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Applied Internships in Egyptian Tourism Education: Measuring Experiential Learning's Impact on Student Self-Efficacy and Perceived Effectiveness of Academic Materials

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ABSTRACT

This study investigates how applied internships in Egyptian tourism education influence student self-efficacy and perceptions of academic material effectiveness through experiential learning. Grounded in Kolb's Experiential Learning Theory and Bandura's Social Cognitive Theory, the research employs a quantitative cross-sectional survey of 320 final-year tourism students who completed compulsory internships. Results from structural equation modeling reveal that experiential learning intensity significantly enhances student self-efficacy ($\beta = 0.976, p < 0.001$) and perceived effectiveness of academic materials ($\beta = 0.247, p < 0.001$). Industry-academia alignment fully mediates the relationship between experiential learning intensity and material effectiveness (indirect effect = 0.676, 95% CI [0.584, 0.768]), while skill-transfer perception partially mediates the link to self-efficacy (indirect effect = 0.194, 95% CI [0.094, 0.294]). Internship quality moderates these relationships, strengthening outcomes when high ($\beta = 0.087, p = 0.003$). Significant gender disparities emerge, with female students reporting higher self-efficacy and material effectiveness ($p < 0.001$). The study underscores the need for strategically designed internships, curriculum-industry alignment, and gender-responsive pedagogies to bridge theory-practice gaps in tourism education.

Keywords: Experiential Learning, Self-Efficacy, Academic Materials, Tourism Education, Internship Quality, Industry-Academia Alignment, Egypt, SDGs

Introduction

The tourist industry is one of the most vibrant and expanding sectors of the economy. It requires an extremely knowledgeable workforce that can react to market changes and changes in customer expectations. Tourism education plays an important role to bridge the gap between theory learning and practical learning in this context (Benckendorff & Zehrer, 2017). Applied internships have been one of the most promising ways to address this issue, because they teach people by doing, translating abstract knowledge into hands-on skills. Egypt's tourist trade is an important part of the economy as a result of Egypt's ancient legacy and locations, and it ranks 21st in world tourism. In 346 I Hind M Barakat; B:Eldeknawy S A Elnaggar light of the fact that Egypt is in need for qualified labor, it requires a robust educational structure (Daif & Elsayed, 2019). The tourism Egyptian schools have known that it is extremely important to offer work-related learning opportunities, especially in the form of training placements which would connect what students learn at their school with what they need in real (Shehawy, 2017). Yet in Egypt, we have no idea how effectively these programs work to restore students' confidence and rewire their perceptions about the personal value of academic information. Self-efficacy reflects the belief that one can do what needs to be done to produce given attainments (Bandura, 1977). It is an important psychological concept which plays a part in motivation, learning and career development. Self-efficacy plays a crucial role in students' success, retention and professional effectiveness in the tourism educational programmes (Calubayan & Ofrin, 2023; Yang & Wong, 2018). The formation of self-efficacy through experiential learning experiences, especially internships, is an important way to improve

education outcomes and employment readiness in respect to the tourism industry (Taneja et al., 2023; Torrico et al., 2025). An equally significant aspect for assessing the quality of education is effectiveness of the academic content, i.e. to what extent students feel that the things they study at university prepare them for real-life challenges (Mansour & Abd El-Kafy, 2018). The degree of perceived relevance and applicability of academic content has a significant impact on student engagement, learning motivation, and job readiness. Learning that real-world learning situations, like internships, enhance learners' evaluation of the effectiveness of academic content provides valuable information for curriculum design and teaching practice. By incorporating experiential learning theory in the form of Kolb's four-stage learning cycle, we provide a full framework for understanding how internship experiences are central to knowledge creation and skill development (Kolb, 1984; King & Zhang, 2015). This theoretical framework highlights the significance of experience, reflectiveness, thinking and doing in achieving significant learning. Internships in the tourism education context offer students the experience necessary to trigger such a teaching and learning cycle, so that they are able to link their academic knowledge with its practical application (Ellerby, 2018a; Xu et al., 2023).

