

Does Interactivity in an English Presentation Affect its Preparation Process?

Fumiya Shinozaki,^{1*} Hiroaki Aoki²

¹Osaka Kyoiku University, Osaka – Japan, ²Tennoji Junior High School Attached to Osaka Kyoiku University, Osaka – Japan

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Abstract

The purpose of this study is to clarify the differences in the process of students' preparation and practice outside of class for a one-way or interactive English presentation. The participants were 105 third-year junior high school students in Japan. They were supposed to record their actions while preparing for each type of presentation outside of class for a week. A hierarchical cluster analysis was conducted on all learners based on a self-evaluation questionnaire administered beforehand. Three clusters were created from the dendrogram. Kruskal-Wallis test and multiple comparisons showed significant differences among all items. Each cluster was named "Self-rating (high)", "Self-rating (medium)", and "Self-rating (low)". These three groups were analyzed based on the records and the post-questionnaire. The results indicated that the amount of practice on the day of the presentation was greater for a one-way presentation in any group, while in an interactive presentation, the tendency of the group to "Self-rating (high)" was different from the others. The inclusion of interaction with listeners in a presentation confirmed motivation for further preparation, such as conducting research and creating additional questions and quizzes in advance, suggesting the possibility of a different range of effects on learning.

Keywords: interactive presentation; motivation; self-evaluation

Introduction

There are many methods to improve students' skills of speaking English as a foreign language at school. A presentation activity is an effective way for students to learn various abilities relevant to speaking. For instance,

Yamamoto (2020) mentions the possibility that a presentation activity encourages autonomous learning and helps develop skills to think about how to express oneself and speak in a way that is easy for listeners to understand. More empirically, Sengiku et al. (2015) verified the differences in students' speaking skills before and after presentation activities, noting significant improvements in fluency. Another important finding of their study is that by having the students work on a task contextualized in a presentation situation rather than a mechanical task that only focused

*Corresponding Author: Fumiya Shinozaki
(fshino@cc.osaka-kyoiku.ac.jp) 4-698-1
Asahigaoka, Kashiwara City, Osaka, 582-0026

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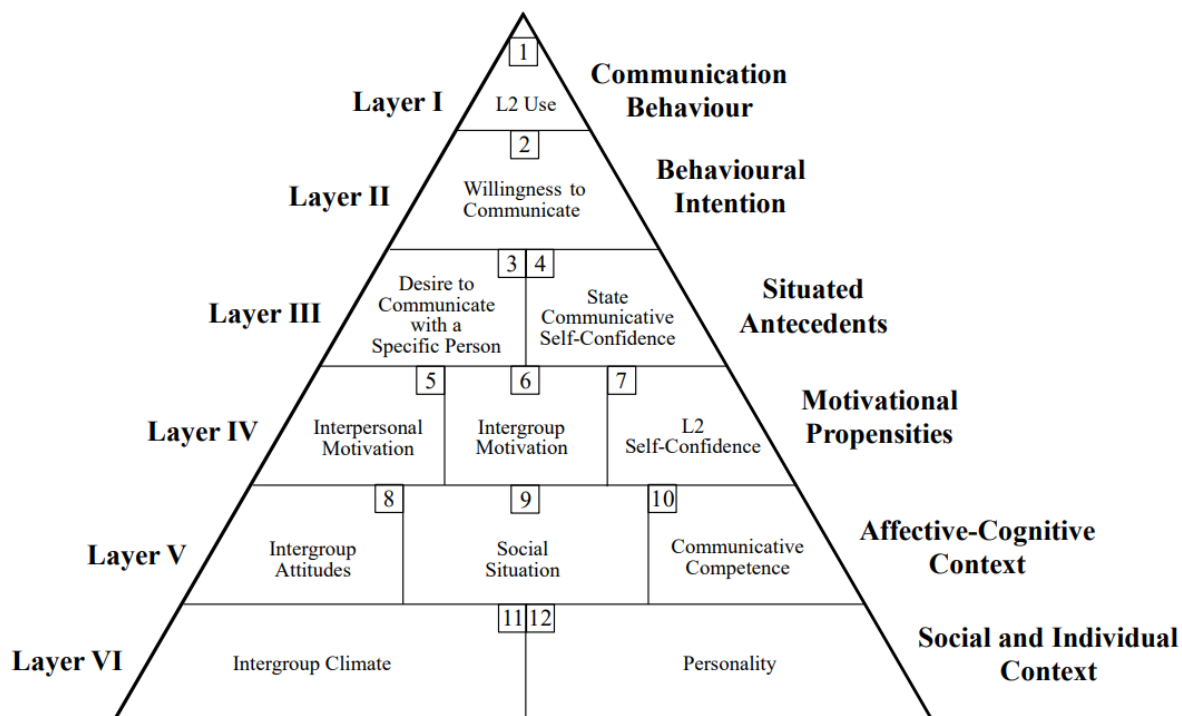
on the forms of a presentation, the students could stay motivated.

