The Current State and Future Development of Tourism and Hospitality Higher Education in Taiwan

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Abstract

Taiwan's transition to a knowledge-based economy has necessitated the development of high-quality human resources, particularly in service sectors like tourism and hospitality. This study investigates the effectiveness of flipped learning in enhancing students' learning outcomes and attitudes within hospitality and tourism higher education. A quasi-experimental design involving 60 undergraduate students from a Taiwanese university was employed. Participants were divided into control (traditional learning) and experimental (flipped learning) groups. Data collection tools included pre/post-tests and a 15-item attitude questionnaire assessing cognitive, affective, and behavioral dimensions. Results revealed that the flipped learning group significantly outperformed the control group in learning outcomes and attitudes. These findings support integrating flipped learning into hospitality education to enhance academic performance, student engagement, and workforce readiness.

Keyword: Hospitality and Tourism, Higher Education, Hospitality and Tourism Education in Taiwan, Flipped Learning

Introduction

As Taiwan transitioned from a labor-intensive to a knowledge-driven economy, the quality of its human resources has become a key factor in economic progress. As a result, national competitiveness now depends on the growth of high-value-added industries and the cultivation of skilled labor. Taiwan's Ministry of Education has prioritized the tourism and hospitality sectors as part of its broader service industry development strategy. Both public and private sectors have made significant investments, resulting in notable changes in these industries. Baum (2007) highlighted the importance of individuals in delivering successful tourism services, while Mayaka & Akama (2007) pointed out that human resource development is crucial for gaining comparative advantage in the fast-evolving and highly competitive global tourism market. The future of Taiwan's tourism and hospitality industries lies in building an innovative, comprehensive, and professional educational system. To achieve national competitiveness, educational institutions must train high-quality human resources to ensure graduates are ready for the workforce. Therefore, higher education institutions need to be adaptable and flexible in producing qualified talent for the industry. This demand has increased the number and variety of hospitality education institutes (Horng & Lee, 2005). By the end of 2020, Taiwan had 91 schools offering 184 tourism, hospitality, and recreation departments and programs. Despite the large number of programs, many tourism employers still recruit non-tourism graduates (e.g., those with business degrees) (Dale & Robinson, 2001). This trend reveals a disconnect between the industry and higher education, suggesting inefficiencies in both human and educational resources.

Globally, countries are revising higher education teaching models to engage students better and retain them in a highly competitive market (Segura-Robles et al., 2020). A review of the Web of Science reveals that over 2,968 studies have focused on flipped learning and classroom approaches (López-Belmonte et al., 2022), highlighting its growing popularity in university education worldwide (Pozo-Sánchez et al., 2022). Flipped learning, a student-centered approach, reverses the traditional classroom setup (Singay, 2020) and has attracted significant attention due to its potential to enhance teaching and learning (Zainuddin et al., 2019; López-Belmonte et al., 2022). In flipped learning, teachers maximize classroom time to deepen and broaden learning, while

students build self-knowledge (El Miedany, 2019; Marín-Marín et al., 2021). With the global disruption caused by COVID-19, higher education faced an unprecedented shift to online learning, with many institutions forced into distance learning with little preparation (Chukwuemeka et al., 2021; Gumbheer et al., 2022). In March 2020, Taiwan raised its COVID-19 alert level to 3, forcing universities to rapidly switch to online learning. While these measures aimed to protect students' educational rights, they revealed challenges in assessing learning outcomes in certain technical and professional courses. Both teachers and students faced significant difficulties that impacted education (Ye & Ye, 2020). Flipped learning has shown success in various fields, including social sciences, humanities, engineering, natural sciences, and biomedicine (Tien et al., 2020). However, the effectiveness of flipped teaching in online hospitality management education requires further empirical analysis. This study involved 55 third-year hospitality management students from a Taiwanese university who participated in 32 hours of flipped learning over eight weeks. It aimed to assess whether long-distance online teaching can complement and enhance flipped learning in hospitality management.

