Available online at: https://jurnal.integrasisainsmedia.co.id/index.php/JTHTM
Journal of Tourism, Hospitality and Travel Management
Volume 2 Nomor 2, 2024: 116-128
DOI: 10.58229/jthtm.v2i2.314

Shaping Entrepreneurial Futures: Educational and Contextual Predictors among Vocational Tourism Students

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Abstract

Entrepreneurial intention among vocational tourism students has emerged as a critical focus in promoting job creation and self-employment in the creative economy sector. This study examines the direct effects of entrepreneurial education, learning experience, industry openness, and digital efficacy on students' entrepreneurial intention while evaluating the psychological roles of self-efficacy and attitude toward entrepreneurship. Employing a quantitative approach with Structural Equation Modeling–Partial Least Squares (SEM-PLS), data were collected from 278 vocational tourism students in Indonesia through an online survey. The results indicate that entrepreneurial education significantly influences both self-efficacy and entrepreneurial attitude. Learning experience positively impacts self-efficacy, while industry openness demonstrates a strong direct effect on entrepreneurial intention. Digital efficacy does not directly affect self-efficacy or intention but contributes positively to entrepreneurial attitude. Conversely, self-efficacy does not have a significant direct effect on intention, whereas attitude toward entrepreneurship does. These findings extend the application of the Theory of Planned Behavior (TPB) by integrating contextual factors related to vocational education and provide strategic insights for curriculum designers and policymakers aiming to enhance the entrepreneurial capacity of vocational tourism institutions.

Keywords: Vocational education; entrepreneurship; entrepreneurial intention; tourism; self-efficacy; entrepreneurial attitude; SEM-PLS

A. INTRODUCTION

Tourism remains a key driver of global economic growth and employment, positioning vocational education in tourism as a vital mechanism for equipping students with practical skills and entrepreneurial mindsets suited for a rapidly evolving and sustainability-driven industry. The shifting role of vocational institutions—from producing job seekers to cultivating job creators—has become increasingly critical amidst globalization, technological advancements, and post-pandemic recovery challenges (Ardani & Harianto, 2021; Debata et al., 2020; Sutarya, 2023). Recent studies highlight the integration of sustainable practices in edutourism curricula (Jannah et al., 2024; Susanto et al., 2022), the importance of creative adaptability in vocational training (Ли et al., 2024), and the role of innovation in enhancing employability. Case studies in Indonesia's vocational higher education demonstrate the potential of vocational institutions to evolve into tourism education hubs with significant local economic impact (Mandey et al., 2023; Pratama et al., 2023). Moreover, dynamic, industry-aligned curricula and the adoption of problem-based learning have proven effective in fostering critical thinking and soft skills among tourism students, further reinforcing the need for technologically enhanced, industry-responsive education (Ginaya et al., 2020; Vogelsang et al., 2021).

Despite the growing need for entrepreneurial talent in the tourism sector, many graduates from vocational institutions remain dependent on formal employment, highlighting the urgent need to assess how educational processes, learning experiences, and industry collaboration influence students' entrepreneurial intentions. Research shows that strong economic literacy enhances entrepreneurial interest among students (Setiawan et

al., 2020), while well-designed entrepreneurial education fosters creative and proactive attitudes essential for navigating the uncertainties of modern tourism, including crises like the COVID-19 pandemic (Laachach et al., 2023; Martín-Navarro et al., 2023). Entrepreneurial alertness and readiness can be improved through targeted educational interventions (Saadat et al., 2021), and developing entrepreneurial competencies through reformed curricula is critical across all educational levels (Lv et al., 2021). Tailoring entrepreneurship education to the unique characteristics of tourism significantly enhances students' preparedness for business engagement (Mhlongo et al., 2024). Furthermore, practical entrepreneurial education improves students' self-efficacy, which directly boosts entrepreneurial intention (Soelaiman et al., 2024; Yousaf et al., 2021), while supportive social environments—particularly those shaped through collaboration between vocational institutions and the tourism industry—serve to amplify these effects and foster innovation (Huang et al., 2024).

The Theory of Planned Behavior (TPB) (Ajzen, 1991) has been widely applied to explain entrepreneurial intention, emphasizing psychological constructs such as attitude, self-efficacy, and subjective norms. However, limited research explores how vocational educational inputs—such as entrepreneurial education, learning experience, and digital efficacy—interact with these psychological factors, particularly in tourism. (Mutohhari et al., 2023) assert that vocational education significantly strengthens entrepreneurial personality traits, suggesting that educational inputs directly influence TPB components. Studies also show that digital competencies enhance entrepreneurial intention by improving students' problem-solving abilities and adaptability (Triyono et al., 2023), a critical aspect of tourism's digitally evolving landscape. Entrepreneurial education has been shown to shape students' attitudes, self-efficacy, and perceived norms (Fahmi et al., 2022), while creativity is a moderating factor that enhances the formation of entrepreneurial attitudes (Shi et al., 2020). Industry openness remains underexamined despite its significance, yet it plays a crucial role in supporting student entrepreneurship by enhancing experiential learning and strengthening institutional–industry linkages. A supportive social environment fostered through collaboration with industry actors can further amplify the impact of educational inputs on students' entrepreneurial intentions (Huang et al., 2024).

This study investigates the direct effects of entrepreneurial education, learning experience, digital efficacy, and industry openness on the entrepreneurial intention of vocational tourism students while examining the cognitive roles of self-efficacy and attitude toward entrepreneurship. By focusing on direct relationships, the research identifies key factors influencing students' aspirations to become entrepreneurs in the tourism sector. The findings are expected to offer valuable insights for educators, policymakers, and industry stakeholders in designing more responsive curricula, strengthening institutional–industry collaboration, and developing targeted entrepreneurship programs. Academically, the study extends the Theory of Planned Behavior (TPB) by incorporating contextual variables relevant to vocational and digital learning environments. Its novelty is integrating TPB's psychological constructs with emerging elements such as digital efficacy and industry openness, providing a fresh perspective on how tourism vocational education can foster entrepreneurial mindsets.

