INTERDISCIPLINARY INTEGRATION OF TOURISM MANAGEMENT, FINANCE, AND STRATEGIC MANAGEMENT, INDUSTRY UNIVERSITY COLLABORATION-CASE BASED TEACHING DESIGN AS ANTECEDENTS OF PERCEIVED TEACHING EFFECTIVENESS IN TOURISM ENTERPRISE MANAGEMENT COURSES IN CHINESE PRIVATE UNIVERSITIES*

Qiye Teng[1] and Ao Chen[2]

[1-2]International College, Panyapiwat Institute of Management, Thailand

Corresponding Author's Email: qiyetengpim@outlook.com

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Abstract

This research article aimed to: (1) construct and measure the interdisciplinary integration, industry-academia-research collaboration, and case-based teaching design in the tourism enterprise management course; (2) examine the independent impact of these three teaching factors on students' perceived teaching effectiveness; (3) test the joint explanatory power of these three factors after controlling for student background factors; and (4) propose teaching improvement strategies for tourism enterprise management courses in Chinese private universities.

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Research employs a cross-sectional quantitative research design. Data were collected through a structured questionnaire. The survey participants were 352 undergraduate students majoring in tourism management or related fields in Chinese private universities who had completed at least 70% of the target course or had taken the course within the past 12 months. Data analysis was performed using SPSS software. Descriptive statistics, reliability and validity assessments, Pearson correlation analysis, multicollinearity diagnosis, multiple linear regression, and one-way ANOVA were used to test the research objectives and hypotheses.

The research results found that: (1) interdisciplinary integration, industry-university-research cooperation, and case-based teaching design were all perceived as being at a moderate level, and students' perception of teaching effectiveness was also at a moderate level; (2) all three factors could significantly and positively predict students' perception of teaching effectiveness, with case-based teaching design having the greatest impact (β = 0.390, $p < .001$), followed by interdisciplinary integration (β = 0.309, $p < .001$) and industry-university-research cooperation (β = 0.295, $p < .001$); (3) the overall regression model was statistically significant and could explain 52.3% of the variance in students' perception of teaching effectiveness ($R^2 = 0.523$, adjusted $R^2 = 0.514$, $F(6, 345) = 62.936$, $p < .001$). Supplementary ANOVA showed that there were significant differences in the perception of teaching effectiveness among students of different grades, with the fourth-year university students having the highest average score. These findings provide practical guidance for curriculum development, teaching improvement, and quality assurance in tourism enterprise management education.

Keywords: Interdisciplinary integration, industry–university collaboration, case-based teaching design, perceived teaching effectiveness tourism enterprise management

Introduction

Tourism enterprise management courses in Chinese private universities are increasingly expected to deliver measurable learning outcomes, employability relevance, and decision-making competence for a tourism economy shaped by digital distribution platforms, experience-driven consumption, and intensified competition among destinations and enterprises. In this context, students often judge teaching effectiveness not only by instructor delivery, but also by how well course objectives, learning activities, and assessments are designed to support authentic managerial problem solving.

Prior research indicates that students' perceived learning and satisfaction are associated with structured instructional design, facilitation, and direct instruction (Li & Wang, 2024), while evidence from Chinese private universities suggests that institutional conditions such as workload and career support can shape the teaching quality students experience (Liang, 2025). For professionally oriented fields like tourism and hospitality, these findings imply that teaching effectiveness depends on whether courses provide coherent practice-oriented learning tasks, clear expectations, and timely feedback.

Accordingly, this study examines three course-level antecedents that are actionable for curriculum and teaching improvement: (1) interdisciplinary integration of tourism management with finance and strategic management, (2) industry–university collaboration that increases the authenticity of learning experiences, and (3) case-based teaching design that enables students to apply cross-domain knowledge in realistic decision contexts. By focusing on these antecedents, the study aims to generate evidence that can guide teaching enhancement and quality assurance in tourism enterprise management courses within Chinese private universities.

Questions

RQ1: To what extent does interdisciplinary integration among tourism management, finance, and strategic management influence students' perceived teaching effectiveness?

RQ2: To what extent does industry–university collaboration influence students' perceived teaching effectiveness?

RQ3: To what extent does high-quality case-based teaching design influence students' perceived teaching effectiveness?

RQ4: To what extent do interdisciplinary integration, industry–university collaboration, and high-quality case-based teaching design jointly explain students' perceived teaching effectiveness?

Objectives

To conceptualize and measure interdisciplinary integration, industry–university collaboration, and high-quality case-based teaching design in tourism enterprise management courses.