Derived from the background, this research aims to address a set of fundamental questions related to the identified problem. Specifically, the study concentrates on cultivating human resources within educational institutions and formulating operational management curricula. The higher education landscape is scrutinized with a focus on its connection to the fields of tourism and hospitality. Subsequently, the study delves into exploring the feasibility of integrating tourism and hospitality education management into the developmental framework for higher education in this sector. In light of these considerations, the research introduces an innovative framework for tourism and hospitality education. This framework is designed not only to nurture human resources but also to drive innovation in related technologies and strengthen management practices rooted in diverse cultural knowledge. These aspects are deemed crucial for enhancing global industrial competitiveness within the field.

Objectives

1. to analyze the current situation of hospitality and tourism higher education in Taiwan

2. to investigate the problems and obstacles in producing graduates in the hospitality and tourism field of study at universities/institutions in Taiwan

3. to identify the future development of hospitality and tourism higher education in Taiwan

4. to propose recommendations for producing graduates in the hospitality and tourism field of study, that meet the industry's human resources requirement sufficiently in both quantity and quality.

Literature Review

1. Tourism and hospitality education refers to the academic and professional training programs that prepare individuals for careers in the tourism and hospitality industries. This education encompasses a wide range of disciplines, including business management, marketing, customer service, sustainable tourism, and event management. The objective of such education is to equip students with the necessary knowledge, skills, and competencies to succeed in various roles within these sectors Baker et.al. (2021). Key Components:

1.1 Curriculum: Programs typically include courses in hospitality management, tourism planning, service operations, cultural tourism, and financial management, combining theoretical knowledge with practical skills.

1.2 Industry Partnerships: Many programs collaborate with industry stakeholders to provide students with internships and real-world experiences, enhancing employability.

1.3 Global Perspective: Given the international nature of tourism and hospitality, these programs often emphasize cross-cultural communication and global business trends.

1.4 Sustainability: Increasingly, education in this field addresses the need for sustainable practices within tourism and hospitality to minimize environmental impact and promote responsible tourism.

2. Tourism higher education refers to post-secondary academic programs specializing in studying tourism and related fields. These programs aim to prepare students for careers in the tourism industry by providing them with theoretical knowledge, practical skills, and industry insights. Higher education in tourism encompasses various disciplines, including management, marketing, sustainability, and cultural studies, among other. Beineke, J., & Troske, K. (2019). Key features of these programs include:

2.1 Interdisciplinary Approach: Integrates various disciplines such as economics, sociology, and environmental

studies to address the complexities of tourism.

2.2 Curriculum: Offers courses in tourism management, destination marketing, hospitality operations, and sustainable tourism practices.

2.3 Practical Experience: Emphasizes experiential learning through internships and industry partnerships.

2.4 Global Focus: Prepares students for diverse cultural and geographic contexts due to the international nature of tourism.

2.5 Adaptation to Trends: Continuously evolves to incorporate emerging issues like technology and sustainability.

3. Flipped learning (FL) is defined as a pedagogical approach in which typical lecture content is delivered outside of class (often via online videos or readings), and face-to-face class time is repurposed for exercises, projects, and discussions that promote active learning.

In essence, what is traditionally done as homework is done before class in a flipped model, and what is typically lecture material is engaged with during class, but through interactive, student-centered activities. Bergmann & Sams (2012) popularized the concept of flipped classrooms as a way to “flip” the sequence of learning activities, allowing students to acquire basic knowledge on their own and then use class time to assimilate and apply that knowledge.

In a flipped classroom, students are encouraged to receive foundational content instruction at home (e.g., watching pre-recorded lectures), and class sessions are dedicated to working through problems, collaborating with peers, and receiving guidance from the instructor.

Over the past decade, flipped learning has gained popularity in higher education worldwide as a strategy to improve student engagement and deepen learning. By moving direct instruction out of the classroom, more class time can be devoted to collaborative work, case studies, hands-on practice, and feedback, which are especially valuable in professionally oriented fields like hospitality and tourism.

Given the Taiwanese context—marked by rapidly growing programs and a push for higher teaching quality—flipped learning is particularly relevant. It offers a way to modernize teaching practices and better integrate theory with practice, a crucial consideration for hospitality and tourism education.

Flipped learning in higher education offers a cost-effective, student-centered alternative that can address increasing enrollment demands and alleviate structural and funding challenges,

particularly in systems where faculty research is prioritized over student learning (Zou et al., 2020). This pedagogical approach equips students with essential 21st-century competencies needed to navigate global challenges (Zhao et al., 2021) and provides industry-relevant knowledge aligned with current market demands (Ng & Lo, 2022). The flipped classroom model fosters the development of critical thinking, collaboration, and problem-solving skills through real-world applications, ultimately enhancing students' academic performance and practical knowledge (Castedo et al., 2018; Rodríguez-Chueca et al., 2019; Sevillano-Monje et al., 2022).

