# Active Learning and Students' Perceptions of its Effectiveness to Improve English Skills

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**Abstract**: Active Learning (AL) has attracted considerable attention in Japanese higher education in recent years. By requiring active student participation in classrooms, it can maximize student classroom engagement, leading to better educational outcomes. AL has been incorporated into classrooms at Miyazaki International College (MIC) since its establishment in 1994. However, it remained unknown what types of AL had been employed and how effective they were. Two surveys were administered to investigate faculty use of AL and students' perceptions about its effectiveness on English skills. In this paper, the results from two surveys are summarized to identify important characteristics of AL use at MIC. Then, it discusses how effective students perceived a wide range of AL teaching strategies to be. Based on the findings, this paper suggests "best AL practices" to improve English skills.

**Keywords**: Active Learning; Acceleration Program for University Education Rebuilding; Teaching Strategies; Higher Education；English Skills.

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## Introduction

### Active Learning and Educational Policy of Japan

With the recent rapid expansion of technology and globalization, and issues relatively specific to Japan, such as an aging population and declining birthrate, Japan faces various obstacles to prospering as a country (the Japanese Central Council, 2018). In such an unpredictable era, demands from Japanese society have changed; it is important for Japanese individuals to acquire capabilities to meet the societal demands and keep up with those changes. Without such capabilities, Japan will not be able to prosper in this difficult era and contribute to a global community. Considering the importance of the role that higher education can assume in responding to social needs of human resources in the Japanese society, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has put forth educational policies that encourage institutions of higher education to prepare their students to meet these societal needs. In 2012, the Japanese Central Council for Education issued a report titled "Towards a Qualitative Transformation of University Education for Building a New Future - Universities Fostering Lifelong Learning and the Ability to Think Independently and Proactively" (MEXT, 2012), emphasizing the shift to learner-oriented education. It also highlighted the importance of active learning (AL) for the qualitative transformation required for the desired undergraduate education, contributing to the needs of society. AL is considered important in higher education in other countries as well. For instance, the European University Association (2019) points out AL in higher education as an effective way to foster student skills needed for society and their future employers. AL can effectively engage students in the learning process by increasing student involvement in class activities. By maximizing student class engagement through AL, it becomes possible to foster students' capabilities to successfully manage their future work in this rapidly changing society. Additionally, viewing AL as an essential component of higher education, MEXT (2014) started a funded project to advance AL in higher education.

## Definitions of Active Learning

With the Japanese government push towards AL with its funded program, AL has become a trend in Japanese higher education in recent years. According to a report from Benesse (2017), a number of courses in which AL has been incorporated is on a rise. However, there

is no agreed-upon definition of AL. Bonwell and Eison, prominent scholars in AL, define AL as "anything that involves students in doing things and thinking about the things they are doing (1991, p.19)", with several main characteristics such as student involvement beyond listening, more emphasis on developing students' skills than transmitting information, increased student engagement in educational activities, and greater emphasis on their exploration of their own attitudes and values. MEXT (2012) describes AL as teaching techniques or pedagogies that promote active student participation, which is different entirely from one-way lectures. The purpose of AL is to maximize student learning and develop cognitive, ethical, and social skills that can be applied in various dimensions of life. Such AL teaching strategies include, but are not limited to, classroom activities such as discussions, debates, and group work, and experience-based learning such as internships.

Mizoguchi (2014) emphasizes student involvement in AL processes, such as writing, speaking and presenting, claiming that AL should ensure the students' expression of their cognitive processes. Matsushita (2015) claims that the focus of AL should not be on how active students look, but on how deep their involvement and their cognitive process become. Like Mizoguchi, she puts an emphasis on cognitive skills that can be fostered as a result of deep student engagement with class activities through AL. Summarizing viewpoints of different prominent scholars in AL, AL can occur both inside and outside classrooms with various educational activities. In classrooms, specific AL teaching techniques, such as group work, discussions, and presentation, may be used. Outside classrooms, experience-based learning such as internships and community-based projects can become a form of AL. However, prominent scholars suggest that the focus of AL should not be on its different forms, but on the cognitive processes occurring as a result of AL. Various studies demonstrated that AL can yield positive students learning outcomes (Freeman et. al, 2014). For instance, Anderson et al (2005) showed that AL, compared with lecture-based learning, can increase content knowledge, and develop critical thinking and problem-solving skills in undergraduate education. Therefore, in investigating AL, it is crucial to examine not only its different forms but also its educational outcomes.

## Active Learning at Miyazaki International College

Founded in 1994, Miyazaki International College (MIC) is a liberal arts college in Japan. It started with the School of International Liberal Arts (SILA), in which students study international liberal arts in English. An overarching educational goal of the school is to foster students' advanced thinking and problem-solving skills (critical thinking skills) through active learning methodology (Otsubo, 2014). Classes at MIC are structured in ways to maximize student engagement through different AL techniques, such as group work, discussions, presentations, debates, and so on. Using content-based English instruction, the school provides an immersion environment in which students can learn specialized content in English while improving their English language skills at the same time. To maintain a global educational environment, more than 70 percent of the faculty is international (non-Japanese) in the school. While being in Japan, students can learn in a global environment that provides excellent opportunities to communicate in English on a daily basis. Since its inception, MIC has incorporated AL into classroom teaching, and classes are organized around AL to maximize student learning. However, it remained unknown how different forms of AL teaching techniques contributed to the development of students' English skills. As a college that relies extensively on AL and uses English as the primary medium of instruction, it is important to understand the nature of AL employed at MIC and how different types of AL have an impact on English skills.

