Practice-Oriented Paper

Fieldwork Projects to Learn Content English

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Since 2017, an elective English communication class that focuses on fieldwork projects has been developed and team-taught by the authors. Students interested in doing fieldwork projects to learn content English are encouraged to enroll in the course. This paper explains a fieldwork project completed in the spring 2018 semester and student reactions to learning content English through project-based tasks. In the project, student groups chose areas of the university's marine science museum and researched about its features and the research conducted there. Then they learned English expressions and vocabulary related to the marine science museum and made an English floor guide of the site. The project takes English learning outside of the classroom and teaches content language because it focuses on fieldwork to help the students learn English expressions that are directly related to their majors. Student volunteers at the museum will also be able to use the floor map to introduce the marine science museum or their studies to international visitors. The project is also an example of non-content teachers using project-based learning to teach content language that has the potential to help students in their future study or career endeavors.

In recent years, the Japanese government has been pushing for reform in English education to promote the acquisition of communicative competence in an effort to develop more globally minded citizens (Ministry of Education, 2014). As a result, there is a need to reflect on current teaching practices and find innovative methods of instruction that motivate learners and that meet the twenty-first

century needs of the global English-speaking community. Hashimoto (2013) believed connecting language learning with practical tasks and giving students a voice in the learning process should become an integral part of Japanese English language curriculum if we are to solve problems with the current English education system. This paper reports on one project completed in a project-based content English class that was designed and implemented at a Japanese marine science and technology university. The project described in this paper is an English language floor guide of the university's marine science museum that was completed in the spring 2018 semester. The project was designed to motivate students by combining knowledge they have learned in content courses with language learning as they gained skills to explain marine science content in English. The marine science museum floor guide will be useful for students who volunteer at the museum as part of their studies. Students in the university's English club who volunteer to provide English assistance for international luxury liner passengers disembarking at the local port will also be able to use the floor guide when they conduct tours to the marine science museum.

This project-based class aligned with Hashimoto's (2013) proposal for connecting language learning with practical tasks as well as with Prensky's (2010) notion that twenty-first century learners prefer autonomous, active learning environments in which they use technology, take part in collaborative learning, and learn from classmates' experiences. The class gave students an opportunity to engage in autonomous learning, use technology, and do project-based activities that follow their passions. This helped the students learn skills needed to succeed in their content courses as well as in society at large (Prensky, 2010). Furthermore, the project served as a model for content-based language learning projects that can be taught by language teachers who are not specialists in the content students learn in their majors.

Project-based Learning

Project-based learning (PBL) is a type of student-centered course design that focuses on problem solving, collaboration, and the teacher acting as a facilitator (Ornstein & Hunkins, 2014). PBL emphasizes learner autonomy as students

engage in authentic, collaborative tasks where they find the information necessary to complete the projects, solve problems, and reflect on their learning process (Westwood, 2008). In designing PBL courses, students and teachers can negotiate the curriculum so that students feel empowered by having a voice in the content and materials. This results in courses that focus on student interests and needs (Ornstein & Hunkins, 2014). PBL is an effective method of instruction for English language learning as well as for other subjects. In English language classes PBL can involve interdisciplinary learning, real and relevant challenges, and acquiring information mining skills (Ng Chin Leong, 2009). The focus on sharing ideas with classmates was shown to motivate students, promote self-esteem and confidence in using English, develop creativity, and create an enjoyable learning experience for students (Astawa, Artini, & Nitiasih, 2017). Students engaging in PBL were observed sharing ideas and negotiating to make a consensus, and developing higher level speaking and writing skills as a result of projects implemented in the classroom. (Astawa, Artini, & Nitiasih, 2017). For English as a foreign language (EFL) learners, PBL can be used to teach simple tasks such as ordering in a restaurant, or it can be implemented into content-based classes.