To examine the independent effects of interdisciplinary integration, industry–university collaboration, and high-quality case-based teaching design on students' perceived teaching effectiveness.

To examine the joint explanatory power of the three antecedent variables in predicting students' perceived teaching effectiveness.

To propose targeted teaching improvement strategies for tourism enterprise management courses in Chinese private universities.

Literature Review

Interdisciplinary and practice-oriented pedagogy is increasingly framed as a response to the complexity and uncertainty that characterize modern service industries such as tourism(Boronenko et al., 2024), where managerial problems

cut across operational, financial, strategic, technological, and sociocultural dimensions. In higher education, learning designs that encourage students to connect concepts across disciplines can strengthen integrative reasoning and improve confidence in applying knowledge to authentic situations. This logic supports the expectation that when a tourism enterprise management course is explicitly designed to integrate tourism management, finance, and strategic management(Evans, 2024), students are more likely to perceive the teaching as effective because it aligns course content with the real decision environments that graduates will encounter.

A central implication of interdisciplinary curriculum research is that integration does not happen automatically. Integration requires a clear instructional vision, coordination of teaching materials, and assessment practices that reward synthesis rather than isolated recall. In applied professional programs, these requirements are particularly salient because students must learn to reconcile quantitative analysis (e.g., financial evaluation) with qualitative judgments (e.g., stakeholder trade-offs) while still meeting sector-specific standards of service quality and ethical practice(Xu & Wu, 2025). For tourism enterprise management courses, this means that teaching effectiveness is likely to be judged by the extent to which integration is visible in examples, tasks, and feedback, not only in a course outline.

1. Learning theory foundations of perceived teaching effectiveness

Perceived teaching effectiveness is typically framed as a perception-based outcome that reflects how students experience the design and delivery of instruction. In higher-education research, this perception is linked to learning theories that emphasize active meaning making, social interaction, and reflective practice. When teaching creates structured opportunities for students to articulate reasoning, test ideas, and receive feedback, students are more likely to view instruction as effective because it supports deeper learning rather than

surface memorization(Kyriakides et al., 2023). This framing is compatible with constructivist and experiential perspectives that prioritize authentic tasks and the integration of conceptual and practical knowledge in professional education.

2. Theories of interdisciplinarity and knowledge integration

Interdisciplinary integration is increasingly framed as a response to the complexity and uncertainty that characterize modern service industries such as tourism, where managerial problems cut across operational, financial, strategic, technological, and sociocultural dimensions. In higher education, learning designs that encourage students to connect concepts across disciplines can strengthen integrative reasoning and improve confidence in applying knowledge to authentic situations(Li & Zhu, 2022). This logic supports the expectation that when a tourism enterprise management course is explicitly designed to integrate tourism management, finance, and strategic management, students are more likely to perceive the teaching as effective because it aligns course content with the real decision environments that graduates will encounter.

3. Interdisciplinary integration in tourism enterprise management education

Tourism and hospitality education has undergone significant reform as educators respond to sustainability challenges, digital transformation, and changing visitor behavior. Recent scholarship in tourism education highlights the need to integrate sustainability, analytics, and managerial decision-making into curricula so that graduates can navigate complex stakeholder environments (Zhang, 2026). In such a context, interdisciplinarity is not merely an academic ideal; it is a competency requirement. Students' perceptions of teaching effectiveness are likely to increase when courses make these integrations explicit and when assignments help them practice boundary-crossing problem solving.

Empirical studies in China's tourism higher education provide additional context for the present model. Research using multi-institution samples of tourism students in China shows that learning outcomes such as learning gains,

professional identity, and career-related confidence can be shaped by educational experiences that connect curriculum content to practice and to students' future roles (Zhong et al., 2022)These findings support the expectation that pedagogies emphasizing integration, collaboration, and authentic cases can influence how students judge the value and effectiveness of instruction in tourism enterprise management courses.

4. Relevant Research

This section reviews empirical research related to interdisciplinary integration, industry-academia collaboration, case-based teaching design, and students' perceptions of teaching effectiveness. Recent research indicates that students' perceptions of teaching effectiveness are influenced by both instructional design and contextual expectations, particularly in practical disciplines that emphasize practical skills and employability. In tourism and hospitality management education, learning activities that combine theory with real-world industry problems can enhance students' perceptions of course relevance, learning benefits, and career readiness. Therefore, this review focuses on research from 2020 to 2025, particularly in tourism education, Chinese higher education, and the context of private universities that place a strong emphasis on industry responsiveness (Khairuddin, 2026). In Chinese private universities, curriculum design is often influenced by applied training objectives, employment pressures, and institutional competition. In this context, students tend to evaluate teaching effectiveness based on the practicality, timeliness, and relevance of the learning content to future career needs (Min & Yang, 2025). Meanwhile, governance research indicates that Chinese higher education is influenced by both state guidance and market competition, further prompting universities to improve course relevance and teaching quality (Al-Mekhlafi et al., 2025).