## Study Context and Objectives

This study was conducted as part of a larger funded project to improve the quality of education, named the Acceleration Program for University Education Rebuilding (AP). AP is an educational initiative funded by MEXT, which is responsible for various aspects of education in Japan. MEXT also leads various educational initiatives to advance educational quality at different levels. The purpose of AP is to promote the university educational reforms that correspond to the educational policy specified in the Educational Rebuilding Implementation Council (MEXT, 2014). AP started in 2014 with three themes; Active Learning (Theme I), Visualization of Learning Outcomes (Theme II), Entrance Exam Reform / Connection between High school and College (Theme III), in addition to the Themes I & II Combined. AP has been expanded since 2014 with two more themes added in the following

years; Long-Term Off-Campus Study Program (Theme IV) and Quality Assurance in Higher Education (Theme V). AP is a competitive grant that institutions in higher education can apply to. For instance, 70 institutions in higher education applied to Theme I, 7 of which received the grant. AP is a four to six-year project with its total awarded amount being approximately one hundred million, which varies based on the theme, length and necessity.

MIC received a grant for the Themes I and II Combined in 2014. This study is part of its work towards Theme I, Active Learning. The purpose of this study is to understand the nature of AL teaching strategies used in classrooms and perceptions of students about those techniques. Specific questions investigated are listed below:

- Q1. What types of AL teaching strategies do instructors use in their classrooms?
- Q2. How effective do students perceive AL teaching strategies to be for improving English skills?
- Q3. Which AL teaching strategies are perceived more effective than others by students?

## Methods and Procedures

### Study Design

A cross-sectional design was adapted to investigate and address the questions. More specifically, the design consisted of two surveys; a faculty survey and a student survey.

### Samples

### Sample for Faculty Survey

All the instructors who belonged to SILA (approximately 30 to 32) were invited to answer a faculty survey once at the end of Fall and once at the end of Spring terms. The total number of the respondents was 27. The respondents were asked to answer about their use of AL methods in a particular course that they were teaching. Characteristics of the courses over two semesters are summarized below in **Table 1**. The discipline type indicates the type of the discipline of the course the respondent completed the survey about. The year of study is divided into three as listed, meaning that 3$^{rd}$ and 4$^{th}$ year students usually take a course together. There are three types of courses; English, team-taught content, and solo-taught

content. English, as its name suggests, indicates courses to teach the English language, such as reading and listening for 1st and 2nd year students. In a team-taught content course, two instructors team teach a specific subject in class at the same time. The instructors usually consist of a specialist in the English language and a specialist in the content area. Solo taught content indicates those courses where instructors teach a specific subject, such as Economy and Psychology, to juniors and seniors.

| Category | Choice | Number of Lessons |
|---|---|---|
| Discipline Type | Language | 5 |
| | Humanities | 6 |
| | Social sciences | 12 |
| | Natural sciences & technology | 3 |
| | No response | 1 |
| Grade | 1st year | 9 |
| | 2nd year | 4 |
| | 3rd/4th year | 14 |
| Course Type | English (solo-taught) | 7 |
| | Team-taught content | 7 |
| | Solo-taught content | 13 |

**Table 1.** Characteristics of the courses over two semesters. N = 27 for each category

**Sample for Student Survey**

Due to the nature of a pilot study, particular courses are selected based on availabilities and schedules. To cover a wide range of AL teaching methods, courses for different English skills are particularly selected. Characteristics of the sample are summarized in **Table 2**.

| Course Type | Grade | Number of Students |
|---|---|---|
| English (Writing) | 1st year | 6 |
| English (Reading) | 1st year | 20 |
| English (All skills) | 1st year | 20 |
| English (All skills) | 2nd year | 15 |
| Content Class | 3rd/4th year | 32 |

**Table 2**. Characteristics of classes where students responded to the student survey.

**Instrumentation**

**Development of an Active Learning List**

To investigate AL teaching methods, it is imperative to understand what types of AL techniques were used in classrooms. A group of MIC faculty members worked towards identifying "Active Learning Teaching Strategies (ALTSs)", teaching methods that MIC faculty members employed in classes. Referring to past literature and conducting class observations followed by instructor interviews, they created a list of ALTSs, including those teaching techniques incorporated on a regular basis at MIC and likely at other institutions as well (Mork & Howard, 2015). **Figure 1** on the left includes a list of ALTSs that have been developed by the group. The list was amended slightly from its original version, turning into the current version listed below.

ALTSs are organized on two axes. One axis is inward vs outward, and the other one is prepared vs extemporaneous. The first dimension indicates whether ALTSs involve communication with others or not. Inward ATLSs are mostly reflective in nature, requiring individual student activities, while outward ATLSs employ interpersonal strategies involving other students, mostly orally. The second dimension involves how much preparation is required for students to complete learning activities. Prepared ALTSs require students to take a longer preparation time than Extemporaneous ALTSs do. In extemporaneous ALTSs, students are typically required to work spontaneously with faculty instructions. The list was organized in such a way that most ALTSs can be categorized in terms of two dimensions. For instance, ALTSs in Category 1 are inward and prepared in nature, indicating that those

ALTSs require students to take a relatively long preparation time and to work individually. ALTSs in Category 5 have a mixture of different characteristics of Category 1 to 4. For a full discussion of the development of the original ALTSs list, please refer to Mork and Howard (2015).

