, 2016; Stein & Ramaseshan, 2016), and the digitalisation of educational services (Revenko & Polezhaieva, 2025; Pan & Filippova, 2024), three gaps persist. First, empirical evidence integrating teacher competence, curriculum design, and business model change within a single explanatory model for training providers is scarce. Second, the role of business model transformation as a mediating mechanism—rather than merely an outcome—linking organisational capabilities to customer experience has received limited attention. Third, most studies are conceptual or set in higher-education contexts, leaving the commercial training-provider sector, where customer experience is directly tied to competitiveness, insufficiently examined.

The practical challenge, however, extends beyond adoption of digital technologies. Digitalisation requires training providers to redesign the way learning value is produced and experienced by learners. Evidence from Indonesian training practices illustrates this transition. For example, the Central Bureau of Statistics (BPS) implemented national instructor training in 2024 using a combination of massive open online courses (MOOCs) and distance learning through virtual platforms, integrating both synchronous and asynchronous learning. One national instructor programme involved 131 prospective instructors from BPS provincial offices across Indonesia. Similarly, the BPS Gojags Classroom platform currently reports more than 15,000 active participants, over 500 courses, and more than 25,000 certificates issued, illustrating how digital platforms can become an important infrastructure for large-scale training delivery. Although such examples do not represent the entire Indonesian training-provider industry, they demonstrate the growing importance of digitally enabled learning systems and the need to understand how digital resources translate into learner value.

From an organisational perspective, this challenge can be explained through the Dynamic Capabilities Theory. Teece (2007) conceptualises dynamic capabilities as organisational capacities that enable firms to sense changes in their environment, seize emerging opportunities, and reconfigure resources in response to changing market conditions. For training providers, digital curriculum can represent an important organisational resource that allows educational content and learning processes to respond to changing learner and industry requirements. However, curriculum digitalisation alone may not generate superior outcomes unless training providers are able to reconfigure their business models, including their value propositions, delivery mechanisms, customer interfaces, partnerships, and revenue logic. Business model transformation can therefore be understood as an organisational mechanism through which training providers translate digital resources and human capabilities into new forms of value creation.

The urgency of digital transformation in the training industry can be illustrated by the broader digital readiness of Indonesian society. Data from the 2024 Indonesia Digital Society Index (Indeks Masyarakat Digital Indonesia—IMDI), published by the Ministry of Communication and Informatics Human Resources Development Agency, indicate that a substantial proportion of the population continues to experience difficulties in utilising digital platforms. Approximately 81% of respondents reported challenges in using digital platforms, with lack of interest (49.68%) and insufficient understanding of how to use digital platforms (41.90%) identified among the major barriers. These findings suggest that the expansion of digital infrastructure does not automatically translate into effective digital adoption. Digital transformation therefore requires not only technological availability but also appropriate content, user capabilities, and organisational mechanisms that facilitate meaningful engagement with digital services.

The Service-Dominant Logic (S-D Logic) of Vargo and Lusch provides a complementary theoretical perspective for understanding this process. S-D Logic views service as the fundamental basis of exchange and emphasises value co-creation through the integration of resources and competences among actors. In the training context, value is therefore not simply embedded in a course, curriculum, or learning platform and subsequently delivered to learners. Rather, learner value emerges through interactions among instructors, learners, curriculum, digital technologies, and the institutional environment. This perspective makes customer experience particularly relevant because the quality of the learning experience reflects how effectively these resources and interactions are integrated during the service process (Vargo & Lusch, 2008).

The situation is particularly relevant to the training industry, where the quality of digital adoption directly affects how learners access, participate in, and experience training services. Malang provides an illustrative regional context. In 2024, Malang recorded an IMDI score of 52.64, substantially above the national average of 43.34 and placing the city among the regions categorised as having a “very high” level of digital society development (BPSDM Komdigi RI, 2024). Nevertheless, relatively strong digital readiness at the regional level does not eliminate the challenges faced by individual training providers in converting technological opportunities into effective learning experiences. This contrast between increasing digital readiness and persistent adoption difficulties creates an important practical problem: training providers must determine how digital resources can be translated into learning value that is relevant, accessible, and engaging for learners.

This phenomenon can be observed more directly in the operational performance of PT Citra Prestasi Gemilang (CPG), a non-institutional training provider. Internal company data for 2021–2024 indicate a substantial decline in the number of training participants. The number of participants decreased from 1,350 in 2021 to 1,200 in 2022, declined further to 984 in 2023, and reached only 870 in 2024. Overall, the company therefore experienced a reduction of

approximately 35.6% in its participant base over the four years. Although a temporary increase of 45 participants was recorded between the first and second quarters of 2024, the recovery was not sustained. The decline is particularly relevant among young professionals aged 25–35 years, for whom an internal survey indicated that 67% preferred training programmes incorporating digital learning elements.

