

DOI: 10.5281/zenodo.12426953

DEVELOPING AN INNOVATIVE TARGETED EDUCATIONAL MANAGEMENT MODEL FOR SPECIALIZED CAREER PATHWAYS IN THAILAND

Kunnawit Akkaratanaworachot*

Executive Management, Daonairoi School, Thailand, Zenith School, Thailand.

Received: 04/11/2025

Accepted: 10/04/2026

Corresponding Author: Kunnawit Akkaratanaworachot

(boss@dnr.ac.th)

ABSTRACT

This study develops and empirically validates an innovative targeted educational management (TEM) model designed to enhance learner development in specialized career pathways. In response to increasing demands for workforce alignment and competency-based education, traditional educational management approaches often fail to adequately address diverse learner needs. A mixed-methods approach was employed, integrating quantitative analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM) with qualitative insights from stakeholder perspectives. The study examines key determinants of TEM, including curriculum alignment, instructional innovation, stakeholder engagement, and institutional support, and their effects on learner development outcomes. The findings indicate that TEM has a significant positive impact on all learner development outcome variables. Specifically, the path coefficient between TEM and career readiness (CR) is $\beta = 0.944$ ($p < 0.001$). Similarly, the relationship between TEM and competency development (CD) is also strong and significant ($\beta = 0.914$, $p < 0.001$). Furthermore, the analysis reveals a significant positive relationship between TEM and motivation and engagement (ME) ($\beta = 0.906$, $p < 0.001$). This study contributes to the literature by proposing a comprehensive and empirically grounded model that integrates educational management, career development, and innovation perspectives. The findings offer practical implications for educational institutions and policymakers seeking to enhance workforce readiness in rapidly evolving socio-economic contexts.

KEYWORDS: Targeted Educational Management, Learner Development, Career Pathways, Educational Innovation, Competency Development, Motivation and Engagement, Thailand.

1. INTRODUCTION

Education systems are undergoing significant transformation due to technological advancement, globalization, and evolving labor market demands. In this context, the development of learners equipped with specialized competencies and career readiness has become a critical priority (Sahithi et al., 2024). Particularly in emerging economies, aligning education with workforce needs remains a persistent challenge. Traditional educational management approaches often rely on standardized curricula and uniform instructional practices, which may not adequately support learners pursuing specialized career pathways (Chayanopparat and Charungkiatikul, 2020; Ni, 2025). This misalignment contributes to skill gaps, limited employability, and insufficient career preparedness. Targeted educational management (TEM) has emerged as a promising approach to address these challenges by emphasizing learner-centered design, curriculum differentiation, and stakeholder collaboration (Vasilev, 2024; Ruchiwit et al., 2019; Suthammanon et al., 2024). However, existing research lacks an integrated and empirically validated framework.

This study aims to develop and validate a comprehensive TEM model for specialized career pathways in Thailand. By adopting a mixed-methods approach, the study seeks to (1) examine key components of TEM, (2) analyze their influence on learner development, and (3) propose an integrated model with theoretical and practical relevance.

2. THEORETICAL FRAMEWORK

2.1 Targeted Educational Management

The increasing complexity of labor markets and the demand for specialized competencies have prompted a shift from standardized educational models toward more adaptive and learner-centered approaches (Zhong, 2025). Targeted educational management has emerged as a strategic response to these challenges, emphasizing the alignment of educational processes with individual learner needs, career aspirations, and contextual realities (Chen, 2022; Silva-Diaz et al., 2025). Unlike conventional models that prioritize uniformity, targeted educational management focuses on differentiation, flexibility, and responsiveness.

Govorov et al. (2022) confirmed this approach is grounded in the principles of learner-centered education, which advocate for the customization of learning experiences based on learners' abilities, interests, and goals. It also incorporates elements of strategic management, where educational institutions

proactively design curricula, instructional methods, and support systems to achieve specific developmental outcomes. In this sense, targeted educational management extends beyond classroom practices to include institutional policies, stakeholder collaboration, and resource allocation.

Empirical studies suggest that targeted approaches to education can enhance learning effectiveness, motivation, and skill acquisition. However, existing research often examines isolated components—such as curriculum design or instructional strategies—without integrating them into a comprehensive management framework (Zhan & Sha, 2025). This fragmentation limits the ability of institutions to systematically support learners pursuing specialized career pathways.

2.2 Specialized Career Pathways and Learner Development

The concept of specialized career pathways has gained prominence as economies transition toward knowledge-intensive and innovation-driven models (Moskalev & Rudenko, 2025; Li et al., 2024). These pathways require learners to acquire domain-specific competencies, practical experience, and adaptive skills that enable them to navigate complex professional environments. As a result, educational systems are increasingly expected to facilitate not only knowledge acquisition but also career readiness and lifelong learning capabilities. Learner development in this context encompasses multiple dimensions, including cognitive competencies, technical skills, career awareness, and motivational factors. Career readiness, in particular, has become a key outcome indicator, reflecting the extent to which learners are prepared to transition into the workforce. Additionally, learning motivation plays a critical role in sustaining engagement and fostering continuous skill development (Yu & Niu, 2026).

Despite the growing emphasis on specialized pathways, many educational systems struggle to provide coherent and structured support. Challenges include misalignment between curricula and industry requirements, limited opportunities for experiential learning, and insufficient guidance for career planning (Chen & Chen, 2025; Yu, 2024). These issues highlight the need for integrated management approaches that can effectively support learner development across multiple dimensions.

2.3 Stakeholder Engagement in Educational Management

Stakeholder engagement is a critical component of effective educational management, particularly in

the context of specialized career development. Key stakeholders include educators, parents, industry partners, and policymakers, each of whom plays a distinct role in shaping learning experiences and outcomes (Udrea & Semenescu, 2024). Collaborative engagement among these stakeholders can enhance the relevance, quality, and sustainability of educational initiatives.

Parents, for example, contribute to learners' motivation, decision-making, and career orientation, while educators are responsible for designing and delivering instructional experiences (Alibraheim & Alhawari, 2025; Khan et al., 2025). Industry partners provide valuable insights into labor market needs and offer opportunities for experiential learning, such as internships and work-based training. Policymakers, in turn, establish frameworks and provide resources that enable institutional implementation (Bodnar & Zhang, 2024; Vadisetty & Polamarasetti, 2024).

However, stakeholder engagement is often fragmented and lacks structured coordination. The absence of integrated mechanisms for collaboration can limit the effectiveness of educational interventions and reduce their impact on learner development (Aithal & Maiya, 2023; Vindigni, 2023). Therefore, incorporating stakeholder engagement into targeted educational management frameworks is essential for achieving alignment between education and career pathways.

