Action research on project-based learning combined with local creation and integration into curriculum

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Abstract. The purpose of this study is to explore the implementation of project-based learning in the "Proposal Writing and Presentation Skills" course, integrating local distinctive architecture or businesses in Hsinchu as the target field for local revitalization. The learning objective is for each student to utilize the expertise gained in the course to write a professional event planning proposal for the "Open Hsinchu 2023" exhibition. Qualitative and quantitative data collected during class and at the end of the semester are analyzed to examine the development and changes in students' planning abilities throughout the teaching process. Based on the literature review and the findings of this study, implementing project-based learning in planning and presentation skills combined with local revitalization has proven beneficial, necessary, and feasible. It not only bridges the gap between learning and application but also results in significant and positive changes in students' interests and attitudes towards learning. Furthermore, it assists teachers in refining instructional design and effectiveness, as well as strengthening students' abilities in proposal writing and presentation skills.

1 Introduction

In the field of tourism and MICE (Meetings, Incentives, Conferences, and Exhibitions) activities, promoting festival culture tourism and business travel related to conferences and exhibitions has always been a key focus of government efforts to cultivate industries. There has been a particular emphasis on developing "proposal writing" as part of professional training.

However, many student-planned proposals in this area tend to be based on fictional themes, lacking authenticity. Therefore, this study adopts Project-Based Learning (PBL), an learner-centered instructional approach (Thomas, 2000), to create a learning environment that actively involves students in participation and discussions. Through PBL, students become problem solvers and develop their learning interests within this context (Polman, 1998).
Additionally, this study combines the promotion of local revitalization by designing a curriculum centered around students, which enables them to engage in community-based services. The target field is Hsinchu, where students are guided to explore the issues faced by Hsinchu, devise solutions, and collaborate with local stakeholders to address these problems. The learning objective is for students to write and execute an event planning proposal for the "Open Hsinchu 2023" exhibition, emphasizing local connections and enhancing the authenticity of the planning process, thus completing the industry-academia collaboration.

2 Literature Review

2.1 “Proposal Writing and Presentation Skills” Course Design

The "Proposal Writing and Presentation Skills" course conducted in this study had been divided into three main components: event planning, business planning, and presentation implementation. The teaching utilized five designated planning templates provided by TBSA, the Taiwanese Business Strategy Association, as the prescribed format for the plans. TBSA is a professional association dedicated to promoting business planning expertise in Taiwan.

They have established standards for assessing business planning capabilities. Instructors utilize five planning tool forms developed by TBSA, including the Concept Analysis Form, Basic Plan Policy Form, Product Concept Design Form, Marketing Tactics and Activity Design Form, and One-Page Business Plan. These forms guide students through systematic steps in practical exercises for plan writing, gradually developing their ability to integrate planning processes and apply a variety of tools.

2.2 Local Creation

The core concept of local revitalization is the integration of "industry, locality, and people," which combines cultural elements and geographical characteristics to develop industries that are best suited to the local environment (Chuang et al., 2021). The aim is to improve the living functions of remote towns and villages through the advancement of both physical and social infrastructure, creating employment opportunities that attract young individuals who have migrated to metropolitan areas to return to their hometowns.

The goal is to establish a friendly environment that harmonizes urban development, the local population, and employment, while also addressing the objective of increasing the local population. Given Taiwan’s similar challenges of aging population and uneven urban-rural development, it is highly valuable for Taiwan to learn from this strategy as an important approach to address population outflow, revitalize local vitality, and stimulate local economies (Horiuchi & Takahashi, 2016).

2.3 Project-Based Learning (PBL)

In recent years, to break down disciplinary boundaries and develop interdisciplinary integration skills, schools have actively promoted Project-Based Learning (PBL) to enable students to engage in thematic learning. PBL was initially proposed by American educational scholar W.H. Kilpatrick in 1918, advocating that schools should provide various planned topics for students to choose freely. Teachers guide students in applying problem-solving methods to achieve learning objectives (Krajcik et al., 1994). It also encourages
schools to let students select project-based learning according to their practical purposes (Wolk, 1994).

2.4 Action Research

Action research, advocated by Kurt Lewin and Stephen M. Corey in the 1940s, is a research method that combines the capabilities of scientific researchers and practitioners. Gibbs et al. (2017) promote the educational reform concept of "teacher as researcher," which involves continuous reflection, thinking, and re-planning processes to keep researchers focused on and solve problems. The five steps of implementing action research are "plan, act, observe, reflect, and revise." Throughout the development of action research, rolling modifications can be made, and the research plan must be constantly reviewed and revised to align with the real needs of the situation, highlighting the significance of "action" in action research.

3 Methods

In terms of research methodology, qualitative approaches were primarily employed, including classroom observation records, student learning activity records, and teacher feedback forms. Quantitative research tools, such as end-of-term teaching assessments, were also used to collect research data. This action research was conducted in three stages over one semester. The "Planning and Presentation Skills" course was taught for three classes per week, spanning 18 weeks. Each class lasted for 50 minutes. The first week was dedicated to collaborative discussion and revision of the course design, while the final week involved the completion of end-of-term questionnaires and student interviews. Thus, the instructional activities lasted for a total of 16 weeks.

