

# Which CBI on ELT Works Better, Active Learning or More Demanding Lectures?

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This paper examines the effectiveness of active learning (AL) and traditional lecturing (TL) in a university CBI course on ELT. The AL ( $n = 61$ ) and TL ( $n = 68$ ) courses were taught in 2014 and 2015. Although they covered the same content, the former spent about 30% on discussions and tasks, and the latter gave the students demanding take-home assignments. The examined participants' variables included their content understanding, perceptions of CBI on ELT (ELT-CBI) and L2 learning motivation. They were measured respectively in terms of participants' course scores, ELT-CBI factors (Effective, English-Use and Favorable factors), and motivation factors (MFs) relevant to L2 Motivational Self-System. The second and third variables were investigated with two questionnaires at the end of the courses. These data were analyzed with independent samples *t*-tests, showing: (a) there was no significant difference in the effectiveness between AL and more demanding TL; (b) TL failure rates were significantly higher; (c) AL was significantly higher in the means of Effective and Favorable factors; and (d) AL was significantly higher in the means of five out of 10 MFs. Seemingly, AL ELT-CBI is not less effective than TL ELT-CBI, and is better perceived and more motivating.

## 1. Introduction

Active learning (AL) is a buzzword. It is defined by Center for Research on Learning and Teaching (CRLT, 2016) at University of Michigan, a mecca of AL, as “a process whereby students engage in activities, such as reading, writing, discussion, or problem solving that promote analysis, synthesis, and evaluation of class content” (p. 1). Examples provided for it include cooperative learning, problem-based learning, case methods and simulations.

Admittedly, the number of studies on AL has been increasing in Japan (Mizokami, 2014). However, many of the studies tend just to introduce and discuss concepts relevant to AL, curricula that contain AL, or examples of AL practice, and others are inclined to report concise surveys on AL, as far as studies of AL on Cinii and Google Scholar are concerned. Rarely seen are investigations of how AL affects academic performance at the tertiary level as well as at lower levels.

Contrastively, in North America, many studies had been conducted, including meta-analyses (for example, Springer, et al., 1999; Ruiz-Primo, et al., 2014), examining the effectiveness of AL, showing both positive and negative results until Freeman, et al. (2014) decisively revealed the supremacy of AL over traditional lecturing (TL). It was a meta-analysis of studies on AL in the largest scale ever ( $N = 225$ ). They compared TL ( $n = 67$ ) and AL ( $n = 158$ ) in undergraduate science, technology, engineering, and mathematics courses, and found: (a) students in AL had higher examination scores by about 6%, showing .47 in the effect size; (b) students in TL failed 1.5 times more; (c) students in AL learned more

deeply, showing more improvement in concept inventories; and (d) the effectiveness of AL was seen across all class sizes as well as across the subjects. This nearly medium effect size ( $d = .47$ ), which was comparable with those in the previous meta-studies, i.e., .51 ( $n = 37$ ; Springer, et al., 1999) and .50 ( $n = 166$ ; Ruiz-Primo, et al., 2011), confirmed the effectiveness of AL. Therefore, as their conclusion, the researchers came to “question about the continued use of TL” (p. 8410) and “support AL as the preferred, empirically validated teaching practice in regular classrooms” (p. 8410).

Admittedly, one limitation of this study lies in analyzing studies that “varied widely in intensity and implementation” (p. 8410), from a shallow approach such as occasional group problem-solving and use of clickers to a deep approach like studio or workshop course designs. However, even this weakness may suggest that a meta-analysis between deep AL and TL would reveal a greater effectiveness of AL.

Whether these findings may be known or not, there seems to be not a few university educators in Japan still believing that it is how much and seriously students study that matters, and that it is students who are to blame when they do not achieve course goals. One reason for this teacher belief may lie in the fact that effects of AL at universities have not been examined so much in Japan that the effectiveness of AL may not be properly understood. In this case, we should conduct more studies for this purpose. Therefore, we performed a study to examine which content-based instruction (CBI) on English language teaching (ELT) is more effective to university students, AL or TL.