Motivation affects the preparation quality and presentation performance. Thus, it is essential to consider ways to incorporate mechanisms to improve motivation into activities. Many factors, including motivation, relate to L2 use, whose relations are depicted by MacIntyre, Clemént, Dörnyei, Kimberly, and Noels (1998) in their pyramid model (Figure 1). This model deals with 12 factors influencing willingness to communicate (WTC). They define it as “a readiness to enter into discourse at a particular time with a specific person or

persons, using an L2” (p.547). According to MacIntyre et al. (1998), Layers I, II, and III are subject to situations and time.

On the other hand, Layers IV, V, and VI are considered constant in any situation and relatively permanent as characteristics of the individual person. In the figure, interpersonal and intergroup motivation are placed in Layer IV. Motivation is an important factor that leads a learner to L2 usage. In fact, Shirvan, Khajavy, MacIntyre, and Taherian (2019) conducted a meta-analysis, which shows that L2 WTC and some variables, such as motivation, were moderately correlated.

Figure 1
Heuristic Model of Variables Influencing WTC (MacIntyre et al., 1998, p.547)



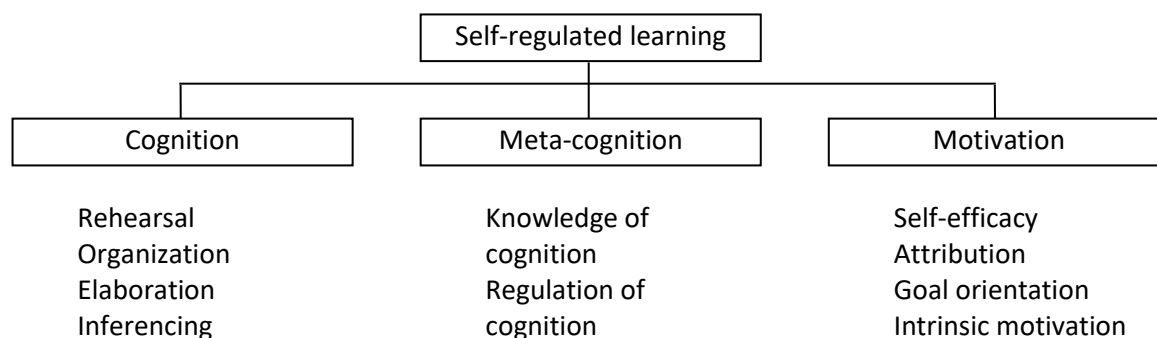
Previous studies explain motivation from many perspectives. For instance, Deci and Ryan (2012) propose the self-determination theory, which discusses intrinsic and extrinsic motivation. Intrinsic motivation is the motivation associated with doing something for the sake of doing it or an action that derives pleasure or satisfaction from doing it (Yashima, 2019). Wang, Liu, and Chian (2019) account for the three important innate psychological needs of intrinsic motivation: “autonomy (the need to feel ownership of one's behavior), competence (the need to produce desired outcomes and to experience mastery), and relatability (the need to feel connected to others)” (p.1). These three needs are integral to increasing intrinsic motivation (Ryan & Deci, 2017). Moreover, Vallerand (2012) subdivides intrinsic motivation into three elements: knowledge, accomplishments, and stimulation.