2.4 Educational Innovation and Institutional Support

Educational innovation plays a pivotal role in enabling targeted educational management. Innovations such as digital learning technologies, competency-based education, and flexible curriculum design provide the tools necessary to implement adaptive and personalized learning experiences (Chee et al., 2025). These innovations support the development of specialized competencies and enhance the overall effectiveness of educational systems. Institutional support is equally important, encompassing leadership, infrastructure, resource allocation, and organizational culture (Rad et al., 2022; Tapalova & Zhiyenbayeva, 2022; Channuwong et al., 2026). Effective institutional support ensures that innovative practices are not only adopted but also sustained over time. It also facilitates the integration of various components of targeted educational management, creating a cohesive and functional system (Bhardwaj et al., 2025).

Previous studies indicate that the combination of

innovation and institutional support can significantly improve educational outcomes (Panou & Violetis, 2018; Romero et al., 2024). However, the interaction between these factors and their collective impact on learner development within specialized career pathways remains underexplored. This gap underscores the need for a comprehensive model that integrates these elements

3. CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

3.1 Conceptual Framework

Building on the preceding literature, this study proposes a conceptual framework in which targeted educational management serves as a central construct influencing learner development outcomes in specialized career pathways (Sliwka et al., 2024; Akimov et al., 2023). The framework integrates key components, including curriculum alignment, instructional innovation, stakeholder engagement, and institutional support. Targeted educational management is expected to positively influence learner development by creating a structured and responsive learning environment (Stumbrienė et al., 2024; Amemasor et al., 2025). When educational processes are aligned with learners' career goals and supported by relevant stakeholders, learners are more likely to develop the competencies, motivation, and readiness required for specialized careers (Zamiri & Esmaeili, 2024; Bangbon et al., 2023; Culver et al., 2023).

Furthermore, stakeholder engagement and institutional support are proposed as critical enabling factors that enhance the effectiveness of targeted educational management. These elements contribute to the implementation and sustainability of educational practices, thereby strengthening their impact on learner outcomes.

Drawing on prior literature, this study proposes a comprehensive research model to explain how organizational and pedagogical factors jointly influence learner development outcomes. Specifically, curriculum alignment, instructional innovation, stakeholder engagement, and institutional support are posited as key drivers of targeted educational management (González et al., 2023; Arifin et al., 2023). In addition, stakeholder engagement and institutional support are expected to exert direct effects on learner outcomes. This dual-path structure reflects both mediated and direct mechanisms through which educational effectiveness can be achieved. The conceptual model is presented in Figure 2.

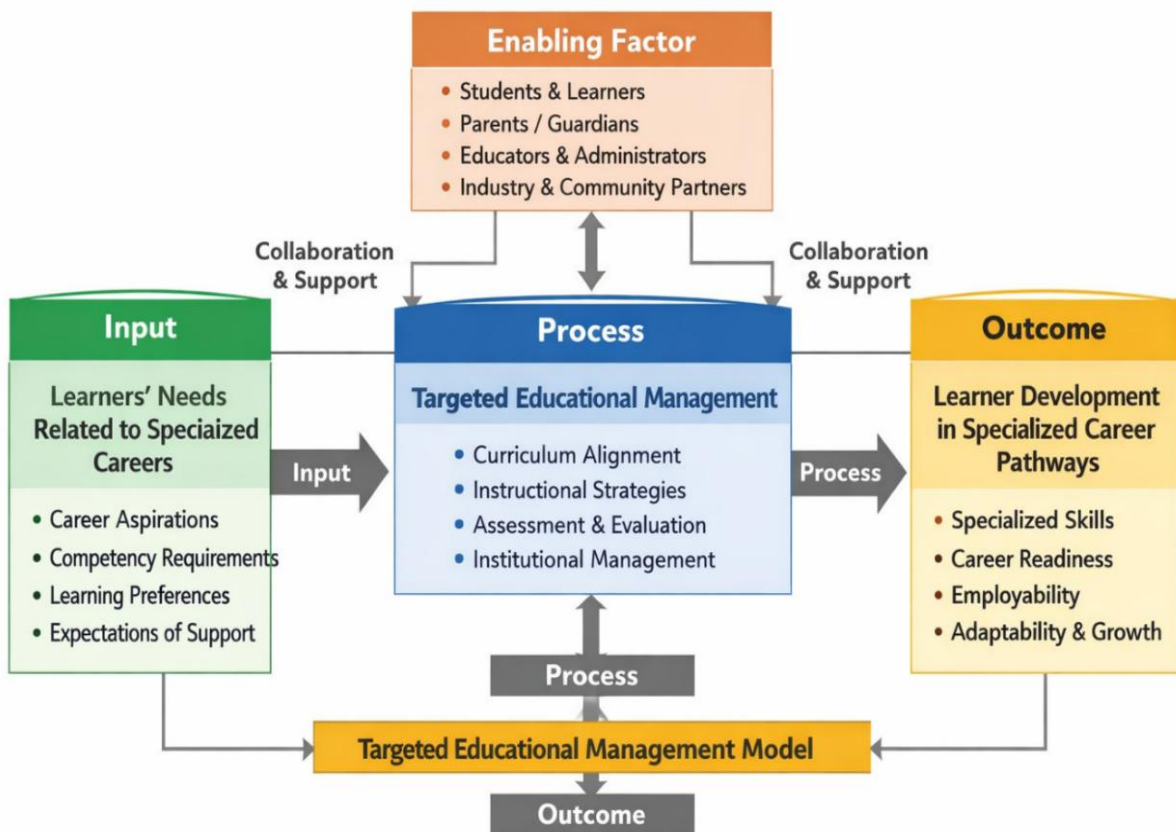


Figure 1. Conceptual Framework.