Before proceeding to the study, CBI is briefly reviewed with our reasons for the adoption of this instruction. CBI evolved from Communicative Language Teaching, aiming to kill two birds with one stone, i.e., instruction of a content subject and L2. Although CBI is often used as an umbrella term for English-medium instruction, it is focused more on content teaching than Content and Language Integrated Learning, predominantly used at secondary schools (Lightbown, 2014; Richards & Rodgers, 2014). It has mainly three teaching models, which are theme-based, sheltered, and adjunct models (Stryker & Leaver, 1997). Out of them, a sheltered CBI was chosen because it allowed one instructor, or the author, to teach our ELT training course in English.

## 2. Study

In the background of this study lay another study on CBI on ELT (ELT-CBI) in 2013 (Miyasako, 2016a), where our first trial of ELT-CBI was conducted on university students with interest in ELT ( $n = 68$ ), and the students’ perceptions of the CBI, as well as content understanding and English proficiency, were investigated. Since this course spent about 30% on tasks and discussions among the students, following and between the teacher talk, it is considered to have been AL in the sense as shown above (Freeman, et al., 2014). However, despite their favorable perceptions of the course, the students’ content understanding was not necessarily satisfactory. This AL ELT-CBI was similarly taught in 2014 to reveal resemblance in the students’ content understanding.

Our reflection on these results showed two possible causes for them. One concerned the teaching manner, i.e., AL, and the other the course’s level of demand. These ELT-CBI courses might have generated greater content understanding among the students if taught in TL with demanding assignments. Consequently, this approach was adopted in 2015. When this TL course was taught, it was designed as a part of a comparative study to examine the difference of effectiveness between AL and TL. Although AL was reviewed to be more effective, it had a handicap of demanding assignments that TL gave to the students but AL did not.

The purpose of this study was to compare the AL and TL ELT-CBI courses pertaining to the students’ content understanding, course perceptions, and L2 learning motivation, which is defined as motivation relevant to one’s L2 learning (Dörnyei, 2009). Accordingly, research questions were addressed as: (1) Is AL more effective than TL in an ELT-CBI course at the tertiary level?; (2) Is AL more favorably perceived than TL in an ELT-CBI course at the tertiary level?; and (3) Is AL more motivating

than TL in an ELT-CBI course at the tertiary level?

### 3. Method

#### 3.1 Participants

The participants were students with interest in ELT at a university in Western Japan ( $N = 152$ ). They took *Basic Studies on English Language Education*, a mandatory course for the English teaching certificate at the secondary level, in the 2014 and 2015 spring semesters. Although the numbers of registered students were 64 and 88 in 2014 and 2015, those who took all the tests and surveys were respectively 61 and 68, and totally 129, composed mainly of sophomores. The participants' English proficiencies were in the range of lower and upper intermediate.

#### 3.2 Instruction

The 15-weekly-session courses were both taught in English by a Japanese instructor, the author. The content was basically the same, using *How to Teach English* (new edition) (Harmer, 2007) as the coursebook. The purposes were: (a) to have students understand basic ideas of ELT; and (b) to develop their English proficiency through English exposure and use. The requirements were: (a) to read a 10-15-page chapter of the course book in authentic English; (b) to understand the content; and (c) to discuss issues relevant to it.

Based on the commonality, what differentiated AL and TL ELT-CBI mainly concerned requirement (c). After the teacher talk of a topic in AL, the students discussed issues or cooperatively tackled tasks appropriate for the topic, that is to say problem-based or cooperative learning, most of which were provided in the coursebook as supplements. Time spent for this was about 30 minutes or 30% of the 90 minute session. Although the students were supposed to use English in the discussions and tasks, they were occasionally seen to use code-switching strategies, particularly when topics and activities were challenging. Discussions and tasks that were not completed were their homework. However, the students rarely did it because they were not required to submit it.

On the other hand, in TL, the teacher talk was longer and more elaborate, so that the students were hardly given time for discussions or tasks. Instead, they were given the same discussions and tasks, which were provided in AL, as assignments. This homework demanded over 60 minutes of individual work to be done in written English. Many of the students submitted their homework because it was checked.