Nishida (2022) summarizes self-determination theory based on the previous studies by Deci and Ryan (2002), Noels, Pelletier, Clement, and Vallerand (2000), and Yashima (2004) as to its mechanism of the

transitions from extrinsic to intrinsic motivation or vice versa, referring to the four kinds of extrinsic motivation: integrated regulation, identified regulation, introjected regulation, and external regulation, plus motivation. Learning activities are basically offered by teachers in class, so it is important to consider how extrinsic motivation, such as identified regulation, which represents conscious evaluation against activities, can be transferred to intrinsic motivation or how learners regulate themselves to work on activities.

Zimmerman (2011) looks at the role of several forms of motivation in student self-regulated learning. Originally, Zimmerman (1990) stated that there are three features involved in students’ self-regulated learning: “their use of self-regulated learning strategies, their responsiveness to self-oriented feedback about learning effectiveness, and their interdependent motivational processes” (p.6). Relevant to this, components of self-regulated learning are depicted in Figure 2 by Schraw, Kauffman, and Lehman (2006).

Figure 2
Components of self-regulated learning (Schraw et al., 2006)



In addition, Ninomiya (2022) elucidates the process of self-regulated learning, maintaining

that self-regulated learning ability becomes more proficient as meta-cognition improves.

She further explains that meta-cognition is the ability to deepen one's understanding of one's own cognitive activities, to provide feedback on the current state of task performance, and to self-regulate learning strategies and motivation, thereby increasing motivation for learning performance (p.409). Another important perspective to improve motivation is the form in which an activity is conducted. Interaction with another person positively affects learners. For instance, Baleghizadeh and Farhesh (2014) compared a pair-work-oriented group and an individual-oriented group, and the results showed that greater amounts of pair-work contributed more to the improvements in students' motivation.

Thus, there is a possibility that a presentation activity with more opportunities for interaction with listeners, in which students are at their discretion in its preparation and presentation process, would be effective in motivating them. Therefore, the purpose of this study is to reveal the differences between a one-way presentation and an interactive (two-

way) presentation by analyzing each preparation process outside of lessons. The research questions (RQ) are to describe how forms of presentations (a one-way presentation and an interactive presentation) affect students' motivation for presentation preparation and which form of presentation is preferable from the listeners' perspectives.

Method

Research Design

This study compared two forms of presentations: a one-way presentation and an interactive presentation (Figure 3). In a one-way presentation, the speaker was allowed to ask questions or give quizzes to the listener, but the speaker did not require the listener to respond. On the contrary, in an interactive presentation, the speaker interacts with the listener by asking questions or giving quizzes to the listener and also encouraging the listener to respond to them.

Figure 3

Two Forms of Presentations (Left: One-Way, Right: Interactive)



The paper-based slides for each type of presentation were created by the authors in advance. The front side had a question related to a theme from SDGs with several options for answers. There was an open question about the theme at the bottom of the sheet (Appendix). The back side indicated the basic procedure of the presentation. The sheet for a

one-way presentation advised students to put a short pause after giving a quiz or a question, while the one for an interactive presentation clearly showed that the speaker first gave a quiz or asked a question, waited for the listener's response, and then had the speaker show the answer for the quiz or stated his or her opinion.

The participants experienced both forms of presentations, were supposed to answer questionnaires, and keep a learning record when preparing for the presentations outside of the classrooms. The questionnaires and learning records were analyzed quantitatively and qualitatively.

Participants

The participants in this study consisted of 144 third-year students (14 or 15 years old) at a junior high school attached to a national university in Japan (They were either in Class A, Class B, Class C, or Class D). The data screening

revealed that 39 out of them had missing values on the research instruments, so the other 105 were the actual targets of this study. Before this study, they had a few opportunities for one-way English speeches and presentations. They also practiced talking with someone in English in their everyday English lessons, but they had never experienced an interactive presentation either in their native language (Japanese) or in English.

Procedure

Table 1 summarizes the procedure of this study.

Table 1

The procedure of the Present Study

	Class A, B	Class C, D
	Self-evaluation questionnaire	
Week 1	Each student records their own daily preparation on the sheet #1 One-way presentation	Interactive presentation
Week 2	Each student records their own daily preparation on the sheet #2 Interactive presentation	One-way presentation
	Post-questionnaire	

First, the participants were asked to answer the self-evaluation questionnaire. In Week 1, Class A and B were preparing for a one-way presentation outside of the lessons, and Class C and D for an interactive presentation. During the preparation, they were supposed to fill out a record sheet on which they evaluated the degree of learning on a five-point scale and took notes of what they did every day until the day of the presentation. The sheet was collected after the presentation, and another one was distributed for Week 2 so as to prevent some problems, such as losing the sheet or rewriting. Week 2 was conducted for

counterbalancing to which type of presentation came first. Finally, a post-questionnaire was administered to ask their impressions on each type of presentation.