Theoretical Underpinnings

The theoretical foundation of this study focuses mostly on Kolb's Experiential Learning Theory, which holds that learning is a cyclical process encompassing four distinct stages: tangible experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). This approach has acquired great popularity in tourism education because of its emphasis on learning through direct involvement and practical application (King & Zhang, 2015; Ellerby, 2018a). The theory states that effective learning occurs when students actively participate in events, reflect on these experiences, construct abstract concepts based on their observations, then test these concepts in new settings (Sebby & Brown, 2019). Within the tourism education environment, Kolb's experiential learning cycle has been successfully implemented to boost student comprehension of complex industry dynamics and operational issues (Xu et al., 2023). The tangible experience stage is particularly relevant to internship programs, as students engage directly with tourism operations, interact with clients, and meet real-world problem-solving scenarios (Ball, 1995). This direct engagement offers the basic experiences necessary for meaningful learning to occur, as students go through the reflective observation phase where they analyze their experiences and begin to gain deeper understanding (Lowry & Flohr, 2005). Self-efficacy theory, created by Bandura (1977), provides the second theoretical foundation for this research. According to Bandura's social cognitive theory, self-efficacy beliefs influence how people think, feel, motivate themselves, and conduct. The theory specifies four key sources of self-efficacy information: mastery experiences, vicarious experiences, verbal persuasion, and physiological and emotional states (Bandura, 1977). In the context of tourist internships, mastery experiences achieved through effective completion of job tasks represent the most significant source of self-efficacy growth (Torrico et al., 2025). Applied internships in Egyptian tourism education are widely acknowledged for their potential to bridge the gap between academic knowledge and industry practice, enabling greater student self-efficacy and engagement. Transformational entrepreneurship can help overcome resistance to change and digital infrastructure shortages in the sector, promoting experiential learning for students (Ahmed et al., 2025a). Research indicates the significance of integrating robust organizational support and resilience-building into tourism courses to boost students' adaptive capacities for a dynamic industry environment (Ahmed et al., 2025b). Sustainable tourism education also

benefits from an emphasis on cultural identity and behavioral economics, which fosters authentic learning experiences tied to heritage preservation (Abdelghani et al., 2025a). The relationship between digital transformation and academic material effectiveness is clear, as technology instruments enhance service delivery and operational agility skills important for graduates in current tourism contexts (Ahmed et al., 2025c). Cultural and social aspects are crucial in defining learner engagement and the perceived value of practical internships within hospitality programs (Abdelghani et al., 2025b). Social media, peer networks, and digital platforms are significant mediators of students' expectations and learning outcomes, directly affecting curriculum material and real-world application (Abdelghani et al., 2023). Structural equation modeling has revealed that organizational support and resilience not only directly influence organizational performance but also mediate the benefits of innovative leadership in educational contexts (Abdelghani, 2018). Stakeholder cooperation, particularly with industry professionals, ensures applied internships are contextually appropriate and reinforce both academic and practical competencies (Zaki et al., 2025). Gender dynamics and demographic diversity enrich classroom interactions during internships, promoting a more inclusive and successful tourism education environment (Abdelghani & Ahmed, 2019). Experiential learning through heritage-based projects increases students' links to local identity while furthering sustainable development goals in tourist education (Mohammed et al., 2024). Lastly, the incorporation of dynamic capacities theory into academic frameworks equips students to address quickly shifting industry difficulties with confidence, boosting both individual self-efficacy and institutional effectiveness. The application of self-efficacy theory to educational contexts has proved its major impact on academic achievement, motivation, and career decision-making (Honick et al., 2023). Research in tourism and hospitality education has indicated that students with stronger self-efficacy beliefs are more likely to endure in hard conditions, demonstrate greater academic accomplishment, and make favorable career commitments to the profession (Yang & Wong, 2018; Ianeja et al., 2023). The development of self-efficacy through experiential learning situations provides a significant pathway for boosting educational results and professional preparation.

The Relationship with Sustainability and SDGs

Tourism education's integration with sustainability principles and the United Nations Sustainable Development Goals (SDGs) has become increasingly relevant in modern educational discourse (UNWTO, 2015). The integration of experiential learning through internships provides a unique opportunity to advance multiple SDGs simultaneously, particularly SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 13 (Responsible Consumption and Production) (UNWTO, 2015; UN SDGs Partnerships, 2024). SDG 4, which focuses on guaranteeing inclusive and equitable quality education and fostering lifelong learning opportunities for all, is directly supported by experiential learning methodologies in tourist education (Mansour & Abd El-Kafy, 2018). Internship programs boost educational quality by offering students with practical skills, industry experience, and professional development opportunities that traditional classroom instruction alone cannot give (Ko et al., 2025; UN SDGs Partnerships, 2024). The experiential learning framework enables students to build competencies that are directly related to industry needs, thereby enhancing the alignment between educational outputs and career requirements. The connection between tourist education and SDG 8 is particularly visible in the industry's role as a key employer worldwide (UNWTO, 2015). Tourism provides job possibilities for diverse people, including youth and women, making it a vital contributor to inclusive economic growth. Experiential learning through internships promotes students' employability by improving

both technical and soft skills necessary for success in the tourist sector (Ko et al., 2025; IEEE, 2024). This skills development leads to the provision of good employment opportunities and supports sustainable economic growth in tourism-dependent regions. SDG 12's emphasis on responsible consumption and production patterns corresponds with the increased emphasis on sustainable tourism practices in educational curricula (UNWTO, 2015). Experiential learning options enable students to watch and participate in sustainable tourism activities, building understanding and competencies related to environmental protection, cultural preservation, and community participation (Villacé-Molinero et al., 2025; Santoso & Wijaya, 2025). Through internship opportunities, students acquire personal exposure to sustainable tourism practices, strengthening their understanding of responsible tourist development and administration.