#### 3.3 Instruments

This investigation mainly used three instruments. First, the students' content understanding of AL and TL ELT-CBI was measured as their course scores. These course scores consisted mainly of their final examinations plus class participation. The examinations were quite similar in difficulty, covering the same materials. Class participation in AL was observed in the students' interactions. Participation in TL was assessed with their lecture listening, note taking and homework submissions.

Second, the students' perceptions of ELT-CBI were investigated in terms of ELT-CBI factors (ELT-CBI Fs), which were Effective, English-Use and Favorable ELT-CBI Fs, with a 15-item 6-point-Likert questionnaire (Miyasako, 2017; Appendix A). These three factors respectively concern the effectiveness of ELT-CBI in content understanding and in developing English proficiency, English use in ELT-CBI, and the favorability of ELT-CBI.

Third, the students' L2 learning motivation, relevant to L2 Motivational Self-System (MSS) (Dörnyei, 2005), was looked into with a 39-item 6-point-Likert questionnaire (Taguchi, et al., 2009, Appendix B). Here, L2 MSS was developed based on Self-Discrepancy theory (Higgins, 1987) and Possible-Self theory (Markus & Nurius, 1986). Their key concept is *possible selves*, what one can think of becoming. More

specifically, it can be *ideal* or *ought selves*, what one wishes to be or to avoid becoming. When these ideal and ought selves are different from one's present self, or what one is, one often tries to fill the gap between them. Dörnyei (2005) borrowed and adapted these concepts to Applied Linguistics into *ideal* and *ought-to L2 selves*, which are respectively defined as what one wishes to be and what one wishes to avoid becoming as an L2 user. Motivational factors (MFs) examined were L2 motivational effort as criterion measures (CMs; MF 1), ideal L2 self (MF 2), ought-to L2 self (MF 3), family influence (MF 4), instrumentality (promotion) (MF 5), instrumentality (prevention) (MF 6), attitudes to learning English (MF 7), cultural interest (MF 8), attitudes to L2 community (MF 9), and integrativeness (MF 10).

Additionally, two more instruments were used. One was the students' self-reported EIKEN Grade levels, as indices of their English proficiencies, on a 10-point scale: below pre-2nd G (5), about pre-2nd G (6), about 2nd G (7), about pre-1st G (8), about 1st G (9), and above 1st G (10) (Miyasako, 2016a). Although learners' self-claimed proficiencies are inclined to be lower than their actual proficiencies, they were assumed to reflect the students' English abilities to a similar degree that their perceptions of CBI and L2 learning motivation were measured with the questionnaires.

The other was their career prospects: would-be English teachers (WETs) or would-be non-English teachers (WNETs). This was due to possible effects that this difference might have on the variables to be examined.

### 3.4 Procedure

The questionnaires were conducted and the questions were asked in the last sessions of the courses. On these occasions, the participants were given explanation of the survey purposes and our ethical treatment of the data, and consented to answering them.

### 3.5 Analyses

The analyses began with the participants' English proficiencies and career prospects mainly to examine whether AL and TL students were equivalent in them. Second, for the first research question, an independent samples *t*-test was run on their content understanding between the courses to examine which course was more effective. Also, a  $\chi^2$ -test was performed to examine their failure rates for the same purpose. Third, for the second research question, independent samples *t*-tests were conducted on three ELT-CBI Fs between AL and TL students to examine if their perceptions of ELT-CBI were different. Finally, for the third research question, independent samples *t*-tests were performed on 10 MFs between the students to find out differences in their L2 learning motivation.

## 4. Results and Discussion

### 4.1 English Proficiency and Career Prospects

Table 1 shows the participants' means and standard deviations of English proficiency indices, which

Table 1 *The Participants' English Proficiency Indices and Career Prospects*

	<i>n</i>	<u>English proficiency</u>		<u>Career prospect</u>	
		<i>M</i>	<i>SD</i>	WET	WNET
AL students	61	6.28	.90	27	34
TL students	68	6.10	.79	24	44
<i>Total</i>	129	6.19	.85	51	78

WET and WNET represent would-be English and non-English teachers respectively.

were self-reported EIKEN Grade levels on a 10 point scale, and their career prospects, WETs or WNETs. First, there was no significant difference in the index means between the students in AL and TL ( $t = 1.18$ ,  $df = 127$ ,  $ns$ ,  $d = .21$ ). The mean values 6.28 and 6.10 show that the students' English proficiencies were on average a little above EIKEN Pre-2 Grade level, which meant they would have to improve their English abilities to hold English teaching professions.