**Faculty Survey** To investigate frequencies of ALTS use in classrooms, a faculty survey was created. The survey asked faculty to indicate the frequencies of using each ALTS in their courses. They were asked to write down the names of the courses they were teaching during a semester and indicate the frequencies of using ALTSs in the courses by choosing one of the following options; almost every class, about once a week, once or a few times a month, once or a few times a semester, or never. Senior Thesis was excluded from the faculty survey because it is a specific course, rather than a teaching strategy used in a particular class.

| | ALTSs |
|---|---|
| Category 1 | ①Creative writing |
| | ②Self-assessment |
| | ③Written paraphrases and summaries |
| | ④Feedback survey/report |
| | ⑤Journal writing |
| | ⑥Response/reaction writing |
| | ⑦Senior thesis |
| Category 2 | ①Skits and dramatic productions |
| | ②Formal debates and panel discussions |
| | ③Presentation and reverse presentations |
| | ④Creative recitations |
| | ⑤Surveys and interviews |
| | ⑥Peer teaching |
| Category 3 | ①Written peer review of written work |
| | ②Pause for reflection |
| | ③Active listening |
| | ④Close reading |
| | ⑤Symbolized paraphrases and summaries |
| Category 4 | ①Interactive lectures |
| | ②Facilitated discussion |
| | ③Free discussion |
| | ④Case studies |
| | ⑤Role plays and impromptu skits |
| | ⑥Jigsaw activities |
| | ⑦Oral paraphrases and summaries |
| | ⑧Informal debates |
| | ⑨Group work on questions |
| | ⑩Think-pair-share and think-group-share |
| Category 5 | ①Cooperative student projects |
| | ②Simulations and experiments |
| | ③Community based projects |
| | ④Student-created assessment criteria |

| | No. | ALTSs modified for the student survey |
|---|---|---|
| Category 1 | 1 | ①Creative writing<br>⑤Journal writing<br>⑥Response/reaction writing |
| | 2 | ②Self-assessment |
| | 3 | ③Written paraphrases and summaries |
| | 4 | ④Feedback survey/report |
| | 5 | ⑦Senior thesis |
| Category 2 | 6 | ①Skits and dramatic productions |
| | 7 | ②Formal debates and panel discussions |
| | 8 | ③Presentation and reverse presentations |
| | 9 | ④Creative recitations |
| | 10 | ⑤Surveys and interviews |
| | 11 | ⑥Peer teaching |
| Category 3 | 12 | ①Written peer review of written work |
| | 13 | ②Pause for reflection |
| | 14 | ③Active listening |
| | 15 | ④Close reading |
| | 16 | ⑤Symbolized paraphrases and summaries |
| Category 4 | 17 | ①Interactive lectures |
| | 18 | ②Facilitated discussions<br>③Free discussions |
| | 19 | ④Case studies |
| | 20 | ⑤Role plays and impromptu skits |
| | 21 | ⑥Jigsaw activities |
| | 22 | ⑦Oral paraphrases and summaries |
| | 23 | ⑧Informal debates |
| | 24 | ⑨Group work on questions<br>⑩Think-pair-share and think-group-share |

**Fig. 1.** The ALTSs List developed by the Active Learning Working Group on the left.

Note: Category 1: Inward-Prepared; Category 2: Outward-Prepared; Category 3: Inward-Extemporaneous; Category 4: Outward-Extemporaneous; Category 5: Potentially a mixture of 4 categories. (The interested reader can refer to Mork and Howard (2015) for the development of the original ALTSs list.)

### Student Survey

The purpose of a student survey is to investigate students' perceptions about the effectiveness of ALTSs for English skills. To focus on ALTSs in classrooms, project-based ALTSs carried out mainly outside classrooms (i.e., the ATLSs in Category 5) were eliminated from the student survey. In addition, to ensure that students had a good understanding of each ALTS before completing the survey, the student survey was modified slightly by merging similar ALTSs into one. This process was assisted by a group of students familiar with the ALTSs list. **Figure 1** above on the right is a list of ALTSs used for the student survey. In the student survey, students were asked to indicate their perceived effectiveness of ALTSs in terms of English skills. English skills are divided into five components; reading, listening, speaking, writing, and vocabulary and grammar (V&G). They were asked to indicate their perceived effectiveness of ALTSs for each English skill on a scale of not useful at all, not very useful, a little useful, and very useful.

## Procedures

### Faculty Survey

The faculty survey was administered using a web-based survey system. Before the survey administration, faculty had opportunities to attend a series of faculty development sessions explaining a list of ALTSs. Additionally, an electronic copy of the list, as well as a hard copy, was circulated to all faculty members to ensure that they understood the list. The survey was conducted at the end of each academic semester in 2017 to 2018.

### Student Survey

The study survey was administered after class in two ways. As for freshmen and sophomores, who might not be familiar with ALTSs, an instructor selected ALTSs which were actually employed in class. For those selected ALTSs, students were asked to indicate their perceived effectiveness in terms of five types of English skills, including reading, writing, listening,

speaking, and V&G. As for juniors and seniors, who were expected to be familiar with ALTSs, they were asked to answer the questionnaire for all of the ALTSs. The total of 93 students in six different classes completed the survey in 2019.

