

The Active Learning in Tourism Design: Focusing on Project-Based Learning (PBL) in Higher Education

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観光デザインにおけるアクティブ・ラーニング

—高等教育におけるプロジェクト型学習（PBL）を中心に—

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Abstract

This paper focuses on Project-Based Learning (PBL), a type of active learning, based on its effectiveness. It further clarifies the concept the tourism design and analyzes examples of practical tourism projects undertaken by students in the field of tourism design in higher education to examine the educational effects and practical potential of PBL. In particular, this study examines student projects conducted through Independent Studies and Tourism Research Practicum, detailing the content of each activity and class, as well as the students' learning experiences. This analysis provides a concrete perspective on how PBL can facilitate student learning and deepen their understanding of tourism design.

Introduction

Active learning is widely known as an educational method that emphasizes students' active involvement in the learning process, rather than simply passively receiving knowledge from instructors. In the field of tourism design, based on previous research, the author used Project-Based Learning (PBL), an effective method of active learning, to guide students in launching numerous projects over a period of two years, from 2023 to 2024. This study discusses the processes and

outcomes of some of the projects initiated during this period.

Active Learning

Active learning is commonly used as a practical term in educational settings rather than a clear definition. Bonwell et al. (1991) stated the following:

Though the term “active learning” has never been precisely defined in educational literature, some general characteristics are commonly associated with the use of strategies promoting active learning in the classroom:

Students are involved in more than listening.

Less emphasis is placed on transmitting information and more on developing students’ skills.

Students are involved in higher-order thinking (analysis, synthesis, evaluation).

Students are engaged in activities (e.g., reading, discussing, writing).

Greater emphasis is placed on students’ exploration of their own attitudes and values.

(Bonwell et al.,1991: P2)

From the above theory, the effectiveness of active learning lies in its ability to promote student participation and improve the quality of learning. However, the characteristics of individual students must be taken into account in its implementation. Additionally, it is important to evaluate how specific educational activities contribute to student learning and to continue to improve them. Furthermore, P. Doolittle et al. (2023) mention as follows:

While active learning has been demonstrated to have positive impacts on student learning and performance, defining the concept has been elusive.

(P. Doolittle et al., 2023: P2)

Based on the above theory, this paper provides a detailed analysis of the learning process based on theoretical perspectives and related factors as well as students’ practical activities in the field of tourism design in higher education. Furthermore, based on the ICE approach which stand for Ideas, Connections and Extensions, the content and structure of the syllabus are analyzed to evaluate how active learning is implemented and how it affects students’ learning. Through this analysis, the practice and effects of active learning in tourism design are discussed in depth.

Tourism Design

Regarding the concept of “Tourism Design,” Kashima K. (2021) states the following:

In order to revitalize the region, it refers to creating new value by fusing between different fields in the process of designing tourism according to the needs of the times. Specifically, the following three fields, Tourism, Marketing, and ICT (Information Communication Technology) are expected to be combined.

(Kashima K., 2021: P10)

Students are expected to understand this concept of “tourism design” and to analyze the current situation of the region through research activities to evaluate tourism resources and identify market needs. This approach enables students to integrate knowledge from different disciplines and develop practical skills in tourism design. Additionally, the data collected through the use of ICT can be used to develop marketing strategies, leading to the realization of tourism designs that bring new value to the region.

The following sections describe the outcomes of the students’ Independent Studies and the projects they made in the course of Tourism Research Practicum.

Independent Studies

i. Student Projects

The students developed independent projects based on diverse themes, utilizing their unique perspectives and the latest technology to address issues and possibilities in the tourism field. These projects were highly evaluated through presentations at Japan Tourism Association, and the significance and results of these projects have been widely recognized, including an Encouragement Award. The details of each project are as follows.

Project I

A Study on the Development of a Platform for Volunteer Tourism

(Fukuda R., et al., 2023)

Overview

This study is based on the concept of volunteer tourism and previous research, and it

involves designing an integrated platform using a website, mobile app, and social media through community contribution activities at the university. Through this design process, the concept of volunteer tourism is embodied, and a system is established to simultaneously support regional growth and the promotion of tourism.

Project II

A Study on Mobile Applications for Foreign Tourists in Nepal: Focusing on the MIMAMORI app (Rai et al., 2023)

Overview

This study aims to improve the safety and tourism experience of foreign visitors by proposing a mobile app for foreign tourists in Nepal. Through a survey conducted in advance, the needs and requests of foreign tourists were identified. The focus is placed not only on features that can be used during emergencies but also on those that can be used in normal situations, with the goal of supporting the safety and alleviating the concerns of foreign tourists. The app will propose features such as providing information on tourist sites, emergency contact details, and linking with local guides. It is intended to serve as a new service proposal for the tourism industry in Nepal (Figure 1).