Second, TL course appears to have had more WNETs, 44, than the other, 34. Statistically, however, there was no significant difference in their career prospects between them ( $\chi^2 = 1.08$ ,  $df = 1$ ,  $ns$ ,  $\phi = .09$ ). The percentages of WETs were 44.3% and 35.3% respectively for AL and TL courses, and totally 39.5%. Arguably, these figures as well as their English proficiencies may not look appropriate, but they seem to represent the reality of ELT training courses. In any case, since AL and TL students were so similar in these variables that the following examinations would not be affected by these variables.

#### 4.2 Research Question One

The first research question inquired into whether AL would be more effective than TL in an ELT-CBI course at the tertiary level. In order to compare the effectiveness, the participants' content understanding was looked into (Table 2; Figure 1). Means of AL ( $M = 71.77$ ,  $SD = 10.23$ ) and TL ( $M = 69.71$ ,  $SD = 13.08$ ) students were close, which was confirmed by the independent samples  $t$ -test ( $t = 1.18$ ,  $df = 127$ ,  $ns$ ,  $d = .21$ ). However, considering that the TL course was more demanding with weekly assignments, it may be that AL was not less effective than TL.

This interpretation is reinforced when failures of the courses (Table 3; Figure 1) are looked at. Here, failures mean failed and dropped-out students. The failures rates were 15.63% and 29.55% respectively for AL (10 / 64) and TL (26 / 88) students. This 1.9 times greater percentage for TL students was statistically confirmed ( $\chi^2 = 3.97$ ,  $df = 1$ ,  $p < .05$ ,  $\phi = .16$ ).

However, caution should be exercised for this interpretation. One reason for this lies in the greater number of students registered in TL ( $n = 88$ ). Another lies in the equivalence of English proficiency and career prospects between AL and TL students who took the surveys at the course ends (see Table 1). In short, the TL course, at the beginning, may have included more students who possibly had lower English proficiency or lower interest in ELT. Moreover, it is possible that the demanding nature of the TL course may have contributed to their dropouts.

Nonetheless, these greater failures in TL coupled with the equivalent content understanding between the AL and more demanding TL courses suggest, answering positively the first research question, that AL is not less effective than TL in an ELT-CBI course for university students with interest in ELT.

Table 2 *The Participants' Content Understanding*

	<i>n</i>	<i>M</i>	<i>SD</i>
AL students	61	71.77	10.23
TL students	68	69.71	13.08
<i>Total</i>	129	70.68	11.82

Table 3 *The Participants' Course Results*

	<i>n</i>	Pass	Fail	Failure rate (%)
AL students	64	54	10	15.63
TL students	88	62	26	29.55
<i>Total</i>	152	116	36	23.68