The decline in participant numbers was accompanied by deterioration in financial performance. CPG's net profit margin decreased from 12.7% in 2021, equivalent to approximately IDR 1.5 billion in net profit, to 7.5% in 2024, equivalent to approximately IDR 780 million. The company's operating cost structure also remained heavily dependent on physical training delivery, with approximately 65% of operating expenditure associated with physical training facilities and participant accommodation. Although cost-efficiency initiatives temporarily increased the margin to 9.1% in the second quarter of 2023, the improvement was not sustained. This pattern indicates that the challenge faced by the company is not simply a decline in demand but may also reflect the difficulty of adapting its existing value-delivery configuration to an increasingly digital training environment.

A similar pattern can be observed in participant retention. CPG's participant retention rate declined from 54% in 2021 to 28% in 2024. Follow-up survey data indicated that 58% of participants who did not continue their training relationship had moved to providers offering more flexible digital learning programmes. This finding is particularly important because it suggests that learners' decisions are increasingly influenced not only by the availability of training content but also by how the overall service is experienced. Flexibility, accessibility, digital interaction, and the integration of technology into the learning process may therefore constitute important components of customer experience in the contemporary training industry.

The competitive landscape provides further evidence of the challenge. While CPG's participant numbers declined from 1,200 in 2022 to 870 in 2024, several competing non-institutional training providers recorded different patterns of development. Duta Sukses increased its participants from 1,465 in 2022 to 1,573 in 2024, while WePro Communication increased substantially from 478 to 1,450 participants during the same period. YES Consulting maintained a comparatively large participant base, although its participants declined from 1,293 in 2023 to 1,240 in 2024. These differences suggest that the decline experienced by CPG cannot simply be attributed to an overall contraction of the training market. Rather, differences in how providers respond to changing learner expectations and digitalisation may contribute to differences in market performance.

Taken together, these data reveal a significant practical phenomenon. The challenge confronting training providers is not merely whether digital technology is available, but whether organisations can transform digital resources, curriculum, and human capabilities into a compelling learner experience. The case of CPG illustrates this tension clearly: while digital readiness and demand for flexible digital learning are increasing, participant numbers, retention, and profitability have deteriorated. The divergence between these trends indicates a potential gap between digital availability and value realisation.

This gap raises three interrelated questions. First, to what extent does the quality and integration of a digital curriculum influence learners' experiences? Second, can teachers' self-efficacy in delivering and adapting learning through digital environments contribute to a better customer experience? Third, and more importantly, are these resources sufficient without changes in how training providers create and deliver value? The CPG case suggests that curriculum digitalisation and teacher capability may need to be accompanied by broader business model transformation, including changes in value propositions, delivery channels, learner interaction, resource configuration, and service processes.

Accordingly, customer experience represents an important outcome through which the success of digital transformation can be assessed. A training provider may invest in digital

platforms and curriculum, but such investments create strategic value only when learners perceive the resulting service as accessible, relevant, flexible, engaging, and valuable. From this perspective, business model transformation may function as an organisational mechanism that converts digital curriculum and human capabilities into learner-facing value.

The empirical phenomenon therefore provides a clear practical foundation for examining the relationships among teachers' self-efficacy, digital curriculum, business model transformation, and customer experience. Rather than assuming that digitalisation automatically improves training outcomes, this study investigates the organisational mechanism through which digital and human resources are transformed into superior customer experience. This perspective is particularly relevant for training providers operating in increasingly competitive and digitally mediated markets, where the ability to reconfigure their business models may determine whether technological investments translate into sustained learner value.

Therefore, this study develops an integrated framework linking teachers' self-efficacy and digital curriculum to customer experience, with business model transformation positioned as a mediating mechanism. Drawing on Dynamic Capabilities Theory and Service-Dominant Logic, the study proposes that training providers can enhance customer experience by transforming digital and human resources into new configurations of value creation. Empirically, the study examines these relationships using data collected from learners and instructors of training providers and applies partial least squares structural equation modelling (PLS-SEM). The study contributes to the literature by positioning business model transformation as an innovation bridge between internal organisational capabilities and learner-facing service experience, while also providing empirical evidence on digital transformation in the training-provider context.