## Findings

### Assessment of Faculty Use of ALTSs

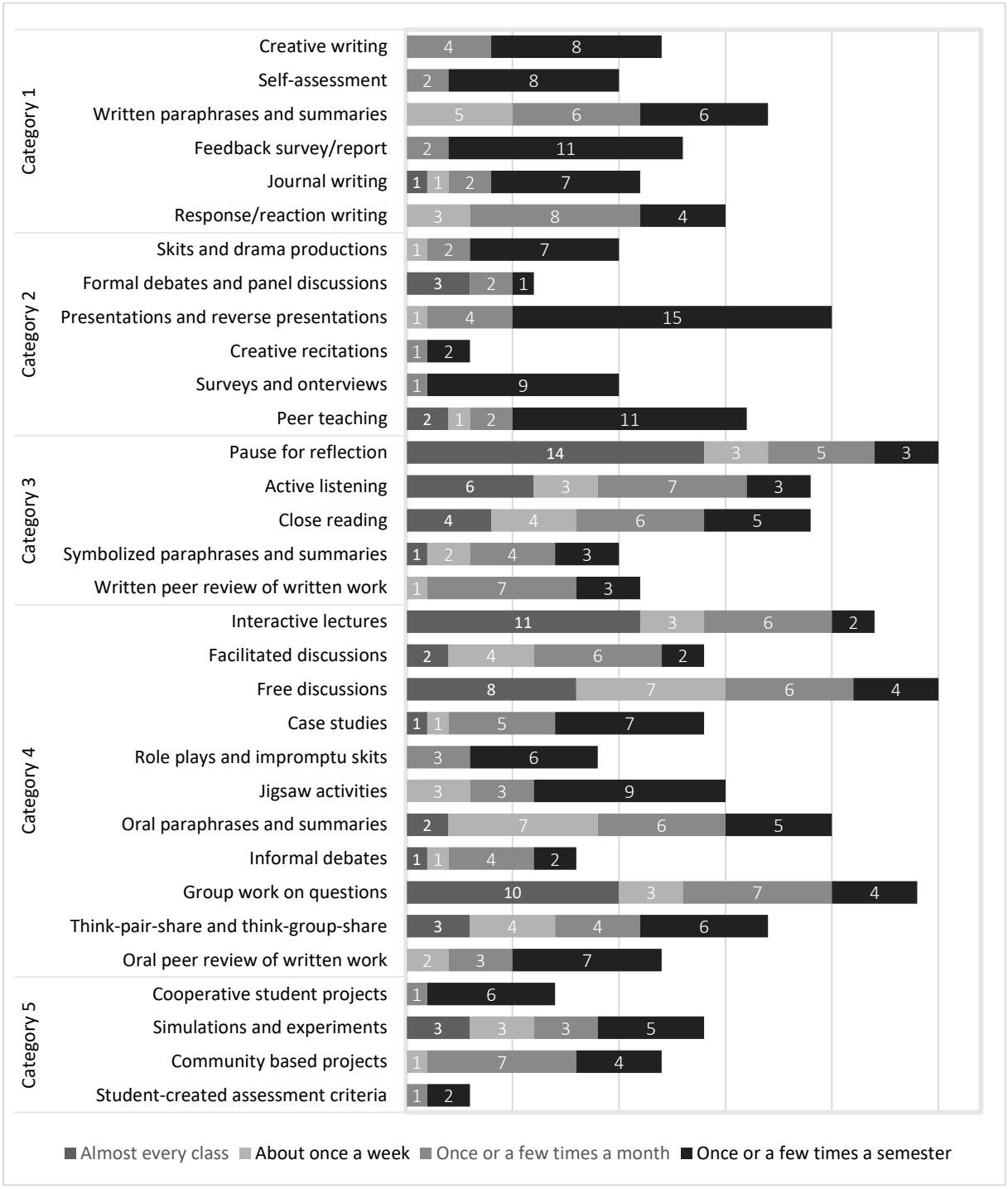

**Fig. 2**. Summary of the faculty survey results. N = 27

As shown in **Figure 2**, ALTSs in Category 3 and 4 tended to be employed more frequently than other ALTSs did. Pause for reflection, active listening and close reading were popular in Category 3, while free discussions, group work on questions, and interactive lectures were the top 3 ALTSs among those in Category 4. Specifically, among those that were used frequently in Category 4, interactive lectures, group work on questions and free discussions were used in almost every class by 11, 10 and 8 respondents respectively. In Category 3, 14 respondents indicated their constant use of pause for reflection. ALTSs in Category 3 and 4 are extemporaneous in nature, in which students are asked to work on class activities promptly with faculty instructions. Therefore, the results indicate that respondents preferred to use a prompter nature of ALTSs, in which students were engaged in class activities spontaneously and in a lively manner.

In Category 1, written paraphrases and summaries, and response/reaction writing were frequently adopted. Presentations and reverse presentations, and peer teaching were comparatively more used than others in Category 2. Presentations and reverse presentations did not seem to be employed very often. However, with a relatively long preparation time typically required for presentations, presentations seemed to be incorporated into classes effectively, used at least once during the semester by 15 respondents.