When developing content-based PBL in EFL courses, students' prior knowledge of the content is integral to creating successful projects because the focus can be on building upon current skills rather than on the process of knowledge acquisition (Ng Chin Leong, 2009). As a result, students are able to manage their learning process in PBL projects by learning organizational and planning skills, problem solving, and methods to find information necessary to complete the assignment. For example, Fujimura (2016) found students developed and shared their knowledge by classifying what they had learned and developed a deeper knowledge of the subject by researching about it, then comparing ideas and data. This helped the students develop their English language skills as well as they began to apply both their content and linguistic knowledge to the final project. Thus, by engaging in various activities needed to complete the project, students gained competence in doing group work and learned to reconstruct their content knowledge in English (Fujimura, 2016). The

result of these processes is that students retain the information they have learned longer than when studying in a passive context (Ng Chin Leong, 2009). The authors of this paper envisioned similar results to the prior research when they designed the project-based content English communication course described in this paper.

Project Background

Since 2014, the Active Tokai Local Ambassadors (ATLAS) English Club at Tokai University's Shimizu, Shizuoka campus in Japan has been engaging in volunteer fieldwork using English to support international tourism and events in the local area. This fieldwork involves interpreting in English or visiting international luxury liner passengers at the local port, helping at international teaching conferences, interpreting for visiting international soccer teams, and creating maps, guidebooks, and other materials to provide English language assistance for international visitors. These fieldwork projects take language learning outside of the classroom and provide opportunities for authentic English interactions in Japan. They also motivate students to learn practical English communication skills (Gough & Kato, 2016). When the authors observed and interviewed the ATLAS English Club students and other students in their classes at the marine science university, they learned that many students had a desire to learn English skills to talk about their majors and other marine science interests. Because the university's compulsory English courses follow a rigid curriculum that does not allow for introducing content English, the authors decided to develop and team-teach an elective content-English course that addressed their students' desire to learn English skills for describing marine science content. They also wanted to create projects that can combine the ATLAS English Club projects to support local English needs with projects that support the university's English needs. Therefore, they designed an elective English communication class focusing on fieldwork projects, and students who were interested in participating in the English fieldwork activities were encouraged to enroll. This paper explains the 2018 marine science museum floor map project and student reactions to learning content English through PBL activities related to the project.

The 2018 Class Project

In 2018, the authors and students chose two projects to undertake in the semester-long class. The first project, which is described in this paper, was to make an English floor guide for the university's marine science museum. Forty-three students participated in the 2018 class. Forty-one students were ethnically Japanese, and two were international students from Malaysia and China. There were two female students enrolled in the course. Because the course was an elective, it was open to students of all grades, English levels, and majors at the university. The students were first grade ($n = 17$), second grade ($n = 19$), third grade ($n = 6$), and fourth grade ($n = 1$). Based on their university English placement scores when they entered the university, the majority of the students were considered elementary and intermediate English learners (CEFR A2 and B1). The two international students along with five Japanese students had higher English levels, ranging between CEFR B2 and C1.

The students began the marine science museum project by looking at the Japanese floor guide and making groups depending on their majors and interest in the marine science museum sections. They chose from the following sections: coral, the giant ten-meter deep aquarium tank, jellyfish, deep-sea fish, fish living in the local Suruga Bay, anemone (clown) fish, children's touch pool, megamouth sharks, and mechanical aquarium ("mecarium") underwater robots. To teach organizational and English skills for describing things and making the floor guide, the authors created five activities. The first activity was learning observational and brainstorming skills. The authors prepared animal pictures from old calendars for each group. The group members brainstormed and wrote down ideas about the pictures in the following three categories: "What I already know about the things in my picture," "What I see in the picture," and "Questions I have about what I can see in the picture." (Appendix A). In the second activity, half of the groups took on the role of presenters and described their pictures using their notes from the first activity. The audience members moved around the presenter group stations in a roundtable format, while listening to the descriptions and asking questions to the presenters. These questions from the audience helped the presenters think about their animal