In hospitality education, flipped learning supports practical skill development, collaboration, and reflection—core competencies in service industries. It aligns with Taiwan's education reform agenda, which emphasizes digitalization, innovation, and global readiness (Zhao et al., 2021).

4. Theory of Planned Behavior (TPB) This theory suggests that entrepreneurial intention is influenced by three primary factors: attitudes, subjective norms, and perceived behavioral control. Additionally, external factors, such as willingness to take risks, can indirectly influence entrepreneurial intention via attitudes.

Research Methodology

1. Locale of the Study

The study was conducted at a public university in central Taiwan, known for its hospitality and tourism management program. The university offers a range of undergraduate and graduate degrees and is recognized for its commitment to innovative teaching methods and industry collaboration. This location was selected due to its representativeness of higher education institutions in Taiwan offering hospitality programs and its access to a sizable student population within the relevant field of study.

2. Population and Sampling Procedure

The target population consisted of third-year undergraduate students enrolled in the university's hospitality and tourism program. A purposive sampling technique was employed to ensure that participants had prior exposure to core tourism and hospitality courses. Sixty students were recruited and randomly assigned to two equal groups: 30 students in the experimental group (flipped learning) and 30 in the control group (traditional learning). Participants were similar in

academic background, ensuring comparability between groups.

3. Measurement of Variables

The independent variable in the study was the type of instructional method—flipped learning versus traditional lecture-based instruction. The dependent variables included students' learning outcomes and learning attitudes. Learning outcomes were measured through standardized pre- and post-tests aligned with course objectives. Learning attitudes were assessed across three domains: cognitive, affective, and behavioral.

4. Research Instrument

Knowledge Test: Developed based on the course syllabus and validated by three subject-matter experts. It consisted of multiple-choice and short-answer questions assessing students' understanding of key hospitality technology concepts.

Learning Attitude Questionnaire: A 15-item Likert-scale instrument adapted from existing validated tools, covering cognitive (e.g., understanding), affective (e.g., interest), and behavioral (e.g., participation) components. Each item was rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

5. Pretesting of the Instrument

A pretest is conducted without informing participants, following the approach suggested by Converse & Presser (1986). A sample of 30 participants is selected for this purpose, in line with recommendations for pretest sizes.

6. Data Gathering

Before the intervention, both groups completed the pre-test and attitude questionnaire to establish baseline data. The experimental group then participated in an eight-week flipped learning course, which included pre-recorded lectures and in-class collaborative activities. The control group followed a traditional distance learning model with live lectures and no interactive elements. After the intervention, both groups completed the post-test and the same attitude questionnaire. Data collection was conducted under standardized conditions with informed consent from all participants.

7. Variable Measurement of Research

7.1 Independent Variables: Type of instructional method (flipped vs. traditional).

7.2 Dependent Variables: Learning Outcomes: Measured through performance on post-test scores, controlling for pre-test results. Learning Attitudes: Measured in three dimensions: Cognitive: Ability to comprehend and retain knowledge. Affective: Emotional response and interest

toward learning. Behavioral: Engagement in learning activities and participation.

Analysis of Data

Data were analyzed using SPSS software. Descriptive statistics were used to summarize participant demographics and response distributions. To assess the impact of the instructional method on learning outcomes and attitudes, ANCOVA (Analysis of Covariance) was employed, controlling for pre-test scores. Additionally, structural equation modeling using the PLS-SEM approach was applied to test relationships among the TPB variables—attitudes, subjective norms, perceived behavioral control, and entrepreneurial intention. Bootstrapping with 5,000 subsamples was used to assess the significance of path coefficients. Results were reported with significance thresholds set at $p < .05$.

Results and Discussion

The results indicate a significant positive impact of flipped learning on students' learning outcomes and attitudes. The findings of this study provide compelling evidence for the effectiveness of flipped learning in enhancing both academic performance and student attitudes in hospitality and tourism education. These outcomes are consistent with a growing body of research supporting the pedagogical advantages of flipped classrooms.