Although those in Category 5 were not utilized as frequently as other ALTSs, it does not necessarily mean that ALTSs in Category 5 were not adopted much. ALTSs in Category 5 usually take a longer class time period than others do. For instance, in community-based projects, students cooperate with members of the wider community either as a group or individually. This type of project is more likely to take longer than other short-time ALTSs in classrooms, such as free discussions and group work on questions. Considering the nature of ALTSs in Category 5, the results might show that those in Category 5 were used relatively frequently by MIC instructors.

**ALTSs Used Very Frequently**

To identify ALTSs that were employed very frequently, responses (“almost every class,” “about once a week, “once or a few times a week” “once or a few times a month,” “once or a few times a semester,” and “never”) were divided into two groups.”Almost every class” and

"about once a week" were grouped together into a frequently-used group because ALTSs in this group were adopted at least once out of two classes (most courses meet twice a week). The other response options were grouped together into an infrequently-used group. The results were summarized in **Figure 3**, indicating the number of courses where the listed ALTSs were used at least once every class. In the order of frequency, the following ALTSs were employed at least onceevery two classes; pause for reflection (17 courses), free discussions (15), interactive lectures (14), group work on questions (14), oral paraphrases and summaries (9), active listening (9), and close reading (8).

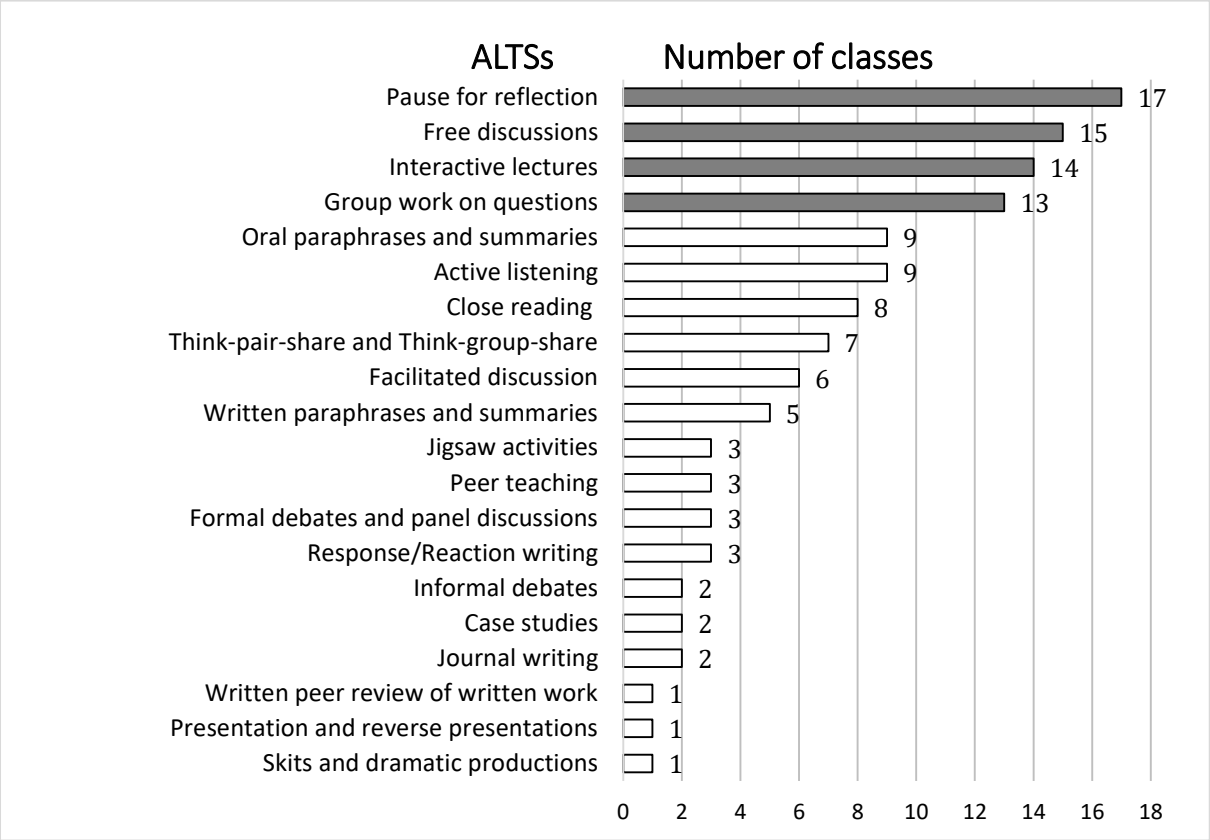


**Fig. 3**. Number of courses where the listed ALTSs were used at least once out of two classes. N = 27

**Assessment of Students' Perceptions**

To make meaningful comparisons about students' perceived effectiveness of various ALTSs against different English skills, scores were assigned to students' evaluations. Specifically, the following system was adopted; a scale of 0 to 3 with 0 being not useful at all, 1 being not very useful, 2 being a little useful, and 3 being very useful. **Figure 4** shows the distribution of all the students' scores. The average of all the students' scores was 2.01 with a standard

deviation (SD) of 0.26. The deviation value 60 corresponding to the top 15% was 2.27 (2.01 + 0.26), and the deviation value 40 corresponding to 15% from the lower level was 1.75 (= 2.01 - 0.26). To discuss comparative effectiveness, it was decided that 2.27 points or more indicates a very effective ALTS to improve a particular English skill.

