DIALOGBOOK2: AN IMPROVEMENT OF E-PORTFOLIO SYSTEM FOR INTERNATIONAL COMMUNICATION LEARNING

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ABSTRACT

In recent years, an educational revolution has been progressing toward the globalization of Japanese society by teaching English in elementary academic courses. However, traditional English education overweighs reading and writing and tends to disregard fostering skills in hearing and speaking, which are required to have smooth English conversations. Real globalization is one in which a globalized person can participate in borderless communications in any context. Essential aspects are to understand different cultures and achieve more in-depth communication while respecting others. Therefore, to improve the global sense of high-school students, we started the Students Meet Internationally through Language Education (SMILE) project during the fiscal year of 2020. The characteristics of the project include giving the participants with opportunities to communicate with international students and providing systematic procedures as a general educational program package. Furthermore, we support the efficient learning of students by offering a simple and easy-to-use e-portfolio system called Dialogbook. This paper presents an overview of the first SMILE project, problems, and requirements acquired from the use of the first version of Dialogbook. The article then outlines a novel redesigned system.

KEYWORDS

Online Meeting Tools, Dialogbook, E-Portfolio System, Intercultural Education, SMILE Project

1. INTRODUCTION

Online meeting tools, such as Zoom, Webex, Google Meet, and Microsoft Teams, allow users to hold online meetings instantly (Keshlaf et al., 2021). The online sessions supported by these tools are not only domestic but also forms of international communication. From 2020, the COVID-19 pandemic has prevented us from easily traveling abroad. However, such online meeting tools enable international communication through the Internet. Almost all academic meetings have also moved online, and their activities have been maintained by holding international conferences in a virtual environment (Kashiwazaki et al., 2021).

The workshop initiative for language learning (WILL) prepared the Students Meet Internationally through Language Education (SMILE) project, which has provided intercultural education courses for Japanese and foreign high schools. A pilot project was carried out during the last quarter of 2020 (Wakabayashi et al., 2021). Two pairs of high schools from Japan and Taiwan, Hinode High School and Fucheng High School, and Ichihara Chuo High School and Donggang High School, respectively, participated in the project. Both pairs of schools held three interactive classes during the project period. Students from Japan and Taiwan communicated using online meeting software (one team used Zoom and the other used Webex).

The SMILE project also provides a system implemented for a project called Dialogbook (Iio and Wakabayashi, 2020), where students can record their learning activities. Dialogbook is designed as a simple e-portfolio system or an easy-to-use learning management system (LMS). The system has a characteristic function that enables students to self-evaluate by providing rubrics items and memos for learning records.

Figure 1 shows an overview of the SMILE project. The students participating in the project communicated to the students from the counterpart school using an online communication tool and recorded their activities in Dialogbook and on cloud storage. The teachers encouraged the students to have smooth
conversations and interact with each other. Furthermore, the staff from WILL assisted the students and teachers by offering them technical support, templates on the course materials, and some help in preparing interactive classes between the two schools.

Figure 1. Overview of the SMILE project. The major players are students from Japanese and Foreign high schools. Teachers support student learning activities. In addition, the staff of WILL helps them by coordinating interactive classes, offering learning materials, and providing technical support

Based on the experience of the first project, we recognized several problems and requirements to improve the Dialogbook. Therefore, we redesigned a new system for the next project, which will be conducted in this year. This paper presents an overview of the project, problems, and improvement points of the system.

2. FIRST SMILE PROJECT

WILL carried out the first project during the last quarter of 2020. The preparation for the project started in August 2020, and online interactive classes were held from October to December (see Table 1).

<table>
<thead>
<tr>
<th></th>
<th>Hinode and Fucheng</th>
<th>Ichihara and Donggang</th>
</tr>
</thead>
<tbody>
<tr>
<td>First interaction</td>
<td>October 29, 2020</td>
<td>November 11, 2020</td>
</tr>
<tr>
<td>Second interaction</td>
<td>November 12, 2020</td>
<td>November 18, 2020</td>
</tr>
<tr>
<td>Third interaction</td>
<td>December 10, 2020</td>
<td>December 9, 2020</td>
</tr>
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</table>

A total of 20 to 30 first- and second-grade high school students from each school participated in the project. During the online interactive classes, students were placed into groups of two or three students, and the online meeting tools connected the groups from Japan and the counterpart country, allowing them to communicate interculturally. When preparing the communication classes, teachers scheduled approximately 50 min in their school timetables. For each class, 20 min sessions were conducted twice.

There is a significant need to conduct real-time communications. Hence, the SMILE project expects schools in countries near Japan with no broader time difference to be used as counterparts. During the first project, all interactive classes were conducted in Japanese and Taiwanese time throughout the morning.
Figure 2. Students participating in the interactive class connected using the online meeting tool. The left photograph shows the students at Hinode high school (Japan), and the right shows students at Fucheng high school (Taiwan).

The photograph on the left of Figure 2 shows the class at Hinode high school using laptop computers, and the right side of Figure 2 shows Taiwanese students communicating with Japanese students using their smartphones. The students utilized not only personal computers but also various devices to achieve online interactions during the project.

Through this practice, WILL offered the Dialogbook system to Hinode, Ichihara, and Donggang high schools. Three applications were independently deployed to Heroku and allowed the teachers and students in each school to access the system. Only Fucheng high school did not use Dialogbook. The data on the learning activities and reflections at that school were collected offline using worksheets printed on paper.

3. PROBLEMS AND IMPROVEMENTS

From the experiences of the three high schools, we obtained several problems and requirements regarding the first implementation of Dialogbook.

![Diagram showing data structure containing multiple projects in one application](image)

Figure 3. The data structure containing multiple projects in one application

The first problem is a management issue, which is troublesome, particularly for our administrative procedure. As mentioned previously, we deployed the three applications separately for use on the Heroku platform. Therefore, the simultaneous administration of the three applications was slightly complicated. They should be integrated into one application that has multiple schools (see Figure 3). The new architecture makes administration simpler than the previous operation and can increase the magnitude of the project.

The second problem is a lack of meeting management functions. Throughout the previous project, we encountered some problems related to misconnections. Students are often unfamiliar with using online meeting tools, much fewer hosting meetings. Students frequently missed the meeting invites and thus were unable to connect as scheduled. Hence, we need a function for managing the meeting link information, i.e., when the next meeting will be held and where we should connect.
The last requirements are convenient functions that assist teachers. The improved system (see Figure 4) implemented a teacher’s dashboard that includes lesson (rubrics) management, meeting management, user account management, student comments, and a data download function.

Figure 4. Screenshots of new Dialogbook. The left image is a student’s MyPage and the right one is a teacher’s MyPage.

As with the previous implementation, the new system (Dialogbook2) is currently implemented over Ruby on Rails (version 6.1.3.2) and deployed on the Heroku platform.

4. CONCLUSIONS

WILL conducted the first SMILE project during the last quarter of 2020. The four schools, two high schools from Japan, and two high schools from Taiwan, participated in the project. They were connected using online meeting tools to create intercultural education classes.

During the project, WILL provided support to the students and teachers, such as the scheduling of interactive classes, templates for the educational materials, and a simple e-portfolio system called Dialogbook. Throughout the execution of the project, we experienced several problems and obtained some requirements to improve the Dialogbook system. A novel version of Dialogbook was designed and re-implemented. We are currently planning to evaluate a new system for the next project scheduled for this year.

REFERENCES