3.1 Research question

The evaluation aims to examine the impact of integrating project-based learning with local revitalization teaching models on students' development of planning abilities and their learning outcomes. It seeks to examine how the combination of these approaches has impacted students' development of planning skills and to determine the overall effectiveness of their learning.

Based on the research findings, recommendations will be provided for the design and implementation of project-based learning integrated with local revitalization. Specific insights and reflections gained from the study will be presented, offering valuable guidance for curriculum design and instructional practices in this context.

3.2 Participants

The researchers selected a class of approximately 45 students from the Department of Tourism and MICE at Chung Hua University in Hsinchu City as the participants for this action research. These students were in their third year of university. The researchers provided three weekly sessions of the "Proposal Writing and Presentation Skills" course and incorporated project-based learning tasks. Some of the course sessions were conducted in classrooms on the university campus, while others involved off-campus field trips for site exploration. The students followed the course's design process and sequentially completed the instructional tasks in line with the "Proposal Writing and Presentation Skills" curriculum.
3.3 Research method

Data collection for this action research included observations, interviews, and document analysis. The documents analyzed consisted of end-of-course teaching evaluation questionnaires, classroom observation records, student learning activity logs, and teacher feedback forms. In addition, the data were reviewed collaboratively by participants and action research experts to enhance the objectivity and impartiality of data analysis and interpretation, aiming to achieve triangulation.

3.4 Data Analysis

The end-of-course teaching evaluation questionnaires were analyzed using descriptive statistics. The data were coded, and the total counts and percentages were calculated to describe the situation among variables.

The content data from the classroom observation records, student learning activity logs, teacher feedback forms, etc., were analyzed, compared, summarized, and presented in written form.

4 Results and Discussion

4.1 Quantitative Analysis

Based on the "End-of-Term Teaching Evaluation Questionnaire," the overall average score is 4.55 out of 5, indicating that students highly appreciate the integration of project-based learning into the "Proposal Writing and Presentation Skills" course. They show a high level of satisfaction with the teacher's instructional strategies, course design, teaching assessment, as well as peer interaction, learning interest, and acquisition of professional knowledge. The
lowest-scoring item is question eight, where students expressed slightly lower agreement regarding how the course content design contributes to enhancing their learning interest, with a score of 4.36.

The highest level of agreement, with a score of 4.68, is observed for question three, suggesting that the teaching materials and instructional methods employed by the teacher inspire learning efficiency. Overall, these results address the first research question, indicating a significant and positive change in students' learning interest and attitudes through the introduction of project-based learning in the "Proposal Writing and Presentation Skills" course.

Table 1. Chung Hua University Teaching Assessment Questionnaire

<table>
<thead>
<tr>
<th>Teaching Assessment Survey</th>
<th>Strongly Agree (5 points)</th>
<th>Agree (4 points)</th>
<th>Slightly Agree (3 points)</th>
<th>Disagree (2 points)</th>
<th>Strongly Disagree (1 point)</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teacher can fully explain the learning goals in class instruction.</td>
<td>58%</td>
<td>38%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>4.54</td>
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<tr>
<td>2. The teacher is enthusiastic, earnest, and responsible in class instruction.</td>
<td>64%</td>
<td>36%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4.64</td>
</tr>
<tr>
<td>3. The teacher’s teaching materials or pedagogy can inspire me to learn more efficiently.</td>
<td>68%</td>
<td>32%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4.68</td>
</tr>
<tr>
<td>4. The teacher can adjust the teaching methods or course content to the learning response of the students.</td>
<td>56%</td>
<td>40%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>4.52</td>
</tr>
<tr>
<td>5. The teacher is very willing to discuss with students in class and after class.</td>
<td>68%</td>
<td>28%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>4.64</td>
</tr>
<tr>
<td>6. The teacher can follow the course outline to conduct the course and grade students’ performance.</td>
<td>64%</td>
<td>32%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>4.6</td>
</tr>
<tr>
<td>7. The overall curriculum and teaching can foster students’ core competencies that have been set in the</td>
<td>58%</td>
<td>32%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
<td>4.48</td>
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curriculum design.

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<tr>
<td>8. The course content can increase my interest in any learning activities.</td>
<td>48%</td>
<td>40%</td>
<td>12%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>9. The way of how the teacher conducts the class can help me learn the related professional knowledge and skills more efficiently.</td>
<td>56%</td>
<td>36%</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>10. I have really learned the relevant professional knowledge from this course.</td>
<td>58%</td>
<td>36%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total average</td>
<td></td>
<td></td>
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### 4.2 Qualitative Analysis

Through the introduction of PBL themes, students are better able to focus on the core problem and follow the guidance provided by the PBL theme. They adopt a top-down perspective to deconstruct the problem and discuss it systematically, allowing students to have a clear direction throughout the activity planning process and optimize the sequencing of activity planning. Student learning activity records include off-campus visit reflections, group discussions, improvement strategy proposals, final reflections, and final project presentations. The following are summarized feedback and opinions from some of the students:

**Learning attitude changes**

Student A: "For event marketing, I wanted to use video filming as a way to promote the event. I came up with many ideas... How can I accomplish this with limited resources and a small team? Those few days, I couldn't sleep and felt stressed. I was criticized by my teammates during the first and second meetings, but I didn't give up. I continued to think of better solutions to complete the task."