B. LITERATURE REVIEW

Entrepreneurial Education and Its Psychological Outcomes

Entrepreneurial education aims not only to equip students with knowledge and technical competencies but also to foster essential psychological attributes such as confidence, risk-taking, and proactive attitudes. In vocational education settings, these programs are especially significant, as they offer structured opportunities—such as case-based learning, mentoring, and simulations of real business scenarios—that help students internalize entrepreneurial thinking. (Liao et al., 2022) argue that self-efficacy and attitude toward entrepreneurship are central mediators through which entrepreneurial education influences entrepreneurial intention. (Charina et al., 2024) further emphasize that training and mentoring activities within entrepreneurship programs stimulate innovative thinking and strengthen decision-making capabilities,

empowering students to act confidently in entrepreneurial contexts. This empowerment is closely tied to belief in one's ability to succeed—self-efficacy—a core psychological factor in forming entrepreneurial intentions.

Moreover, mentoring and pedagogical innovations embedded within entrepreneurial education have significantly shaped students' mindsets and entrepreneurial readiness. (Rofa & Ngah, 2024) highlight that collaborative learning environments and structured mentoring promote practical insight and psychological support, enhancing students' confidence and motivation to pursue entrepreneurship. (Atmani et al., 2023) underscore the role of experiential learning—through incubators, project-based assignments, and interactive teaching methods—in bridging theoretical concepts with real-world application, further strengthening entrepreneurial attitudes. (Saoula et al., 2023) also, entrepreneurial education positively influences students' self-efficacy, enhancing their entrepreneurial intention. Based on this literature, the following hypotheses are proposed:

H1: Entrepreneurial education has a positive effect on vocational students' self-efficacy.
H2: Entrepreneurial education has a positive effect on attitude toward entrepreneurship.

Learning Experience in Vocational Education

Learning experiences in vocational education are inherently experiential, emphasizing practice-oriented and context-based approaches. When students engage in authentic learning environments—such as real or simulated tourism projects, internships, and community-based tourism development—they develop technical competencies and psychological readiness, including self-efficacy and positive entrepreneurial attitudes. These hands-on experiences foster a deeper sense of ownership and vocational identity, empowering students to view entrepreneurship as a realistic and attractive career option. (Ceelen et al., 2021) highlight that pedagogical strategies such as coaching and continuous feedback during workplace learning play a vital role in strengthening students' belief in their abilities. Similarly, peer learning and collaborative tasks enhance communication and social support systems, further reinforcing students' confidence in entrepreneurial tasks (Güngör, 2021).

The integration of industry-academic collaboration is another essential aspect of effective learning experiences. (Zhao & Ko, 2024) argue that such partnerships equip students with relevant work-based competencies and instil an entrepreneurial mindset aligned with real-world business practices. Internships, in particular, are frequently cited as a critical mechanism for increasing self-confidence and entrepreneurial awareness. As (Ferreras-Garcia et al., 2021) note, internships in tourism and hospitality programs serve as vital experiential learning tools that expose students to professional settings, improve competencies, and expand their professional networks. These experiences holistically contribute to both the development of self-efficacy and the formation of favourable attitudes toward entrepreneurship. Based on this review, the following hypotheses are proposed:

H3: Learning experience has a positive effect on vocational students' self-efficacy.
H4: Learning experience has a positive effect on attitude toward entrepreneurship.

Industry Openness and Entrepreneurial Development

Industry openness refers to the willingness of tourism-related businesses and stakeholders to collaborate with educational institutions in supporting student entrepreneurship. When the industry provides accessible opportunities—such as internships, networking events, mentorship, and joint projects—students are more likely to develop the confidence and clarity needed to pursue entrepreneurial paths. This kind of exposure fosters not only technical readiness but also psychological readiness, particularly enhancing self-efficacy. Previous studies highlight that when students perceive the tourism industry as approachable and supportive, their entrepreneurial motivation and belief in their capabilities increase significantly (Kim & Jeong, 2018; Kong, 2015).

Collaborative efforts between educational institutions, local communities, and tourism organizations create rich experiential learning environments that reinforcing entrepreneurial potential. (Oentoro & Wiyatiningsih,

2022) emphasize the role of community and institutional partnerships in boosting students' confidence and competence, while (Rahman et al., 2021) illustrate how stakeholder engagement in creative tourism enhances educational impact and drives entrepreneurial behaviour. In contexts like urban tourism cities, such collaborations have proven effective in producing sustainable tourism practices that cultivate future entrepreneurs (Lestari et al., 2022). Furthermore, aligning educational frameworks with industry needs—as proposed by (Kong, 2015)—ensures that vocational programs meet labour demands and empower students to initiate business ventures. Based on this, the following hypotheses are proposed:
H5: Industry openness has a positive effect on vocational students' self-efficacy.
H6: Industry openness has a positive effect on student's entrepreneurial intention.

Digital Efficacy as a Modern Entrepreneurial Competence

In a rapidly evolving digital economy, particularly within the tourism industry, students' ability to use digital tools effectively is becoming a critical entrepreneurial competence. Digital efficacy—defined as the confidence and capability to apply digital technologies in problem-solving, business management, and customer engagement—has been shown to influence entrepreneurial potential significantly (Andrianto & Susanto, 2023; Bachmann et al., 2024; Sansone et al., 2024). Students with high digital efficacy are more likely to recognize business opportunities, navigate digital marketplaces, and initiate online-based ventures. Educational interventions such as MOOCs and digital entrepreneurship courses offer experiential exposure that shapes both capability and self-efficacy in managing digital aspects of business operations (Rizal et al., 2022).

Moreover, embedding digital skills like coding, digital marketing, and e-commerce into entrepreneurship education frameworks has elevated students' readiness for entrepreneurial engagement. (Sansone et al., 2024) note that such skills are foundational for maintaining long-term entrepreneurial intent, while (Lv et al., 2021) emphasize the transformative effect of competency-based digital education on students' motivation to pursue business initiatives. Platforms supporting digital learning also foster networking, peer support, and access to resources, encouraging students to act on their business ideas (Baskaran et al., 2023). Therefore, digital efficacy enhances students' belief in their ability to succeed (self-efficacy) and directly motivates them to pursue entrepreneurial careers. Based on this, the following hypotheses are proposed:
H7: Digital Efficacy has a positive effect on vocational students' self-efficacy.
H8: Digital Efficacy has a positive effect on student's entrepreneurial intention.