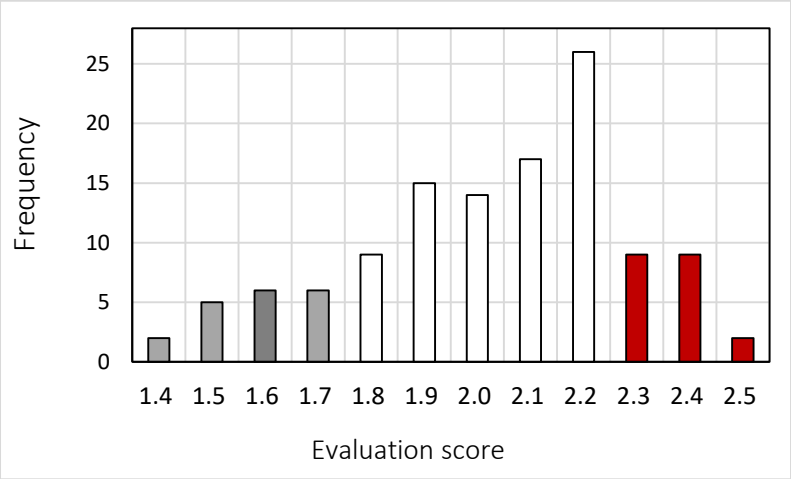


**Fig. 4**. Distribution of all the students' evaluation scores. Mean, mode and SD were 2.01, 2.20 and 0.26, respectively.

**Table 3** includes all the averages of the students' scores across all types of English skills. Scores more than 2.27 (one SD above the mean) were written in bold. Students perceived the following ALTSs effective to improve reading skills: close reading (2.44 on a scale of 0 to 3), senior thesis (2.39), and written peer review of written work (2.33). For writing skills, written paraphrases and summaries (2.45), written peer review of written work (2.42), senior thesis (2.39), creative, journal, response/reaction writing (2.28) were perceived to be very effective.

| No. | ALTSs | Average Scores | | | | |
|---|---|---|---|---|---|---|
| | | Reading | Writing | V & G | Listening | Speaking |
| 1 | Creative writing<br>Journal writing<br>Response/Reaction writing | 2.10 | **2.28** | 2.18 | 1.96 | 1.90 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | Self-assessment | 1.72 | 1.76 | *1.66* | *1.57* | *1.56* |
| 3 | Written paraphrases and summaries | 2.16 | **2.45** | 2.19 | *1.42* | *1.45* |
| 4 | Feedback survey/Report | 2.13 | 2.07 | 2.19 | 1.90 | 1.94 |
| 5 | Senior thesis | **2.39** | **2.39** | **2.35** | *1.61* | *1.71* |
| 6 | Skits and dramatic productions | 1.80 | 1.81 | 1.89 | 1.89 | 1.99 |
| 7 | Formal debates and panel discussions | 1.97 | *1.63* | 1.97 | 2.16 | 2.16 |
| 8 | Presentation and reverse presentations | 1.85 | 1.76 | 1.95 | 1.94 | 2.19 |
| 9 | Creative recitations | *1.45* | *1.42* | *1.62* | *1.70* | 1.88 |
| 10 | Surveys and interviews | 2.15 | 2.17 | 2.14 | **2.30** | **2.30** |
| 11 | Peer teaching | 2.09 | 2.10 | 2.15 | 2.10 | 2.09 |
| 12 | Written peer review of written work | **2.33** | **2.42** | **2.39** | *1.45* | *1.45* |
| 13 | Pause for reflection | 2.19 | 2.22 | **2.28** | 2.11 | 2.17 |
| 14 | Active listening | 2.06 | 2.01 | **2.31** | **2.37** | 2.23 |
| 15 | Close reading | **2.44** | 1.91 | 2.06 | *1.47* | *1.59* |
| 16 | Symbolized paraphrases and summaries | 2.16 | 2.09 | 2.18 | 1.90 | 1.97 |
| 17 | Interactive lectures | 2.10 | 2.00 | 2.15 | 2.15 | 2.18 |
| 18 | Facilitated discussion<br>Free discussion | 1.80 | 1.85 | 1.90 | 2.04 | 2.16 |
| 19 | Case studies | 1.97 | 2.19 | 2.13 | 1.94 | 2.00 |
| 20 | Role plays and impromptu skits | 1.76 | 1.79 | 1.86 | 2.02 | 2.10 |
| 21 | Jigsaw activities | *1.75* | 1.97 | 1.84 | *1.68* | *1.74* |
| 22 | Oral paraphrases and summaries | 2.19 | 2.11 | 2.15 | 2.15 | **2.35** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 23 | Informal debates | 1.98 | 1.92 | 2.05 | **2.31** | **2.39** |
| 24 | Group work on questions<br>Think-pair-share and Think-group-share | 2.18 | 2.25 | 2.20 | **2.34** | **2.46** |

**Table 3.** Summary of the averages of all the responses. Note: N = 93. Numbers in bold are larger than 2.27.

Listening and speaking had a similar result; group work on questions and think-pair/group-share (2.34 for listening and 2.46 for speaking), informal debates (2.31 for listening and 2.39 for speaking), surveys and interviews (2.30 for both), active listening (2.37 for listening), and oral paraphrases and summaries (2.35 for speaking) were perceived very effective. Written peer review of written work (2.39), senior thesis (2.35), active listening (2.31) and pause for reflection (2.28) were found to be effective to improve V&G skills.