The study makes three contributions. Theoretically, it extends the business model transformation literature by positioning BMT as an innovation bridge that translates human competencies and curriculum design into superior learner experience. Empirically, it provides quantitative evidence from the training-provider sector on the relative importance of curriculum, teacher competence, and business model change. Practically, it offers managers of the training providers evidence-based guidance on where to prioritise investment when pursuing digital transformation.

Business model transformation denotes a substantial reconfiguration of an organisation's model of value creation, delivery, and capture in response to market dynamics (Chuunga & Mpundu, 2025). Unlike incremental adjustment, transformation involves rethinking core logic—program design, delivery mechanisms, and monetisation—often catalysed by technological change (Kostov, 2023). In the training-provider sector, BMT typically manifests in the shift from face-to-face delivery towards hybrid and fully digital models, the adoption of subscription and micro-credential offerings, and the use of data analytics to personalise services (Revenko & Polezhaieva, 2025; Yuen, 2023). BMT is therefore conceptualised here both as a strategic response to digital disruption and as an organisational capability that reshapes the learner-facing service.

Customer experience is a multidimensional construct comprising the cognitive, emotional, and behavioural responses evoked across the entire customer journey (Stein & Ramaseshan, 2016; Lipkin, 2016). In education and training, CX spans pre-enrolment information search, the core learning experience, and post-course support, and is increasingly shaped by digital touchpoints and omnichannel interaction (Meutter et al., 2024; Babu & Babar, 2025). Superior CX has been linked to higher satisfaction, engagement, loyalty, and retention, making it a central outcome variable for providers competing on service quality rather than price alone.

Teachers' self-efficacy refers to instructors' beliefs in their ability to organise and execute the actions required to teach effectively, including the confident use of new pedagogies and technologies (Babu & Babar, 2025). Instructors with high self-efficacy are more willing to experiment with technology-based strategies, adopt digital tools, and create meaningful, engaging learning experiences (Revenko & Polezhaieva, 2025; Keiningham et al., 2020). Within a business model transformation lens, developing teacher self-efficacy through training and technological support is viewed as an internal driver of service innovation.

Digital curriculum is an educational framework that integrates digital technologies into the design and delivery of teaching and learning to improve learner experience (Fristianingroem, 2025). It draws on digital resources such as multimedia, learning management systems (LMS), and interactive tools to widen access and deepen engagement (Tiwow et al., 2023). Effective digital curricula also require attention to digital literacy, stakeholder involvement, and industry relevance, while addressing equity challenges arising from unequal access to technology (Pan & Filippova, 2024). As a design capability, digital curriculum is an external-facing driver that compels providers to reconfigure their business models.

Hypothesis Development

Teachers' self-efficacy and business model transformation. Instructors who are confident in using new technologies and methods are more likely to champion changes in how services are delivered—for example, moving from face-to-face to hybrid or data-driven models—thereby acting as an internal engine of business model innovation (Revenko & Polezhaieva, 2025; Keiningham et al., 2020). Thus:

H1. Teachers' self-efficacy has a positive and significant effect on business model transformation.

Digital curriculum and business model transformation. Implementing a robust digital curriculum requires organisations to redesign program structure, delivery, and monetisation—through LMS adoption, micro-credentials, or subscription models—positioning digital curriculum as an external driver of business model change (Kostov, 2023; Tiwow et al., 2023). Thus:

H2. Digital curriculum has a positive and significant effect on business model transformation.

Business model transformation and customer experience. Transformation surfaces through service innovation-flexibility, personalisation, and digital interaction—that enhances learner satisfaction (Keiningham et al., 2020; Meutter et al., 2024). The more advanced the business model, the better the experienced learning journey. Thus:

H3. Business model transformation has a positive and significant effect on customer experience.

Teachers' self-efficacy and customer experience. Confident instructors use digital technology more creatively, foster richer interaction, and manage the learning experience more effectively, so that learners feel more engaged and derive greater value (Babu & Babar, 2025). Thus:

H4. Teachers' self-efficacy has a positive and significant effect on customer experience.

Digital curriculum and customer experience. Curricula that are interactive, multimedia-rich, and industry-aligned deliver a more relevant, adaptive, and enjoyable experience than traditional models (Fristianingroem, 2025; Pan & Filippova, 2024). Thus:

H5. Digital curriculum has a positive and significant effect on customer experience.