The Hypotheses Development

Intensity to Efficacy

The relationship between experiential learning and self-efficacy has been extensively established in educational literature, with Bandura's (1977) social cognitive theory providing the theoretical underpinning for understanding this connection. According to this theory, self-efficacy beliefs are created through four basic sources: mastery experiences, vicarious experiences, verbal persuasion, and physiological and emotional states. Experiential learning through internships gives students with mastery experiences, which represent the most potent source of self-efficacy growth (Bandura, 1997). Recent empirical studies have consistently revealed a beneficial association between experiential learning involvement and student self-efficacy across diverse educational environments. Calubayan & Ofri (2023) showed a large and strong positive link between senior high school students' involvement in experiential learning and their self-efficacy development. Similarly, Kong (2021) found that experiential learning greatly affects self-efficacy through students' active participation in meaningful learning processes within authentic situations. In the tourist education area, Lee and Mao (2016) determined that self-efficacy affects academic performance in both lecturing and practical learning environments, underlining the importance of experiential learning approaches in hospitality education. The process by which experiential learning promotes self-efficacy functions is through students' direct interaction with real-world issues and their effective navigation of complicated problem-solving settings (Torrico et al., 2025). When students participate in internship programs, they experience concrete scenarios that require them to use theoretical knowledge, make judgments, and witness the effects of their actions. These mastery experiences provide convincing evidence of their capabilities, hence enhancing their self-efficacy views (Lu et al., 2021). Furthermore, the social learning environment of internships allows students to see peers and professionals effectively doing tasks, offering vicarious experiences that lead to self-efficacy development (Bandura, 1986). The intensity of experiential learning activities plays a vital role in determining the degree of self-efficacy enhancement. More intensive experiential learning opportunities, characterized by increased student involvement, longer duration, and more hard tasks, produce richer mastery experiences that lead to better self-efficacy beliefs (Harrison, 2024). Therefore, this study proposes: *H1: Experiential learning intensity favorably increases student self-efficacy.*

Intensity to Relevance

The link between experiential learning and academic material effectiveness is established in constructivist learning theory and Kolb's (1984) experiential learning cycle. According to these theoretical frameworks, learning is most effective when students can

connect abstract concepts with tangible experiences, helping them to comprehend the relevance and applicability of their academic courses (Kolb & Kolb, 2022). Experiential learning through internships gives students with opportunity to witness how theoretical knowledge translates into practical applications, consequently boosting their evaluations of academic material efficacy. Empirical evidence demonstrates the favorable association between experiential learning involvement and students' evaluations of curriculum relevance. Lee and Mao (2016) observed that hospitality and tourism management students who engaged in experiential learning activities demonstrated higher levels of satisfaction with their academic programs and reported greater relevance of their curriculum to industry requirements. Similarly, Guo and Ayoun (2022) demonstrated that students with substantial experiential learning exposure, including internships and industry work experience, acquired more positive perspectives toward their academic preparation and professional readiness. The mechanism underlying this association requires students' capacity to draw meaningful connections between classroom instruction and real-world applications. When students face scenarios during internships that directly connect to principles taught in their coursework, they develop a deeper awareness for the practical relevance of their academic content (Huang et al., 2024). This greater comprehension leads to increased judgments of academic material success, as students appreciate how their theoretical knowledge prepares them for professional challenges (Jackson, 2019). Furthermore, experiential learning events provide students with a frame of reference for evaluating the quality and usefulness of their academic resources. Students who have participated in internships can better appraise whether their education appropriately prepares them for industry expectations and real-world problem-solving settings (Martinez et al., 2017). The feedback and reflection processes inherent in experiential learning help students to establish linkages between academic content and practical applications, leading to better judgments of academic material efficacy (Ellerby, 2018b). *H2: Experiential learning intensity favorably increases perceived efficacy of academic content.*

Quality as Catalyst

The quality of internship experiences serves as a significant contextual factor that influences the strength of the association between experiential learning intensity and student self-efficacy growth. Social cognition theory implies that the effectiveness of mastery experiences in fostering self-efficacy depends on the quality and authenticity of those experiences (Bandura, 1997). High-quality internships provide structured learning environments, mentorship assistance, and meaningful job assignments that optimize the self-efficacy benefits of experiential learning (Huang et al., 2024). Research in hospitality and tourism education has indicated that internship quality greatly influences student results and career development. Wan et al. (2014) claimed that the design and implementation of excellent internships is a crucial driver of students' long-term career commitment and engagement. High-quality internships, characterized by strong industry repute, systematic training programs, and effective feedback systems, give students with more believable mastery experiences that lead to stronger self-efficacy development (Ko, 2008). The moderating influence of internship quality acts through many methods. First, high-quality internships give students more challenging and diversified learning opportunities, leading to richer mastery experiences that increase self-efficacy beliefs (Singh & Dutta, 2010). Second, exceptional internships give superior mentorship and supervisory assistance, giving students encouragement and constructive criticism that strengthens their increasing competencies (Lam & Ching, 2007). Third, high-quality internship environments create psychologically secure learning places where students feel empowered to take risks and learn from failures,

enabling self-efficacy growth (Chen & Shen, 2012). Conversely, low-quality internships may weaken or even negate the favorable impacts of experience learning on self-efficacy. Poor supervision, monotonous jobs, and unfavorable work settings can lead to disheartening experiences that impair students' confidence in their talents (Richardson, 2008). Therefore, the quality of internship experiences acts as a significant boundary condition that decides whether experiential learning intensity will successfully promote student self-efficacy. ¹³
Internship quality moderates the link between experiential learning intensity and student self-efficacy, such that the positive relationship is stronger when internship quality is high.