Figure 1 The conceptual image of “MIMAMORI NEPAL”



Project III

A Study on Island Tourism using ChatGPT : Focusing on Miyako Island (Fukuda I. et al., 2023)

Overview

This study explores the potential of island tourism using ChatGPT, with Miyako Island as the field of study, including a definition of remote islands. Information related to Miyako Island tourism was collected for each phase of the travel—before, during, and after the travel—and was tested by asking ChatGPT questions. Furthermore, in order

to promote regional revitalization and enhance tourist experiences, the study also provides suggestions on how to integrate ChatGPT's functions into a mobile app. As a model for this research, it is expected to open up possibilities for application to other remote island tourism and offer new insights for the future of island tourism.

Project IV

Research on Niche Tourism: Focusing on Motorcycle Tourism (Tamura, 2023)

Source: Tamura (2023), Supervisor: Kanato Kashima (Author edited)

① Overview

This study defines a new form of tourism, "Motorcycle Tourism," and identifies the current situation and challenges regarding the decline in motorcycle usage. Through surveys and field research, the study plans tours utilizing motorcycle tourism and proposes a new business model. Additionally, a mobile app to support bike tourism within Fukuoka Prefecture will also be developed. This research aims to contribute to the development of motorcycle tourism and the revitalization of the local economy.

② Key Questions in the Survey (n=30)

- Do you ride a motorcycle?

"Yes" was 14%, and "No" was 86%, indicating that the majority of people have never ridden a motorcycle (Figure 2).

Figure 2

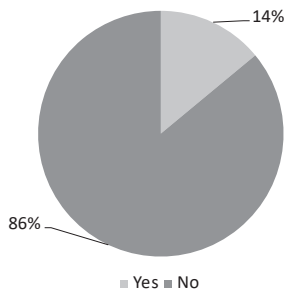
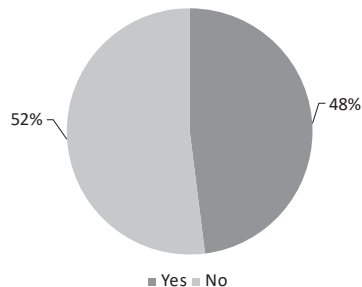
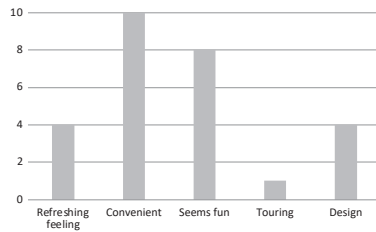
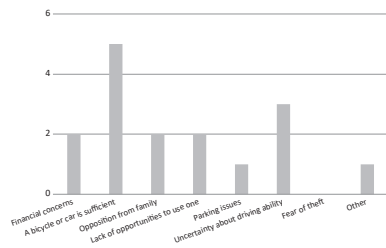


Figure 3



- Are you interested in motorcycles? (Figure 3)
- For those interested in motorcycles → What aspects of motorcycles interest you? (Multiple answers allowed, up to 3) (Figure 4)

Figure 4**Figure 5**

· For those not interested in motorcycles, please tell us the reasons(Figure5)
 Among “those not interested in motorcycles”, 5 persons felt that a bicycle or car is sufficient, while “uncertainty about driving ability” was noted by 3 persons. “Financial concerns” were cited by 2 persons. “Opposition from family” was mentioned by 2 persons, and “Lack of opportunities to use” was also noted by 2 persons. “Parking issues” were raised by 1 person, while “Fear of theft” accounted for none. It was apparent that there are people who are not interested in or cannot afford a motorcycle due to various reasons such as financial constraints, family circumstances, and driving skills.

ii. Effectiveness

After the presentation at the conference and receiving the award, feedback was received from the students regarding the challenges they encountered while progressing with the project, their sense of accomplishment, the improvement in their presentation skills, their plans for the future, and so on (Table 1).

Table 1 Feedback of the students

Project	Preparation and Growth	Post-Presentation Awareness and Future Outlook
Project I	The flow of the presentation and visuals were well-received, earning sympathy from the professors.	Seek to develop a feasible platform that promotes volunteer activities and contributes to the community.
Project II	Faced challenges with changing topics and app design, but worked hard in preparation.	Aim to improve app features and make more practical proposals.
Project III	Presented in Okinawa with some nervousness, but was able to answer questions well and gained valuable experience.	Plan to apply the presentation experience to other research projects.
Project IV	Struggled with creating PowerPoint slides and presenting, but was able to enjoy and tackle the project with enthusiasm.	Plan to further develop research by conducting field studies and producing PR videos.