Conceptual Framework: Interdisciplinary integration helps students connect tourism management with finance and strategic management; industry-academia collaboration enhances the authenticity of courses through corporate participation and practical resources; case teaching provides a structured approach to applying knowledge to real-world decision-making problems. These three factors are expected to collectively improve students' perceived teaching effectiveness. In practice, they may also mutually reinforce each other, as industry-academia collaboration can provide real-world cases, while case teaching can serve as a mechanism for applying interdisciplinary knowledge. Therefore, the proposed framework supports the hypothesis that each antecedent variable has a positive impact on perceived teaching effectiveness.

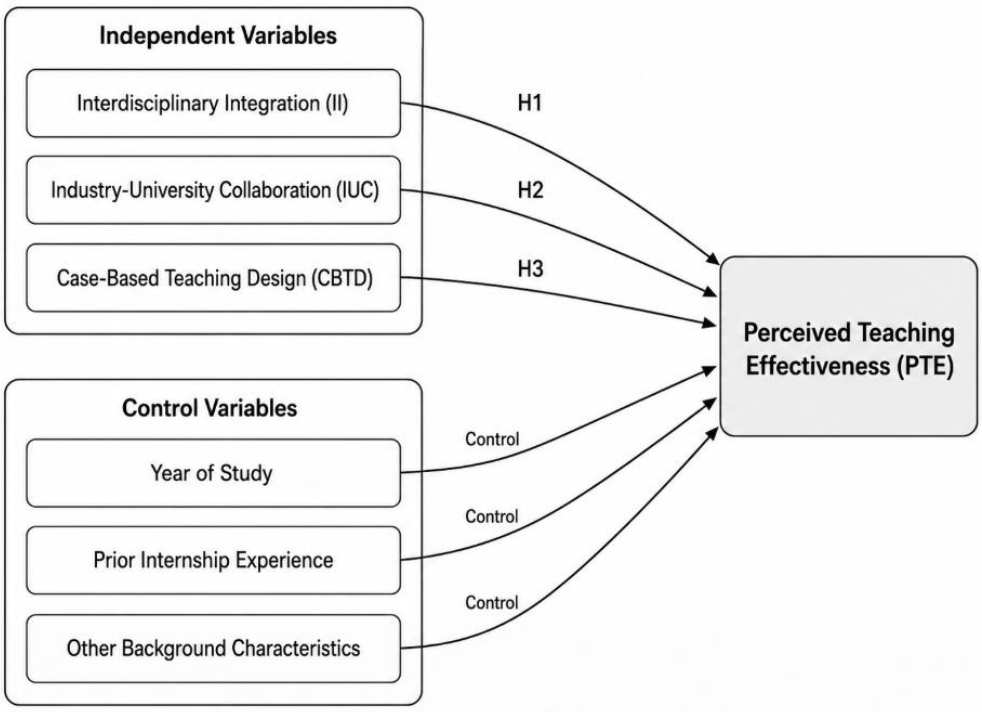


Figure 1 Conceptual model with estimated standardized effects

Research Methodology

This study employed a cross-sectional quantitative survey design to explore how interdisciplinary integration, industry-academia-research collaboration, and high-quality case-based teaching design predict students' perceptions of the teaching effectiveness of a tourism enterprise management course. The target population consisted of undergraduate students majoring in tourism management or related fields at private universities in China who had completed or were currently enrolled in the course. A total of 352 valid questionnaires were collected and analyzed using SPSS software. Descriptive statistical analysis was used to determine the basic demographic characteristics and variable distribution of respondents, and Cronbach's alpha coefficient, exploratory factor analysis, and confirmatory factor analysis were employed to assess reliability and construct validity. Pearson correlation analysis and multicollinearity diagnosis were conducted before hypothesis testing. Subsequently, multiple linear regression analysis was used, with gender, grade level, and internship experience as control variables, to examine the independent and joint predictive effects of interdisciplinary integration, industry-academia-research collaboration, and high-quality case-based teaching design on students' perceptions of teaching effectiveness. Furthermore, one-way ANOVA was conducted to compare differences in the perceived teaching effectiveness among different student groups.