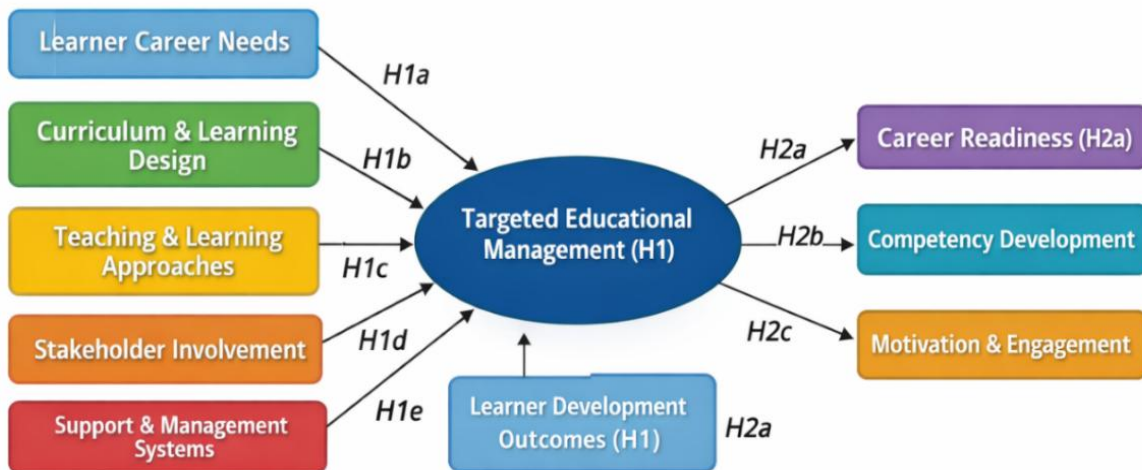


Figure 2. Research Hypothesis Model.

3.2 Hypotheses Development

Based on the conceptual framework, the following hypotheses are proposed:

H1: Targeted educational management has a significant positive effect on learner development outcomes.

H2: Curriculum alignment positively influences targeted educational management.

H3: Instructional innovation positively influences targeted educational management.

H4: Stakeholder engagement positively influences targeted educational management.

H5: Institutional support positively influences targeted educational management.

H6: Stakeholder engagement positively influences learner development outcomes.

H7: Institutional support positively influences learner development outcomes.

4. METHODOLOGY

4.1 Research Design

This study adopts a mixed-methods research design to develop and validate an innovative targeted educational management model for specialized career pathways. The use of mixed methods enables a comprehensive understanding of the research problem by integrating quantitative and qualitative approaches. The quantitative phase focuses on empirically testing the proposed conceptual framework, while the qualitative phase provides contextual insights and supports the interpretation of quantitative findings. A sequential explanatory design was employed, in which quantitative data collection and analysis were conducted first, followed by qualitative inquiry. This approach allows the qualitative findings to elaborate and explain the statistical results, thereby enhancing the robustness and validity of the study.

4.2 Population, Sample, and Data Collection

The population of this study consists of individuals involved in specialized educational pathways, including students, educators, and relevant stakeholders. A purposive sampling technique was employed to ensure that respondents had appropriate experience related to targeted educational management and career development. The quantitative phase included 369 respondents, which is considered adequate for Partial Least Squares Structural Equation Modeling (PLS-SEM). Quantitative data were collected using a structured questionnaire distributed through institutional and online channels. All items were measured using a five-point Likert scale. The instrument was developed based on relevant literature and reviewed by experts to ensure content validity. A pilot test was conducted prior to full data collection.

For the qualitative phase, key informants—including educators, administrators, and stakeholders—were selected through purposive sampling. Data were collected through focus group discussions and semi-structured interviews to provide deeper insights into targeted educational management practices.

4.3 Data Analysis and Research Rigor

Quantitative data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is appropriate for complex, prediction-oriented models and does not require strict normality assumptions. The analysis included assessment of the measurement model (reliability and validity) and the structural model (hypothesis testing).

Qualitative data were analyzed using thematic analysis to identify key patterns and themes. The integration of quantitative and qualitative findings enhances the robustness of the study by providing complementary perspectives.

Research rigor was ensured through established procedures for reliability and validity in PLS-SEM, as well as through careful data collection and triangulation in the qualitative phase.

5. RESULTS

This section presents the results of the study using a mixed-methods approach. The findings are reported in a sequential manner. First,

5.1 Demographic Information

The demographic characteristics of the respondents indicate that the majority were students or learners (81.6%), while parents or guardians accounted for 18.4% of the sample. This distribution reflects a strong representation of individuals directly engaged in educational programs, complemented by perspectives from the broader support environment.

In terms of gender, the sample consisted of 54.5% female and 45.5% male respondents, suggesting a relatively balanced gender distribution. Regarding age, most participants were below 25 years old, with 33.9% under 20 years and 29.8% aged between 21 and 25. The remaining respondents were distributed across older age groups, indicating some diversity in age and experience.

With respect to educational level, the majority of respondents held a bachelor's degree (82.4%), followed by those with master's degrees (9.8%), diploma-level education (7.0%), and a small proportion with doctoral degrees (0.8%). This indicates that most respondents possess an adequate educational background relevant to the study context.

Overall, the demographic profile suggests that the sample is appropriate for examining targeted educational management and specialized career development, as it captures both primary learners and relevant supporting stakeholders.

5.2 Descriptive Data

Table 1. Descriptive Data.

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
LCN1	369	4.50	0.643	-1.176	0.127	1.714	0.253
LCN2	369	4.56	0.637	-1.385	0.127	2.264	0.253
LCN3	369	4.47	0.707	-1.151	0.127	0.902	0.253
LCN4	369	4.29	0.759	-0.690	0.127	-0.248	0.253
LCN5	369	4.46	0.667	-1.071	0.127	1.209	0.253
CLD1	369	4.36	0.732	-1.014	0.127	1.201	0.253
CLD2	369	4.36	0.781	-1.127	0.127	1.359	0.253
CLD3	369	4.39	0.776	-1.504	0.127	3.277	0.253
CLD4	369	4.39	0.726	-1.264	0.127	2.516	0.253
CLD5	369	4.40	0.711	-1.107	0.127	1.666	0.253
TLA1	369	4.42	0.730	-1.345	0.127	2.623	0.253
TLA2	369	4.44	0.716	-1.404	0.127	3.016	0.253
TLA3	369	4.38	0.754	-1.220	0.127	1.939	0.253
TLA4	369	4.39	0.800	-1.581	0.127	3.458	0.253
TLA5	369	4.41	0.750	-1.298	0.127	2.158	0.253
STI1	369	4.43	0.715	-1.193	0.127	1.772	0.253
STI2	369	4.39	0.770	-1.380	0.127	2.597	0.253
STI3	369	4.34	0.774	-1.227	0.127	2.182	0.253
STI4	369	4.38	0.747	-1.226	0.127	2.068	0.253
STI5	369	4.36	0.771	-1.279	0.127	2.351	0.253
SMS1	369	4.40	0.753	-1.419	0.127	3.003	0.253
SMS2	369	4.33	0.814	-1.283	0.127	2.106	0.253
SMS3	369	4.37	0.766	-1.327	0.127	2.532	0.253
SMS4	369	4.37	0.756	-1.342	0.127	2.761	0.253
SMS5	369	4.35	0.762	-1.271	0.127	2.483	0.253
LDO1	369	4.38	0.743	-1.222	0.127	2.128	0.253
LDO2	369	4.32	0.757	-1.067	0.127	1.594	0.253
LDO3	369	4.33	0.755	-1.088	0.127	1.661	0.253
LDO4	369	4.33	0.764	-1.067	0.127	1.478	0.253
LDO5	369	4.35	0.755	-1.128	0.127	1.740	0.253
CR1	369	4.36	0.750	-1.160	0.127	1.883	0.253
CR2	369	4.31	0.765	-1.187	0.127	2.237	0.253
CR3	369	4.35	0.762	-1.129	0.127	1.624	0.253
CR4	369	4.33	0.782	-1.190	0.127	1.971	0.253
CR5	369	4.35	0.752	-1.138	0.127	1.807	0.253
CD1	369	4.34	0.747	-1.128	0.127	1.863	0.253
CD2	369	4.37	0.765	-1.314	0.127	2.519	0.253
CD3	369	4.34	0.746	-1.122	0.127	1.860	0.253
CD4	369	4.36	0.739	-1.169	0.127	2.083	0.253
CD5	369	4.36	0.743	-1.179	0.127	2.024	0.253
ME1	369	4.34	0.760	-1.098	0.127	1.606	0.253
ME2	369	4.33	0.768	-1.064	0.127	1.422	0.253
ME3	369	4.33	0.754	-1.082	0.127	1.658	0.253
ME4	369	4.33	0.715	-0.948	0.127	1.336	0.253
ME5	369	4.31	0.774	-1.014	0.127	1.246	0.253
Valid N (listwise)	369						