Psychological Determinants of Entrepreneurial Intention

Within the Theory of Planned Behavior (TPB) framework, self-efficacy and attitude toward entrepreneurship are widely recognized as significant psychological determinants of entrepreneurial intention. Self-efficacy refers to an individual's belief in their ability to successfully carry out entrepreneurial tasks, while attitude toward entrepreneurship reflects one's overall evaluation of entrepreneurship as a desirable or worthwhile career path. Individuals who believe in their capabilities and positively view entrepreneurship are likelier to exhibit strong entrepreneurial intentions. Research supports this association, with (Ojewumi & Fagbenro, 2019; Yohana, 2021) demonstrating that students with higher levels of self-efficacy and more favourable attitudes toward entrepreneurship are significantly more inclined to pursue entrepreneurial activities in the future.

Further evidence underscores the dominant role of self-efficacy as a driver of entrepreneurial intention. (Andriyati et al., 2024) identify entrepreneurial self-efficacy as a key determinant, particularly in sustainable entrepreneurship contexts. (Pham et al., 2023) also highlight the mediating role of self-efficacy and attitude in the relationship between social norms and entrepreneurial intention, reinforcing their foundational importance within TPB. Moreover, (Wu et al., 2022) find that entrepreneurial education contributes to enhanced self-efficacy and the development of positive attitudes, which directly influence intention formation. These findings emphasize that self-efficacy and attitude are core cognitive mechanisms that translate learning experiences and social influence into behavioural intention. Based on this review, the following hypotheses are proposed:

H9: Self-efficacy has a positive effect on students' entrepreneurial intention.
H10: Attitude toward entrepreneurship positively affects students' entrepreneurial intention.

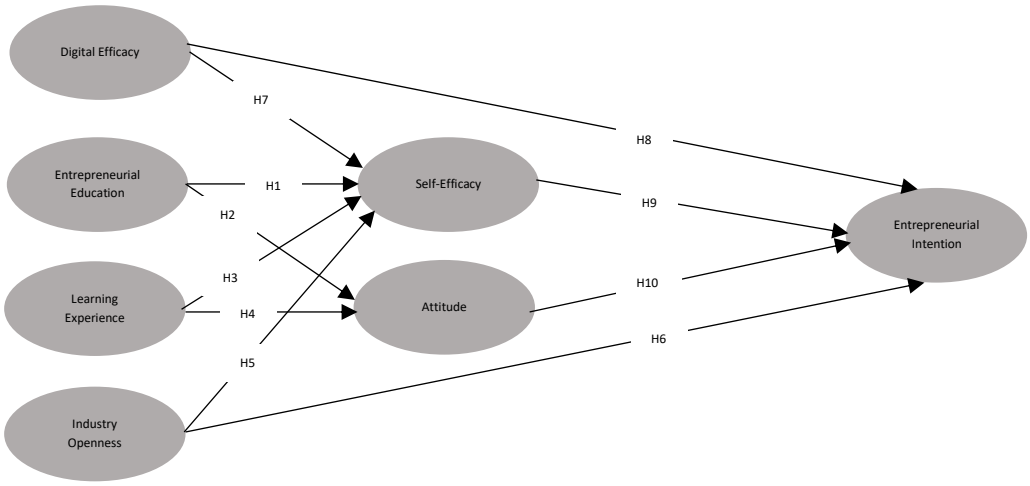

Figure 1. Proposed Framework
Source: Research data, 2024

C. METHODS

This study applies a quantitative, explanatory research design to examine the direct effects of entrepreneurial education, learning experience, industry openness, and digital efficacy on the entrepreneurial intention of vocational tourism students. In addition, the study investigates the psychological contributions of self-efficacy and attitude toward entrepreneurship as cognitive predictors of such intention. Data are collected through a structured questionnaire using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The research population includes students in vocational tourism programs at accredited higher education institutions. A purposive sampling technique is used to select respondents who meet specific criteria: (1) being actively enrolled in a tourism-related vocational program, (2) having participated in entrepreneurship-related courses or activities, and (3) willingness to complete the survey. A minimum sample size of 200 students is targeted to meet the adequacy requirement for structural equation modelling analysis.

The instrument development process includes an expert review and a pilot test involving 30 students to ensure clarity and content validity. The questionnaire consists of several constructs: entrepreneurial education, learning experience, industry openness, digital efficacy, self-efficacy, attitude toward entrepreneurship, and entrepreneurial intention. Each construct is measured using 4 to 6 items adapted from previously validated instruments relevant to vocational and entrepreneurship education contexts. The collected data are analyzed using Structural Equation Modeling with the Partial Least Squares (SEM-PLS) approach, which is considered suitable for predictive modelling and exploratory analysis, especially with moderately sized samples and complex variable relationships. The analysis involves two main stages: evaluation of the measurement model to assess construct reliability and validity and evaluation of the structural model to test the significance of hypothesized direct relationships among variables. Path coefficients, R^2 values, and significance levels will be interpreted to explain the model's explanatory power and support the proposed hypotheses.

D. RESULTS AND DISCUSSIONS

Respondent Profile

Two hundred seventy-eight respondents participated in this study, all active students enrolled in tourism-related vocational programs across several higher education institutions in Indonesia. Data were collected through an online questionnaire distributed via institutional communication channels and student networks.

Based on purposive sampling criteria, all participants had previously engaged in entrepreneurship-related learning activities, such as courses, workshops, or business simulations. The demographic profile of respondents reflects the typical composition of vocational tourism education in Indonesia. Of the total respondents, 65.8% (183 students) were female, and 34.2% (95 students) were male, which aligns with the general gender distribution in hospitality and tourism programs. Regarding age, the majority (72.3%) were between 18 and 22 years old, indicating that most respondents were in the early stages of higher education.

Regarding academic year, 39.6% were in their second year, 34.5% in their third year, and 25.9% in their final year. This distribution ensures a balanced representation across different stages of study, with sufficient exposure to theoretical and practical elements of vocational training. Most participants (81.6%) reported attending at least one entrepreneurship-related course or workshop during their studies. Additionally, 52.5% had participated in internships or field projects in tourism businesses, which provided valuable experiential learning opportunities. Internet access and digital literacy were generally high among respondents, with 89.2% indicating confidence in using digital tools for academic or business-related purposes. These characteristics support the assumption that the respondents are well-positioned to assess constructs such as entrepreneurial intention, self-efficacy, and digital efficacy, which are central to this study.