Some ALTSs received high scores for more than one English skill. Senior thesis and written peer review of written work had more than 2.27 (one SD above the mean) on three different English skills. Surveys and interviews, active listening, informal debates, and group work on questions and think-pair/group-share had 2.27 above on two different skills. Furthermore, it was found that some ALTSs had a relatively high score on all the English skills. At least 2.00 was marked on all the English skills in surveys and interviews, peer teaching, pause for reflection, active listening, interactive lectures, oral paraphrases and summaries, and group work on questions and think-pair/group-share. These ALTSs might work effectively to increase a variety of English skills. Especially, surveys and interviews, active listening, and group work on questions and think-pair/group-share received more than 2.00 on all the English skills with 2.27 above on two skills. In addition, the results from the faculty survey indicate that faculty tended to employ these ATLSs frequently. Thus, there seems to be an overall match between frequent faculty use of ALTSs and the students' perceptions.

### 4.4 Relationships of Perceived Effectiveness among English Skills

To investigate whether a particular ALTS is considered effective for multiple English skills, correlation coefficients of students' evaluation scores were calculated in **Table 4**.

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1.Reading | 1.00 | 0.76* | -0.04 | -0.19 | 0.87** |
| 2.Writing | | 1.00 | -0.10 | -0.19 | 0.84** |
| 3.Listening | | | 1.00 | 0.96** | 0.16 |
| 4.Speaking | | | | 1.00 | 0.05 |
| 5.V & G | | | | | 1.00 |

*p<.01 *p<.001

**Table 4**. Correlation coefficients among different English skills

As **Table 4** shows, relatively high correlation coefficients were found in the relationships between speaking and listening (0.96), reading and V&G (0.87), writing and V& G (0.84), and writing and reading (0.76). The high correlation between speaking and listening indicates that ALTSs considered effective for speaking is likely to be so for listening as well. There is a similar positive relationship among writing, reading and V&G. Thus, reading, writing and V&G were grouped together as English learning through the written mode, while listening and speaking were listed as English learning through the oral/aural mode. Based on this grouping, two graphs were created in **Figure 5**, indicating most effective ALTSs for multiple English skills.

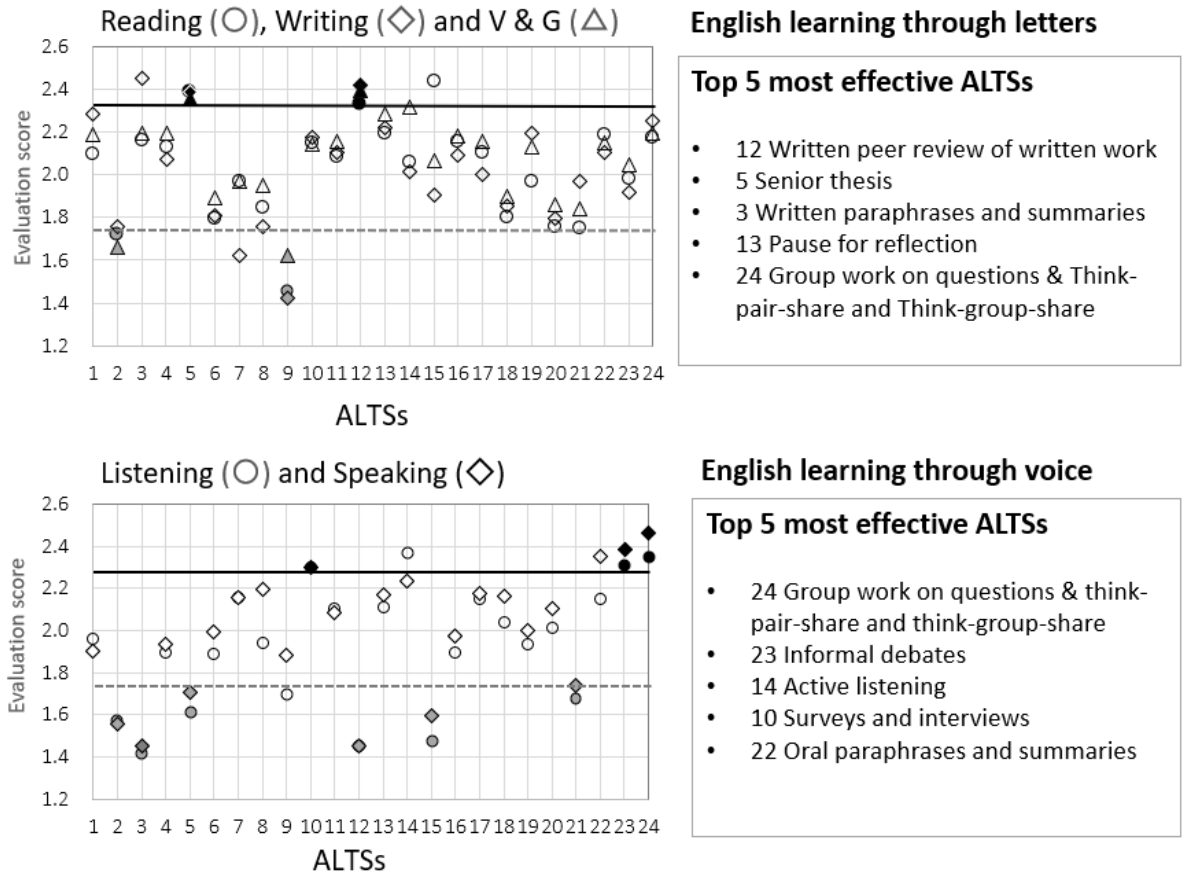


**Fig. 5.** Plots of the averages of the evaluation scores on ALTSs in English skills: reading, writing, and V & G (upper) and listening and speaking (bottom).