Instruments

There were three research instruments: the self-evaluation questionnaire, the record sheets, and the post-questionnaire. These were all conducted in and responded to in Japanese. The questions of the self-evaluation questionnaire were (1) Do you like English?, (2) As a junior high school student, how well do you think you know English vocabulary?, (3) As

a junior high school student, how well do you think you understand English grammar?, (4) Are you good at preparing manuscripts and speaking English?, (5) Are you good at speaking impromptu in English without looking at anything?, (6) Are you good at listening to and understanding English?, (7) Are you good at giving a presentation in front of your classmates in English?, and (8) Are you good at giving a presentation to small groups of classmates in English?

As Zimmerman (2011) points out, real-time forms of data collection are ideal in motivation study because students’ recall can be quite unreliable after some time has passed. Therefore, this study adopted a record sheet where each participant was asked to keep a record every day until the presentations. An example of the record sheet is shown in Table 2. Each participant was supposed to evaluate their degree of learning on a five-point scale (0 for “Never did”, 3 for “somewhat did”, 5 for “did very hard”).

Table 2
An Example of the Record Sheet

Date	Degree of learning	Content of learning	Reasons
March 6 (Mon.)	0	Nothing	Too busy
March 7 (Tue.)	3	Reading aloud	To be able to read the script smoothly
March 8 (Wed.)	5	Memorizing the script	To cram it before the presentation

The questions of the post-questionnaire were: (1) Was there any difference in the way you prepared for your presentation between a one-way presentation and an interactive presentation? Please tell us why you think so, and (2) As a listener, which presentation type did you find easier to understand, a one-way presentation or an interactive presentation? Why?

Data Analysis

A hierarchical cluster analysis was conducted based on the answers for the self-evaluation questionnaire using IBM SPSS Statistics ver.29. According to the dendrogram, the authors decided the number of clusters, namely groups. Kruskal-Wallis test and multiple

comparisons were conducted to confirm whether there were significant differences among the groups. Then, the amount of practice per group was graphed in order to facilitate interpretation. The student’s original record sheets were referred to for interpretation as appropriate so as to avoid arbitrary interpretation. Furthermore, correspondence analysis was conducted using KH Coder 3. Beta.07d (Higuchi, 2020) to assess the presentation forms from listeners’ views.

Findings and Discussion

Findings

From the result of the hierarchical cluster analysis (Appendix), the authors judged that it

was adequate to divide the participants into three groups (the red line was drawn by the authors). Kruskal-Wallis test and multiple comparisons, Dunn Bonferroni, were conducted on the results of a self-evaluation questionnaire of the three groups (Table 3). The

results showed significant differences among all the items (Appendix), indicating that the groups have statistically different properties. Those three groups were named "Self-rating (high)", "Self-rating (medium)", and "Self-rating (low)" respectively.

Table 3
Average Points of the Questions of the Self-Evaluation Questionnaire Per Group

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Self-rating (high)	4.80	3.88	4.40	4.32	3.84	4.32	3.92	4.44
Self-rating (medium)	3.68	3.08	3.40	3.42	2.42	3.48	2.64	3.16
Self-rating (low)	2.47	2.47	2.67	1.77	1.40	2.07	1.47	1.83
Average	3.60	3.10	3.43	3.16	2.47	3.28	2.61	3.09

Note. 0 for "Never did", 3 for "somewhat did", and 5 for "did very hard".

Figure 4 shows the transitions of the degree of learning that the students did outside of the classroom. The analysis was based on the average points of all the students, which were computed from their record sheets. It compared one-way presentations and interactive presentations. Since week one was

the preparation period for each presentation type, each day was to be called Day 1 to Day 7. The vertical axis in each figure stands for the self-evaluation score (five points maximum). The numbers ①, ②, and ③ indicate distinct periods when salient changes were seen.