Measurement Model

The measurement model (outer model) was evaluated to ensure that the reflective constructs used in this study met the criteria for reliability and validity before proceeding to structural model analysis. This evaluation comprised four key aspects: indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. Indicator reliability was assessed through the standardized outer loadings of each item. As shown in Table 1, all item loadings were above the recommended threshold of 0.70, ranging from 0.726 to 0.944. These results indicate that each item strongly correlates with its respective latent construct and contributes significantly to measuring the intended dimension. For instance, ATT2, ATT3, and ATT4 demonstrated high loadings above 0.86, reflecting students' strong perception that entrepreneurship is favourable and valuable. Similarly, DE3 achieved the highest loading (0.944), showing students' high confidence in operating digital tools in entrepreneurial contexts. Other constructs, such as entrepreneurial intention, industry openness, learning experience, and self-efficacy, also showed consistently strong item performance.

Table 1. Reflective Indicators, Questionnaire Items, and Outer Loadings

Construct	Code	Reflective Statement (Item)	Loading
Attitude Toward Entrepreneurship	ATT1	I consider entrepreneurship to be a good career choice.	0.765
	ATT2	I am interested in becoming an entrepreneur.	0.878
	ATT3	Entrepreneurship is a desirable path for me.	0.869
	ATT4	Starting a business is a worthwhile goal.	0.864
Digital Efficacy	DE1	I feel confident using digital tools for problem-solving.	0.908
	DE2	I am capable of using digital technology in a business context.	0.926
	DE3	I can easily adapt to new digital applications relevant to entrepreneurship.	0.944
Entrepreneurial Education	EE1	The entrepreneurship courses I took were relevant to the real world.	0.818
	EE2	I gained useful knowledge from my entrepreneurship education.	0.870
	EE3	I was actively involved in entrepreneurship-related activities during my studies.	0.844
	EE4	The training I received increased my interest in starting a business.	0.885
Entrepreneurial Intention	EI1	I intend to start a business in the future.	0.726
	EI2	I plan to start my own business someday.	0.815
	EI3	I am determined to create a business.	0.782
	EI4	I have strong intentions to become an entrepreneur.	0.874
	EI5	I will make a serious effort to start and run my own business.	0.842
Industry Openness	IO1	The tourism industry is open to supporting student entrepreneurs.	0.833
	IO2	I have access to mentorship or networking from industry professionals.	0.899
	IO3	The industry provides real opportunities for student involvement.	0.891
	IO4	Industry players are willing to collaborate with student-led initiatives.	0.876

Construct	Code	Reflective Statement (Item)	Loading
	IO5	I feel that the tourism industry welcomes student innovation.	0.861
Learning Experience	LE1	I have participated in tourism-related internships or field projects.	0.875
	LE2	My learning experiences involved solving real-world tourism problems.	0.936
	LE3	I was involved in hands-on projects during my tourism studies.	0.906
Self-Efficacy	SE1	I am confident in my ability to identify business opportunities.	0.839
	SE2	I believe I can successfully run a business.	0.861
	SE3	I can make effective decisions when facing business challenges.	0.820
	SE4	I can handle uncertainty in business environments.	0.887
	SE5	I believe I have the skills necessary to start a business.	0.833

Source: Research data, 2024

Internal consistency reliability was measured using Cronbach's Alpha and Composite Reliability (CR). As summarized in Table 2, all constructs exceeded the acceptable threshold of 0.70, with Cronbach's Alpha ranging from 0.866 to 0.922 and CR values ranging from 0.904 to 0.947. These results confirm that the items within each construct consistently measure the same underlying concept. The highest CR value was found in the digital efficacy construct (0.947), indicating excellent internal consistency in measuring students' digital competencies.

Table 2. Reliability and Convergent Validity of Constructs

Construct	Cronbach's Alpha	Composite Reliability	AVE
Attitude	0.866	0.909	0.715
Digital Efficacy	0.917	0.947	0.857
Entrepreneurial Education	0.877	0.915	0.730
Entrepreneurial Intention	0.868	0.904	0.655
Industry Openness	0.922	0.941	0.761
Learning Experience	0.891	0.932	0.821
Self-Efficacy	0.903	0.928	0.720

Source: Research data, 2024

All constructs' Average Variance Extracted (AVE) values were above the 0.50 threshold, confirming convergent validity. This means that the constructs can explain more than half of the variance of their indicators, with particularly strong convergent validity found in digital Efficacy (AVE = 0.857) and learning experience (AVE = 0.821). To assess discriminant validity, the Heterotrait-Monotrait Ratio (HTMT) was employed. As shown in Table 4.3, all HTMT values were below the conservative threshold of 0.85, ranging from 0.211 to 0.693. This indicates that each construct is empirically distinct and measures a unique dimension. The closest relationship was observed between digital efficacy and learning experience (HTMT = 0.693), which is theoretically justifiable given the integration of digital tools into modern vocational learning environments.

Table 4.3 HTMT Discriminant Validity Matrix

	Attitude	Digital Efficacy	Entrepreneurial Education	Entrepreneurial Intention	Industry Openness	Learning Experience
DE	0.443					
EE	0.621	0.211				
EI	0.621	0.327	0.618			
IO	0.616	0.417	0.435	0.612		
LE	0.564	0.693	0.533	0.425	0.447	
SE	0.666	0.344	0.634	0.525	0.484	0.576

Source: Research data, 2024

The measurement model fulfils all requirements for indicator reliability, internal consistency, convergent validity, and discriminant validity. These results confirm that the measurement instruments used in this study are reliable and valid, and the model is suitable to proceed with structural model analysis and hypothesis testing.

Structural Model

After confirming the reliability and validity of the measurement model, the next step is to evaluate the structural model (inner model) to examine the significance of the proposed direct relationships between latent

variables. The evaluation includes analyzing the path coefficients, t-statistics, p-values, coefficient of determination (R^2), and predictive relevance (Q^2). The significance of the path coefficients was assessed through a bootstrapping procedure with 5000 resamples. Table 4 and Figure 2 show that several hypothesized paths are statistically significant. Notably, entrepreneurial education has a strong and significant effect on both attitudes toward entrepreneurship (β = 0.442, t = 7.447, p < 0.001) and self-efficacy (β = 0.438, t = 7.645, p < 0.001), supporting H1 and H2. Similarly, industry openness significantly influences entrepreneurial intention (β = 0.332, t = 5.572, p < 0.001), supporting H6. Attitude also significantly predicts entrepreneurial intention (β = 0.262, t = 2.906, p = 0.004), supporting H10. Learning experience significantly affects self-efficacy (β = 0.277, t = 4.290, p < 0.001), confirming H3. However, several paths were not statistically significant. For example, digital efficacy does not have a significant direct effect on entrepreneurial intention (β = 0.017, t = 0.269, p = 0.788) nor self-efficacy (β = 0.052, t = 0.750, p = 0.453), thereby not supporting H7 and H8. Likewise, the effect of learning experience on attitude (β = 0.149, t = 1.480, p = 0.139) and self-efficacy on entrepreneurial intention (β = 0.168, t = 1.730, p = 0.084) is not significant at the 5% level, although the latter is marginally close.