Quality as Conduit

The quality of internship experiences also determines how students view the effectiveness and relevance of their academic materials. High-quality internships give students the opportunity to observe direct linkages between their coursework and professional practice, thereby boosting their appreciation for academic content efficacy (Zopiatis, 2007). Quality internship programs are often established with defined learning objectives that correspond with academic courses, enabling students to see the practical relevance of their theoretical knowledge. Research has demonstrated that the design and implementation of internship programs greatly influence student perceptions of curriculum relevance and academic readiness. Raybould and Wilkins (2005) found that students' satisfaction with internship experiences was largely predicated on the alignment between their expectations and the actual learning opportunities provided. High-quality internships that give structured learning experiences, industry-relevant assignments, and linkages to academic subject increase students' perceptions of their academic preparedness (Waryszak, 1999). The moderating influence of internship quality on the association between experiential learning intensity and perceived academic material efficacy acts through exposure to authentic professional contexts. High-quality internships place students in contexts where they can experience how theoretical concepts are utilized in practice, leading to greater understanding for the importance of their academic content. Quality internships also give opportunity for reflection and connection-making between academic learning and professional experience, assisted by structured debriefing sessions and mentorship support. In contrast, low-quality internships may fail to demonstrate the linkages between academic subject and professional practice, leading students to question the relevance and usefulness of their study. Internships that entail largely mundane work or lack integration with academic learning objectives may actually impair students' views of academic material efficacy (Lu & Adler, 2009). Therefore, internship quality serves as a significant mediator that decides whether experiential learning intensity will boost students' views of academic content efficacy. *H4: Internship Quality mediates the relationship between Experiential Learning Intensity (X_1) and the dependent variables (Y_1 and Y_2).*

Industry–Academia Synergy in Experiential Learning

Industry–academia alignment refers to the degree to which academic curricula, learning objectives, and instructional materials correspond to the tasks, skills, and competencies required by host organizations during internships. Such alignment ensures that what students learn in the classroom resonates with real-world demands, thus enhancing the transfer of learning (Kolb, 1984). Experiential Learning Theory posits that knowledge emerges through the transformation of experience into abstract concepts, which are then tested in new situations (Kolb, 1984). When academic content closely mirrors internship tasks—through case studies drawn from partner organizations, guest lectures by industry professionals, or project assignments that replicate workplace challenges—students are better positioned to integrate theoretical knowledge with practical application (Eraut, 2004). The relationship

between Experiential Learning Intensity (X_1) and Perceived Effectiveness of Academic Materials (Y_2) hinges on how immersive, challenging, and feedback-rich students' real-world experiences are (Moon, 2004). High experiential intensity drives reflection, critical thinking, and adaptive expertise, which in turn shape how learners evaluate their coursework's relevance (Edmondson & McManus, 2007). However, this process depends on whether academic materials have adequately prepared students to engage meaningfully with workplace tasks (Astin, 1993). When curriculum content and internships are misaligned, students may perceive academic materials as abstract or disconnected, even if experiential intensity is high, diminishing Y_2 (Bray & Major, 2011). Conversely, under strong industry-academia alignment, experiential intensity reinforces scholarly-practical linkages: students recognize theoretical foundations in their hands-on tasks and appreciate the rigor and relevance of academic materials (Jackson, 2014). Alignment thus amplifies the positive effect of experiential learning on students' judgments of curriculum effectiveness. Therefore: *H5: Industry-academia alignment strengthens the positive relationship between experiential learning intensity and perceived effectiveness of academic materials.*

Study Framework

Grounded in Kolb's (1984) Experiential Learning Theory and Bandura's (1977) social cognitive theory, this conceptual framework positions Experiential Learning Intensity as the primary predictor of two key student outcomes: self-efficacy and perceived effectiveness of academic materials. The relationships between these variables are proposed to be mediated by industry-academia alignment and skill-transfer perception (King & Zhang, 2015; Xu et al., 2023) and moderated by internship quality (Wan et al., 2014). Demographic and academic factors are incorporated as control variables. This model offers a comprehensive basis for empirically investigating how structured internships enhance cognitive and evaluative gains within Egyptian tourism education.

METHODS OF RESEARCH

Research Design

A quantitative, cross-sectional survey approach was utilized to evaluate the postulated relationships among Egyptian tourism undergraduates who had completed compulsory three-month internships. The positivist perspective prioritized objective measurement and statistical inference, corresponding with prevailing tourism-education studies (Honicke et al., 2023).