The mediating role of business model transformation. Beyond their direct effects, teacher self-efficacy and digital curriculum are expected to influence customer experience indirectly by driving business model transformation. Highly capable instructors and strong digital

curricula prompt organisations to redesign service delivery, which in turn elevates the learner experience (Keiningham et al., 2020; Revenko & Polezhaieva, 2025). Thus:

H6. Business model transformation mediates the effect of teachers' self-efficacy on customer experience.

H7. Business model transformation mediates the effect of digital curriculum on customer experience.

METHODS

Research Design

This study adopts a quantitative, explanatory research design using a cross-sectional survey to test the hypothesised relationships. Variance-based structural equation modelling (PLS-SEM) was selected because the study is prediction-oriented, involves a complex model with a mediating construct, and uses constructs measured reflectively with a relatively modest sample—conditions under which PLS-SEM is well suited (Hair et al., 2019). Analyses were conducted in SmartPLS.

Population and Sample

The target population comprised learners and instructors of training providers in PT Citra Prestasi Gemilang (CPG), a non-institutional training provider. The learner was defined as the unit of analysis because the principal outcome variable in this study is customer experience, which refers to the learner's direct experience with the training service, including interactions with the curriculum, instructors, learning processes, and digital learning environment. Respondents yielded a final sample of 180 valid responses. The sample size satisfies the PLS-SEM guideline of at least ten times the largest number of structural paths directed at any single construct. Respondent characteristics (gender, age, role, and prior digital-learning experience) are summarised in Table 1.

Table 1. Respondent Profile

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male / Female	68/112	37.78/ 62.22
Age	20 - 30 th y.o	9	5
	31 - 40 th y.o	54	5
	41 - 50 th y.o	63	35
	51 - 60 th y.o	27	15
	> 60 th y.o	27	15
Digital-learning experience	< 1 yr / ≥ 1 yr	43 / 137	23.89/ 76.11

A purposive sampling technique was employed because the study required respondents with specific experiential characteristics relevant to the research constructs. In particular, respondents needed to have sufficient exposure to the training programme and, where applicable, the digital learning components examined in the study. The final sample consisted of [N] valid learner responses after data screening and removal of incomplete or invalid questionnaires.

The decision to use learners as the unit of analysis addresses the potential unit-of-analysis problem associated with measuring customer experience among service providers. Instructors were not treated as customer-experience respondents because they represent the service-provider side of the training interaction. Their role and capabilities are conceptually distinct from those of learners who consume and experience the training service.

Measurement Instrument

All constructs were measured reflectively using multi-item scales adapted from prior literature and rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly

agree). Teachers' self-efficacy was captured through three indicators (mastery of basic technology, participation in professional development, and adaptability to new technology); digital curriculum through three indicators (integration of technology and content, digital pedagogy, and professional development); customer experience through two indicators (digital interaction and experience-driven loyalty); and business model transformation through two indicators (digital-based business model development, and product/service innovation). The operationalisation of constructs and indicators is presented in Table 2.

Table 2. Construct Operationalisation

Construct	Code	Indicator / Item
Teachers' Self-Efficacy (X1)	X1.1	Instructors master the basic technology required for digital learning
	X1.2	Instructors actively participate in technology professional-development programs
	X1.3	Instructors are able to adapt to new learning technologies
Digital Curriculum (X2)	X2.1	The use of digital tools improves learning effectiveness (technology-content integration)
	X2.2	Teaching methods are optimally adapted to digital needs (digital pedagogy)
	X2.3	Technology training for instructors is conducted regularly (professional development)
Business Model Transformation (Z)	Z1	Digital-based business model development creates added value for the institution
	Z2	Digital product and service innovation differentiates the institution from competitors
Customer Experience (Y)	Y1	Digital interaction with customers delivers a superior experience
	Y2	Customer experience via digital platforms builds customer loyalty

Data Analysis

Data were analysed in two stages following the standard PLS-SEM procedure (Hair et al., 2019). First, the measurement (outer) model was assessed for indicator reliability (outer loadings), internal-consistency reliability (Cronbach's alpha, composite reliability rho_a and rho_c), convergent validity (average variance extracted, AVE), and discriminant validity (Heterotrait-Monotrait ratio, HTMT, and the Fornell-Larcker criterion). Second, the structural (inner) model was evaluated for collinearity (VIF), the coefficient of determination (R²), effect size (f²), path coefficients, and specific indirect, direct, and total effects, complemented by model-fit indices (SRMR, d_{ULS}, d_G, NFI). Hypotheses were tested using the sign, magnitude, and significance of the path coefficients obtained through bootstrapping.