Table 4. Path Coefficients and Hypothesis Testing Results

Hypothesis	Path	β	t-Statistic	p-Value	Conclusion
H1	Entrepreneurial Education → Self-Efficacy	0.438	7.645	0.000	Supported
H2	Entrepreneurial Education → Attitude	0.442	7.447	0.000	Supported
H3	Learning Experience → Self-Efficacy	0.277	4.290	0.000	Supported
H4	Learning Experience → Attitude	0.149	1.480	0.139	Not Supported
H5	Industry Openness → Entrepreneurial Intention	0.332	5.572	0.000	Supported
H6	Digital Efficacy → Self-Efficacy	0.052	0.750	0.453	Not Supported
H7	Digital efficacy → Entrepreneurial Intention	0.017	0.269	0.788	Not Supported
H8	Digital Efficacy → Attitude	0.209	2.124	0.034	Supported
H9	Self-Efficacy → Entrepreneurial Intention	0.168	1.730	0.084	Not Supported
H10	Attitude → Entrepreneurial Intention	0.262	2.906	0.004	Supported

Source: Research data, 2024

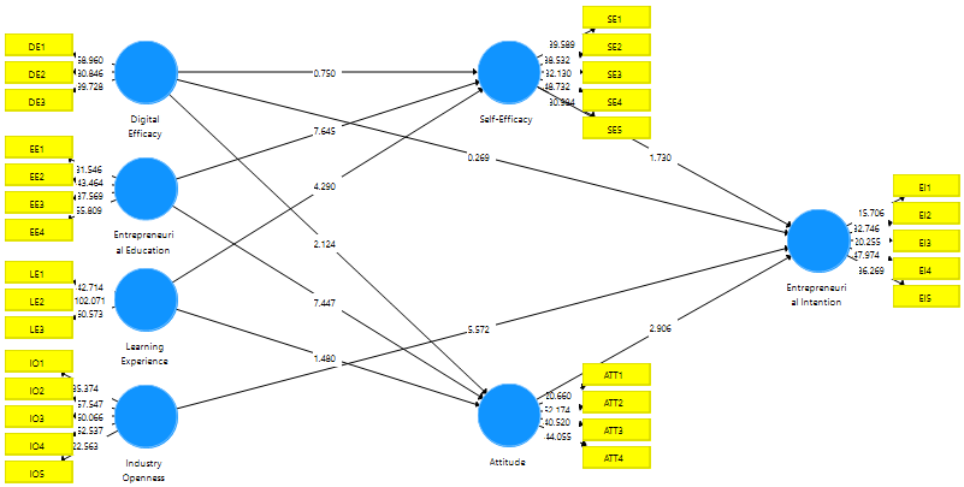

Figure 2. Structural Tested Model

Source: Research data, 2024

In terms of explanatory power, the R^2 values for key endogenous variables were moderate: entrepreneurial intention (R^2 = 0.482), self-efficacy (R^2 = 0.285), and attitude (R^2 = 0.275). These values indicate that the model explains a substantial portion of the variance in the primary dependent variable, entrepreneurial intention. The Q^2 values for the same constructs—entrepreneurial intention (Q^2 = 0.261), self-efficacy (Q^2 = 0.285), and attitude (Q^2 = 0.275)—are all above zero, confirming that the model has predictive relevance for these constructs.

Table 5. Predictive Relevance (Q^2) of Endogenous Constructs

Construct	SSO	SSE	Q^2 (= 1 – SSE/SSO)
Attitude	1.112.000	806.268	0.275
Self-Efficacy	1.390.000	993.559	0.285
Entrepreneurial Intention	1.390.000	1.027.498	0.261

Source: Research data, 2024

Discussion

This study investigated the direct effects of entrepreneurial education, learning experience, industry openness, and digital efficacy on vocational tourism students' entrepreneurial intention. It also examined how self-efficacy and attitude toward entrepreneurship, as key psychological constructs within the Theory of Planned Behavior (TPB), contribute to the formation of such intention. Out of ten proposed hypotheses, six were statistically supported. The results reflect alignment and divergence with existing literature, offering insights into the mechanisms driving entrepreneurship in vocational education settings. The results showed that entrepreneurial education significantly influences self-efficacy (H1) and attitude toward entrepreneurship (H2). These findings are consistent with previous research that positions entrepreneurial education as a key driver of cognitive and affective readiness to engage in entrepreneurial activity (Fahmi et al., 2022; Liao et al., 2022). The significant relationship between entrepreneurial education and self-efficacy supports the idea that structured entrepreneurship learning, mentoring, and project-based tasks build students' confidence in performing entrepreneurial roles (Charina et al., 2024; Rofa & Ngah, 2024). Similarly, the positive effect on attitude aligns with (Martín-Navarro et al., 2023), who assert that entrepreneurship education instils a proactive and opportunity-seeking mindset essential for forming favourable entrepreneurial evaluations.

The positive impact of learning experience on self-efficacy (H3) also confirms prior literature emphasizing that real-world exposure through internships, field-based tourism projects, and community engagement enhances students' belief in their capabilities (Ceelen et al., 2021; Güngör, 2021). These experiences contribute to developing vocational identity and problem-solving skills, essential components of entrepreneurial self-efficacy. However, learning experience did not significantly influence attitude toward entrepreneurship (H4), contrary to expectations. This finding suggests that practical experience alone, without reflective or structured learning components, may not be sufficient to shape students' affective evaluations of entrepreneurship. This may reflect the inconsistent quality or limited relevance of certain vocational placements within the Indonesian tourism education system—something echoed by (Zhao & Ko, 2024), who emphasized the need for close alignment between learning experiences and industry expectations. A particularly strong and significant finding was the effect of industry openness on entrepreneurial intention (H5). This confirms that when students perceive the tourism industry as welcoming and supportive of innovation and youth entrepreneurship, their intention to start a business increases (Oentoro & Wiyatiningsih, 2022; Rahman et al., 2021). This finding aligns with (Saoula et al., 2023), who show that perceived external support strengthens entrepreneurial motivation. The tourism industry's role as a co-educator through mentorship, access, and collaborative engagement proves critical in shaping intention-reinforcing calls (Kong, 2015) for more comprehensive industry-academia partnerships.

