Critical Success Factors Affecting Hospitality & Tourism Management Students' Learning Efficacy From Project-based Learning

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Abstract:

The primary goal of this study is to identify critical success factors affecting HTM students' learning efficacy from problem-based learning. Drawing on the insights solicited from six focus-group interviews with 23 hospitality and tourism management students from a public university in Hong Kong, a total of six critical success factors were identified. The findings of this exploratory study do not only contribute some new knowledge to the realm of research about hospitality and tourism education but also provide some clues for hospitality and tourism educators for making their PBL become more learner centric.

Keywords: Project-based learning; critical success factors; learning efficacy; course design; hospitality education; tourism education.

1. Introduction

Project-based learning (PBL) has been extensively used in hospitality and tourism education since this instructional method has proven to be capable of effectively engaging learners in knowledge construction through having them tackle real-world challenges and develop real-world products (Krajcik & Shin, 2014). While many hospitality scholars (e.g., Griffin, 2021) advocate the continuing use and increase in PBL application across the curriculum, scholarly attention towards the identification of critical success factors affecting students' learning efficacy from PBL remains scarce at the moment of this writing.

As demonstrated in prior studies like Moya and Camacho (2021) as well as König, Karrenbauer and Breitner (2023), the identification of critical success factors for certain pedagogies and learning modes from learners' standpoint is a vital pathway for instructors to optimize students' learning experience and efficacy. To provide hospitality and tourism educators with actionable clues for making their PBL become more learner-centric, this qualitative study synthesizes the opinions and advice on PBL shared by 23 hospitality and tourism management (HTM) students. To be specific, the twofold objectives of this study are: (1) To identify critical success factors affecting HTM students' learning efficacy from PBL; and (2) To provide hospitality and tourism educators with recommendations for optimizing their PBL design.

2. Literature review

2.1. What is project-based learning and why it matters?

PBL refers to an inquiry-based instructional method that engages learners in knowledge construction via searching or designing solutions, having them accomplish authentic projects as well as communicating and debating ideas with others (Krajcik & Shin, 2014; Maros, Korenkova, Fila, Levicky, & Schoberova, 2023). Different from other traditional modes of learning like lectures and seminars, PBL can better prepare students to be future-ready working professionals via simulating professional situations and cultivating future-oriented abilities (Zhang & Ma, 2023).

PBL has long been recognized as an effective pedagogy as it can provide students with opportunities to participate in real problem-solving and knowledge construction in authentic professional contexts (Guo, Saab, Post, & Admiraal, 2020). Zhang and Ma (2023) echo that PBL can motivate students to continuously explore in the process of problem-solving, thus promoting the development of higher order-thinking, problem-solving, collaboration and inter-personal communication skills. Considering that PBL is known as a constructivist approach that can help students form knowledge system through the completion of multiple learning tasks, PBL has been frequently applied in hospitality curriculum as practical experience is crucial for nurturing hospitality professionals (Hou, Lai, & Wu, 2023).

2.2. Past research on PBL

Prior studies on PBL largely focus on three issues. The examination of *"whether and how PBL can enhance students' learning efficacy"* is the most researched topic, and most studies presented positive findings. For instance, Karpudewan, Ponniah and Zain (2016) explored and proved the efficacy of PBL approach in improving secondary school students' energy literacy. Specifically, students exposed to the PBL-based course outperformed students taught with traditional courses in terms energy-related knowledge, attitudes and behaviors.

Parrado-Martinez and Sanchez-Andujar (2020) tested and found that cooperative work in PBL promoted secondary school students' critical thinking, writing and collaboration skills. In Biazus and Mahtari's (2022) quasi-experimental study utilized PBL and direct instructional learning models, the researchers also found that PBL model has a significant impact on the enhancement of creative thinking skills of secondary school students. Since PBL provides students with a sense of connection to the course material and peers, Almulla's (2020) study shows teachers who are capable of using the PBL approach can foster a higher level of students' learning engagement. Hou et al. (2023) illustrated and demonstrated how virtual reality-aided project-based pedagogy can effectively equip students with essential green building knowledge associated with different stages of a building lifecycle.

While most studies empirically proved the efficacy of PBL on students' learning, contrasting results were reported in some studies. Gratchev and Jeng (2018) explored if the combination of traditional teaching methods and PBL activities improved students' learning experience throughout their study period, and the achievements by two groups were very similar. Zhang and Ma's (2023) meta-analysis study reported that PBL did impose strong influence on students' interest in learning and moderate influence on students' learning attitudes. Based upon their analysis on 66 PBL-based experimental research papers, the researchers found PBL has the most significant effects on students' creative thinking skills and computational thinking skills.

Apart from examining the efficacy of PBL, some recent studies (e.g., Warr & West, 2020) illustrate how they integrate PBL into teaching and learning in order to upskill students' competencies and share the challenges they encountered during the design period. Pan, Seow, Shankararaman and Koh (2021a) discussed the essence, benefits and challenges of establishing academic-industry partnership through PBL. The authors concluded the study by proposing a framework for partnership management in PBL with four key features: (1) value proposition; (2) depth of collaboration; (3) knowledge creation; and (4) exchange and continuous feedback.