Source: Created by the author

Tourism Research Practicum

1. Syllabus design using “ICE approach”

The ICE approach, first introduced by Wilson (1996) and later refined by Sue Fostaty Young (2005), is composed of 3 key elements: Ideas, Connections, and Extensions. It is widely recognized as an effective method of promoting active learning. In the “Tourism Research Practicum” course, the syllabus is designed based on this approach. Students are then supervised to work on various projects that align with the course objectives. The following tables illustrates the relationship between the course content and the ICE approach (Table 2).

Table 2 Syllabus design using “ICE approach”

Content	ICE Approach
<ul style="list-style-type: none"> · Knowledge related to Tourism Studies Elements of tourism, tourism resources, tourism motivations, tourism behavior, etc. 	Ideas
<ul style="list-style-type: none"> · Basic knowledge related to Information and Communication Technology (ICT) What information is, what ICT is, the DIKW model, information systems, information management, etc. 	
<ul style="list-style-type: none"> · Basic knowledge related to Research Primary and secondary data, qualitative and quantitative information, methods of information collection, etc. 	
<ul style="list-style-type: none"> · Knowledge related to Marketing Management resources, marketing mix, etc. 	
<ul style="list-style-type: none"> · Integration of Tourism and Psychology 	Connections
<ul style="list-style-type: none"> · Integration of Tourism and ICT 	
<ul style="list-style-type: none"> · Integration of Tourism and Business (Regional Revitalization) 	
<ul style="list-style-type: none"> · Field Research 	Extensions
<ul style="list-style-type: none"> · Survey research and data analysis 	
<ul style="list-style-type: none"> · Content creation (videos, prototypes) 	
<ul style="list-style-type: none"> · Proposals and information dissemination 	

Source: Created by the author (Refer to the “Note”, author edited)

2. Student Projects

This course incorporates a PBL (Project-Based Learning) approach, in which students work to gain a deeper understanding of the unique characteristics and attractions of the region. The goal is to cultivate their ability to maximize the potential of regional tourism resources and contribute to sustainable local development.

As part of this, students explored new research topics related to the tourism resources of their hometowns and presented their findings in group presentations. Each group focused on aspects of the region's potential, such as "local blessings and characteristics" like agricultural products, traditional crafts, and natural landscapes, as well as "regional memories" such as history, legends, and traditional events, seeking new possibilities beyond traditional tourism resources.

The main presentation themes are as follows:

- i. Tourism Information-related topics
 - A new approach to integrating gourmet, sports, and tourism using ICT: Focusing on Hiroshima prefecture
 - A survey on tourism information at Hiroshima station
- ii. New tourism experiences through the integration of tourism and other fields
 - Educational Tourism for children in Yamaguchi (integration of tourism and education)
 - Historical tourism in Ehime (integration of tourism and history)
- iii. Tourism-oriented town development
 - Tourism destination development using Destination Mix
 - Tourism town development using station melodies

3. Projects awarded at Japan Tourism Association

As an output of the course, presentations were made on the above themes, three of which were selected and had the opportunity to be presented at Japan Tourism Association. One theme was introduced in a presentation by the author and the other two themes were presented by students.

Project I

A new approach to integrating gourmet, sports, and tourism using ICT: focusing on Hiroshima prefecture (Sakane et al., 2024)

Source: Sakane et al. (2024), Supervisor: Kanato Kashima (Author edited)

① Overview

Hiroshima Prefecture is a region with diverse tourism resources, including history and culture, local cuisine, and sports activities that take advantage of its natural resources. However, there is a need to address issues such as the centralization of information among tourist attractions, multilingual support, and seamless integration of tourist experiences. In this study, using Hiroshima Prefecture as a field, we propose a new tourism model that integrates gourmet experience, sports activities, and tourism using ICT. As part

of this project, we designed and developed a prototype of a mobile application that supports the tourism experience. This prototype provides functions and interfaces to make the tourism experience more attractive and convenient, and aims to be a useful tool for users. In the next step, we plan to further improve the UI of the application and consider adding a short video function.

