

An attempt to build bidirectional/hybrid remote classes

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Abstract

The purpose of this study was to conduct a trial of hybrid remote classes (face to face + simultaneous bidirectional online classes) and to find the impact and effectiveness of hybrid classes, which are expected to become more popular and expand in the future. Based on the results of a survey conducted at the end of the first semester in 2023, the effectiveness, problems, positive and negative impressions of the hybrid-type classes were analyzed mainly qualitatively. The results showed that, with regard to these trial classes, combining remote classes with in-person classes, which tend to reduce the social presence of instructors, is expected to be less pressurizing and more effective in promoting motivation to learn.

1. Introduction

1.1 Background of the research

In recent years, the use of digital content via the Internet such as remote classes has become commonplace and has attracted attention as a new form of education and learning. In March 2023, the MEXT (Ministry of Education, Culture, Sports, Science and Technology) issued ‘Guidelines for the Implementation of Distance Education at Universities and Colleges of Technology’ to confirm the basic concept of the implementation of distance education, using freedom from geographical, spatial and time constraints as an example of the advantages of distance education.

As described above, distance education or remote classes are expected to have the potential to expand the ‘time’ and ‘place’ of education in the 21st century, but some studies have pointed out its some weaknesses as well as effectiveness. According to Akakura and Kashiwabara (2016), remote classes tend to lack a sense of tension and presence, and it is difficult for the teacher to grasp learners’ reactions and level of understanding. In addition, Sugihara (2005) states that video-mediated communication is generally less smooth than face-to-face communication and is prone to dialogue problems. The reasons for this are that the social presence of the other side is low, there are fewer visual cues from the other side, and the spontaneity and diversity of the conversation is impaired. Kubota (2000) also points out that learners are isolated in distance learning so self-control and motivation are more important than ever to keep them on task and learning, and that more students tend to drop out than in general classes.

‘The results of the 2021 National Student Survey (2nd trial implementation)’ by MEXT shows the results of a questionnaire survey on the two types of online classes (the simultaneous interactive type and the on-demand type) that students took. In the aforementioned ‘Guidelines for the Implementation of Distance Education at Universities and Colleges of Technology’, there is a reference to a class format that combines online and face-to-face teaching, and now ‘hybrid class formats’ that combine both online and face-to-face teaching are also being seen. However, it cannot be said that there has been sufficient verification of the effective implementation methods of the hybrid class format.

1.2 Purpose of the study

The purpose of this study is to conduct a trial of hybrid-type classes (face-to-face + simultaneous interactive online methods) with Japanese university students and, based on the results, to explore the effectiveness and points to mind of introducing hybrid-type classes into online classes, which are expected to spread and expand further in the future.

2. Method

Participants in this study were 47 Japanese undergraduate university students (Japanese speakers) and all students were the second and third year of students. They were divided into two classes. The frequency of the session was once a week, and each session lasted 90 minutes. One instructor was in charge of both classes, and one teaching assistant (TA) supported each class. The number of sessions was fifteen, and the content of both classes was mainly English reading. During the above sessions, the instructor provided approximately three interactive remote classes per month and one face-to-face class per month. At the final session, a text-based questionnaire was conducted referred from the 2021 National Student Survey by the MEXT. The results of the questionnaire of this research were analyzed by comparing some of the contents with the results of the aforementioned survey by MEXT in 2021.

Table 1

Details of the bidirectional/hybrid remote classes

	Class details
Period	April to July, 2023 (during the first semester)
Type	Elective compulsory class and credit bearing
Participants	47 Japanese University students (undergraduates in 2nd & 3rd year, L1 Japanese)
Software	Zoom (Zoom Corporation)
Session duration	90-minute sessions conducted once a week

Number of sessions	15 times
Session content	English Reading
Questionnaire	Paper based Questionnaire