RESULTS AND DISCUSSION

Result

Measurement Model Assessment

Indicator reliability was examined through the outer loadings reported in Table 3. All ten indicators loaded above the 0.70 threshold, ranging from 0.815 to 0.901, confirming adequate indicator reliability and convergent validity at the item level.

Table 3. Outer Loadings and Outer Weights

Indicator → Construct	Outer loading	Outer weight
X1.1 → Teachers' Self-Efficacy	0.853	0.444
X1.2 → Teachers' Self-Efficacy	0.824	0.407
X1.3 → Teachers' Self-Efficacy	0.837	0.342
X2.1 → Digital Curriculum	0.869	0.415
X2.2 → Digital Curriculum	0.815	0.310

Indicator → Construct	Outer loading	Outer weight
X2.3 → Digital Curriculum	0.845	0.458
Y1 → Customer Experience	0.884	0.562
Y2 → Customer Experience	0.886	0.567
Z1 → Business Model Transformation	0.901	0.559
Z2 → Business Model Transformation	0.899	0.552

Internal-consistency reliability and convergent validity are reported in Table 4. Cronbach's alpha values (0.724–0.800), composite reliability rho_a (0.724–0.819) and rho_c (0.876–0.895) all exceeded 0.70, while AVE values (0.702–0.810) exceeded 0.50, confirming reliable and convergent valid constructs.

Table 4. Construct Reliability and Convergent Validity

Construct	Cronbach's α	rho_a	rho_c	AVE
Business Model Transformation	0.765	0.765	0.895	0.810
Customer Experience	0.724	0.724	0.879	0.783
Digital Curriculum	0.800	0.819	0.881	0.711
Teachers' Self-Efficacy	0.789	0.798	0.876	0.702

Discriminant validity was assessed using the HTMT ratio (Table 5) and the Fornell–Larcker criterion (Table 6). All HTMT values ranged from 0.524 to 0.788, below the conservative 0.85 threshold. Likewise, each construct's square root of AVE (diagonal) exceeded its correlations with other constructs, satisfying the Fornell–Larcker criterion. Together these results confirm satisfactory discriminant validity.

Table 5. Discriminant Validity – Heterotrait–Monotrait Ratio (HTMT)

	BMT	CX	DC	TSE
Business Model Transformation (BMT)	—			
Customer Experience (CX)	0.763	—		
Digital Curriculum (DC)	0.645	0.721	—	
Teachers' Self-Efficacy (TSE)	0.524	0.548	0.788	—

Table 6. Discriminant Validity – Fornell–Larcker Criterion

	BMT	CX	DC	TSE
Business Model Transformation (BMT)	0.900			
Customer Experience (CX)	0.568	0.885		
Digital Curriculum (DC)	0.517	0.562	0.843	
Teachers' Self-Efficacy (TSE)	0.410	0.420	0.620	0.838

Note: Diagonal values (bold) are the square roots of AVE; off-diagonal values are inter-construct correlations.

Structural Model Assessment

Collinearity among predictor constructs was within acceptable limits, with inner-model VIF values ranging from 1.389 to 1.878—well below the conservative threshold of 3.3—indicating no problematic multicollinearity. The coefficient of determination (Table 7) shows that the model explains 42.3% of the variance in customer experience ($R^2 = 0.423$; adjusted $R^2 = 0.413$) and 28.0% of business model transformation ($R^2 = 0.280$; adjusted $R^2 = 0.272$).

Table 7. Coefficient of Determination (R^2)

Endogenous construct	R^2	R^2 adjusted
Business Model Transformation	0.280	0.272
Customer Experience	0.423	0.413

Effect sizes (f^2) are reported in Table 8. Business model transformation exerts a medium-to-large effect on customer experience ($f^2 = 0.171$), while digital curriculum has small-to-medium effects on business model transformation (0.155) and customer experience (0.102). By contrast, teachers' self-efficacy has negligible effects on both business model transformation (0.018) and customer experience (0.004).

Table 8. Effect Size (f^2)

Relationship	f^2	Interpretation
BMT → Customer Experience	0.171	Medium–large
Digital Curriculum → BMT	0.155	Small–medium
Digital Curriculum → Customer Experience	0.102	Small–medium
Teachers' Self-Efficacy → BMT	0.018	Negligible
Teachers' Self-Efficacy → Customer Experience	0.004	Negligible

Path coefficients, specific indirect effects, and total effects are presented in Tables 9, 10, and 11. Among the direct paths, digital curriculum → BMT is the strongest (0.426), followed by BMT → customer experience (0.370) and digital curriculum → customer experience (0.332). The paths from teachers' self-efficacy are comparatively weak (0.146 to BMT and 0.062 to customer experience).