The role perspectives of PBL in a collaborative learning environment has attracted some scholarly attention in recent years. Pan, Seow, Shankararaman and Koh's (2021b) case study

highlights that role ambiguity and role conflict could occur in PBL courses, and the happening of these phenomena might negatively influence students' learning efficacy. Based on their case study conducted with a Singaporean institution, teachers shall play the roles of designer, champion, facilitator and manager in a PBL course to ensure that learning is effective. On the other hand, students should play the roles of a self-directed learner and a warrior when completing their projects. Although much scholarly effort has been paid to enhance theoretical knowledge and understanding about PBL in education, it is surprising that the set of critical success factors affecting HTM students' learning efficacy from PBL remains unclear.

3. Methodology

3.1. Data collection

To identify all critical success factors for PBL from HTM students' standpoint, all final-year students – who are pursuing a bachelor's or master's degree in hotel, tourism or event management from a public university in Hong Kong – were invited as research subjects of this study. A purposive sampling method was used, and final-year students were recruited because they are going to complete all course projects and thereby being able to share rich/extensive information with the investigator.

A total of 23 students accepted the invitation sent by the investigator. Six focus-group interviews (with three to five people in each group) were arranged and conducted during October 2024 - February 2025 under the investigator's moderation. Semi-structured interview mode was used, and open-ended questions were asked during the interviews. In each interview, the following three questions - q#1: please recall and describe the most satisfying PBL experience throughout your study; q#2: what constitutes the best PBL experience; q#3: which factor/s instructors should be noticed when they apply PBL approach – and other probing questions were asked to the interviewees.

3.2. Data analysis

All conversations were recorded after seeking participants' informed consent. One student assistant transcribed all conversation verbatims, and member checks (i.e., forwarding the transcripts to interviewees for verifying the accuracy of the transcription) were conducted. Following Kolbe and Burnett (1991), two coders (including the student assistant and the investigator) independently and jointly analyzed all transcripts in order to minimize personal bias. The transcripts were firstly read and re-read many times in order to familiarize them with the content/insights by interviewees. Afterwards, thematic analysis was applied to identify recurring themes across the interviews. This method distills key insights and patterns that emerge from the interview content, facilitating a broader understanding of shared opinions and experiences among participants.

4. Results and discussions

A total of six critical success factors were identified after analyzing and synthesizing the qualitative data shared by 23 interviewees.

4.1. Realism of the project topic

Nearly two-third (n = 15; 65.2%) of the recruited interviewees mentioned that their perceived learning gain was higher when the project topic is to address a real-world (but not hypothetical) problem. This result is in line with the notion shared by Wijnia and colleagues (2024) in their recent studies about effects of PBL on students' motivation.

Interviewee #13 (a male master student majoring in hotel management) claimed that using a real-life problem shared by a real business would spark their interest and motivation in completing the work, because their recommendations are likely to generate real impact to the corresponding business or even the society. Three interviewees (#7, #9 and #10; all are female bachelor students majoring in tourism management) echoed that they learned a lot from a course project pertinent to optimizing service design for the visually impaired. As that project was proposed by a non-government organization based on the authentic opinions shared by travelers with visual impairment, adding that the lecturer quoted many real-world evidences to prove the needs of the disabled have often been overlooked, those three interviewees acknowledged the high realism and meaningfulness of the project topic. They thus dedicated more effort to complete all tasks and consequently learned a lot after completing the project.

4.2. Alignment with the knowledge and skills learned with the project design

Ten interviewees mentioned that the level of alignment between the knowledge and skills learned with the project is another decision factor affecting their extent of learning efficacy from PBL. According to the quote shared by two interviewees (#2 and #4; all are female bachelor students majoring in hotel management), they did not enjoy and learn nothing from one course project as the content they learned from lectures and seminars was irrelevant and unhelpful for her to complete the corresponding project. Interviewee #21 (a male master student majoring in hotel management) illustrated that he once questioned his ability when he could not link and apply any knowledge learned from other sessions in the same subject in addressing the challenges at hand. Two interviewees (i.e., 5 and #22) shared similar thoughts during their focus-group interviews. The presence of this evidence supports Zhao, Zhoa and Li's (2023) proposition of conducting alignment analysis between instruction activities and assessment activities before the semester starts.

4.3. Clarity of project instruction

Since the project guideline plays a vital role in guiding students to complete the assigned tasks, eight interviewees mentioned that the clarity of instructions presented in the guideline is another factor that instructors should pay attention to. Interviewees #4 and #15 (all are female bachelor students majoring in hotel management) noted that the to-do tasks in the project must be clearly outlined as the unnecessary ambiguity might discount students' motivation and even result into conflict with instructors. According to interviewee #4, she failed to learn from and concentrate on a particular course project because the instructor kept changing the project instructions. Interviewee #15 echoed that her team was frustrated with the project grade because that instructor gave a higher weighing on certain section (e.g., recommendations but not analysis) albeit it was not mentioned in the project guideline.

