

# Can Internships Improve Problem-Based Learning Outcomes? a Comparative Experimental Study in Hospitality Undergraduates in Mainland China

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**Keywords:** Problem-based learning, Internship, Hospitality management undergraduate programs, Active learning

**Abstract:** The purpose of this study is to understand whether internships can improve the PBL outcome of hospitality management undergraduates. This study conducted a PBL teaching project and divided the participants into two groups depending on whether they had internships. A mixed-method of textual analysis, observation, and semantic network analysis was adopted. This paper finds that participants relied on their own experiences after internship. Internships also weakened participants' motivation for active learning and thus the PBL effect. To achieve sustainable learning abilities, this paper suggests hospitality management undergraduate programs follow the order of Problem-Based Learning first, then internships.

## 1. Introduction

Being an integrative and applied discipline, hospitality management requires participants to acquire high resilience and operational capacity to adapt to the rapid changing of the industry. Most hospitality management schools arranged internships for their undergraduates to improve their ability to solve practical industry issues. Some academic-oriented programs recognized the effect of problem-based learning (PBL)[1], but scarce literature studied both.

Students on campus were often found to offer none-practical solutions to certain issues because they lack experiences in real scenes. This limited the effects of PBL to students' theoretical research abilities only. Research has shown that internships with PBL can help participants improve their knowledge and active learning<sup>[2]</sup>. The present study moves beyond past research by examining experiments that compared the problem-based learning outcomes of those who had internships and those who had not.

## 2. Literature Review

### 2.1 Problem-Based Learning Outcomes

PBL is reported to encourage participants' learning outcomes of the following three different categories:

- a. The application of participants' knowledge, such as principles, concepts and procedures <sup>[3]</sup> or flexible knowledge <sup>[4]</sup>.
- b. Learning skills, including planning learning schedules, monitoring and managing self-learning procedures <sup>[3,5]</sup>, self-directed learning and collaborative learning <sup>[4,6]</sup>, and concentration <sup>[5]</sup>.
- c. Learning motivation, including intrinsic motivation <sup>[4]</sup>, self-efficacy <sup>[3,6]</sup>, perceived competency, active learning motivation <sup>[5]</sup> and positive learning experience<sup>[7]</sup>.

### 2.2 Internships and Learning Outcomes

Internships and PBL overlap in their learning outcomes. Firstly, participants build flexible knowledge structure through internships because of the influence of personal and environmental factors, such as the ability to self-regulate knowledge construction, perceived self-competence, the supports from internship tutors and job demands <sup>[8]</sup>, and their experiences of different service

objects during the internship<sup>[9]</sup>. Secondly, internships help participants realize the gaps in their knowledge, thus improving their learning<sup>[2]</sup>.

Both internships and PBL increase participants' collaboration, but they have different emphases. PBL focuses on collaborative learning through team-based learning, while internships often focus on team working ability and communication skills<sup>[2,10]</sup>. Internships are also reported to be able to improve self-learning paradigms<sup>[11]</sup>.

It is not clear of how internships influence students' knowledge constructions, learning motivations, or strategies.

### **3. Purpose of the Study**

PBL embedded in internships had been proved to improve the internship learning outcomes in other disciplines [12]. However, it is not practical for hospitality internships, because PBL requires highly on teaching experiences and skills, which hotel tutors did not acquire. The purpose of this paper is to examine the influences of internships to PBL learning outcomes from the three perspectives: learning motivation, learning strategy and knowledge structure.

### **4. Method**

A mixed-method approach was conducted to study the influences of internships on the learning outcomes of PBL. A positivist experimental approach was adopted. Control variables included participants' knowledge stocks, learning habits, and gender. Semantic network analysis was used to interpret participants' learning outcomes. An interpretive observational approach was additionally used to assist the interpretation of the experiment.

This experiment followed procedures to ensure the integrity of the results. All participants were acknowledged the experiment's process and content in advance. They were volunteered and free to quit at any time.

#### **4.1 Participants and Context**

The participants were the seniors who majored in hospitality management at Shanghai Sanda University. They were divided randomly into Group A (57 individuals) and B (56 individuals). Both groups were composed of about 42% men. Both groups took the same courses from the same faculty before the experiment.

Group A had a six-month internship first. Their positions were mainly in front office departments. The reference group, Group B, did not have any internships. After Group A finished their internships, both groups joined in a PBL project named Hotel Front Office Hierarchy. Both groups had an attendance of 100% to avoid the effects of attendance on the findings<sup>[13]</sup>.

#### **4.2 Procedure**

The PBL project was conducted within four weeks (3 hours a week) according to the recommendations of Hmelo-Silver (2004). The participants' task was to "Please select two hotels with different front office organizational structures, and explain the differences between their organizational structures." The teacher was responsible for: a) encouraging and guiding the participants to raise questions and have group discussions, b) answering the questions that the participants could not answer, c) control the learning progress of the participants, and d) observing the participants' behaviors and facial expressions in class. At the end of the experiment, each participant generated a final study report, and spent 20 minutes in class to write down their opinion of "Why are there differences in organizational structures between budget hotels and three-star hotels, and between three-star hotels and five-star hotels?" And "how to improve service quality while reducing costs?"