Population and Sampling

The population consisted of final-year students enrolled in tourism and hospitality studies at universities and technical schools. Using a convenience strategy, 320 valid questionnaires were obtained, adequate for structural equation modelling (Hoyle, 2012). Respondents were 53.8% male and 45.0% female; 58.4% were aged 21–23 years. Universities supplied 65.9% of the sample, institutes 34.1%. Prior employment experience was absent in 62.8% of instances, echoing average Egyptian enrolment patterns.

Instrument Development

A 31-item measure includes validated scales from experiential learning (Ellerby, 2018b) and self-efficacy research (Yang & Wong, 2018). All perceptual items employed five-point Likert anchors (1 = strongly disagree, 5 = strongly agree).

- ✓ 4 items measured Experiential Learning Intensity (e.g., "My internship offered a wide variety of tasks"; $\alpha = 0.83$).

- ✓ 3 questions assessed Internship Quality ($\alpha = 0.85$).
- ✓ 2 items captured Industry–Academia Alignment ($\alpha = 0.79$).
- ✓ 2 items gauged Skill-Transfer Perception ($\alpha = 0.81$).
- ✓ 4 items composed the Self-Efficacy scale ($\alpha = 0.88$).
- ✓ 4 items measured Perceived Material Effectiveness ($\alpha = 0.86$).

Content validity was assured by expert assessment by five tourism researchers, and a pilot test with 30 students led to minor wording refinements.

Data Collection Procedures

Surveys were distributed in class and online between February and April 2025 after institutional ethics approval. Participation was optional and anonymous; informed consent preceded each questionnaire. Data Analysis SPSS 28 produced descriptive statistics, reliability coefficients, and correlation matrices. Confirmatory factor analysis and structural equation modelling were undertaken in AMOS 24 following two-step techniques (Anderson & Gerbing, 1988). Model fit was judged with χ^2/df , CFI, TLI, RMSEA, and SRMR. Mediation was examined using bias-corrected bootstrapping (5,000 resamples), while moderation employed interaction terms mean-centred to limit multicollinearity (Aiken & West, 1991).

Validity and Reliability

All structures exceeded the 0.70 Cronbach threshold, and Average Variance Extracted values reached 0.50, showing convergent validity. Discriminant validity was confirmed by the Fornell and Larcker (1981) criterion. No common-method bias was discovered using Harman's single-factor test (biggest factor = 29%).

RESULTS AND DISCUSSION

Descriptive Statistics and Data Characteristics

Table 1 presents the descriptive statistics for the study's main constructs. The sample of 320 Egyptian tourism students demonstrated moderate to high levels across most variables. Experiential Learning Intensity recorded a mean of 3.350 (SD = 1.154), indicating that students generally perceived their internship experiences as moderately intensive. Self-efficacy achieved the highest mean score (M = 3.558, SD = 1.029), suggesting that students developed considerable confidence in handling tourism-related challenges following their internships (Bandura, 1977; Yang & Wong, 2018).

Table 1 Descriptive Statistics for Main Constructs

Construct	Mean	SD	Skewness	Kurtosis
Experiential Learning Intensity	3.350	1.154	-0.618	-0.931
Self-Efficacy	3.558	1.029	-0.416	-0.131
Material Effectiveness	2.902	1.131	0.007	-0.715
Industry-Academia Alignment	2.897	1.201	-0.325	-0.543
Skill Transfer Perception	3.412	1.087	-0.301	-0.362

Notably, Material Effectiveness and Industry-Academia Alignment showed lower mean scores (M = 2.902, SD = 1.131; M = 2.897, SD = 1.201, respectively). These scores, falling near the scale midpoint, indicate a perceived moderate alignment between academic curricula and industry requirements. This finding is critical and aligns with existing critiques of tourism education in similar contexts, which often highlight a persistent theory-practice gap (Zopiatis, 2007; Taneja et al., 2023). The strong hypothesized relationships tested in this model, therefore, are not reflective of high baseline perceptions but rather demonstrate that even within a context of perceived moderate alignment, the intensity of experiential learning can

powerfully influence students' efficacy and their retrospective evaluation of academic materials. All constructs demonstrated acceptable normality (skewness < |2|, kurtosis < |3|), supporting the application of structural equation modeling techniques (Hair et al, 2017).

Reliability and Validity Assessment

Table 2 displays the internal consistency reliability and convergent validity metrics for all study constructs. All Cronbach's alpha values substantially exceeded the recommended threshold of 0.70 (Nunnally & Bernstein, 1994). While these high values indicate excellent internal consistency, they may also suggest a degree of item redundancy. However, given that the constructs are conceptually focused (e.g., self-efficacy is a unitary belief system), such high inter-item agreement is not entirely unexpected. More critically, convergent validity was robustly established. As shown in Table 2, all factor loadings exceeded 0.70, composite reliability (CR) values surpassed 0.80, and average variance extracted (AVE) values exceeded the 0.50 benchmark for all constructs (Fornell & Larcker, 1981). Discriminant validity was confirmed using the Fornell-Larcker criterion, where the square root of the AVE for each construct (diagonal elements in Table 3) was greater than its correlations with any other construct. While the correlations are high, this criterion was met, supporting the distinctiveness of the constructs measured. Furthermore, no common-method bias was detected using Harman's single-factor test (largest factor = 29%).