Figure 4
Degree of Learning Outside Lessons in Preparation for Each Type of Presentation

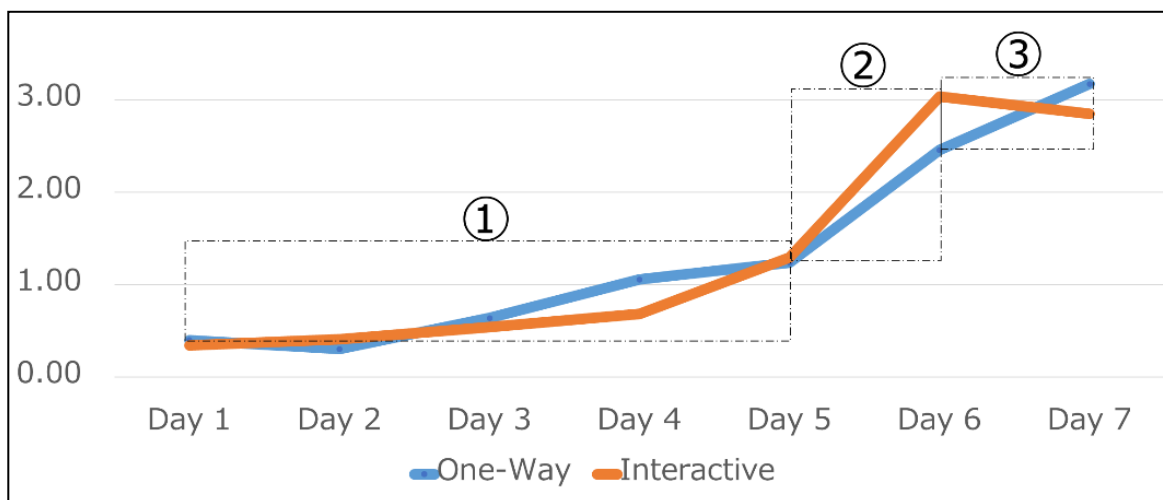


Figure 5 shows the transitions of the degree of learning outside lessons per group in preparation for a one-way presentation. Figure

6 shows the transitions of the degree of learning outside lessons per group in preparation for interactive presentations.

Figure 5

Degree of Learning Outside Lessons per Group in Preparation for One-Way Presentation

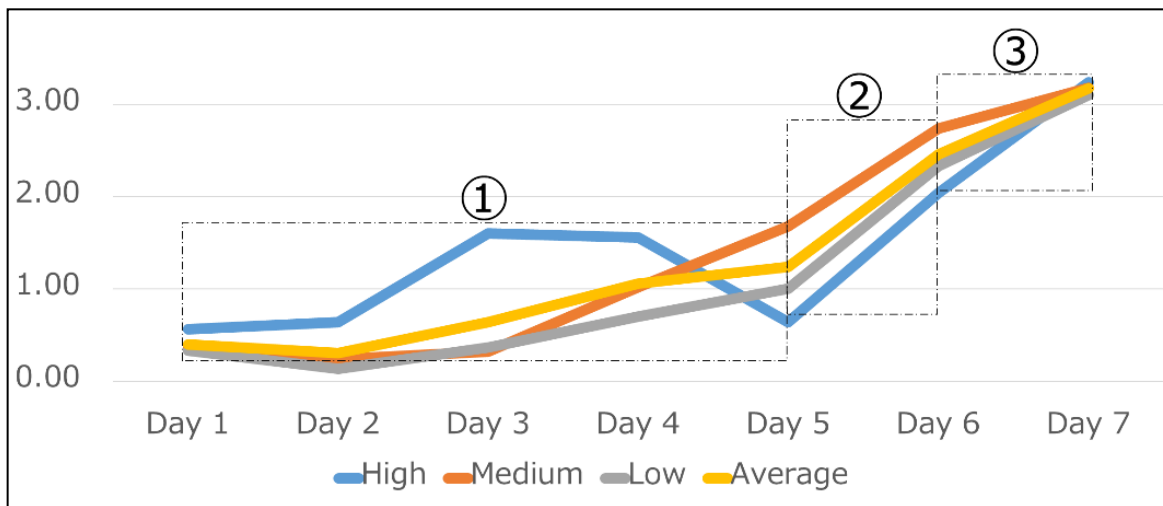
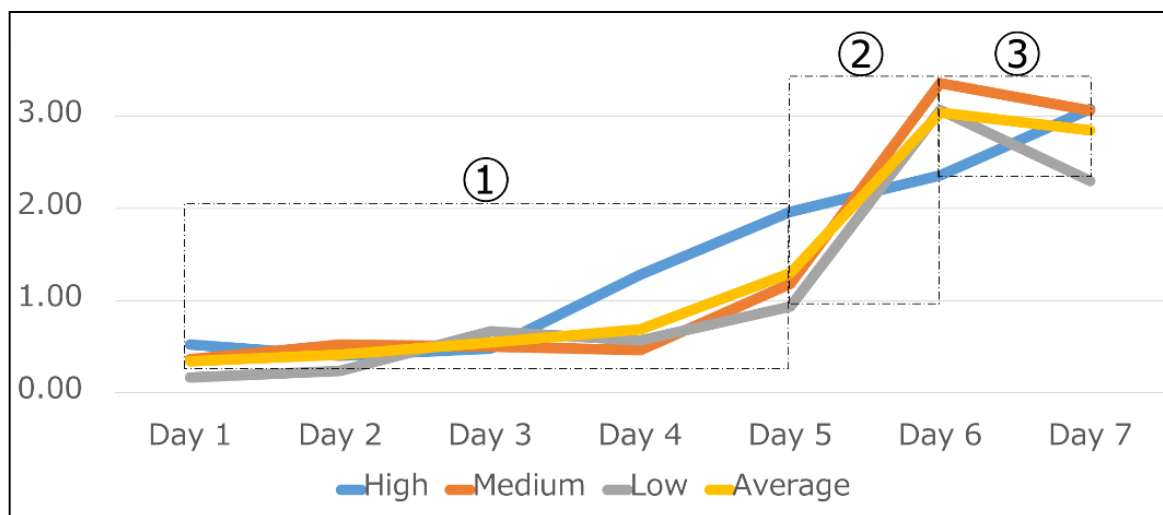