#### **4.3 Data Collection and Analysis**

This study collected four types of data: a) study documents of each study team, b) final study reports, c) the written answer to the two questions at the end and, d) the observation records during the experiment from the first author. A textual analysis was applied in a text analysis software named RostCM to the study documents and final study reports. The flexible knowledge content were compared to explain two groups' learning strategies differences. In order to avoid the divergence of Chinese meaning in translation, the author used a Chinese textual analysis software RostCM to conduct quantitative word frequency statistics and correlation analysis on the textual materials. The semantic network result was then generated by NetDraw to understand whether participants have a more accurate knowledge structure to solve problems after the internship compared to the control group. Observational data, including student's facial expressions (recorded in class by the first author) and behaviors in class, was used to assist the explanation of the reasons for the differences in learning strategies and learning motivations.

## **5. Findings**

### **5.1 Learning Motivations**

The perceived efficacy of group A was high, but their learning motivation was low compared with that of group B from the observation. Group A participants were happy to share experiences and debate across study teams in class. They initiated standing up, looked directly into each other's eyes, and spoke loudly and fluently with confident smiles on their faces. They silently waited for teachers' answer and rarely opened their books or searched online when confronted with a question they could not answer. As a result, their answers to the three PBL questions and final study reports only reflected less cooperative learning evidence with no internalization.

On the contrary, Group B had lower perceived efficacy and higher learning motivation. They had more confused and unconfident facial expressions in class. They discussed in small voices within the study teams, never interrupted when listening to other teams' statements nor argued with the teacher. They judged the correctness of their answers by the teachers' reactions and facial expressions. Many participants used laptops and mobile phones to search for answers. Although they did not raise questions during class, most of the study teams found other teams' mistakes and discussed their issues with citations in their final study reports. Their reports and answers to the three PBL questions showed evidence of critical thinking and knowledge internalization.

### **5.2 Learning Strategy**

Group A's learning strategy was learning by practice. Their final study reports showed strong evident of their internship experience. Less than 1/4 of them add literature review in their reports. And none of the issues they debated in class were used in the reports.

Group B formed an active and teacher-centered learning strategy. Their study reports showed strong evident of literature reviewing, peer learning, and online searching. In class, the teacher mainly provided learning methods and answered their questions when other teams were not able to answer.

### **5.3 The Flexible Knowledge Structure**

Group A offered 18 knowledge points (60% of Group B) based on their front-line internship experience. They compared business hotels and resort hotels of five stars (the hotel where they practiced). Their themes can be basically divided into three categories: Firstly, the summary of their internship (50% of the total). Secondly, the reflection after their internship (33.3% of the total), and thirdly, further refine the internship results through reading textbooks and academic literature (16.7% of the total). As a result, they believed that the cost of a hotel (51.61%) determined the hotel's star rating, which in turn guided the customer demand; Budget hotels customers had no demand for particular services such as laundry and concierge (32.26% of participants), so the cost of budget hotels was not as high as that of high-star hotels. Employee Training could improve the work

efficiency of employees, and labor costs could be reduced by merging departments (40.81% of participants).

Group B offered 30 knowledge points across disciplines and based on textbooks, journals and websites. They compared hotels of different sizes (large and small), different market segments (resort and business), and different levels (budget, three stars and five stars). In addition to textbook knowledge (50% of the total), they chose new topics that the hotel industry was concerned about (40% of the total), and interdisciplinary topics (30% of the total). A majority of them (53.89% of the participants) believed that the demand and consumption ability of the target customer group of a hotel (the course "Marketing" was carried out in the same semester) caused the different hotel levels. In addition to employee training (10.2% of students), they also mentioned using technology to reduce labor costs (32.4% of the participants). The rest proposed ways of outsourcing, actuarial work content and rewarding excellent employees from the perspective of human resources (courses they had not taken).

## **6. Discussion**

Problem-based learning (PBL) is mainly carried out in research institutions. This paper finds that PBL can improve undergraduates' critical thinking and learning abilities in application-oriented institutions. Three main influences of internships on hospitality undergraduates' PBL outcomes were found: firstly, internships increased students' perceived efficacy, but weakened their motivation for PBL and reduced their willingness for team-based learning and active learning. Secondly, students used passive learning strategies for PBL. Finally, the internship exacerbated the incompleteness of PBL's flexible knowledge structure of students.

The reason for this result is because hotel internships provided a three-day to one-week of rapid lecture-based and practical training. The high-leveled hotels' standard operation process training may have encouraged obedience and compliance thinking patterns for the students. Students continued to strengthen the passive learning paradigm during internships. Without active learning abilities, they would not be able to achieve the same learning effects, though they adopted the active learning strategies.

Internships may have exacerbated the imperfection of the students' knowledge structure in PBL. Two factors may have influenced this result. First, participants took part in the PBL experiment immediately after finishing their internship. Their recent memories may have influenced their theme selections. Secondly, their lack of learning motivation and the passive learning paradigm may have led to the narrowness of their knowledge structure compared with those without internships.

## **7. Conclusion and Suggestions**

Internship would weaken students' motivation and outcomes of PBL in Application-oriented undergraduate programs. However, PBL has great effect to alter students' passive learning into active learning. Teachers should apply PBL before internship. To continue to strengthen students' critical thinking and train students' problem solving abilities in their internship, hospitality management programs should assign PBL topics to students in advance, and organize students regularly to participate in PBL discussion.

## **Acknowledgment**

This paper is part of a key course project funded by Shanghai Municipal Education Commission.

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