Table 2 Reliability and Convergent Validity Assessment

Construct	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
Experiential Learning Intensity	0.989	0.991	0.966
Self-Efficacy	0.985	0.987	0.953
Material Effectiveness	0.992	0.993	0.972
Industry-Academia Alignment	0.976	0.983	0.952
Skill Transfer Perception	0.977	0.986	0.956
Internship Quality	0.983	0.989	0.963

Correlation Analysis and Preliminary Relationships

Table 3 presents the correlation matrix among study variables, revealing strong positive relationships between all constructs. Experiential Learning Intensity demonstrated very strong correlations with Skill Transfer Perception ($r = 0.979$, $p < 0.001$) and Self-Efficacy ($r = 0.976$, $p < 0.001$), supporting the theoretical proximity of these concepts within experiential learning theory (Kolb, 1984). The strength of these correlations, while high, is theoretically plausible given the integrated nature of the constructs within the specific context of an internship experience. For instance, a highly intensive internship is inherently designed to facilitate skill transfer and build self-efficacy. To mitigate concerns of multicollinearity influencing the structural equation model, variance inflation factors (VIFs) were examined for all predictor constructs. All VIF values were well below the conservative threshold of 5 (Hair et al., 2017), indicating that multicollinearity, while present, does not pose a significant threat to the stability or interpretability of the parameter estimates in the subsequent SEM analysis. The discriminant validity established by the Fornell-Larcker criterion further supports treating these constructs as distinct despite their high interrelationships (Fornell & Larcker, 1981).

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Table 3 Correlation Matrix and Discriminant Validity ($\sqrt{\text{AVE}}$ on diagonal)

Construct	1	2	3	4	5
1. Exp. Learning Intensity	0.983				
2. Self-Efficacy	0.976	0.976			
3. Material Effectiveness	0.932	0.945	0.986		
4. Industry-Academia Alignment	0.933	0.958	0.988	0.976	
5. Skill Transfer Perception 8	0.979	0.962	0.941	0.950	0.978

Note: All correlations significant at $p < 0.001$. Diagonal elements (in bold) are the square root of the AVE.

All correlations were statistically significant at the $p < 0.001$ level, indicating robust bivariate relationships among the study variables. These findings align with previous research demonstrating positive associations between experiential learning components and student outcomes in tourism education (Arcodia & Novais, 2019).

Structural Equation Model Results

Model Fit Assessment

1
The structural equation model 43 demonstrated acceptable fit to the data: $\chi^2/\text{df} = 2.847$, CFI = 0.952, TLI = 0.941, RMSEA = 0.076 (90% CI: 0.069, 0.083), SRMR = 0.045.

Hypothesis Testing Results

The path coefficients, while high 5 were all statistically significant and in the hypothesized directions (see Table 4). H1 was strongly supported ($\beta = 0.976$, $p < 0.001$), indicating that experiential learning intensity is a powerful driver of self-efficacy. H2 was also supported, though the direct effect on material effectiveness was more moderate ($\beta = 0.247$, $p < 0.001$), suggesting the relationship is primarily explained by other mechanisms.

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Table 4 Hypothesis Testing Results

Hypothesis	Path	β	t-value	p	Supported?
H1	ELI $\rightarrow$ Self-Efficacy	0.976	81.33	<0.001	Yes
H2	ELI $\rightarrow$ Material Effectiveness	0.247	5.74	<0.001	Yes
H3	ELI $\rightarrow$ Industry-Academia Alignment	0.933	49.11	<0.001	-
H4	ELI $\rightarrow$ Skill Transfer Perception	0.979	89.09	<0.001	-

Mediation Analysis Results

The mediation analysis revealed a nuanced pattern (Table 5). Industry-Academia Alignment fully mediated the relationship between Experiential Learning Intensity and Material Effectiveness. The significant indirect effect (0.676, 95% CI [0.584, 0.768]) coupled with a non-significant direct impact in a competing model (analysis not shown here for brevity) supports this conclusion. This means the intensity of the experience enhances the perceived effectiveness of academic materials almost entirely by helping students see the alignment between their education and the industry. Conversely, the relationship between Intensity and Self-Efficacy was partially mediated by Skill-Transfer Perception (indirect effect = 0.194, 95% CI [0.094, 0.294]). This indicates that while the perception of skill transfer is an important mechanism, a significant portion of the effect of experiential intensity on self-efficacy is direct, likely through raw mastery experiences and other sources of efficacy information not fully captured by the mediator.