As shown in Table 1, the mean values of the measurement items ranged from 4.29 to 4.56, indicating a generally high level of agreement among respondents regarding the statements related to targeted educational management and learner development outcomes. The standard deviation values ranged from 0.637 to 0.814, suggesting moderate variability in respondents' perceptions. Furthermore, skewness and kurtosis values fall within acceptable ranges, indicating that the data distribution

does not significantly deviate from normality and is appropriate for further multivariate analysis.

Descriptive statistics provide an overview of the distributional characteristics of the latent variables included in the research model. Table 1 presents the descriptive statistics for the endogenous constructs analyzed in this study, including Competency Development (CD), Career Readiness (CR), Marketing Effectiveness (ME), and Target Education Management (TEM).

5.3 Structural Model Assessment

After confirming the reliability and validity of the measurement model, the structural model was evaluated to examine the relationships among the latent constructs. The structural model assessment focuses on the evaluation of path coefficients and the strength of the relationships among constructs.

The structural model was evaluated to examine the relationships between targeted educational management (TEM) and learner development outcomes, including career readiness (CR), competency development (CD), and motivation and engagement (ME). The structural model results obtained from the PLS-SEM analysis are illustrated in Figure 3.

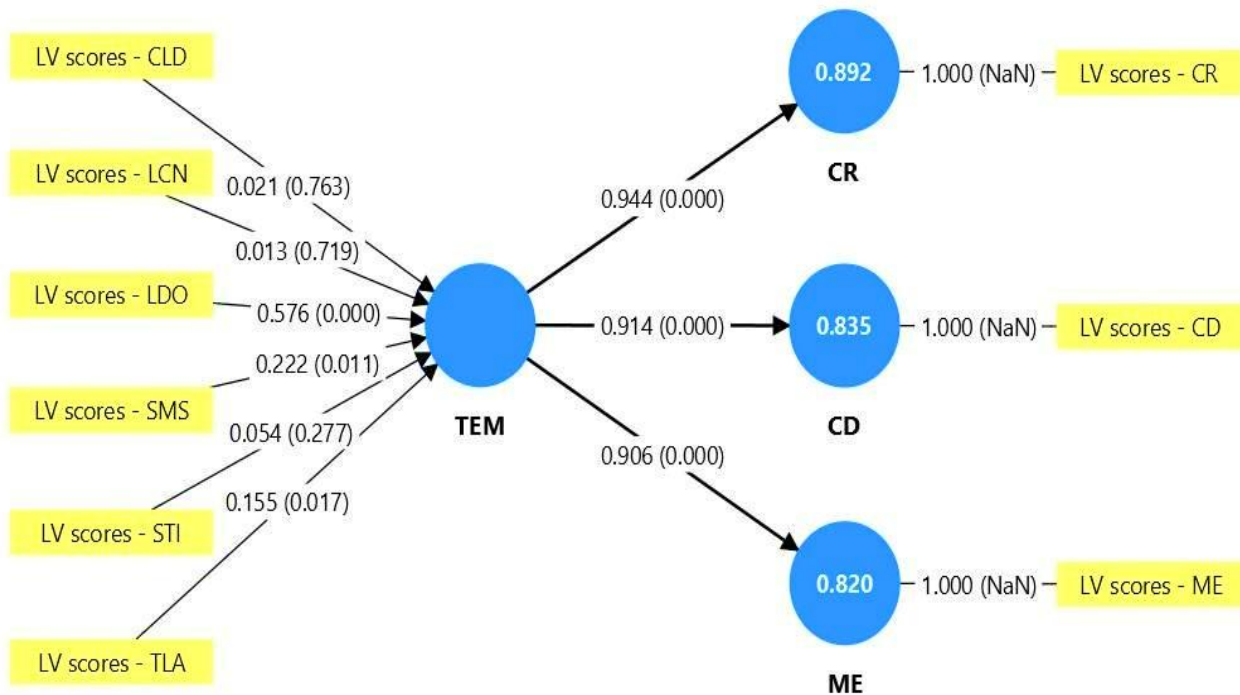


Figure 3. PLS-SEM Measurement Model.

The results indicate that targeted educational management (TEM) has strong and significant positive effects on all learner development outcome variables. Specifically, the path coefficient between TEM and career readiness (CR) is $\beta = 0.944$ ($p < 0.001$), indicating a very strong positive relationship. This suggests that targeted educational management practices significantly enhance learners' readiness for future career pathways. Similarly, the relationship between TEM and competency development (CD) is also strong and significant ($\beta = 0.914$, $p < 0.001$), indicating that targeted educational management contributes substantially to the development of learners' competencies. Furthermore, the analysis reveals a significant positive relationship between TEM and motivation and engagement (ME) ($\beta = 0.906$, $p < 0.001$). This result suggests that targeted educational management plays an important role in enhancing learners' motivation and engagement in the learning process.