In addition, as a future prospect, we plan to implement a voice input function for other languages that utilizes artificial intelligence (AI). By building a system that outputs suggestions from the database in accordance with the user's schedule based on voice input such as "I want to do..." or "I want to eat...", it is expected to provide a more fulfilling tourism experience.

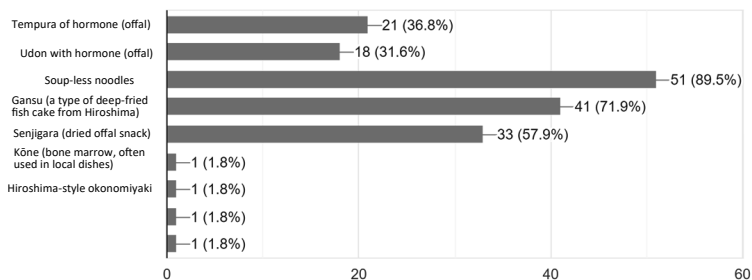
② Research Methods

In this study, a web survey and research on existing services were conducted to understand the needs and expectations of tourists for local foods and experience activities in Hiroshima Prefecture, with the goal of designing a tourism mobile application based on these insights.

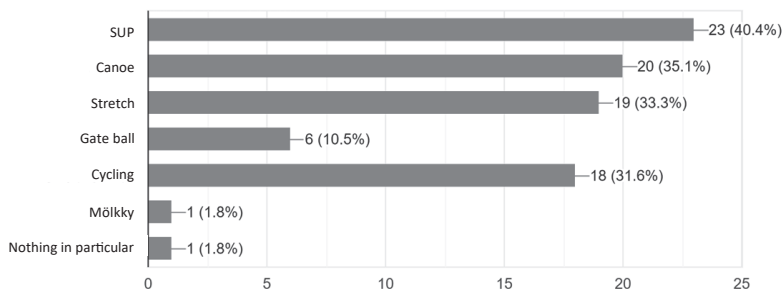
i. Web Survey

A Google Form survey was conducted from June 13, 2024 to July 30, 2024 (n=57). The survey collected questions such as "What do you know about and have eaten about Hiroshima's local cuisine" and "What types of activities would you like to experience, as well as the areas and formats of those activities?" The results of the survey revealed the following:

Figure 6 What do you know about and have eaten about Hiroshima's local cuisine?



Among local delicacies, soup-less noodles (shirunashi dandan-men) are the most popular (Figure 6).

Figure 7 What types of activities would you like to experience?

Many respondents wanted to try stand-up paddleboarding (SUP) as a hands-on activity (Figure 7).

ii. Regarding existing services

The following problems were noted with one mobile application that provides tourist information.

- Not modern and easy-to-use UI
- No seamless integration with other social networking services
- Lack of functions for users to transmit information, such as posting reviews
- Support for travel routes between dining and activities

③ New attempts

Based on the survey results above, to further enhance the tourism experience in Hiroshima Prefecture and to target tourists who have already experienced Hiroshima's famous gourmet foods, we dare to propose niche local gourmet foods. Furthermore, by combining the event with marine sports and nature experience activities in Hiroshima, new experience opportunities will be offered to tourists. A temporary event logo and the prototype of mobile application were also created (Figure 8 & Figure 9).

Figure 8 Project Logo

Figure 9 Image of the mobile app prototype**Project II**

Tourism Destination Development using Destination Mix (Fukui et al., 2024)

Overview

The Asakita ward of Hiroshima is a region rich in nature, with historical resources and cultural attractions. However, in recent years, challenges such as population decline and a low number of foreign tourists visiting the area have emerged. To address these issues, there is a need for tourism development that maximizes the unique characteristics of the region. This study attempts to design a new tourism experience by utilizing the concept of destination mix, combining the tourism resources of Asakita Ward. As part of this project, a tourism promotion video introducing the tourism resources of Asakita ward was created (Figure10), and information was disseminated through social media.

Figure 10 Imagine of promotion video**Project III**

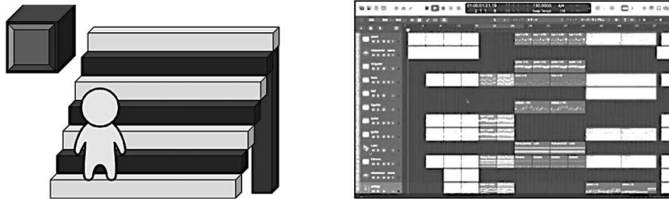
Tourism Town Development using Station Melodies (Murakami, 2024)

Overview

The proposal suggests an attraction where tourists can create their own station melodies (the music played upon the arrival of trains). This experience involves playing musical scales on stairs designed to resemble a keyboard, in sync with a randomly generated beat created by artificial intelligence (AI), and recording the melody (Figure 11). Additionally, the system is designed to allow the creation of original station melo-

dies incorporating musical features from various countries. This engaging and accessible experience is expected to generate buzz and attract visitors to the tourism site.