Figure 6

Degree of Learning Outside Lessons per Group in Preparation for Interactive Presentation



Here, we refer to Figures 4, 5, and 6 and the student’s record sheets as well as the answers to the first question in the post-questionnaire

to describe the characteristics of each period ①, ②, and ③. During period ①, in both preparation for one-way and interactive

presentations, almost no preparation was done except for students who confirmed the theme and did preliminary research on the relevant content (mainly in the Self-rating (high) group).

During period ②, in preparation for the one-way presentation, students mainly prepared manuscripts and practiced reading aloud, whereas in preparation for the interactive presentation, in addition to these activities, they conducted research and prepared questions and quizzes to express their own opinions. The self-rating (high) group tended to be similar to the other groups in preparation for the one-way presentation, whereas, in preparation for the interactive presentation, they gradually prepared themselves from period ①.

During period ③, in preparation for the one-way presentation, the students practiced until the end of the activity in order to more accurately convey the prepared manuscript. In preparation for the interactive presentation, on the other hand, some students practiced in anticipation of the reaction, as they needed to adjust the way they proceeded with the presentation according to the reaction of the audience, but as a presentation with interaction was not a definitive progression, some students did not practice as much in advance as in preparation for one-way presentation (mainly in Self-rating (medium) and Self-rating (low) groups).

Thus, as to RQ (1) “How do forms of presentations (a one-way presentation and an interactive presentation) affect students’ motivation to presentation preparation?”, irrespective of the height of self-evaluation, neither form of presentation motivated students to work on the preparation in the

initial stage. However, in the middle stage of preparation for their interactive presentations, some students created additional questions or quizzes of their own volition.

As for RQ (2) “Which form of presentations is preferable from listeners’ perspectives?”, most students preferred an interactive presentation to a one-way presentation. As a result of the post-questionnaire, 87% of the students as listeners found it easier to understand a speaker in an interactive presentation than in a one-way presentation.