1. Learning Outcomes Post-test scores showed that students in the experimental group achieved a mean score of 77.18, while the control group scored 65.20. After adjusting students who participated in the flipped learning intervention achieved significantly higher post-test scores ($M = 77.18$) compared to those in the control group ($M = 65.20$). The difference remained significant even after controlling for pre-test differences using ANCOVA, the between-group difference was statistically significant, scores using ANCOVA, $F(1, 50) = 29.11$, $p < .001$. This confirms the outcome aligns with findings by López-Belmonte et al. (2022), who demonstrated that flipped learning significantly improved students' academic performance in hospitality technology. The structured exposure to pre-class content and the interactive, application-oriented in-class sessions likely contributed to deeper learning and better knowledge retention. enhances academic achievement through more meaningful engagement with learning materials. Moreover, the combination of asynchronous content delivery and synchronous in-class activities facilitated

deeper learning, as Zainuddin et al. (2019) and Ng and Lo (2022) suggested.

2. Learning Attitudes Flipped learning also positively influenced students' learning Participants in the flipped classroom reported improved learning attitudes across all three domains:

2.1 Cognitive Attitude: The experimental group reported a higher post-test mean Domain: Students exhibited enhanced understanding and critical thinking skills. The mean post-test score for the experimental group ($M = 4.93$) was significantly higher than that of the control group ($M = 3.81$), $F(1, 50) = 42.05$, $p < .001$. Students demonstrated improved comprehension and ability to reflect on content.

2.2 Behavioral Attitude: The flipped group. This supports previous literature that links flipped classrooms with increased cognitive engagement (Castedo et al., 2018).

2.3 Behavioral Domain: Students in the flipped group demonstrated more active participation ($M = 4.94$) than the control group ($M = 4.06$), $F(1, 50) = 20.37$, $p < .001$. The team-based learning environment encouraged engagement.

2.4 Affective Attitude: Students in the experimental group expressed greater enthusiasm and motivation ($M = 5.02$ vs. $M = 3.73$), According to Rodríguez-Chueca et al. (2019), student-led activities in flipped classrooms enhance motivation and engagement.

2.5 Affective Domain: Learners in the flipped condition reported stronger emotional connections to the course material, with a post-test mean of 5.02 compared to 3.73 in the control group, $F(1, 50) = 39.02$, $p < .001$. Similar findings by Mengual-Andrés et al. (2020) indicate that flipped learning positively influences motivation and self-efficacy.

These results are consistent with previous research that emphasizes the motivational benefits of flipped learning (López-Belmonte et al., 2022; Mengual-Andrés et al., 2020). The use of digital materials prior to class provided students with autonomy in their learning process, while classroom time was used for interaction and collaborative problem-solving, enhancing their emotional connection to the subject matter.

Theory of Planned Behavior (TPB) Analysis Using PLS-SEM, the study found significant paths linking TPB constructs:

Attitudes ⟶ Entrepreneurial Intention: $\beta = 0.125$, $t = 2.611$, $p < .01$

Subjective Norms ⟶ Entrepreneurial Intention: which mirrors the findings of Esfandiar et al. (2019) and Ajzen (1991). Subjective Norms also

influenced intention (β = 0.335, t = 6.121, p < .01 **Perceived Behavioral Control ⟶ Entrepreneurial Intention:** affirming the importance of perceived social support, as discussed by Boubker et al. (2021). **Perceived Behavioral Control** was another strong predictor (γ = 0.148, t = 2.887, p < .01), consistent with prior research (Nowiński & Haddoud, 2019). Interestingly, **Willingness to Take Risk ⟶ Attitudes:** Risks had a significant effect on attitude (γ = 0.263, t = 5.681, p < .01), though not directly on intention. A mediating effect through attitude was confirmed via post hoc analysis (γ = 0.033, t = 2.309, p < .05), supporting the assertions of Roy et al. (2017). However, the direct path from willingness to take risk to entrepreneurial intention was not statistically significant. A post hoc analysis revealed that attitude mediated this relationship, supporting the hypothesis that a positive learning environment can influence students' entrepreneurial orientation indirectly through improved attitudes (Esfandiar et al., 2019; Roy et al., 2017).