Figure 11 Image of composing music on stairs using AI



4. Effectiveness

A survey was conducted after the class, and feedback was collected based on four indicators: “Enjoyment of the class”, “Knowledge acquisition”, “Depth of the course” and “Project experience” (n=13). The details are shown in the table below (Table 3).

Table 3 Feedback of the students

Items	Feedback (Selected excerpts)
Enjoyment of the class	<ul style="list-style-type: none"> · I really appreciated how the professor listened carefully during the preparation for the presentation. It is a very enjoyable and educational class.
Knowledge acquisition	<ul style="list-style-type: none"> · I am able to absorb a wide range of knowledge about tourism, which is very helpful. I'm grateful for that. · I gained a lot of knowledge about various aspects of tourism. It has made the subject even more interesting to me.
	<ul style="list-style-type: none"> · I learned many things about tourism that I didn't know before, and it is great. I feel that I can now approach tourism from a new perspective when I travel.
Depth of the course	<ul style="list-style-type: none"> · After attending all 15 sessions, I gained a deep understanding of the tourism field. I am glad I took this course.
Project Experience	<ul style="list-style-type: none"> · Through this course, I am able to understand the structure of tourism well, and I am able to make great progress on my project in a very interesting way. · This class is a lot of fun. I enjoyed the process of thinking, discovering, and actually developing plans. · I am able to understand the key points in tourism, how to offer them, and what elements should be included. I also learned how to combine and apply marketing and ICT. · It is fun listening to the discussions about tourism topics, which also included SDGs and marketing elements. · The teaching method is very engaging, and it is a very enjoyable class. I am thrilled to learn information that will be useful in society. · This is a unique and interesting class. Although it feels a bit difficult for me, I want to try my best. · In this lecture, I learned new information and skills every time, so I am able to enjoy the class without feeling tired, even in the first period. · I felt that this class focused on providing useful information and knowledge that would help in job hunting. · I don't mind learning completely new topics, and it is really fun as new knowledge is entering my mind. · There is a lot to remember, which is tough, but everything seems useful for the future, so I am doing my best!

Source: Created by the author

Conclusion

The study touched on the essence of active learning and based on the basic theory of Project-Based Learning (PBL), discussed PBL methods in higher education. In particular, this study addresses the definition of tourism design given by Kashima K. (2021), how to create new value for regional development, and how to integrate the three fields of tourism studies, marketing, and ICT. Students were allowed to choose their favorite field or area of expertise. From the selection of the theme, clarification of problem awareness, information search and discovery, survey design (determination of survey methods and creation of survey forms), fieldwork, data analysis, and presenting the outcomes at internal presentations and academic conferences, including academic awards, the process contributed to the students' personal growth and confidence.

In the PBL implementation process, this study discussed two courses, Independent Studies and the Tourism Research Practicum. In Independent Studies, student projects in the field of tourism information included the construction of the volunteer tourism platform, an application for overseas tourists to watch over tourists, and the application and effectiveness testing of ChatGPT in island tourism. Additionally, in the niche tourism area, the student explored and launched a motorcycle tourism project, which was presented at the academic conference, leading to growth as reported in their feedback.

In Tourism Research Practicum, active learning methods incorporating the ICE approach were emphasized, which were highly appreciated as they not only deepened the students' understanding of tourism research, but also provided them with a sense of enjoyment and accomplishment through the projects. Furthermore, it was evident that the active engagement of the students facilitated practical learning through the problem-solving process.

Future research should further validate the effectiveness of this approach, identify areas for improvement in practical application, and gain insight into maximizing the effectiveness of active learning. Moreover, further development of this approach is expected to establish a more effective tourism design model, helping students develop the ability to find creative and practical solutions to challenges in the tourism field.

Notes

A portion of this study, particularly the part related to the Tourism Research Practicum, incorporates content from the author's oral presentation titled "A study on Tourism Design Education Based on the ICE Approach", delivered at the Japan Tourism Association conference in 2024, which was also included in the conference proceedings.

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News Release:

The students of the Department of Global Communication received the Presentation Encouragement Award at the Japan Tourism Association Conference

<https://www.h-bunkyo.ac.jp/university/report/global/28117/>