In accordance with the assertion presented in Loyens and colleagues' (2023) recent work, many interviewees stressed that students are equivalent to algorithms or robots who can only *"produce the right product when right instructions are given"* (Interviewee #7; a female master student majoring in hotel management). If instructors would like to leverage PBL to upskill students, they have to assure the project instruction clearly outlines all to-do tasks and specific requirements (e.g., formatting) in order to avoid unnecessary confusion.

4.4. Fairness in team formation and conflict resolutions

The question of whether instructors should allow students to form their own teams or not has been extensively discussed in the academia for several decades, but no consensus has

been reached (Lee, Huh, & Reigeluth, 2015). In this study, over two-thirds of interviewees preferred forming their own teams, but they were not resistant to the ideas of letting instructors to form the team or random assignment.

One interesting finding deserves special mentioning. In this study, eight interviewees declared that they understood the idea of instructor-led team formation could provide them with opportunities to learn from others under a more diversified learning environment. But still, those eight interviewees noted that some flexibility in team formation should be given under certain circumstances. According to Interviewee #21 (a male master student majoring in tourism management), instructors shall interfere during the project period when any member/s in the group did not make contribution. Two interviewees including #19 (a female master student majoring in event management) supplemented that members' motivation and learning efficacy would be drastically discounted when certain member/s made no contribution. This situation was even worse when other members aired their complaint to instructors, and instructors replied by asking the team to resolve it by themselves. When they were advised to design solutions for such conflict, five interviewees stressed that the mentioning of problem-solving in general and conflict resolutions in particular as an evaluation criteria can be considered. This notion is coherent with what Wijnia et al.'s (2024) idea of combining project- and problem-based learning in a single project.

4.5. Clarity of assessment methods and criteria

Although all recruited interviewees trusted that their instructors impartially and professionally evaluated their submissions, all highlighted the significance of sharing clear assessment methods and criteria with learners.

As mentioned by Interviewees #8 and #10 (all are female bachelor students majoring in tourism management), they advanced their learning efficacy from one course project after knowing the judging panel includes academics and practitioners. They elaborated by explaining that clear mentioning of assessors, methods and criteria enabled and offer them better opportunities to personalize the works according to targeted audiences' preferences. If assessors are industry practitioners, more trade (rather than academic) journals should be reviewed and less academic jargons should be presented. Interviewee #13 (a male master student majoring in hotel management) shared similar idea during in his focus-group interview. In his entrepreneurship class, his team got higher learning gains because their instructor notified and reminded them to tailor-make their presentation for investors who would only give them five minutes to present five slides. After acknowledging the rules, their team retained highly essential content and rehearsed frequently. Throughout the process, their team learned a lot about how to make a concise (rather than lengthy) presentation from the judges' standpoint.

4.6. Provision of feedback

Nine interviewees mentioned that the provision of high-quality feedback is one thing many good instructors did to help students to improve their future work. According to Interviewee #23 (a master student majoring in event management), she received extra learning gains after reviewing the evaluation report prepared by the instructor of her junior-year marketing subject. Several interviewees also noted that the suggestions and areas for improvements are invaluable elements of PBL because they assisted learners in acknowledging what they should avoid doing in future work as well as how to optimize their upcoming works when similar situations happen. Since providing students with constructive guidance and

feedback is decisive in determining students' learning efficacy from PBL (Pan, Shankararaman, Koh, & Gan, 2021), instructors shall not overlook this when they design their PBL.

5. Conclusions

Drawing on the insights solicited from focus-group interviews with 23 HTM students from a public university in Hong Kong, this study successfully identified six critical success factors – namely (1) Realism of the project topic; (2) Alignment with the knowledge and skills learned with the project design; (3) Clarity of project instruction; (4) Fairness in team formation and conflict resolutions; (5) Clarity of assessment methods and criteria; and (6) Provision of feedback - which are decisive in affecting students' learning efficacy from PBL.

Being one of the first studies in this kind, the findings of this exploratory study are expected to contribute some new knowledge to the realm of research about hospitality and tourism education, pedagogy design and application as well as students' learning experience enhancement. The results of this study are also expected to provide some clues for hospitality and tourism educators to make their PBL become more learner centric.

Although this study made some contributions, readers are advised to generalize the findings with cautious as this study has some limitations. First, all participants of this exploratory study were recruited from one public university in Hong Kong. The opinions reflected by the participants of this study may not be applicable to HTM students from other countries or regions. Researchers are recommended to replicate this study by expanding the size and diversity of students. The examination of weighing on those identified factors from students' standpoints, and whether some critical success factors are exceptionally important to certain subjects' PBL is another interesting topic that deserves further investigation.

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