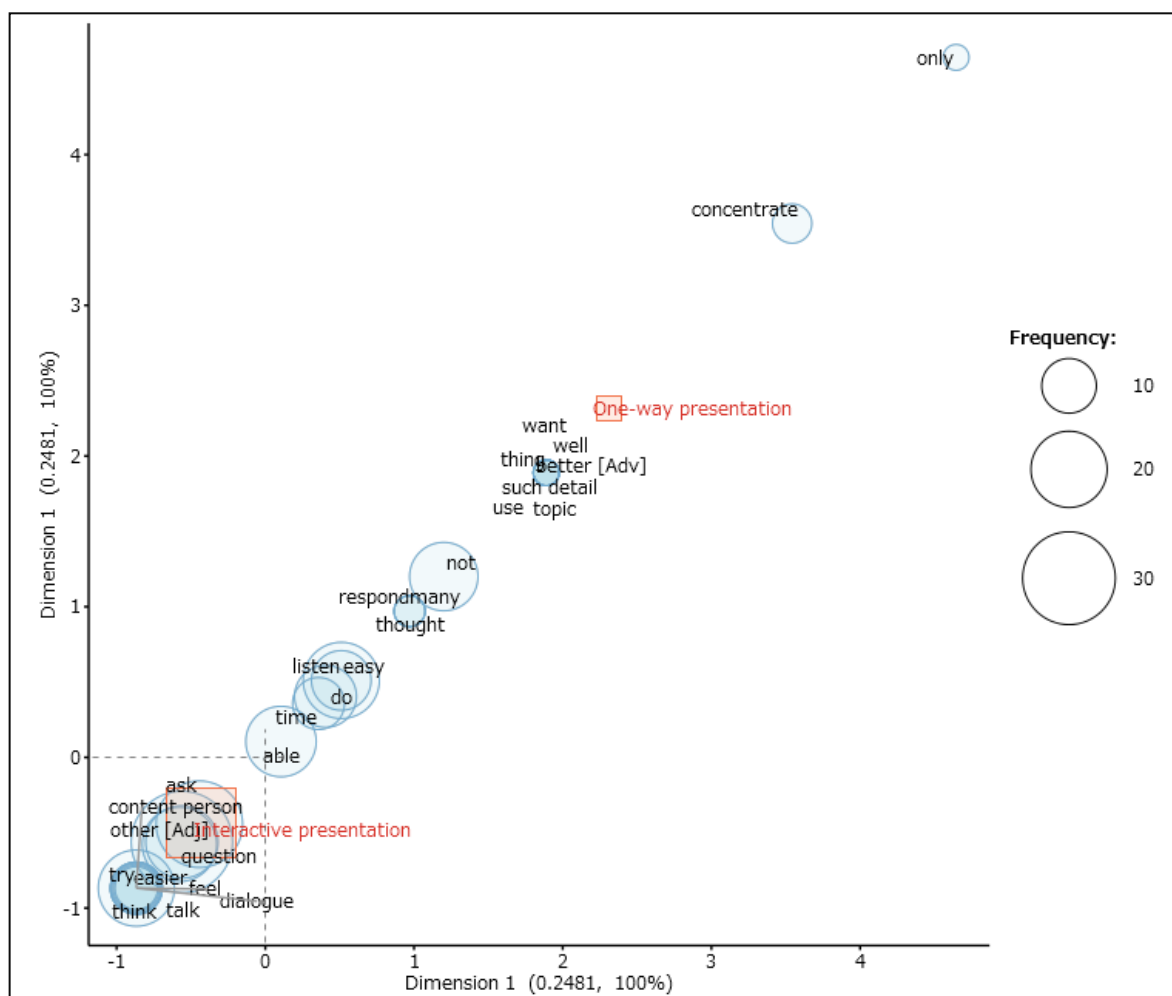
In order to analyze the reasons for interactive presentation being preferred to one-way presentation, correspondence analysis was administered (Figure 7). This analysis helped us grasp the tendency of the texts more objectively. Analyzing a certain amount of qualitative data by hand could be too subjective, and it is difficult to discover the correlation among variables.

First of all, the authors translated student comments written in Japanese into English for analysis. Next, from among the words extracted by KH Coder, ones that occurred frequently but are not considered significant in this present study were excluded from the analysis (e.g., “I”, “be”, and “because”). As a result, the total number of words extracted (Token) was 1,182, of which 670 were used for analysis by KH Coder, excluding common words such as particles and auxiliary verbs. The number of different words (Type) was 218, of which 181 were subject to analysis. The aggregation unit was selected as H5 (aggregation per Microsoft Excel cell). The size of the frequency circles in the figure indicates the number of times the word appears. In the correspondence analysis, the further away from the origin a word is

placed, the more characteristic it is interpreted to be. Next, by checking which direction the word is located in relation to the origin, we can determine which variable the word was characteristic of. The variables in this analysis were one-way presentation and interactive

presentation. To facilitate the identification of characteristic words, the top 30 words with significant differences were used in the analysis, and only the top 30 words that were far from the origin (where the dotted lines intersect) were also displayed.