Interestingly, digital efficacy did not significantly influence self-efficacy (H6) or entrepreneurial intention (H7). This contradicts findings from (Rizal et al., 2022; Triyono et al., 2023), who argued that digital skills enhance students' entrepreneurial readiness, especially in digitally-intensive business sectors. A possible explanation lies in the gap between general digital literacy and its application in entrepreneurship. In the tourism vocational context in Indonesia, digital tools may still be seen as secondary or administrative rather than as core components of entrepreneurial value creation. However, digital efficacy did significantly influence attitudes toward entrepreneurship (H8), suggesting that digital competence may first shape how students perceive entrepreneurship—making it seem more modern, dynamic, and relevant—before directly affecting behavioural intention. This supports the work of (Sansone et al., 2024), who emphasized the indirect pathways between

digital competence and entrepreneurial behaviour. Surprisingly, self-efficacy did not directly affect entrepreneurial intention (H9), which partially challenges the TPB framework. While self-efficacy is typically a robust predictor of intention (Ojewumi & Fagbenro, 2019; Yohana, 2021), this study's findings suggest that confidence alone may not lead to action unless paired with external support and attitudinal alignment. In the context of vocational tourism education, students may feel confident yet still perceive high barriers to business creation—such as limited access to capital, regulatory complexity, or lack of market experience. This nuance echoes findings by (Pham et al., 2023), who suggest that self-efficacy may operate more effectively as a mediator or moderator rather than a direct driver of intention.

By contrast, attitude toward entrepreneurship significantly positively affected entrepreneurial intention (H10), strongly aligned with TPB and supporting a wide body of literature (Pham et al., 2023; Yohana, 2021). Attitude reflects an individual's evaluation of entrepreneurship—whether attractive, meaningful, or feasible. The fact that this construct remains a strong and direct predictor suggests that fostering positive entrepreneurial perceptions should remain a primary goal of vocational curricula, particularly through inspirational teaching, real case studies, and success stories from alumni entrepreneurs. These findings provide empirical support for TPB while also expanding its scope by integrating educational and contextual variables such as industry openness and digital efficacy. They underline the importance of holistic education—one that builds knowledge and skills, shapes attitudes, and offers meaningful engagement with the professional world. The study reinforces earlier calls (Atmani et al., 2023; Mhlongo et al., 2024) to embed experiential, digital, and entrepreneurial components more deeply into vocational education, particularly in rapidly evolving sectors such as tourism.

E. CONCLUSION

This study aimed to examine the direct effects of entrepreneurial education, learning experience, industry openness, and digital efficacy on the entrepreneurial intention of vocational tourism students while also assessing the roles of self-efficacy and attitude toward entrepreneurship as psychological predictors within the framework of the Theory of Planned Behavior (TPB). Using a structural equation modeling approach with 278 respondents from vocational tourism programs in Indonesia, the study found that six out of ten proposed hypotheses were statistically supported. The results revealed that entrepreneurial education is central to shaping self-efficacy and attitude toward entrepreneurship, highlighting its importance as a foundational vocational training element. Learning experiences, particularly practical and immersive, significantly boosted students' entrepreneurial confidence, although their effect on attitude was not statistically confirmed. The strong influence of industry openness on entrepreneurial intention reinforces the value of creating collaborative, accessible environments between vocational institutions and the tourism industry.

While digital efficacy did not directly influence self-efficacy or intention, it significantly impacted attitude—suggesting that digital competence contributes to students' perception of entrepreneurship as modern and achievable. Interestingly, self-efficacy, often emphasized in TPB, did not directly predict intention in this context, indicating the possibility of mediating or moderating variables that could shape its role. Conversely, attitude toward entrepreneurship emerged as a robust and consistent predictor of entrepreneurial intention. Theoretically, the study extends the TPB framework by integrating contextual and educational factors relevant to vocational tourism education, offering a more nuanced understanding of what drives entrepreneurial intention in applied learning environments. Practically, the findings suggest that vocational institutions should strengthen entrepreneurial education components, expand partnerships with industry, and integrate digital entrepreneurship training to foster both the mindset and capability needed for new venture creation. Future research should explore mediating effects, longitudinal impacts of educational interventions, and the role of institutional culture in shaping entrepreneurial behaviour.

REFERENCES

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision

Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Andrianto, T., & Susanto, E. (2023). Generational Differences of Technology Entrepreneurial Leadership; Comparative Case Studies of Tourism and Hospitality Industry. Journal of Business Management Education (JBME), 8(2), 25–37.

Andriyati, R., Wardani, D. K., & Setyowibowo, F. (2024). Determinant of Sustainable Entrepreneurial Intention : Mediating Role of Entrepreneurial Self-Efficacy. Jurnal Kependidikan Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan Pengajaran Dan Pembelajaran, 10(1), 364. https://doi.org/10.33394/jk.v10i1.10953

Ardani, E. G., & Harianto, A. (2021). Surviving Strategy of Hospitality Sector in Pandemic Situation. E-Journal of Tourism, 77. https://doi.org/10.24922/eot.v8i1.71449

Atmani, S. E., Atmani, Z. E., & Madrane, M. (2023). Impact of Pedagogical Innovation on the Development of Entrepreneurial Mindset Among Students in Economics and Management. Jett, 14(6). https://doi.org/10.47750/jett.2023.14.06.007

Bachmann, N., Rose, R. F., Maul, V., & Hölzle, K. (2024). What Makes for Future Entrepreneurs? The Role of Digital Competencies for Entrepreneurial Intention. Journal of Business Research, 174, 114481. https://doi.org/10.1016/j.jbusres.2023.114481

Baskaran, S., Mahadi, N., Indıran, L., Yaacob, T. Z., & Subramaniam, Y. (2023). An Investigation of Digital Entrepreneurship Intention Activation Among University Undergraduates. International Journal of Academic Research in Business and Social Sciences, 13(6). https://doi.org/10.6007/ijarbss/v13-i6/17149