Table 9. Path Coefficients (Direct Effects)

Path	Path coefficient	t-value	p-value	Decision
H1 TSE → BMT	0.146	3.467	0.019	<i>supported</i>
H2 DC → BMT	0.426	4.689	0.000	<i>supported</i>
H3 BMT → CX	0.370	4.280	0.000	<i>supported</i>
H4 TSE → CX	0.062	2.987	0.000	<i>supported</i>
H5 DC → CX	0.332	4.520	0.000	<i>supported</i>

Note: Hypothesis decisions (*supported* / *not supported*) should follow the criterion $t > 1.96$ and $p < 0.05$.

Table 10. Specific Indirect Effects (Mediation)

Mediation path	Indirect effect	t-value	p-value
H7 DC → BMT → CX	0.158	3.574	0.020
H6 TSE → BMT → CX	0.054	1.972	0.000

Table 11. Total Effects

Path	Total effect
Digital Curriculum → Customer Experience	0.490
Digital Curriculum → Business Model Transformation	0.426
Business Model Transformation → Customer Experience	0.370
Teachers' Self-Efficacy → Business Model Transformation	0.146
Teachers' Self-Efficacy → Customer Experience	0.116

Model-fit indices are summarised in Table 12. The standardised root mean square residual (SRMR = 0.076) fell below the 0.08 threshold, indicating an acceptable approximate fit. The d_ULS (0.316) and d_G (0.218) values were within reasonable bounds, while the NFI (0.677) suggests moderate fit, consistent with the prediction-oriented nature of PLS-SEM, which does not emphasise exact fit.

Table 12. Model Fit

Index	Saturated model	Estimated model
SRMR	0.076	0.076
d_ULS	0.316	0.316
d_G	0.218	0.218
Chi-square	252.498	252.498
NFI	0.677	0.677