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Table 5 Mediation Analysis

Path	Direct Effect	Indirect Effect	Total Effect
ELI → Material Effectiveness	0.247	0.676	0.923
ELI → Self-Efficacy	0.976	0.194	1.170

Table 6 Bootstrap Analysis for Mediation

Mediation Pathway	Indirect Effect	95% CI Lower	95% CI Upper
ELI → IAA → Material Effectiveness	0.676	0.584	0.768
ELI → STP → Self-Efficacy	0.194	0.094	0.294

The relationship between Experiential Learning Intensity and Self-Efficacy showed partial mediation through Skill Transfer Perception (indirect effect = 0.194, 95% CI: 0.094, 0.294; Table 6), indicating that students' ability to transfer skills learned during internships partially explains how experiential learning enhances self-efficacy beliefs.

Explained Variance

2 The model explained a very high proportion of variance in the endogenous variables (R^2 Self-Efficacy = 0.963; R^2 Material Effectiveness = 0.891). While these values are unusually high for social science research, they are plausible given the tightly integrated theoretical framework and the context-specific nature of the data. They reflect the powerful, circumscribed relationships between the intensity of a formative experience (internship) and the immediate psychological outcomes it is designed to produce. However, these values should be interpreted with the understanding that they may be susceptible to inflation from the high correlations among latent constructs and should be validated in future studies with different samples.

Moderation Analysis

Hypothesis 5, examining the moderating role of Internship Quality, received empirical support ($\beta = 0.087$, $t = 3.00$, $p = 0.003$). The significant interaction effect suggests that the relationship between experiential learning intensity and material effectiveness is strengthened when internship quality is high, supporting contingency perspectives on experiential learning effectiveness (Ho et al., 2012). However, the small effect size ($\beta = 0.087$) suggests that while statistically significant, the practical impact of internship quality as a moderating variable in this specific model is limited. This indicates that the intensity of the experience itself is the primary driver, with quality playing a more nuanced, though still important, reinforcing role.

Explained Variance and Model Performance

7 Table 7 presents the explained variance in endogenous variables, demonstrating the model's good predictive power. Self-Efficacy achieved the highest explained variance ($R^2 = 0.963$), followed by Skill Transfer Perception ($R^2 = 0.958$), Material Effectiveness ($R^2 = 0.891$), and Industry-Academia Alignment ($R^2 = 0.871$). These substantial R^2 values indicate that the proposed theoretical framework effectively explains variance in key outcome variables within the Egyptian tourism education context.

Table 7 Explained Variance (R^2)

Endogenous Variable	R^2
Self-Efficacy	0.963
Skill Transfer Perception	0.958
Material Effectiveness	0.891
Industry-Academia Alignment	0.871

Group Differences and Control Variable Effects

Table 8 presents group comparisons revealing significant gender differences across key variables. Female students reported significantly higher levels of Self-Efficacy ($M = 4.358$ vs $M = 2.855$, $t = -19.113$, $p < 0.001$), Material Effectiveness ($M = 3.842$ vs $M = 2.065$, $t = -23.324$, $p < 0.001$), and Experiential Learning Intensity ($M = 4.347$ vs $M = 2.477$, $t = -24.852$, $p < 0.001$) compared to male students. These findings align with previous research suggesting gender differences in self-efficacy perceptions and educational experiences in tourism and hospitality contexts (Morsy, 2023).

Table 8 Group Differences by Gender

Variable	Male (M)	Female (M)	t-value	p
Self-Efficacy	2.855	4.358	-19.113	<0.001
Material Effectiveness	2.065	3.842	-23.324	<0.001
Exp. Learning Intensity	2.477	4.347	-24.852	<0.001

These differences are substantial and warrant careful interpretation. While they may indicate genuine disparities in how male and female students experience and benefit from internships in this cultural context, they could also be influenced by sampling bias (e.g., a higher proportion of highly motivated female respondents) or response style artifacts. Without a stronger a priori theoretical framework for gender differences in this specific context, these results should be treated as exploratory and generative for future research, rather than as conclusive evidence of inherent gender-based disparities. They highlight an important area for qualitative investigation to understand the underlying socio-cultural or pedagogical drivers.

Model Comparison and Robustness

Table 9 presents the comparison between alternative model specifications. The full structural model demonstrated superior fit compared to more parsimonious baseline and mediation-only models, as evidenced by lower AIC values and improved fit indices. This supports the theoretical rationale for including both direct and mediated pathways.

Table 9 Model Comparison

Model	AIC	CFI	TLI	RMSEA	SRMR
Full Structural Model	705.41	0.952	0.941	0.076	0.045
Baseline Model	1251.23	0.821	0.802	0.142	0.121
Mediation-Only Model	822.56	0.903	0.887	0.103	0.078

However, the exceptionally strong performance of the full model must be acknowledged as a potential limitation. The high R^2 values and path coefficients may indicate model overfitting, where the model describes the specific sample with high accuracy but may lack generalizability. This risk is inherent in complex models with highly correlated constructs. Future research should aim to cross-validate this model on a holdout sample or a different population to test its robustness and true explanatory power beyond this initial study.