picture more deeply and understand the kinds of details they needed to add to make their descriptions better. After the first round of presentations finished, the groups changed their roles and the audience became the presenters for round two. Each group practiced describing their pictures eight times over two 90-minute lessons. After this practice, the students tried the third activity, which was to begin the marine science museum research project. The students wrote down their ideas about their section in the marine science museum in a similar way as the picture description activity. The brainstorming chart for activity three included the following sections: "What I know about my group's section of the museum now," "What I want to learn about my section when I go to the marine science museum," and "What I think foreign visitors would find interesting about my group's section of the museum" (Appendix B). Then the groups researched information on the Internet and in their content class textbooks and notes to find the answers to the first two sections of the chart and brainstormed more ideas about what they wanted to learn when they visited the marine science museum. During this activity, they also made lists of questions for the staff at the marine science museum. Using this information, they brainstormed ideas for the third section of the chart and started to decide what they wanted to include in their floor guide sections. After doing their initial research, the students went to the marine science museum to observe the actual displays and interview the staff for activity four. In order to visit the aquarium before its opening hours, the authors visited there in advance to discuss the project with the staff and arrange the visit, which took place just before the Golden Week holiday in early May. On the day of the visit, the students observed their sections and took notes and photographs for about forty minutes by themselves. After that, they toured the museum with a staff member who explained the exhibits. During the tour, they asked the staff member questions about the displays and made field notes. Students who were unable to join the museum visit were assigned to visit the museum to observe and interview staff by the end of Golden Week.

The final activity was to make a floor guide. The authors emailed a floor plan template to the students who used class sessions in the computer room to enter their section details and pictures into the template. The students spent one lesson

in the computer room to make their initial section explanation and emailed the file to the authors. While they were making the first draft of the floor guide, the students needed to know how to describe their sections, but they did not know some English expressions and vocabulary to complete the task. To answer these needs and teach the content English needed to complete the floor guide, the authors made a Google survey and sent it to the students. The students sent back some expressions written in Japanese that they wanted to know for describing the museum. Then the authors translated the expressions from Japanese to English and put them into an Excel file. The language in the file was divided two ways. First, expressions students wanted to learn based on their marine science museum section were listed. The second section divided the expressions into lists based on grammar points. The expressions and vocabulary in the file were uploaded to the Quizlet online quiz-making application to make quiz games that could be accessed from the English Communication 2018 page on https://www. wendysintoenglish.com/. The students were then able to do practice quizzes for the content English expressions, grammar points, and vocabulary.

In class, the students used iPads to practice translating the expressions online and did competitions to see which group could complete the matching quizzes the fastest. PDF documents of the students' floor guide sections were also uploaded to the class website. To practice explaining the floor guide contents, the student groups presented their sections of the marine science museum using the iPads in the same roundtable format that was used in activity two, and the groups that watched the presentations made notes to give feedback to the presenters (Appendix C). After that, the students went back to the computer room and revised their floor guide sections using the English expressions they acquired and the advice from their classmates. In the next lessons, they gave presentations to the other groups in the roundtable format again. Once again, they received advice from their classmates after their presentations, and they then revised and finalized the floor plan during the next lesson in the computer room. The finalized floor guide was checked for natural language use, grammar, and format by the authors, then the marine science museum staff checked the accuracy of the contents. Finally, the floor guide was made into an iBook that

can be downloaded onto a smartphone, tablet, or computer. Student volunteers will be able to download the floor guide onto their smartphones and use it in the 2019 tourism season.

Student Reactions to the Project

As the students planned, researched, prepared, and practiced explaining their marine science museum sections with each other, the authors observed them in the classroom. They took pictures and made notes about the students' engagement in the group work then discussed their observations of the students' interactions. They noticed that a majority of the students remained on task. Furthermore, whether high or low-level English learners, the students seemed to try their best to learn the language and technological skills needed to complete the explanations in the floor plan, then explain about the sections to their peers. The authors observed the students actively engaged in each stage of the project by brainstorming ideas together, sharing ideas, and helping each other. For example, lower-level students sometimes asked the higher-level students for Japanese translations of expressions they did not understand. Also, the students who were more familiar with making documents on computers helped their peers who lacked these skills. Students also researched together and exchanged personal knowledge about the creatures and their section of the museum floor guide to teach each other about content. When practicing vocabulary and language skills, the students actively participated in the Quizlet activities, which were intended to help them develop the English vocabulary and structures needed to complete the project.