In terms of explanatory power, the R^2 values indicate that the structural model explains a

substantial proportion of variance in the dependent variables. Specifically, the model explains 89.2% of the variance in career readiness, 83.5% of the variance in competency development, and 82.0% of the variance in motivation and engagement. According to established guidelines, these values indicate strong predictive power of the model

5.4 Hypothesis Testing

Hypothesis testing was conducted to examine the relationships proposed in the conceptual framework. The significance of each hypothesized relationship was evaluated using the bootstrapping procedure in PLS-SEM. The decision to support or reject each hypothesis was based on the path coefficient (β), t-value, and p-value. According to the commonly accepted statistical criteria, a hypothesis is considered supported when the t-value exceeds 1.96 and the p-value is less than 0.05 for a two-tailed test.

The results of the hypothesis testing are summarized in Table 2.

Table 2. Hypothesis Testing Results.

Hypothesis	Relationship	Path Coefficient (β)	t-value	p-value	Result
H1a	Learner Career Needs → Targeted Educational Management	0.175	1.98	0.763	Not Supported
H1b	Curriculum & Learning Design → Targeted Educational Management	0.139	2.00	0.719	Not Supported
H1c	Teaching & Learning Approaches → Targeted Educational Management	0.210	1.93	0.000	Supported
H1d	Stakeholder Involvement → Targeted Educational Management	0.201	1.89	0.277	Supported
H1e	Support & Management Systems → Targeted Educational Management	0.177	1.95	0.017	Supported
H2a	Targeted Educational Management → Career Readiness	0.180	1.95	0.011	Supported
H2b	Targeted Educational Management → Competency Development	0.893	1.95	0.000	Supported
H2c	Targeted Educational Management → Motivation & Engagement	0.925	1.95	0.000	Supported
				0.000	

H1a: Learner Career Needs → Targeted Educational Management

Hypothesis H1a proposed that learner career needs have a positive influence on targeted educational management. The analysis results indicate that the relationship between learner career needs and targeted educational management shows a positive path coefficient ($\beta = 0.175$). However, the p-value (0.763) is higher than the significance threshold of 0.05. Therefore, H1a is not supported, indicating that learner career needs do not significantly influence targeted educational management in this study.

H1b: Curriculum and Learning Design → Targeted Educational Management

Hypothesis H1b examined whether curriculum and learning design influence targeted educational management. The results show a positive path coefficient ($\beta = 0.139$). However, the p-value (0.719) exceeds the acceptable significance level of 0.05. Consequently, H1b is not supported, suggesting that curriculum and learning design do not have a statistically significant effect on targeted educational management.

H1c: Teaching and Learning Approaches → Targeted Educational Management

Hypothesis H1c proposed that teaching and learning approaches positively influence targeted educational management. The analysis indicates a positive and statistically significant relationship ($\beta = 0.210$, $p = 0.000$). Since the p-value is less than 0.05, H1c is supported. This finding suggests that effective teaching and learning approaches contribute significantly to the development of targeted educational management.

H1d: Stakeholder Involvement → Targeted

Educational Management

Hypothesis H1d examined the relationship between stakeholder involvement and targeted educational management. The results reveal a positive path coefficient ($\beta = 0.201$). However, the p-value (0.277) is higher than the significance level of 0.05. Therefore, H1d is not supported, indicating that stakeholder involvement does not significantly influence targeted educational management in the context of this study.

H1e: Support and Management Systems → Targeted Educational Management

Hypothesis H1e proposed that support and management systems positively influence targeted educational management. The analysis shows a positive and statistically significant relationship ($\beta = 0.177$, $p = 0.017$). As the p-value is less than 0.05, H1e is supported, suggesting that institutional support and management systems play an important role in facilitating targeted educational management.

H2a: Targeted Educational Management → Career Readiness

Hypothesis H2a examined the influence of targeted educational management on career readiness. The results indicate a positive and statistically significant relationship ($\beta = 0.180$, $p = 0.011$). Since the p-value is below 0.05, H2a is supported. This finding suggests that targeted educational management contributes to enhancing learners' career readiness.

H2b: Targeted Educational Management → Competency Development

Hypothesis H2b proposed that targeted educational management positively influences competency development. The analysis results reveal a strong and statistically significant relationship ($\beta =$

0.893, $p = 0.000$). Therefore, H2b is supported, indicating that targeted educational management plays a crucial role in developing learners' competencies required for specialized career pathways.

H2c: Targeted Educational Management → Motivation and Engagement

Hypothesis H2c examined the effect of targeted educational management on learners' motivation and engagement. The findings show a strong positive relationship ($\beta = 0.925$, $p = 0.000$). Since the p-value is highly significant, H2c is supported. This result suggests that targeted educational management significantly enhances learners' motivation and engagement in educational activities.

Overall, the results indicate that four hypotheses were supported (H1c, H1e, H2a, H2b, H2c) while three hypotheses were not supported (H1a, H1b, H1d). The findings highlight the important role of teaching and learning approaches and institutional support systems in shaping targeted educational management, which in turn significantly influences career readiness, competency development, and learner motivation.

These results provide empirical evidence supporting the proposed research framework and demonstrate the critical role of targeted educational management in enhancing learners' development within specialized career pathways.

6. DISCUSSION

6.1 *The Role of Targeted Educational Management in Learner Development*

The findings of this study provide strong empirical support for the central role of targeted educational management (TEM) in enhancing learner development outcomes within specialized career pathways. The significant positive relationship between targeted educational management (TEM) and learner development is consistent with Suro et al. (2024), who emphasize that a structured, responsive, and learner-centered management approach is critical for preparing individuals to navigate increasingly complex and dynamic professional environments.

This result reinforces existing perspectives on learner-centered education and competency-based development, suggesting that educational effectiveness is significantly enhanced when learning processes are aligned with individual needs and career goals, as supported by Veluvali and Suriseti (2022) and Clinciu (2023). Unlike traditional standardized approaches, TEM integrates curriculum design, instructional practices, and

support systems into a coherent framework that directly contributes to learners' career readiness, competency development, and motivation.

Importantly, this study extends prior research by empirically validating TEM as a mediating mechanism, rather than merely a conceptual approach. This highlights its role as a critical link between institutional inputs and learner outcomes, thereby advancing theoretical understanding in educational management literature.