These results suggest that the flipped learning environment cultivates attitudes and perceptions conducive to entrepreneurial thinking, an essential competency in hospitality and tourism education.

Discussion

These findings reinforce the relevance of flipped learning in hospitality and tourism education. The structure of flipped classrooms—emphasizing student autonomy, group collaboration, and real-time feedback—fosters both academic success and positive learner dispositions. This is particularly critical in fields requiring high levels of interaction and customer service skills, such as hospitality management. The findings strongly advocate for integrating flipped learning into hospitality education curricula in Taiwan. This teaching method improves academic achievement and enhances learners' attitudes, motivation, and perceived self-efficacy. As Zhao et al. (2021) emphasize, flipped learning contributes to the development of 21st-century competencies, including collaboration, critical thinking, and self-directed learning. Furthermore, the integration of TPB provides a robust theoretical foundation to explain how learning environments shape entrepreneurial intentions. The study suggests that hospitality programs should not only focus on content delivery but also cultivate supportive, interactive classrooms to boost students' confidence and aspirations. Moreover, applying TPB provides a nuanced understanding of how

pedagogical interventions can influence students' intentions toward future entrepreneurship. In hospitality and tourism industries, which often require innovation and adaptability, these attitudinal shifts are especially critical (ElSaid & Fuentes, 2019). Overall, the flipped learning model holds significant promise for improving the quality and relevance of hospitality education in Taiwan. By modernizing pedagogical practices and aligning them with both student needs and industry demands, educators can better prepare graduates for future challenges in the global tourism landscape. In summary, flipped learning provides an evidence-based, student-centered approach that addresses the skill and attitude gaps commonly noted in hospitality graduates. It aligns well with Taiwan's educational goals of enhancing employability and fostering lifelong learning in a globalized service economy

Conclusion

This study confirms that flipped learning is a highly effective pedagogical approach for improving both learning outcomes and student attitudes in hospitality and tourism higher education in Taiwan. Students in the flipped learning group demonstrated significantly higher post-test scores and exhibited stronger cognitive engagement, emotional motivation, and active behavioral participation than those in traditional lecture-based settings. These elements are critical for preparing graduates to meet the demands of a dynamic, skill-intensive industry (López-Belmonte et al., 2022; Moreno Guerrero et al., 2021).

Furthermore, drawing on the Theory of Planned Behavior (TPB), the findings suggest that enriched learning environments—especially those that encourage autonomy and interactivity—positively shape students' attitudes and intentions toward entrepreneurship (Ajzen, 1991; Esfandiar et al., 2019). Therefore, The flipped learning model contributes to academic success and the development of entrepreneurial competencies, which are increasingly valued in the hospitality and tourism sectors (Karimi et al., 2013; Roy et al., 2017). These outcomes highlight a critical need for curriculum modernization across Taiwan's higher education institutions. Moving beyond passive, lecture-based instruction toward learner-centered, technology-integrated models is essential for aligning academic preparation with the practical expectations of the industry.

Recommendations

Integrate flipped learning approaches into the core curriculum of hospitality and tourism programs to foster deep, applied learning. Emphasizing student-led activities, industry case studies, and collaborative problem-solving will enhance skill development. Develop structured training programs for academic staff to effectively design and deliver flipped learning experiences. This includes instructional design, video content creation, and the facilitation of active learning strategies. Allocate resources to build or enhance digital platforms that support asynchronous learning, interactive modules, discussion forums, and virtual simulations.

Collaborate with tourism and hospitality enterprises to co-develop course content, host guest lectures, and offer practical learning opportunities. This will ensure alignment between academic outcomes and workforce demands. Provide orientation programs, academic coaching, and ongoing support to help students transition into flipped learning environments, especially those unfamiliar with self-directed learning methods. Encourage future research to explore the long-term impact of flipped learning on professional competencies, job readiness, and career progression. Comparative studies across different types of institutions and cultural contexts can further validate and refine this model. Flipped learning represents a transformational shift in teaching and learning that aligns with the evolving needs of the global hospitality and tourism industry. By promoting active participation, critical thinking, and real-world problem-solving, this approach equips students with the competencies needed for sustained professional success. For Taiwan's higher education sector, adopting flipped learning is not just a pedagogical innovation—it is a strategic response to global education and labor market trends.

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