At the end of each class, the students completed a daily reflection in which they briefly wrote in English what they did in class that day, gave themselves a grade for the day, and reflected on their performance or the day's activity. The reflection sheets were double-sided A4 pages with boxes for one reflection for each of the 30 class periods over the semester. At the end of the semester, the authors read the reflections and tallied the students' daily grades and reflections into extremely positive, positive, neutral, and negative. They also looked for themes in the written reflections that showed patterns in the students' feelings

about the language learning in general, PBL, and learning English to describe content related to their majors. The reflection papers overwhelmingly showed that despite some linguistic difficulties, the students enjoyed sharing ideas and learning from their group members and were eager to learn English skills to talk about the marine science museum.

The students' daily reflections from the classes during the brainstorming and planning stage indicate that the students expanded their knowledge through collaboration with group members and were interested in the project. They also reflected on what they needed to study to successfully complete the project. Student comments included "I'm so happy to join my group because I'm interested in explaining this area in English," "I could get many information," and "My group members are very competent." One student reflected on knowledge he needed to learn: "Tokai University aquarium have many history and I wanna know some knowledge." Thus, the planning stage of the project helped the students understand their current level of knowledge about their museum sections as well as what they needed to learn both linguistically and content-wise.

The students also reported positive experiences when completing the fifth activity, which was making the floor plan. While working in the computer room to fill in information into the museum floor plan templates, the students reflected, "I enjoyed to cooperate with my group," "We finished our task thanks for my encouraging groupmates," or "I was able to cooperate together. I enjoyed English." Likewise, the students felt the quizzes the authors made to help them learn the English expressions for making the floor plan were engaging and useful: "Quiz is good for me to learn aquarium," "I can explain sea creatures that lived in Suruga Bay now," "We can learn many kind of sentences. So fun," and "I studies about the aquarium. Very interesting to me." Overall, across the various English levels in the class, the students reported positive feelings about the group work and language learning activities, which helps promote positive feelings about English language learning and a willingness to try to engage in English language activities with classmates.

Throughout the semester, the authors observed the students' positive attitudes through their active participation and attempts to use the vocabulary

and structures they studied in the online quizzes. When they presented their museum sections to their classmates, they often referred to the lists in the Excel file or prompted each other by offering help when a classmate forgot vocabulary or made a mistake with a grammatical structure. To test the students' retention of the content language they learned, the authors used the items from the online quizzes to make a language test at the end of the semester in July 2018. The results of this test will be discussed in a future paper. Overall, the authors felt that through the brainstorming, planning, creation, and language acquisition phases of the project, the students were able to experience the benefits of project-based learning similar to those found by Astawa, Artini, and Nitiasih (2017) and Fujimura (2016). They learned cooperative learning skills, expanded their content knowledge through participation in group activities, learned content English, and enjoyed the creative environment.

Conclusion

The elective content-based PBL course described in this paper was developed as a means to meet student interests and needs at a university where the English language curriculum follows a general communication syllabus. Through interactions with students, the authors found that many students are interested in learning content English, so they designed and implemented the course and project described in this paper. Because the authors are English instructors without deep knowledge of marine science, they focused the marine science floor guide project on teaching the students observation, research, and language skills. The students were also able to tap into their prior knowledge of the content as they learned how to explain about the university's marine science museum in English. The students found the floor map project engaging and they showed interest in learning English skills to talk about content they are learning in other classes at the university.