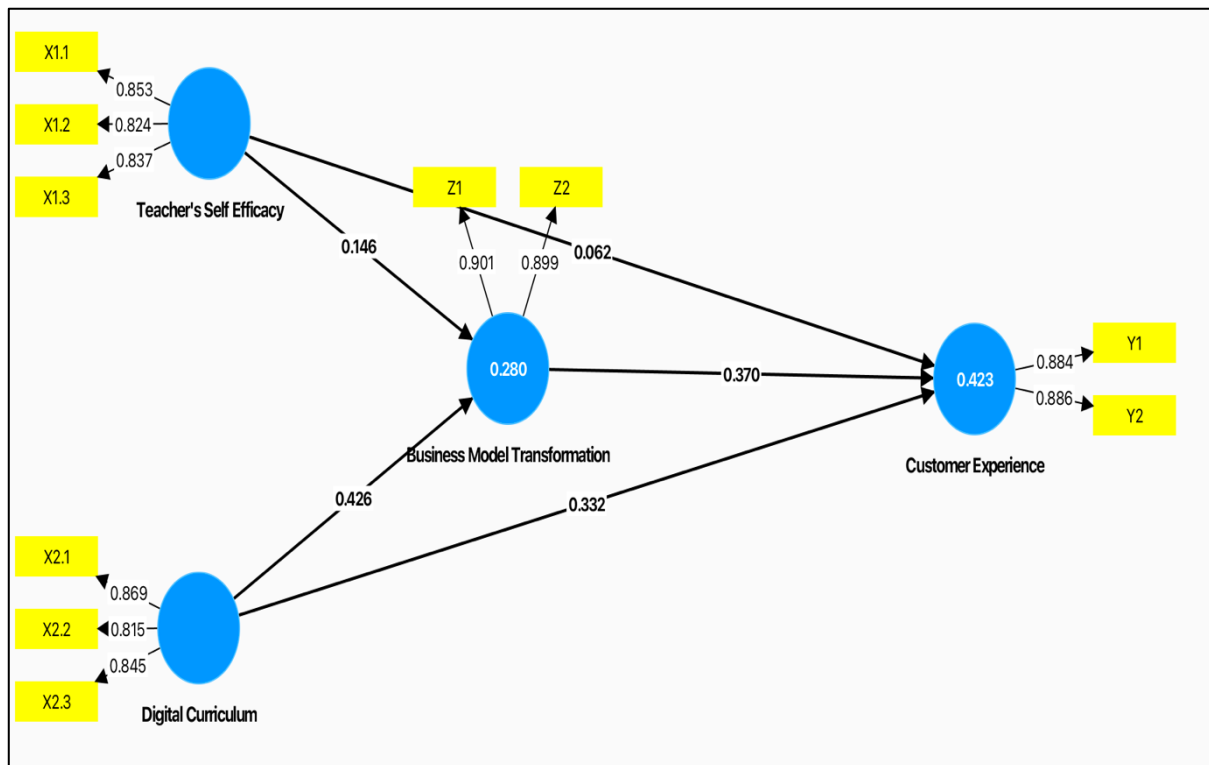


Figure 1. Conceptual Research Model

Source: Author's construction. The model positions Teachers' Self-Efficacy (X1) and Digital Curriculum (X2) as exogenous constructs influencing Business Model Transformation (Z, mediator) and Customer Experience (Y, endogenous), with BMT mediating the $X1 \rightarrow Y$ and $X2 \rightarrow Y$ paths.

Summary of Hypothesis Testing

Based on the sign and magnitude of the path coefficients and effect sizes, the paths involving digital curriculum and business model transformation (H2, H3, H5, and the mediation path H7) show substantive positive effects, whereas the paths originating from teachers' self-efficacy (H1, H4, and the mediation path H6) are weak, with f^2 values approaching zero for the direct effects on both endogenous constructs. Formal support decisions require the bootstrapped t-values and p-values noted above; the pattern of effect sizes nonetheless indicates that H4 (and, by extension, H6) is unlikely to be statistically meaningful, while the digital-curriculum and business-model paths are the model's dominant drivers.

Discussion

This study set out to examine how teachers' self-efficacy and digital curriculum shape customer experience in training providers, and whether business model transformation mediates these relationships. The results paint a clear and theoretically coherent picture: curriculum design and business model change, rather than teacher self-efficacy, are the principal levers of superior learner experience.

The strongest relationship in the model is the effect of digital curriculum on business model transformation ($\beta = 0.426$, $f^2 = 0.155$). This supports the view that implementing a digital curriculum is not a purely pedagogical act but a structural one that forces providers to redesign program architecture, delivery, and monetisation (Kostov, 2023; Tiwow et al., 2023). Digital curriculum also has the largest total effect on customer experience (0.490), combining a direct path (0.332) with an indirect path through business model transformation (0.158). This finding reinforces the argument that curriculum functions as an external driver that compels organisations to innovate their business models, which in turn elevates the learner experience (Revenko & Polezhaieva, 2025; Pan & Filippova, 2024).

Business model transformation itself exerts a substantial direct effect on customer experience ($\beta = 0.370$, $f^2 = 0.171$), the largest single effect size in the model. This is consistent with the customer-experience-driven business model innovation perspective (Keiningham et al., 2020), in which reconfiguring how value is created and delivered—through flexibility, personalisation, and digital interaction—directly improves the experienced service (Meutter et al., 2024). The significant indirect effect of digital curriculum through business model transformation (0.158) confirms the partial mediation proposed in H7 and positions BMT as an innovation bridge linking design capability to customer outcomes.

In contrast, teachers' self-efficacy plays a markedly weaker role than expected. Its effects on business model transformation ($\beta = 0.146$, $f^2 = 0.018$) and, especially, on customer experience ($\beta = 0.062$, $f^2 = 0.004$) are small to negligible, and its indirect effect through business model transformation is limited (0.054). One interpretation is that, at the organisational level, individual instructor confidence is necessary but not sufficient: without systemic changes in curriculum and business model, high self-efficacy alone does not translate into an improved customer experience. This nuances the more optimistic accounts of teacher agency in digital transformation (Babu & Babar, 2025) and suggests that self-efficacy operates as a facilitating condition rather than a primary driver in the training-provider context.

Taken together, the findings indicate that digital innovation in training providers is not a stand-alone technological phenomenon but the product of interaction among instructor competence, curriculum design, and business model transformation—with the latter two carrying most of the explanatory weight. The model explains a substantial share of variance in customer experience (42.3%), lending confidence to this interpretation while acknowledging that other factors outside the model also matter. This constitutes the novelty of the study: it demonstrates empirically that, in commercial training providers, business model transformation acts as the innovation bridge that converts curriculum design and human competencies into a superior learner experience.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This study developed and empirically tested an integrated model examining how teachers' self-efficacy and digital curriculum influence customer experience, with business model transformation as a mediating mechanism in a non-institutional training-provider context. The findings demonstrate that digital curriculum and business model transformation have more substantial relationships with customer experience than teachers' self-efficacy. Digital curriculum has a positive and significant effect on both business model transformation and customer experience, while business model transformation has a positive and significant effect on customer experience. Furthermore, business model transformation functions as an important mechanism through which digital curriculum contributes to learner-facing value.