Figure 7
Correspondence Analysis



From the words “only” and “concentrate”, some students reckon one-way presentations better in the comprehension of their speakers because

they were able to concentrate only on listening to others’ opinions. This means that some students were struggling with the response to the speakers’ questions or

quizzes in an interactive presentation, which made it difficult to keep up with the presentation and understand it properly. On the contrary, the same point was the prominent advantage of an interactive presentation. For example, those who chose an interactive presentation as a better form of presentation as listeners used such words as “question”, “easier,” and “ask” to state that interactivity helped them comprehend the presentation since they were able to ask any questions for clarification. Moreover, some students “felt” comfortable with an interactive presentation because it allowed them to participate directly.

Discussion

Although the presentation task was given by the teacher, the method of giving a presentation was left up to the students for this study. It seemed that students with stronger intrinsic motivation displayed their autonomy and competence, as discussed by Wang et al. (2019). Additionally, they might have felt more relatability with assumed listeners in the interactive presentation than in the one-way presentation in the phase of preparation. More specifically, given Vallerand’s ideas (2012), it is safe to assume that students were excited by the interactivity to search for more information and gain more profound knowledge, thus leading to feelings of accomplishment.

From the self-regulated learning (Zimmerman, 2011) viewpoint, students in the Self-rating (high) group were more likely to reflect on themselves better than the other students, which probably means that they had higher meta-cognition ability. Therefore, regardless of the forms of presentations, they,

in fact, began their preparation earlier than the other students or did something different, such as the additional creation of questions or quizzes.

Conversely, since the interactivity does not allow the progression of presentations to be decided, some students in the Self-rating (medium) and Self-rating (low) groups were not motivated to practice. This might have occurred because relatively low-proficient learners were not good at speaking on the spot, and they might have felt that there was nothing that they could do beforehand. As a matter of fact, those who were highly motivated to create manuscripts for one-way presentations managed just by reading aloud.

The result of student effort in the Self-rating (medium) and Self-rating (low) groups worked harder for one-way presentation than interactive presentation, and the result that most of the students preferred interactive presentation to one-way presentation seemed to contradict each other. However, since the questionnaire was conducted after the students experienced just one of each form of presentation, this result supports the possibility that even though some students were not good at speaking improvisationally or were not really motivated to work on an interactive presentation at the beginning, repetitive implementation of such presentation with the interaction between students could lead them to gain higher motivation. As students felt that a one-way presentation was more an individual work rather than pair work, this result can be supported by Baleghizadeh and Farhesh’s study (2014), which found that pair work had more impact on enhancing students’ motivation than individual work.

Thus, conducting each form of presentation only once is a limitation of this present study. Since the possibility that presentations with interactivity can motivate students more, it has been shown that further studies will be required.

Conclusion

The present study explores how the process of the preparation for a one-way or interactive presentation would be different through the analyses of the questionnaire results and student worksheets. The results showed that the amount of practice for the one-way presentation on the day of the presentation was higher than that of the interactive presentation. On the other hand, in the interactive presentation, the Self-rating (high) group differed from the others in this tendency until the day of the presentation. Furthermore, the interactive presentation was perceived more positively as an activity. In the interactive presentation, when the interaction with the audience was included in its activity, some students were more motivated to do more preparation than just to prepare a manuscript and practice reading aloud. They displayed behaviors such as conducting short research and preparing additional questions and quizzes proactively in advance. Even though students, particularly in Self-rating (medium) and Self-rating (low) groups, were unwilling to prepare for the interactive presentation, they might work on preparation harder if they had another opportunity to make an interactive presentation since many of them also chose it as a preferable activity to a one-way presentation. Thus, the present study suggests that teachers should understand the

characteristics of each type of presentation due to the fact that they showed different tendencies of impact on learners.

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