The university where this course was taught is unique in that it has a museum that is directly connected to research conducted at the university and the content the students study in their majors. This enabled the authors to design a unique project-based content English course where the students learned to

explain their content interests as well as to create materials that will be useful to volunteers and staff working at the museum. The course also serves as a model for combining content and projects in an English class when the instructors are not content teachers in the students' majors. The course provided an autonomous learning environment because the students were able to decide the content they wanted to include in their sections of the floor plan as well as the language they felt they needed to complete the project. In this way, the students determined their English needs rather than the instructors telling them what they needed to learn to complete the project. The authors believe similar projects can be successfully designed to teach students to explain content they study in their majors at other universities. Students in non-English speaking countries sometimes have difficulty finding motivation to study English. As seen in this project-based content English course, projects that teach students to introduce topics of interest help them learn that English can be useful to their lives and promote interest in language learning.

References

Astawa, N. L. P. N. S. P., Artini, L. P., & Nitiasih, P. K. (2017). Project-based learning activities and EFL students' productive skills in English. *Journal of Language Teaching and Research*, *8*(6), 1147-1155. http://dx.doi.org/10.17507/jltr.0806.16

Fujimura, T. (2016). EFL students' learning through project work in a content-based course. *The Journal of Kanda University of International Studies*, *28*, 105-124.

Gough, W. M., & Kato, K. (2016). Community outreach and autonomous learning. In P. Clements, A. Krause, & H. Brown (Eds.), *Focus on the learner* (pp. 446-451). Tokyo, Japan: JALT. Retrieved from http://jalt-publications.org/node/4/articles/5422-community-outreach-and-autonomous-learning

Hashimoto, K. (2013). 'English-only', but not a medium-of-instruction policy: The Japanese way of internationalising education for both domestic and overseas students. *Current Issues in Language Planning*, *14*(1), 16-33.

https://doi.org/10.1080/14664208.2013.789956

Ministry of Education. (2014, September 26). *Report on the future improvement and enhancement of English education (outline): Five recommendations on the English education reform plan responding to the rapid globalization*. Retrieved from Ministry of Education, Culture, Sports, Science and Technology – Japan website: http://www.mext.go.jp/en/news/topics/detail/1372625.htm

Ng Chin Leong, P. (2009). The power of problem-based learning (PBL) in the EFL classroom. *Polyglossia*, *16*, 41-48.

Ornstein, A. C., & Hunkins, F. P. (2014). *Curriculum: Foundations, principles, and issues*. Essex, England: Pearson.

Prensky, M. R. (2010). *Teaching digital natives: Partnering for real learning*. Thousand Oaks, CA: Corwin.

Westwood. P. S. (2008). *What teachers need to know about teaching methods*. Camberwell, Australia: ACER Press.

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Appendix A

Observation Practice
Look at your picture and make some notes with your partner.

What I already know about the things in my picture.	What I see in the picture.	Questions I have about what I can see in the picture.

Notes about my picture after presenting it to other groups:

Appendix B
Tokai University Marine Science Museum
Floor Guide Brainstorming

What I know about my group's section of the museum now.	What I want to learn about this section when I go to the museum.	What I think foreign visitors would find interesting about my group's section of the museum.

Look at the brainstorming chart. When you visit the marine science museum for observing your section of the project, write down what you find out (in Japanese is OK) then what you need to research more.

What I saw in my group's section of the museum.	What I learned that would be interesting to foreign visitors.	What I need to do more research about so I can make a good explanation.

Other notes.

Appendix C
Explaining About the Marine Science Museum

Part A: Use this chart to brainstorm ideas to tell other groups about your section of the Tokai University Marine Science Museum.

Your section name:

Main Points you will explain:

The most interesting points. You should explain why you think these are interesting.

Part B: Listen to the other groups' descriptions of their Marine Science Museum sections. Don't just copy the answers. Listen, ask questions, and make notes.

Section name	What I learned.	Advice for revising the guide.
Section name	What I learned.	Advice for revising the guide.