Ceelen, L., Khaled, A., Nieuwenhuis, L., & Bruijn, E. d. (2021). Pedagogic Practices in the Context of Students' Workplace Learning: A Literature Review. Journal of Vocational Education and Training, 75(4), 810–842. https://doi.org/10.1080/13636820.2021.1973544

Charina, A., Kusumo, R. A. B., & Hapsari, H. (2024). The Role of Empowerment in Improving the Performance of Food-Based Informal Industries in Bandung Regency, West Java, Indonesia. Journal of Ecohumanism, 3(8). https://doi.org/10.62754/joe.v3i8.4951

Debata, B., Patnaik, P., & Mishra, A. (2020). COVID-19 Pandemic! It's Impact on People, Economy, and Environment. Journal of Public Affairs. https://doi.org/10.1002/pa.2372

Fahmi, M. A., Khalisa, A., Sari, D. N., & Hassan, Z. I. (2022). Analysis of Entrepreneurial Implementation Intention on Vocational Education Student at Universitas Padjadjaran: An Empirical Analysis. International Journal of Research in Business and Social Science (2147-4478), 11(9), 313–327. https://doi.org/10.20525/ijrbs.v11i9.2229

Ferreras-Garcia, R., Sales-Zaguirre, J., & Serradell-López, E. (2021). Competency Assessment and Learning Results in Tourism Internships: Is Gender a Relevant Factor? Higher Education Skills and Work-Based Learning, 12(1), 162–177. https://doi.org/10.1108/heswbl-05-2021-0096

Ginaya, G., Kanca, I. N., & Astuti, N. N. S. (2020). Designing Problem-Based Learning (PBL) Model for Tourism Vocational Education in 4.o industry. International Journal of Linguistics Literature and Culture, 6(1), 14–23. https://doi.org/10.21744/ijllc.v6n1.808

Güngör, G. (2021). The Powerful Learning Environments in Vocational and Technical Secondary Education in Turkey: Teachers' Views. European Journal of Education Studies, 8(9). https://doi.org/10.46827/ejes.v8i9.3911

Huang, M., Xu, S., Guo, T., Ni, Y., & Xu, Y. (2024). Impact of Entrepreneurship Education on the Entrepreneurial Intention of Higher Vocational Students: A Moderated Mediation Effects Model. European Journal of Education, 59(4). https://doi.org/10.1111/ejed.12775

Jannah, M., Tazkia, S., Mahfudz, I. N., Nuradji, A. D., Hanifah, S. R., & Minggra, R. (2024). Development of Guidelines for Edutourism Facilities Through Research Instrument Preparation Based on Ecological Architecture. Iop Conference Series Earth and Environmental Science, 1404(1), 12028. https://doi.org/10.1088/1755-1315/1404/1/012028

Kim, H. J., & Jeong, M. (2018). Research on Hospitality and Tourism Education: Now and Future. Tourism Management Perspectives, 25, 119–122. https://doi.org/10.1016/j.tmp.2017.11.025

Kong, A. (2015). The Dilemma Facing Higher Education and Industry in Tourism and Hospitality.

Springerplus, 4(S2). https://doi.org/10.1186/2193-1801-4-s2-p2

Laachach, A., Laaraj, N., & Farissi, N. (2023). The Effects of the COVID-19 Pandemic on Tourism Entrepreneurial Intention Among University Students: The Role of Entrepreneurship Education. Industry and Higher Education, 38(3), 246–264. https://doi.org/10.1177/09504222231189708

Lestari, F., Dali, M. M., & Che-Ha, N. (2022). The Importance of a Multistakeholder Perspective in Mapping Stakeholders' Roles Toward City Branding Implementation. Policy & Governance Review, 6(3), 264. https://doi.org/10.30589/pgr.v6i3.601

Liao, Y., Nguyen, V. H. A., Chi, H., & Hieu, N. H. (2022). Unraveling the Direct and Indirect Effects of Entrepreneurial Education and Mindset on Entrepreneurial Intention: The Moderating Role of Entrepreneurial Passion. Global Business and Organizational Excellence, 41(3), 23–40. https://doi.org/10.1002/joe.22151

Lv, Y., Chen, Y., Sha, Y., Wang, J., An, L., Chen, T., Huang, X., Huang, Y., & Huang, L. (2021). How Entrepreneurship Education at Universities Influences Entrepreneurial Intention: Mediating Effect Based on Entrepreneurial Competence. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.655868

Mandey, N., Alelo, M., & Tenda, D. (2023). Improving Educational Tourism Marketing by Utilizing Website. Open Journal of Social Sciences, 11(12), 607–617. https://doi.org/10.4236/jss.2023.1112040

Martín-Navarro, A., Martín-Velicia, F. A., Medina-Garrido, J. A., & Rodrigues, R. G. (2023). Causal Propensity as an Antecedent of Entrepreneurial Intentions. International Entrepreneurship and Management Journal, 19(2), 501–522. https://doi.org/10.1007/s11365-022-00826-1

Mhlongo, Z., Ntshangase, S. D., & Ezeuduji, I. O. (2024). Tourism Entrepreneurial Education and Intention Among Youths: A Case From KwaZulu-Natal in South Africa. International Conference on Tourism Research, 7(1), 489–496. https://doi.org/10.34190/ictr.7.1.1964

Mutohhari, F., Triyono, M. B., Sudira, P., Nurtanto, M., & Kholifah, N. (2023). The Role of Entrepreneurial Personality Mediation and Technological Competencies Moderation in Determining Entrepreneurial Intentions in Vocational Education. Journal of Technical Education and Training, 15(1). https://doi.org/10.30880/jtet.2023.15.01.012

Oentoro, K., & Wiyatiningsih, W. (2022). The Role of Yogyakarta Tourism Kampongs in Supporting Creative Industries Potency. 66–77. https://doi.org/10.2991/978-2-494069-39-8_7

Ojewumi, K. A., & Fagbenro, D. A. (2019). Entrepreneurial Intention Among Polytechnic Students in Nigeria: The Role of Self-Efficacy and Social Networks. International Journal of Entrepreneurial Knowledge, 7(1). https://doi.org/10.37335/ijek.v7i1.85