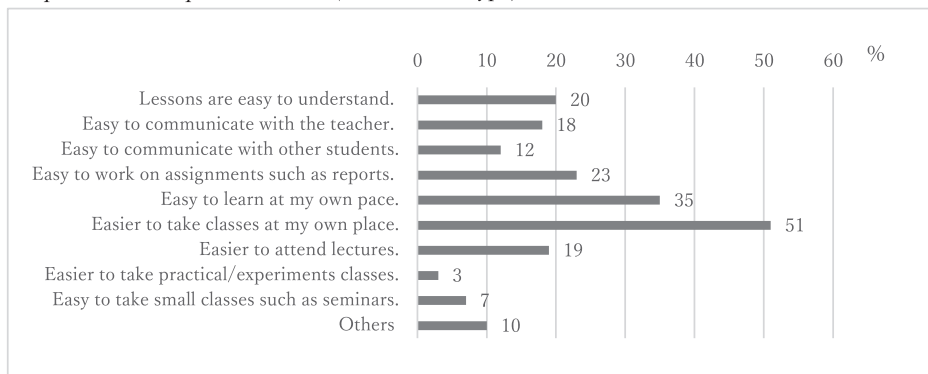
3. Findings

From the results of the questionnaire conducted in this study, it was confirmed whether the participants in those classes were suitable as respondents of the interactive hybrid remote classes. None of the participants had ever attended a hybrid remote class, and few had attended a remote classes themselves.

Figures 1 and 3 are graphs created by the author referred to the “National Student Survey (2nd Trial Survey)” in 2021. The survey conducted by the MEXT was a large scale and divided into three types, those were with more than 800 respondents, from less than 800 to more than 400, and less than 400. Although there was no considerable difference in answers between the three groups, I decided to compared them with the results of the smallest number of less than 400 people. Figures 2 and 4 are graphs created based on the results of a questionnaire conducted after the end of bidirectional hybrid classes. Answers in Figures 1 and 3, respondents chose their answers among multiple examples in line with their own opinion. Answers in Figures 2 and 4, in addition to the multiple examples’ method, a free text field was provided.

Figure 1

Better points than in-person classes (bidirectional type): N=less than 400



From: The results of the 2021 National Student Survey (second trial implementation) by the MEXT

Figure 2

Good points in bidirectional/hybrid type classes: N=47

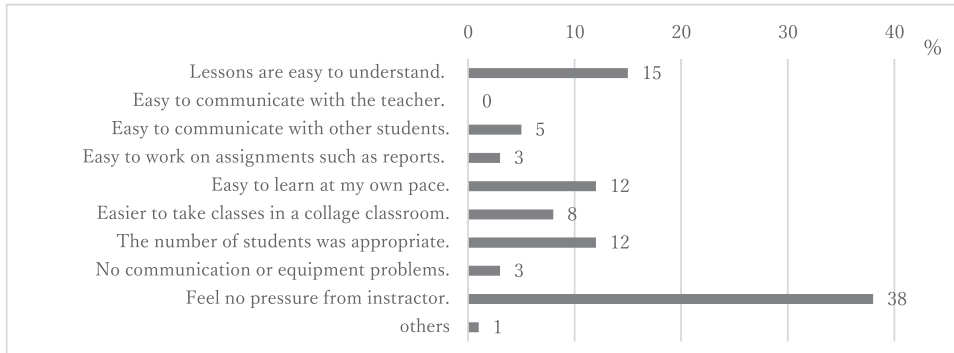
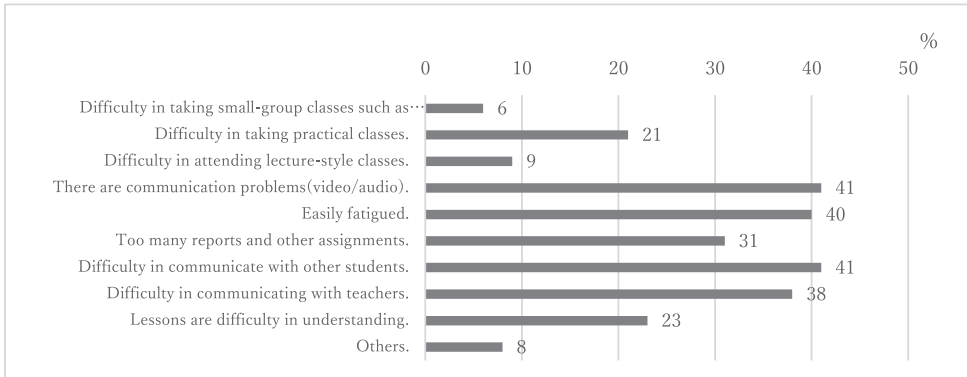