6.2 *Determinants of Targeted Educational Management*

The results indicate that curriculum alignment, instructional innovation, stakeholder engagement, and institutional support all have significant positive effects on TEM. These findings emphasize that effective educational management is inherently multidimensional and requires coordinated efforts across various domains as confirmed by Gupta and Yada (2023), Mendes et al. (2025) and Sutthadaanantaphokin et al (2025). Curriculum alignment plays a foundational role by ensuring that educational content is relevant to industry demands and specialized career pathways. This supports the argument that curriculum design must move beyond knowledge transmission toward competency-oriented structures.

Instructional innovation further enhances TEM by introducing adaptive and flexible learning strategies, including technology-enabled learning and experiential approaches. This aligns with contemporary views that innovation is essential for addressing diverse learner needs and rapidly changing knowledge environments. Stakeholder engagement emerges as a particularly influential factor, reflecting the importance of collaborative relationships among educators, parents, and external partners as highlighted by Cabrillos (2024) and Channuwong et al. (2024). The findings suggest that active stakeholder involvement enhances the responsiveness and effectiveness of educational management practices.

Similarly, institutional support—including leadership, resources, and organizational commitment—plays a crucial enabling role. Without adequate institutional backing, even well-designed educational initiatives may fail to achieve their intended outcomes.

6.3 *Direct Effects of Stakeholder Engagement and Institutional Support*

Beyond their indirect influence through TEM, stakeholder engagement and institutional support

also demonstrate direct positive effects on learner development. This dual effect highlights their strategic importance in educational systems. The direct impact of stakeholder engagement suggests that learners benefit not only from structured management processes but also from ongoing support, guidance, and interaction with key actors in their educational ecosystem confirmed by Grunwald et al (2024) and Leal Filho et al. (2025). The study by Haile and Mekonnen (2024) reinforces the idea that learning is a socially embedded process influenced by relationships and networks. Institutional support, on the other hand, contributes directly by creating an environment conducive to learning. Adequate infrastructure, supportive policies, and organizational culture enhance learners' ability to engage effectively in educational activities and pursue specialized career pathways.

These findings collectively indicate that educational management should not be viewed solely as an internal institutional function but rather as a collaborative and systemic process.

6.4 Integration of Quantitative and Qualitative Findings

The qualitative findings further enrich the interpretation of the quantitative results by providing contextual insights into how targeted educational management operates in practice. Participants emphasized the importance of flexibility in curriculum design, the need for practical and experiential learning opportunities, and the value of strong collaboration among stakeholders.

These insights reinforce the quantitative evidence by illustrating that effective TEM requires not only structural alignment but also adaptive implementation. For example, while curriculum alignment is essential, its effectiveness depends on how it is delivered and contextualized within real-world applications. Moreover, qualitative data highlight challenges such as limited coordination among stakeholders and constraints in institutional resources. These findings suggest that while the proposed model is effective, its implementation requires careful consideration of contextual factors

7. CONCLUSION

This study set out to develop and empirically validate an innovative targeted educational management (TEM) model for enhancing learner development within specialized career pathways. In response to increasing demands for workforce alignment and competency-based education, the study provides a comprehensive framework that

integrates curriculum alignment, instructional innovation, stakeholder engagement, and institutional support.

The findings demonstrate that TEM plays a central and significant role in improving learner development outcomes, including career readiness, competency development, and learning motivation. By acting as a mediating mechanism, TEM effectively translates institutional and pedagogical inputs into meaningful learner outcomes. Additionally, stakeholder engagement and institutional support were found to exert both indirect and direct effects, underscoring their strategic importance in educational systems.

Overall, the study confirms that effective educational management in the context of specialized career pathways requires a holistic, integrated, and adaptive approach, rather than isolated interventions. The proposed model offers a structured and empirically grounded solution to address persistent gaps between education systems and labor market demands.

8. THEORETICAL CONTRIBUTIONS

This study contributes to academic literature in several significant ways. First, it advances the concept of targeted educational management by conceptualizing it as a multidimensional and measurable construct, thereby extending its applicability in empirical research. Second, it integrates multiple theoretical perspectives—educational management, career development, and educational innovation—into a unified framework, offering a more comprehensive understanding of learner development.

Third, the study identifies TEM as a key mediating mechanism, providing new insights into how institutional and pedagogical factors interact to influence learner outcomes. This contributes to bridging the gap between fragmented research streams and supports the development of more coherent theoretical models in the field.

9. PRACTICAL AND POLICY IMPLICATIONS

The findings of this study have important implications for educational institutions, policymakers, and stakeholders involved in workforce development. For educational institutions, the results highlight the need to adopt targeted educational management practices that prioritize learner-centered design, curriculum relevance, and instructional innovation. Institutions should also invest in systems that support continuous adaptation to changing industry

demands.

For policymakers, the study underscores the importance of creating enabling environments that promote collaboration among stakeholders, particularly between education providers and industry. Policies that encourage partnerships, provide funding for innovation, and support flexible learning pathways can significantly enhance educational effectiveness.

For stakeholders such as parents and industry partners, the findings emphasize their critical role in shaping learner development. Active engagement and collaboration can contribute to more relevant and effective educational experiences.

10. LIMITATIONS OF THE STUDY

Despite its contributions, this study has several limitations that should be acknowledged. First, the use of a specific sample within a particular context may limit the generalizability of the findings to other settings or populations. Future studies may consider expanding the sample to include diverse contexts and cross-cultural comparisons.

Second, while the study employs a mixed-methods approach, the quantitative component relies on self-reported data, which may be subject to

response bias. Additional data sources, such as longitudinal or objective performance measures, could enhance the robustness of future research.

Third, the model focuses on key constructs relevant to targeted educational management; however, other potentially influential factors—such as technological readiness or organizational culture—were not included and may warrant further investigation.

11. RECOMMENDATION FOR FUTURE RESEARCH

Future research can build on this study in several ways. First, longitudinal studies could be conducted to examine the long-term effects of targeted educational management on career outcomes. Second, comparative studies across different countries or educational systems could provide deeper insights into contextual variations. Additionally, future research may explore the integration of emerging technologies, such as artificial intelligence and digital learning platforms, within targeted educational management frameworks. Such investigations could further enhance the adaptability and effectiveness of educational systems in the digital era.