Results

Results of Objective 1: Measurement and descriptive results showed that students' perceived levels of interdisciplinary integration (M = 2.957, SD = 0.564), industry-academia collaboration (M = 2.997, SD = 0.566), case-based teaching design (M = 2.994, SD = 0.545), and teaching effectiveness (M = 3.013, SD = 0.438) were moderate. This indicates that the Tourism Enterprise Management course

already possesses these three course design features, but there is still room for systematic improvement.

Results of Objective 2: Multiple regression analysis showed that interdisciplinary integration, industry-academia collaboration, and case-based teaching design all had significant positive impacts on students' perceived teaching effectiveness. Among the three antecedent variables, case-based teaching design had the strongest standardized effect (β = 0.390, $p < .001$), followed by interdisciplinary integration (β = 0.309, $p < .001$) and industry-academia collaboration (β = 0.295, $p < .001$). Results of Objective 3: The joint regression model was statistically significant, $F(6, 345) = 62.936$, $p < .001$, and explained 52.3% of the variance in perceived teaching effectiveness ($R^2 = 0.523$; adjusted $R^2 = 0.514$). This confirms that, after controlling for gender, grade level, and internship experience, these three antecedent variables collectively provided significant explanatory power.

Results of Objective 4: Based on the empirical findings, teaching improvement should prioritize the development of high-quality case studies, explicitly integrate tourism management with finance and strategic management, and strengthen industry-academia collaboration through practitioner participation, corporate data, and internship-related tasks.

After data collection, all returned questionnaires were reviewed for completeness and response quality. Screening focused on (a) missing values, (b) straight-lining patterns in Likert items, and (c) implausible response patterns (e.g., identical responses across long item blocks). Questionnaires that failed minimum completeness criteria or showed clear non-engagement patterns were removed prior to statistical analysis. The final analytic sample comprises 352 usable responses.

Table 1 Respondent profile (N = 352)

Variable	Category	n	%
Gender	Male	139	39.5
	Female	213	60.5
Year of study	Year 2	162	46.0
	Year 3	104	29.5
	Year 4	86	24.4
Internship experience	No internship experience	110	31.2
	Has internship experience	242	68.8

Sample is dominated by female respondents (60.5%). Year-level distribution indicates that Year 2 students form the largest group (46.0%), followed by Year 3 (29.5%) and Year 4 (24.4%). Most respondents report having internship experience (68.8%), reflecting the applied nature of tourism education and the prevalence of work-integrated learning arrangements.

Table 2 Descriptive statistics of key variables (1–5 scale)

Variable	Mean	SD	Min	Max
II	2.957	0.564	1.182	4.508
IUC	2.997	0.566	1.000	4.344
CBT	2.994	0.545	1.016	4.599
PTE	3.013	0.438	1.647	4.577

As shown in Table 4.2, average levels of II, IUC, and CBT cluster around the mid-point of the scale (means approximately 2.96–3.00), suggesting that students perceive the presence of these teaching features as moderate rather than extremely high. The dependent variable PTE also centers near the mid-point

(M = 3.013), implying that overall teaching effectiveness is perceived as moderate with meaningful variability across respondents (SD = 0.438). The observed minimum and maximum values show that respondents used the full response range without severe ceiling effects.

The main hypothesis testing uses multiple linear regression to estimate the unique effect of each course-design feature (II, IUC, CBT) on students' perceived teaching effectiveness (PTE) while holding constant the control variables (gender, year of study, and internship experience). The regression model was estimated using ordinary least squares. Table reports the unstandardised coefficients (B), standard errors (SE), standardised coefficients (β), and significance tests for each predictor, while Table3 reports the overall model explanatory power and the omnibus F-test.

Table 3 Multiple linear regression predicting perceived teaching effectiveness (PTE)

Predictor	B	SE	β	t	p
Interdisciplinary Integration (II)	0.240	0.030	0.309	7.897	<.001
Industry–University Collaboration (IUC)	0.229	0.031	0.295	7.473	<.001
Case-Based Teaching Design (CBT)	0.313	0.031	0.390	10.165	<.001
Gender (1=female)	-0.023	0.034	-0.026	-0.688	0.492
Year of study	0.132	0.020	0.246	6.518	<.001

Internship experience (1=yes)	0.077	0.035	0.081	2.169	0.031

Table reports the unstandardised coefficients (B), standard errors (SE), standardised coefficients (β), and significance tests for each predictor, while

Table 4 Model summary for multiple regression

R^2	Adj. R^2	F(df1, df2)	p	Durbin–Watson
0.523	0.514	62.936 (6, 345)	<.001	2.086

From Table 4 the results show that the set of predictors explains a substantial proportion of variance in perceived teaching effectiveness. The overall model is statistically significant, $F(6, 345) = 62.936$, $p < .001$, with $R^2 = 0.523$ and adjusted $R^2 = 0.514$. Substantively, approximately 52.3% of the variability in students' perceived teaching effectiveness is explained by the combined effects of interdisciplinary integration, industry–university collaboration, case-based teaching design, and the control variables. In education and management research, this level of explained variance is typically considered practically meaningful, because teaching outcomes are influenced by many unobserved contextual and personal factors (Cohen et al., 2003).