Teachers' self-efficacy also has statistically significant positive relationships with business model transformation and customer experience. However, its effect sizes are relatively small, indicating that perceived teacher capability alone may not be sufficient to substantially enhance learners' overall experience. The structural model explains 28.0% of the variance in business model transformation and 42.3% of the variance in customer experience. Overall, the findings suggest that successful digitalisation in training providers depends not only on teachers' capabilities but also on the integration of digital curriculum and organisational transformation to create meaningful value for learners.

Theoretical Implications

Theoretically, this study contributes to the business model transformation literature by positioning business model transformation as an organisational mechanism that connects digital curriculum and perceived teacher capabilities with customer experience. Rather than

treating business model transformation solely as an organisational outcome, the findings highlight its role as an innovation bridge through which digital resources and educational capabilities can be translated into learner-facing value.

The study also integrates teachers' self-efficacy, digital curriculum, business model transformation, and customer experience into a single empirical framework within the non-institutional training-provider context. By examining these relationships from the learner perspective, the study contributes to a better understanding of how learners perceive the integration of curriculum, teaching capabilities, digital learning, and organisational transformation in shaping their overall training experience.

Practical Implications

For training-provider managers, the findings suggest that digital curriculum development should be accompanied by broader business model transformation. Training providers can strengthen learner experience by developing interactive, multimedia-rich, technology-enabled, and industry-aligned learning content while simultaneously redesigning how training services are delivered and accessed.

The findings also indicate that teachers' self-efficacy remains relevant to learner experience, but its relatively small effect suggests that improving instructor capability should not be pursued as an isolated intervention. Teacher development should instead be integrated with digital curriculum development, technological infrastructure, learner interaction, and organisational transformation. This integrated approach can help training providers translate digital resources and teaching capabilities into more consistent and valuable learner experiences.

Limitations

Several limitations should be acknowledged. First, the cross-sectional research design limits the ability to establish causal relationships among the constructs. Longitudinal or experimental designs could provide stronger evidence regarding how changes in digital curriculum, perceived teachers' self-efficacy, and business model transformation influence customer experience over time.

Second, the study relied exclusively on learner respondents. Although this approach provides direct access to the customer perspective and is appropriate for measuring customer experience, it does not capture the organisational or managerial perspective of training providers. Consequently, the findings primarily reflect how learners perceive teachers' self-efficacy, digital curriculum, business model transformation, and their own training experience.

Third, the constructs were measured using a relatively small number of indicators, particularly business model transformation and customer experience. Future research could incorporate broader dimensions of customer experience, including emotional, cognitive, behavioural, and sensory dimensions. Finally, the model explains 42.3% of the variance in customer experience, indicating that additional factors such as service quality, price, brand perception, learner digital literacy, technology acceptance, and perceived value may also contribute to customer experience.

Recommendations for Future Research

Future research should extend the present learner-based perspective by examining the model across multiple training providers, regions, and organisational contexts. Comparative research could investigate whether the relationships among teachers' self-efficacy, digital curriculum, business model transformation, and customer experience differ according to provider characteristics, training format, digital maturity, or learner characteristics.

Given that the present study relies exclusively on learner perceptions, future research could employ a multi-source research design by collecting data from both learners and training-

provider personnel. Such a design would allow researchers to compare learner perceptions with provider-side assessments of digital curriculum implementation, teacher capability, and business model transformation. Multi-group analysis (MGA) could subsequently be employed to examine whether structural relationships differ across relevant respondent groups.

Future studies could also use a dyadic design in which individual learners are matched with the teachers or training personnel responsible for their respective programmes. This would allow researchers to examine potential perceptual gaps between the intended design and delivery of training services and the actual experience perceived by learners. Such an approach could provide deeper insight into how organisational capabilities are translated into learner experience.

Finally, longitudinal and mixed-method research would be valuable for examining how business model transformation develops over time and how changes in digital curriculum and teaching capabilities are translated into changes in learner experience. These approaches could provide stronger evidence regarding the temporal and organisational mechanisms underlying digital transformation in training providers.

Author Contributions

All authors made significant contributions to this study, including research conceptualisation, development of the theoretical framework, data collection, data analysis, interpretation of results, manuscript preparation, scholarly revision, and final approval of the manuscript for publication. All authors confirm that they have read and approved the final version of the article.

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