Pham, V. H., Nguyen, T. K. C., Nguyen, T. B. L., Tran, T. T. T., & Nguyen, T. V. N. (2023). Subjective Norms and Entrepreneurial Intention: A Moderated-Serial Mediation Model. Journal of Entrepreneurship Management and Innovation, 19(1), 113–140. https://doi.org/10.7341/20231914

Pratama, F. A., Wahyudi, M., Eka Putra, D., Muslim, M., & Effendi, H. (2023). Analysis of the Role of Vocational Education for the Halal Tourism Development in Indonesia. Edumaspul: Jurnal Pendidikan, 7(2), 6053–6068. https://doi.org/10.33487/edumaspul.v7i2.7585

Rahman, N. K., Utami, S. B., & Pancasilawan, R. (2021). Kolaborasi Pengembangan Destinasi Pariwisata Kreatif Di Kota Bandung Studi Pada Bandung Creative Belt Sektor Cigadung. Jane - Jurnal Administrasi Negara, 13(1), 74. https://doi.org/10.24198/jane.v13i1.35033

Rizal, Y., Sudira, P., & Mutohhari, F. (2022). Digital Entrepreneurship of Vocational Educations: Enthusiasm Level and Entrepreneurial Personality of Students. Journal of Education Technology, 6(4), 578–585. https://doi.org/10.23887/jet.v6i4.46297

Rofa, N., & Ngah, R. (2024). Exploring the Nexus of Entrepreneurial Potential and Entrepreneurial Mentoring Among TVET Programme Students. Issues and Perspectives in Business and Social Sciences, 4(1), 94–107. https://doi.org/10.33093/ipbss.2024.4.1.7

Saadat, S., Aliakbari, A., Majd, A. A., & Bell, R. (2021). The Effect of Entrepreneurship Education on Graduate Students' Entrepreneurial Alertness and the Mediating Role of Entrepreneurial Mindset. Education + Training, 64(7), 892–909. https://doi.org/10.1108/et-06-2021-0231

Sansone, G., Ghezzi, A., Landoni, P., & Rangone, A. (2024). Students' Entrepreneurial Engagement and Student Entrepreneurship: Do Coding and Digital Skills Matter? Ieee Transactions on Engineering Management, 71, 5733–5743. https://doi.org/10.1109/tem.2024.3367893

Saoula, O., Shamim, A., Ahmad, M. J., & Abid, M. F. (2023). Do Entrepreneurial Self-Efficacy, Entrepreneurial Motivation, and Family Support Enhance Entrepreneurial Intention? The Mediating Role of Entrepreneurial Education. Asia Pacific Journal of Innovation and Entrepreneurship, 17(1), 20–45. https://doi.org/10.1108/apjie-06-2022-0055

Setiawan, A., Soetjipto, B. E., & Rudijanto, E. T. D. (2020). The Impact of Understanding Economic Literacy and Lifestyle on Entrepreneurial Intention of Students in Higher Education. Mec-J (Management and Economics Journal), 4(3), 215–222. https://doi.org/10.18860/mec-j.v4i3.9565

Shi, Y., Yuan, T., Bell, R., & Wang, J. (2020). Investigating the Relationship Between Creativity and Entrepreneurial Intention: The Moderating Role of Creativity in the Theory of Planned Behavior. Frontiers in Psychology, 11. https://doi.org/10.3389/fpsyg.2020.01209

Soelaiman, L., Keni, K., & Puspitowati, I. (2024). Empowering Entrepreneurial Intentions: Educational Support and Self-Efficacy in MBKM Context. Jurnal Manajemen, 28(1), 23–44. https://doi.org/10.24912/jm.v28i1.1760

Susanto, E., Rofaida, R., & Senen, S. H. (2022). Green Human Resources Management in Hospitality Industries: a Systematic Literature Review. European Journal of Human Resource Management Studies, 5(4), 19–34. https://doi.org/10.46827/ejhrms.v5i4.1212

Sutarya, T. B. I. (2023). Policy Implementation Strategy of Link and Match for Vocational High School With Industry and the World of Work in Tangerang District, Indonesia. TJJPT, 44(4), 1193–1206. https://doi.org/10.52783/tjjpt.v44.i4.999

Triyono, M. B., Mutohhari, F., Kholifah, N., Nurtanto, M., Subakti, H., & Prasetya, K. H. (2023). Examining the Mediating-Moderating Role of Entrepreneurial Orientation and Digital Competence on Entrepreneurial Intention in Vocational Education. Journal of Technical Education and Training, 15(1). https://doi.org/10.30880/jtet.2023.15.01.011

Vogelsang, B., Röhrer, N., Fuchs, M., & Pilz, M. (2021). Cooperation Between Learning Venues and Its Limits: The Hotel Industry in Cancún (Mexico). International Journal for Research in Vocational Education and Training, 8(4), 67–89. https://doi.org/10.13152/ijrvet.8.4.4

Wu, L., Jiang, S., Wang, X., Yu, L., Wang, Y., & Pan, H. (2022). Entrepreneurship Education and Entrepreneurial Intentions of College Students: The Mediating Role of Entrepreneurial Self-Efficacy and the Moderating Role of Entrepreneurial Competition Experience. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.727826

Yohana, C. (2021). Determinants of Students' Entrepreneurial Intention: A Perspective of Tertiary Education in Indonesia. Jurnal Pendidikan Ekonomi Dan Bisnis (Jpeb), 9(1), 54–63. https://doi.org/10.21009/jpeb.009.1.6

Yousaf, S. U., Ali, S. A., Ahmed, M., Usman, B., & Sameer, I. (2021). From Entrepreneurial Education to Entrepreneurial Intention: A Sequential Mediation of Self-Efficacy and Entrepreneurial Attitude. International Journal of Innovation Science, 13(3), 364–380. https://doi.org/10.1108/ijis-09-2020-0133

Zhao, Y., & Ko, J. (2024). Vocational Teachers' Perceptions on Workplace Learning in Facilitating Students' Professional Engagement in the Context of Industry-University Collaboration in China. Journal of Workplace Learning, 36(4), 282–297. https://doi.org/10.1108/jwl-12-2023-0197

Ли, М., Han, Y., Hu, Y., & Sun, X. (2024). The Role of Vocational Education in the Integration of Culture and Tourism in the Information Age and Its Implementation Paths. Applied Mathematics and Nonlinear Sciences, 9(1). https://doi.org/10.2478/amns-2024-0286