Regarding the controls, year of study shows a significant positive association with PTE ($\beta = 0.246$, $p < .001$), indicating that students in higher years tend to report higher teaching effectiveness. Internship experience has a smaller but significant positive effect ($\beta = 0.081$, $p = 0.031$), implying that students who have completed internships may perceive higher effectiveness because they can more easily connect classroom concepts to workplace realities. Gender does not significantly predict PTE ($p = 0.492$), suggesting that perceived teaching

effectiveness does not differ systematically by gender once other factors are controlled.

Table 5 One-way ANOVA summary (PTE by year level)

F(df1, df2)	p	η^2
10.433 (2, 349)	<.001	0.056

The omnibus ANOVA indicates that these mean differences are statistically significant, $F(2, 349) = 10.433$, $p < .001$. The effect size ($\eta^2 = 0.056$) suggests a small-to-moderate difference across year levels, meaning that year level accounts for approximately 5.6% of the total variance in perceived teaching effectiveness.

Table 6 Summary of hypothesis testing results

Hypothesis	Path	β (standardized)	p	Decision
H1	II ⟶ PTE	0.309	<.001	Supported
H2	IUC ⟶ PTE	0.295	<.001	Supported
H3	CBT ⟶ PTE	0.390	<.001	Supported
H4	Joint model (II,IUC, CBT + controls)		<.001 (F-test)	Supported

Overall, all hypotheses are supported. Case-based teaching design (H3) shows the strongest effect, followed by interdisciplinary integration (H1) and industry university collaboration (H2). The joint model significance (H4) demonstrates that, together, the three course-design features form a coherent

explanatory set that meaningfully predicts perceived teaching effectiveness in tourism enterprise management courses.

Recommendation

The findings suggest that instructors and programmer leaders should improve tourism enterprise management courses in four ways. First, interdisciplinary integration should be made explicit by linking tourism management with finance and strategic management through assignments and assessment rubrics. Second, industry–university collaboration should be strengthened through advisory boards, practitioner participation, industry-based projects, and real business data. Third, case-based teaching should be prioritized by using high-quality, up-to-date cases and improving teachers' case facilitation skills. Fourth, teaching support should be differentiated by year level, with more scaffolding for lower-year students and more complex industry projects for senior students.

Conclusion

Based on the empirical results, the study draws four main conclusions corresponding to hypotheses H1–H4.

Conclusion 1 (H1 supported): Interdisciplinary integration positively influences perceived teaching effectiveness. Effective teaching in tourism enterprise management benefits from deliberate integration across knowledge domains because managerial decisions in tourism enterprises inherently require simultaneous attention to service design, financial performance, and strategic positioning.

Conclusion 2 (H2 supported): Industry–university collaboration positively influences perceived teaching effectiveness. Collaboration mechanisms such as co-developed cases, practitioner talks, live industry projects, and

internship-linked assignments strengthen students' belief that course content is authentic, current, and aligned with employability expectations.

Conclusion 3 (H3 supported): Case-based teaching design has the strongest positive effect on perceived teaching effectiveness. Students appear to interpret high-quality cases as central learning devices because cases convert abstract concepts into situated problems that require applied reasoning and decision-making rather than memorization.

Conclusion 4 (H4 supported): The joint regression model explains a statistically significant and practically meaningful proportion of variance in perceived teaching effectiveness after controlling for student background factors. Therefore, the combined model provides an empirically supported framework for designing and evaluating tourism enterprise management courses in Chinese private universities.

Recommendation

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Future research may replicate the model across different regions and types of universities to test its generalizability. Longitudinal studies can examine

how students' perceptions change across semesters or before and after internships. Mixed-methods research may further explain how interdisciplinary integration, industry collaboration, and case-based teaching influence perceived teaching effectiveness. Future studies may also examine moderating variables such as internship experience and year level and include objective learning outcomes to compare perceived effectiveness with actual student competence.

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