Student B: "I learned to take the initiative and proactively confirm all the details with the team. I don't just wait around for the team leader or instructions. Every team member has the obligation and responsibility to ensure that everything progresses smoothly and doesn't delay subsequent work."

Student C: "I found it challenging to plan the activities for the event. I didn't have prior experience in planning and executing a location-based event. Although I was a bit worried about my abilities, I still wanted to try this new challenge."

Student D: "Organizing an event is truly more difficult than I imagined. Starting from scratch is not an easy task. This course has been the most demanding and challenging among all the courses this semester, but completing it also gives a strong sense of accomplishment."

**Learning gains**

Student E: "The most valuable lesson I learned was 'communication.' Everyone has opinions and ideas, and it's important to express them and discuss their feasibility together. This was the aspect I learned the most in this course. The importance of communication affects the team's atmosphere and the overall integrity of the event."
Student F: "I believe that the planning and presentation skills I learned in this course will be very helpful in future workplace tasks. Regardless of the profession, discussions and decision-making are necessary. Expressing one's opinions and being open to others' ideas are equally important."

Student G: "Through this course, I learned that not everything goes according to plan. It's important to adapt and make changes to the plan as needed. Being flexible and embracing change is crucial rather than sticking to the original plan."

Increasing teamwork

Student H: "The event team actually faced a lot of pressure because it was challenging to discuss and finalize the detailed event planning within a short period of time. However, the team established a mutual understanding and held regular meetings. If someone arrived late, they had to treat other classmates to drinks."

Student I: "There was only one student in the graphic design team who had a basic understanding of computer graphic software. Although the other members of the team were unfamiliar with this aspect, they actively engaged in discussions. I feel proud of the final backdrop created by our graphic design team."

Based on the comprehensive feedback from students, the results indicate that we can answer the first research question. By integrating problem-based learning into the "Proposal Writing and Presentation Skills" course, there were significant and positive changes observed in students' learning interest, attitudes, and abilities.

5 Conclusion

This study employed an action research approach, involving instructional design, implementation, and data analysis. Regarding the integration of place-based learning into the "Proposal Writing and Presentation Skills" course, the researcher provides the following recommendations for teachers in terms of instructional practices:

1. By incorporating PBL into the "Proposal Writing and Presentation Skills" course, significant and positive changes were observed in students' learning interest, attitudes, and abilities.

Analyzing the composition of students in our department, most of them had lower academic performance during high school, with generally lower school grades. They tended to prefer hands-on courses rather than academic-focused ones. Students' learning motivation was generally low, and they exhibited passive attitudes. This often posed challenges in the instructional context. However, based on feedback from end-of-course questionnaires and students' learning activity records, a noticeable improvement in students' engagement in the course was observed. They demonstrated increased interest and were more attentive during class.

2. Implementing PBL instruction contributes to the enhancement of proposal writing and presentation skills, increases student learning motivation, and improves the challenge of passive learning.

Based on the analysis of student composition and observations from previous teaching experiences, it is evident through end-of-course evaluations and feedback from students' learning activity records that students' active engagement in the course has significantly increased. They are more willing to stay after class to discuss issues and take the initiative to use LINE groups to seek guidance from the teacher and share their opinions outside of class hours.

3. Implementing PBL instruction requires adequate teaching space, time, resources, equipment, and teaching staff.

Due to the case-based nature of PBL, it is more suitable for small-class instruction. This instructional approach places a heavier burden on teachers and imposes a greater learning
workload on students. Additionally, PBL involves extensive problem discussions, making classrooms with flexible arrangements of desks and chairs more suitable for creating a conducive learning environment.

The effective management of discussion time and problem guidance also requires proficient teaching skills and is best suited for teachers with a high level of familiarity with problem-based learning operations. Therefore, the implementation of PBL instruction should take into consideration factors such as an appropriate teacher-student ratio, manageable teaching workload, flexible teaching space, teachers' familiarity with PBL operations, and precise control of instructional progress, which may pose potential limitations.

Based on the research findings, a course design and instructional practice model for "Proposal Writing and Presentation Skills" can be constructed, which significantly contributes to the enhancement of college students' planning abilities. This model can also encourage university teachers to seek relevant teaching materials and course design plans that can further improve students' planning abilities.

Creating a teaching environment that emphasizes practical application is advantageous for cultivating and showcasing planning abilities. Embracing the power of instructional innovation, training students to possess planning and problem-solving skills, and integrating theory with practice will enhance their competitiveness in the job market.

References