Figure 3

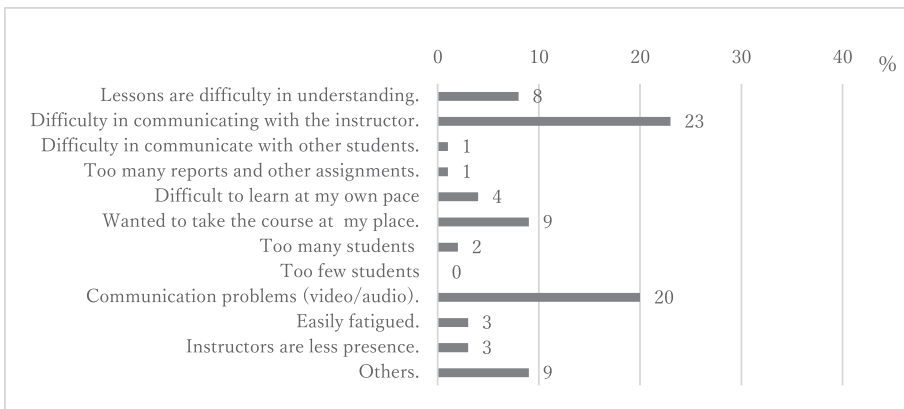
Worse points than in-person classes (bidirectional type): N=less than 400



From: The results of the 2021 National Student Survey (second trial implementation) by the MEXT

Figure 4

Bad points in bidirectional/hybrid type classes: N=47



In addition, the following are the comments in the free text boxes.

Q: What do you think was better than a fully online class (excerpt)?

- It was a new sensation and fun.
- It was nice to have face-to-face meetings.
- It was refreshing to see each other once a month rather than face-to-face, and by meeting once a month, I was able to look forward to the class with focusing on it.
- By meeting the teacher once a month, the wall between the teacher disappeared.
- I'm glad I was able to take the English class without feeling pressured.
- Since I could see teacher's non-verbal communication, it is better to meet sometimes.
- When I actually experienced both, I found that it was better to meet face-to-face once a month because I could see teacher's gestures, free writing on the board, and body language.
- By meeting once a month, I was glad that I could convey the atmosphere of the teacher
- Face-to-face classes are a good opportunity to get to know the teacher's personality.
- It is better to actually meet face-to-face sometimes so that I can concentrate.
- It was easier to take this format because students were not often asked to perform in the class, so I could take classes at my own pace.

Q: What do you think disadvantages about this bidirectional/hybrid class (excerpt)?

- It was difficult to hear voices because of devices problems.
- When we have remote classes, it is a bit difficult to communicate because of microphone problems.
- There was a problem with the microphone.
- The class was easy to understand, but sometimes it was difficult to hear the teacher's voices due to the equipment.
- It was difficult to see the white color of the monitor.
- Even if there was a problem with the machine, the TA would respond immediately, so I didn't have any problems.

4. Discussion

As you can see in Figure 2, as in Figure 1, the participants in this trial also found it difficult to communicate with the instructor and other students in remote classes, but felt that they could learn at their own pace. Many of the participants in this study chose the item as a good point. From their free comments, some participants were expected that they had a strong feeling that they were not good at English, so it was easier for them to take this format because they could feel the social presence of

the instructor was low. Additionally, there was a comment which said, “During the remote classes, students were not often asked to perform, so I could take classes at my own pace.”

However, some comments indicated that students were able to concentrate better when they met face-to-face. Additionally, some comments says that “it was refreshing to meet once a month rather than all remote class system.” From the answers, it was expected that taking in person class one out of four times (or some frequent) led to the maintenance of motivation.

In both Figures 4 and 3, as disadvantages of remote classes, many comments cited difficulties in communicating with the instructor and other students, and also mentioned problems in terms of hardware, such as communication environments and equipment malfunctions. Although these hard problems are expected to be solvable in the future, at present, the hard problems were significant and, therefore, other soft problems were less visible on the surface in this survey.

According to Miyaji (2009), in terms of “remote classes” learners to learn at their own pace, and at the same time, promotes interactive learning and makes it easier to maintain motivation to learn when combined with face-to-face learning. It can be said that the results of the present study are partly the same as those of Miyachi (2009). That is, students who are not good at English tend to prefer remote classes where the teacher’s social presence is reduced (Katori, 2019), but meeting face-to-face from time to time makes it easier for them to maintain their motivation in class.

5. Conclusion

From this survey, it was found that the combination of face-to-face classes and online classes has the advantage of maintaining freshness and motivation more easily than remote classes, but there are some problems about hardware environment. Although, it could be expected that combination for face-to-face classes and remote class have some advantages over “remote classes”, for example, that the ratio of face-to-face and remote classes is not researched nor cleared yet. At present, there is no clear consensus among research and educational institutions, therefore, further research on this matter will be required in the future.

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