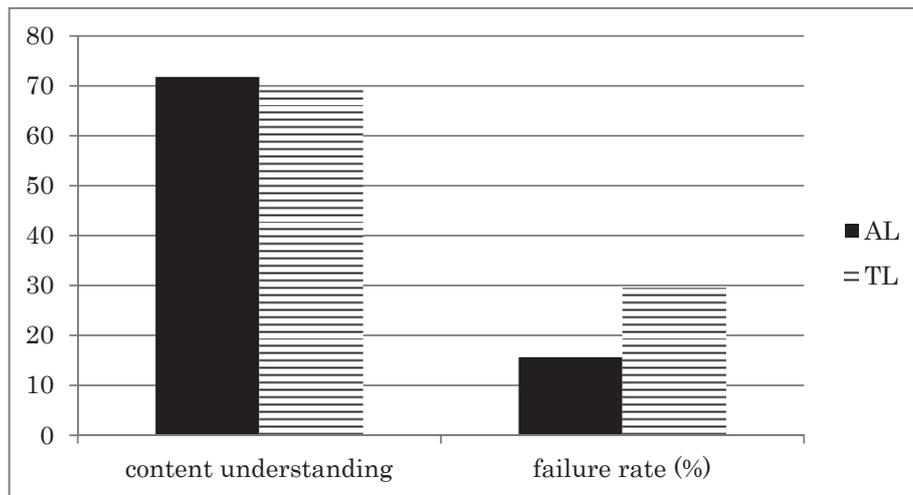


Figure 1. The participants' content understanding and failure rates

### 4.3 Research Question Two

The second research question asked if AL would be more favorably perceived than TL in an ELT-CBI course at the tertiary level. Table 4 and Figure 2 show means and standard deviations of the participants' perceptions of AL and TL ELT-CBI in terms of ELT-CBI Fs. ELT-CBI Fs 1 and 2 were reliable ( $\alpha = .88$  and  $.78$ ), and ELT-CBI F 3 was acceptable ( $\alpha = .63$ ) when one of the four question items was excluded.

In ELT-CBI F 1 (Effective), the means were both above four on the 6-point scale for AL ( $M = 4.60$ ,  $SD = .69$ ) and for TL ( $M = 4.25$ ,  $SD = .74$ ). This suggests that the students acknowledged the effectiveness of CBI on ELT regardless of the teaching manner. However, AL was higher than TL in the values, which was statistically confirmed ( $t = 2.78$ ,  $df = 127$ ,  $p < .01$ ,  $d = .49$ ). It seems that AL was perceived to be more effective than TL.

In ELT-CBI F 2 (English-Use), the means were both rather low for AL ( $M = 2.85$ ,  $SD = 1.00$ ) and for TL ( $M = 2.64$ ,  $SD = .72$ ). This may show the students' perceptions that they did not use much English in the courses. Although it is understandable that TL students were just listening to or taking notes of lectures, AL students seem to have occasionally depended on Japanese language in the discussions and tasks, as pointed out in section 3.2. AL and TL students were not different in the means of this factor, which was revealed by an independent samples  $t$ -test for inhomogeneous variances ( $t = 1.39$ ,  $df = 108.18$ ,  $ns$ ,  $d = .25$ ). Seemingly, AL may not be able to enhance students' English use when activities are not at their appropriate levels.

In ELT-CBI F 3 (Favorable), the means were also rather low for AL ( $M = 3.11$ ,  $SD = .78$ ) and for TL ( $M = 2.74$ ,  $SD = .82$ ). Although these values were lower than the means ( $n = 68$ ,  $M = 3.73$ ,  $SD = .82$ ) of the same Favorable factor in our first ELT-CBI (Miyasako, 2016a), this was probably caused by different question items between the surveys. Nevertheless, AL comparatively looks higher than TL in the values. The independent samples  $t$ -test showed a significant mean difference between the students ( $t = 2.59$ ,  $df = 127$ ,  $p < .05$ ,  $d = .46$ ). Thus, AL seems to have been perceived comparatively more favorably than TL.

One reason for the rather low favorability, in contrast with the students' perceptions of effectiveness, may come from survey questions asking if they would like all English courses to be taught as CBI. Another may lie in the students' perceptions of CBI being difficult despite their recognition of the efficacy in learning the content and in improving their English proficiency.

Notwithstanding, in terms of the supremacy of AL over TL in the students' perceptions of effectiveness and favorability, the second research question can be answered positively. AL ELT-CBI

Table 4 *The Participants' Perceptions of ELT-CBI*

ELT-CBI	<i>k</i>	<i>α</i>	Instruction	<i>n</i>	<i>M</i>	<i>SD</i>
F 1 (Effective)	9	.88	AL	61	4.60**	.69
			TL	68	4.25	.74
F 2 (English Use)	3	.78	AL	61	2.85	1.00
			TL	68	2.64	.72
F 3 (Favorable)	3	.63	AL	61	3.11*	.78
			TL	68	2.74	.84

\*\* $p < .01$ , \* $p < .05$ .