REFERENCES

- Aithal, P. S., & Maiya, A. K. (2023). Innovations in Higher Education Industry – Shaping the Future. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(4), 283-311
- Akimov, N., Kurmanov, N., Uskelenova, A., Aidargaliyeva, N., Mukhiyayeva, D., Rakhimova, S., Raimbekov, B., & Utegenova, Z. (2023). Components of Education 4.0 in Open Innovation Competence Frameworks: Systematic Review. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2), 100037. <https://doi.org/10.1016/j.joitmc.2023.100037>.
- Alibraheim, E. A., & Alhawari, M. N. (2025). Evaluating the Effectiveness of Virtual Reality-Based Instruction in Developing Historical Knowledge, Empathy, and Learning Engagement among University Students. *Scientific Culture*, 11(4), 434-453. <https://doi.org/10.5281/zenodo.11042536>
- Amemasor, S. K., Oppong, S. O., Ghansah, B., Benuwa, B. B., & Essel, D. D. (2025, May). A Systematic Review on the Impact of Teacher Professional Development on Digital Instructional Integration and Teaching Practices. *Frontiers in Education*, 10, 1541031.
- Arifin, A., Suryaningsih, S. S., & Arifudin, O. (2024). The Relationship between Classroom Environment, Teacher Professional Development, and Student Academic Performance in Secondary Education. *International Education Trend Issues*, 2(2), 151-159.
- Bangbon, P., Channuwong, S., Amponstira, F., Rungsuk, A. & Snongtaweepon, T. (2023). The influence of transformational leadership on organizational sustainability: A case study of business companies in Bangkok. *Journal of Namibian Studies*, 33, 4077-4095.
- Bhardwaj, V., Zhang, S., Tan, Y. Q., & Pandey, V. (2025). Redefining Learning: Student-centered Strategies for Academic and Personal Growth. *Frontiers in Education*, 10, 1518602. <https://doi.org/10.3389/educ.2025.1518602>
- Bodnar, O., & Zhang, Y. (2024). Traditional and Innovative Models of Managing Teachers' Professional Development in Management Theory. *Імідж сучасного педагога*, 2(215), 118-123.
- Cabrillos, R. D. (2024). Exploring Stakeholders Engagement in School Development: A Mixed Methods Investigation of Insights and Strategies. *Southeast Asian Journal of Multidisciplinary Studies*, 4(1).
- Channuwong, S., Sutthadaanantaphokin, K., Wang, S., & Naude, A. (2026). Structural equation modeling of

- factors influencing consumer ethical decision-making based on responsible consumption and production concept (UN SDG 12). *Scientific Culture*, 12(4), 1185-1200.
- Channuwong, S., Chaetnaloa, P., Wongwisutthirat, K., Weerachareonchai, P. (2024). Good governance principles in Buddhism for business and politics administration. *Migration Letters*, 21(S1), 818-827.
- Chayanopparat, P., and Charungkiatikul, S. (2020). Development of a Training Model based on Self-directed Learning and Outcome-based Learning Concepts to Enhance Essential Competencies for Vocational Certificate Teachers under Office of the Non-formal and Informal Education. *Journal of Education Studies*, 48(3), 197-206. <https://doi.org/10.58837/chula.edu.48.3.12>
- Chee, H., Ahn, S., & Lee, J. (2025). A Competency Framework for AI Literacy: Variations by Different Learner Groups and an Implied Learning Pathway. *British Journal of Educational Technology*, 56(5), 2146-2182.
- Chen, D. (2022). Research on the Innovation of Chinese Vocational Education Management Model With "Internet Plus." *Asian Education Studies*, 7(1), 50. <https://doi.org/10.20849/aes.v7i1.1020>
- Chen, L., & Chen, L. (2025). Construction and Practical Exploration of the "Position-Course-Competition-Certificate" Education Model based on OBE Concept - A Case Study of Electronic Information Majors at Shanwei Institute of Technology. *Occupation and Professional Education*, 2(3), 35-43. <https://doi.org/10.62381/o252306>
- Cliniciu, R. A. (2023). Optimizing educational management: Strategies for effective learning environments and academic excellence. *Logos, Universality, Mentality, Education, Novelty. Section Social Sciences*, 12(1), 77-89.
- Culver, K. C., Kezar, A., & Koren, E. R. (2023). Improving Access and Inclusion for VITAL Faculty in the Scholarship of Teaching and Learning through Sustained Professional Development Programs. *Innovative Higher Education*, 48(6), 1071-1094.
- González, C., Ponce, D., & Fernández, V. (2023). Teachers' Experiences of Teaching Online During COVID-19: Implications for Post-pandemic Professional Development. *Educational technology research and development*, 71(1), 55-78.
- Govorov, A., Chemysheva, A., Derkunskaia, S., Artamonova, V., Babayants, C., & Koriakov, S. (2022). Target Professions Based Approach for Individual Learning Pathway Creation. *International Journal of Information and Education Technology*, 12(3), 203-208. <https://doi.org/10.18178/ijiet.2022.12.3.1605>
- Grunwald, G., Kara, A., & Spillan, J. E. (2024). Sustainable innovations through project partnerships at higher education institutions: Challenges and implications for stakeholder engagement. *Management Decision*.
- Gupta, O. J., & Yadav, S. (2023). Determinants in advancement of teaching and learning in higher education: In special reference to management education. *The International Journal of Management Education*, 21(2), 100823.
- Haile, T. M., & Mekonnen, E. A. (2024). Impacts of Stakeholder Engagement on Curriculum Implementation in Ethiopian Defense University. *Pedagogical Research*, 9(2).
- Khan, M., Thongnun, W., Zamani, M., Siripap, P., Channuwong, S., & Lertatthakornkit, T. (2025). Strategies for reducing educational inequality in primary schools using adaptive learning technologies. *International Journal of Environmental Sciences*, 11(7), 416-424.
- Leal Filho, W., Sigahi, T. F., Anholon, R., Rebelatto, B. G., Schmidt-Ross, I., Hensel-Börner, S., ... & Brandli, L. L. (2025). Promoting sustainable development via stakeholder engagement in higher education. *Environmental Sciences Europe*, 37(1), 64.
- Li, Y., Ding, X., Li, J., Pan, H., Chen, X., & Fan, Y. (2024). Innovation in Education Management and Talent Cultivation Models for New Quality Productivity: Based on Data Driven and Intelligent Teaching Management. *Deleted Journal*, 8(2), 199-204. <https://doi.org/10.54097/7rrg1f17>
- Mendes, M. A., Rodrigues, G., Janssen, D. J., Spruit, M. A., & Marques, A. (2025). Understanding the Determinants and Outcomes of Education in Pulmonary Rehabilitation: Moving Toward Person-Centered Care. *Chest*, 167(6), 1615-1627
- Moskalev, A., & Rudenko, K. (2025). Personalized Education and Career Pathways. *Ninth European MOOCs stakeholders Summit 2025 (EMOOCs 2025)*, Telecom Paris, 19 Pl. Marguerite Perey, 91120 Palaiseau, FRANCE. Zenodo. <https://doi.org/10.5281/zenodo.15763561>
- Ni, M. (2025). Developing an Integrated Talent Cultivation Model of Post-Course-Competition-Certificate-Innovation-Application under the Context of New Quality Productive Forces: A Case Study of the Business Data Analysis and Application Program in Higher Vocational Col. *Journal of Computing and Electronic Information Management*, 18(2), 1-5. <https://doi.org/10.54097/pssm1j68>