Specifically, the top 5 most effective ALTSs for English learning in the written mode were selected based on the averages of the student evaluation scores on reading, writing, and V&G. The top 5 most effective ALTSs for English learning through the oral/aural mode were chosen in the same way. As shown in **Figure 5**, it was found that the ALTSs that students perceived to be most effective for reading, writing, and V & G were written peer review of written work, senior thesis, written paraphrases and summaries, pause for reflection, and group work on questions & think-pair/group-share in order of their effectiveness. As for English learning through the oral/aural mode, group work on questions and think-pair/group-share, informal debates, active listening, surveys and interviews, and oral paraphrases and summaries were identified the most effective in order of their perceived effectiveness.

**Discussion**

This study investigated the faculty use of ALTSs at MIC and students' perceptions about their effectiveness on different English skills. A body of evidence shows that different forms of AL were effective (Prince, 2004). This study becomes an important contribution to the AL literature by taking one step towards exploring AL at MIC, one of the colleges in Japan where AL has been exclusively incorporated into classrooms.

Overall, results from the faculty survey show that ALTSs of the extemporaneous type, those in Category 3 & 4, were used frequently. Especially, pause for reflection, active listening and close reading were popular in Category 3, and free discussions, group work on questions, and interactive lectures were employed quite often in Category 4. Written paraphrases and summaries, and response/reaction writing were frequently utilized in Category 1. Presentations and reverse presentations, and peer teaching were popular in Category 2. However, caution needs to be taken in interpreting the results of the faculty survey because some ALTSs take a longer period of class time than others do, which might influence their choices. For instance, presentations typically take a long preparation time on the part of students and need a long class time, which makes it impossible to incorporate them as often as other short-term ALTSs. In interpreting the results of the faculty survey, it is important to consider the nature of ALTSs and how it could affect faculty choice of ALTSs in classrooms.

In addition, this study examined how effective students perceived ALTSs to improve different English skills. Correlation coefficients were calculated to identify a strong relationship among the perceived effectiveness of different English skills. Based on the coefficients, the top 5 most effective ALTSs for English learning through letters and voice were identified respectively. Although it is difficult to make clear conclusions from the present study, the following findings based on the two survey results may be worthwhile:

1) ALTSs that faculty tended to use very frequently, such as pause for reflection, interactive lectures, group work on questions & think-pair/group-share, active listening, and oral paraphrases and summaries, were overall perceived effective by students to improve all the English skills.

2) ALTSs that faculty did not employ frequently, such as skits and dramatic productions, self-assessment, feedback survey/report, and role plays and impromptu skits, were not found to be effective by students. It is likely that those ALTSs were used for specific purposes, other than improving English skills.

3) Faculty did not indicate their regular use of the ALTSs (surveys and interviews, and informal debates) that students identified as effective to improve listening and speaking skills.

These findings imply an overall match between faculty use of ALTSs and students' perceptions about their effectiveness. Faculty may quite often employ ALTSs that students found effective to improve various English skills. The findings may suggest that the best AL practices to improve particular English skills are those ALTSs identified as the top 5 ALTSs. It is possible that students perceived those strategies as effective because they were most often use. In addition, faculty may not often use ALTSs that students did not perceive effective for English improvements. Those ALTSs, such as creative citations, may be employed for specific learning outcomes, other than English skills.

**Limitations**

There are some limitations to this study. First, not all the faculty members completed the faculty survey. If there had been more respondents to the survey, it would be possible that different ALTSs were used more frequently than the results of this study indicate. In addition, some ALTSs are specific to particular courses, which might have influenced on the results of faculty use of ALTSs. For instance, journal writing or close reading is more likely to be used in English writing classes than regular content courses. These ALTSs could have been employed more frequently if there were more survey respondents who taught English. It is possible that ALTSs that can be easily adopted in any type of class (e.g. pause for reflection and group work on questions) were used frequently because of their applicability to any course. Furthermore, due to the pilot nature of the student survey, samples were selected based on course schedules and availabilities. It is hard to generalize the student results into the whole student population.

Second, this study investigated students' perceptions of effectiveness of ALTSs on English skills, but not on observable English skills. Their perceptions are important, but do

not necessarily reflect the real effects of ALTSs. For future research, it is imperative to measure the actual effects of ALTSs on English skills using standardized tests. This way, it will become possible to analyze how effective different ALTSs are to improve particular English skills.

Lastly, due to its focus on English skills, this study could not capture other potential benefits of ALTSs. For instance, the ALTSs, presentations and reverse presentations, whose scores were relatively low across all the English skills, have a positive influence on communication and presentation skills. Creative citations was not well received by students either, but the teaching technique may contribute to the development of essential skills, such as creativity and imagination. Effective ALTSs would be different if other types of educational outcomes had been measured.

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