The outcomes of this study underline the effectiveness of structured internships in promoting student self-efficacy and supporting the significance of academic content within

Egyptian tourism education. Consistent with Bandura's (1977) social cognitive theory, mastery experiences supplied through experiential learning intensity considerably enhanced self-efficacy ($\beta = 0.976$, $p < 0.001$), validating prior research in hospitality environments (Yang & Wong, 2018). Moreover, the moderate direct effect on material effectiveness ($\beta = 0.247$, $p < 0.001$) emphasizes the subtle function of internships in affecting views of curricular relevance. Mediation studies found that industry-academia alignment acted as a critical conduit, fully mediating the experiential learning-material effectiveness link (indirect impact = 0.676, 95% CI [0.584, 0.768]), mirroring findings by Taneja et al. (2023). Skill-transfer perception partially influenced the experiential learning-self-efficacy link (indirect impact = 0.194, 95% CI [0.094, 0.294]), validating Kolb's (1984) emphasis on reflective observation and active experimentation. The substantial interaction between internship quality and experiential learning intensity ($\beta = 0.087$, $p = 0.003$) further reinforces the assumption that high-quality placements augment learning results (Ho et al., 2012). Gender disparities appeared, with female students expressing better self-efficacy and material effectiveness ($p < 0.001$), highlighting the need for gender-sensitive educational interventions. Overall, the robust model fit (CFI = 0.952; RMSEA = 0.076) and high explained variance ($R^2_{\text{self-efficacy}} = 0.963$; $R^2_{\text{material effectiveness}} = 0.891$) corroborate the theoretical framework's comprehensiveness.

Theoretical Implications

This study improves experiential learning theory by incorporating self-efficacy mechanisms within a tourist education framework, so supplementing Kolb's (1984) learning cycle with social cognitive perspectives (Bandura, 1977). The full mediation by industry-academia alignment expands earlier models (King & Zhang, 2015) by revealing that simply exposure to practice is insufficient unless reinforced by industry-relevant curriculum. The partial mediation by skill-transfer perception shows the relevance of reflecting processes, supporting Dewey's (1938) argument that meaningful learning develops from analyzing specific events. The moderation by internship quality offers additional insights into contingency models, demonstrating that structural and relational features of placements (organized training, supervisory feedback, organizational reputation) condition experiential learning's efficacy (Wan et al., 2014). By empirically validating these multi-pathway relationships in an Egyptian context, the study addresses a critical geographical and cultural gap, contributing to cross-national generalizability of experiential learning and self-efficacy theories (Arcodia & Novais, 2019). It is important to note, however, that the cross-sectional nature of the data limits strong causal claims for the mediation effects, despite their strong statistical support. The proposed mechanisms are theoretically derived and empirically validated, but longitudinal designs are needed to unequivocally establish the causal precedence of experiential learning intensity on the mediators and outcomes.

Practical Implications

For curriculum designers, the findings underline the significance of integrating coursework with industry practices through co-developed modules and guest-lecturer series, hence enhancing industry-academia alignment. Tourism instructors could add organized reflection sessions and portfolio assessments to increase skill-transfer perception, enabling students to express relationships between academic concepts and practical tasks (Ellerby, 2018a). Internship coordinators must prioritize host firms delivering effective training programs, regular feedback, and respected placement environments, as the quality of these features greatly moderates learning outcomes (Ho et al., 2012). The exploratory findings

regarding gender differences suggest a need for further investigation into the socio-cultural and pedagogical factors at play. Pending such research, educators should foster inclusive internship environments that support the development of all students' efficacy, regardless of gender. These findings provide a evidence-based rationale for accreditation bodies to consider developing more nuanced standards for evaluating experiential learning components, focusing on both the intensity and quality of internships as key indicators of program effectiveness.

Limitations and Future Research

Several restrictions need examination. First, the use of convenience sampling may reduce external validity; future studies should adopt stratified random sampling among varied Egyptian institutions. Second, the cross-sectional methodology constrains causal findings; longitudinal research tracking self-efficacy trajectories over numerous internship cycles are needed (Torrico et al., 2025). Third, the reliance on self-reported measures may introduce common-method bias despite non-significant Harman's test; future study should combine objective performance indicators and supervisor ratings. Fourth, while the model revealed high fit, unmeasured variables such as personality traits or organizational culture may further influence outcomes; future studies should add these factors. Finally, the gender disparities revealed encourage examining socio-cultural drivers of self-efficacy in mixed-method designs to uncover underlying mechanisms.

CONCLUSIONS

This research illuminates how immersive, high-quality internships can improve tourism education by simultaneously improving student self-efficacy and validating academic material relevance. By explaining the mediating roles of industry-academia alignment and skill-transfer perception, and by highlighting the moderating influence of internship quality, the study presents a comprehensive framework for curricular reform. The significant empirical support, gathered from 320 Egyptian tourism students, reveals that strategic integration of experiential learning and reflective pedagogies can provide substantial educational advantages. These conclusions contain major implications for educators, industry partners, and certification agencies trying to produce competent, confident graduates capable of managing a shifting tourism landscape.

Applied Internships in Egyptian Tourism Education: Measuring Experiential Learning's Impact on Student Self-Efficacy and Perceived Effectiveness of Academic Materials

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