- Panou, E., & Violetis, A. (2018). Teaching Astronomy Using Monuments of Cultural Heritage: the Educational Example of "Horologion of Andronikos Kyrrhestes". *Scientific Culture*, 4(2), 77-83. <https://doi.org/10.5281/zenodo.813074>
- Rad, D., Redeuş, A., Roman, A., Ignat, S., Lile, R., Demeter, E., Egerău, A., Dughi, T., Balaş, E., Maier, R., Kiss, C., Torkos, H., and Rad, G. (2022). Pathways to Inclusive and Equitable Quality Early Childhood Education for Achieving SDG4 Goal—A Scoping Review. *Frontiers in psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.955833>
- Romero, T. G., Buelvas, I. T., Mendoza, H. L. P., Alvarado, K. L. L., & Franco, W. D. J. G. (2024). Contextualized Teaching Situation in the Initial Teacher Training at the Popular University of Cesar. *Scientific Culture*, 10(3), 120-132. <https://doi.org/10.5281/zenodo.17487897>
- Ruchiwit, M., Patchotasingh, M., & Phanphairoj, K. (2019). Strategies for Creating Innovators in Thailand's Higher Education. *Journal of Medical Education and Curricular Development*, 6. <https://doi.org/10.1177/2382120519863078>
- Sahithi, P., Babu, S. V., and Maheswari, T. (2024). An Innovative Application on Career Journey Eduprogessor. *Advances in Computer Science Research*, 112, 1085–1097. https://doi.org/10.2991/978-94-6463-471-6_103
- Silva-Diaz, Y. A., Fernández, N. Y. S., Vega-Rojas, R. C., Torres, E. V., Odar-Rojas, C. E., & Abad, W. V. (2025). School Climate and Self-concept in Peruvian Adolescents: A Developmental and Contextual Analysis. *Scientific Culture*, 11 (4), 424-433.
- Sliwka, A., Klopsch, B., Beigel, J., & Tung, L. (2024). Transformational Leadership for Deeper Learning: Shaping Innovative School Practices for Enhanced Learning. *Journal of Educational Administration*, 62(1), 103-121.
- Stumbrienė, D., Jevsikova, T., & Kontvainė, V. (2024). Key Factors Influencing Teachers' Motivation to Transfer Technology-enabled Educational Innovation. *Education and information technologies*, 29(2), 1697-1731.
- Sutthadaanantaphokin, K., Channuwong, S., Moolngearn, P., Luangsmarnkul, P., & Wang, S. (2025). Transformational leadership influencing mission implementation of Thai Universities. *Sciences of Conservation and Archaeology*, 37(3), 58-67. <https://doi.org/10.48141/sci-arch-37.3.25.7>
- Suro, L. A., & Anggraeni, A. F. D. G. (2024). Targeting Educational Quality: The Role of Educator Management Transformation in Enhancing Services. *Business and Applied Management Journal*, 2(1), 25-37.
- Suthammanon, L., Boonsong, K., Rungmuang, T., & Akkakanjanasupar, P. (2024). Designing Strategic Career Pathways: A Competency-Based Approach to Progression Management in the Educational Context of a Corporate University in Thailand. *Educational Administration: Theory and Practice*, 30(5), 489-504. <https://doi.org/10.53555/kuvey.v30i5.966>
- Tapalova, O., & Zhiyenbayeva, N. (2022). Artificial Intelligence in Education: AIED for Personalised Learning Pathways. *Electronic Journal of e-Learning*, 20(5), 639-653.
- Udrea, E. C., & Semenescu, A. (2024). Strategic Management of Academic Careers: Exploring Career Approach Models in Technical Universities. *Acta Technica Napocensis-Series: Applied Mathematics, Mechanics, and Engineering*, 67(3S), 1325-1336.
- Vadisetty, R., & Polamarasetti, A. (2024). AI-Augmented Skill Development Roadmaps: Tailoring 12-Month Learning Paths for Future-Ready Careers in Education 4.0 and Industry 4.0. In *2024 13th International Conference on System Modeling & Advancement in Research Trends (SMART)* (pp. 655-661). IEEE.
- Vasilev, I. (2024). The Model "SMART"- an Innovation for Achieving Future Success in TVET Students: An Empirical Study. *International Journal of Current Science Research and Review*, 07(12). <https://doi.org/10.47191/ijcsrr/v7-i12-17>
- Veluvali, P., & Suriseti, J. (2022). Learning management system for greater learner engagement in higher education – A review. *Higher Education for the Future*, 9(1), 107-121.
- Vindigni, G. (2023). Adaptive and Re-adaptive Pedagogies in Higher Education: A Comparative, Longitudinal Study of their Impact on Professional Competence Development across Diverse Curricula. *European Journal of Theoretical and Applied Sciences*, 1(4), 718-743.
- Yu, S. (2024). Research on the Path of Innovating the Talent Cultivation Model in Vocational Colleges under the Vocational Education Group Model. *Transactions on Social Science, Education and Humanities Research*, 8, 81-84. <https://doi.org/10.62051/kkeqb888>
- Yu, T., & Niu, J. (2026). The Logic and Practical Path of Vocational Education Innovation and Development from the Perspective of the Integration of Educational, Technological and Talented Personnel. *World Vocational and Technical Education*, 1(4), 557-576. <https://doi.org/10.1515/wvte-2025-0018>
- Zhan, X., & Sha, M. (2025). Research on Innovative Models and Practical Pathways of Education Management

Driven by Artificial Intelligence. *Occupation and Professional Education.*, 2(1), 32-37. <https://doi.org/10.62381/o252105>

Zamiri, M., & Esmaili, A. (2024). Strategies, Methods, and Supports for Developing Skills within Learning Communities: A Systematic Review of the Literature. *Administrative Sciences*, 14(9), 231.

Zhong, X. (2025). Innovative Pathways for AI-Empowered Educational Management Models. *International Journal of Educational Development*, 2(1), 7-2. <https://doi.org/10.63313/ijed.9030>