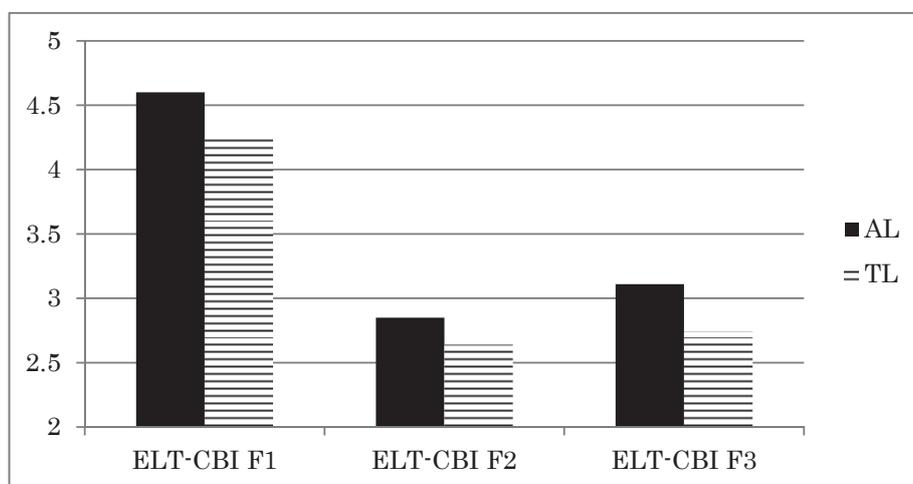


Figure 2. The participants' perceptions of ELT-CBI

may be viewed as being more appropriate and beneficial than TL ELT-CBI by students with interest in ELT.

#### 4.4 Research Question Three

The third research question inquired into if AL would be more motivating than TL in an ELT-CBI course at the tertiary level. Table 5 shows means, standard deviations and reliability coefficients of the L2 MFs for students in the AL and TL ELT-CBI courses. Figure 3 graphically shows the means of the MFs for AL and TL students. The graph reveals that the means clearly show a contrast between positive and negative MFs. Higher positives were MF 1 (CMs or L2 learning effort), MF 2 (ideal L2 self), MF 5 [instrumentality (promotion)], MF 7 (attitudes to learning English), MF 8 (cultural interest), MF 9 (attitudes to L2 community) and MF 10 (integrativeness). Lower negatives were MF 3 (ought-to L2 self), MF 4 (family influence) and MF 6 [instrumentality (prevention)]. This result is in line with the finding that students with interest in ELT are higher and lower respectively in positive and negative MFs (Miyasako, 2016b). Relevantly, what attracts our attention is that only these negative MFs showed higher means for TL. The other positive MFs had higher means for AL.

In order to statistically examine these points, independent samples *t*-tests were performed. The results showed significant mean differences between AL and TL students in six MFs: MF 1 ( $t = 2.51$ ,  $df = 127$ ,  $p < .05$ ,  $d = .45$ ), MF 2 ( $t = 2.57$ ,  $df = 127$ ,  $p < .05$ ,  $d = .46$ ), MF 6 ( $t = -2.90$ ,  $df = 127$ ,  $p < .01$ ,  $d = .52$ ), MF 7 ( $t = 4.66$ ,  $df = 127$ ,  $p < .01$ ,  $d = .83$ ), MF 8 ( $t = 2.91$ ,  $df = 127$ ,  $p < .01$ ,  $d = .52$ ), and MF 10 ( $t = 2.39$ ,  $df = 115.95$ ,  $p < .05$ ,  $d = .42$ ). Here, the analysis of MF 10 was run with the test for inhomogeneous

Table 5 *The Participants' L2 Learning Motivation*

	<i>k</i>	<i>α</i>	Instruction	<i>n</i>	<i>M</i>	<i>SD</i>	SC <sup>†</sup>
MF 1 (CMs or L2 learning effort)	4	.63	AL	61	4.45*	.66	AL > TL
			TL	68	4.14	.73	
MF 2 (ideal L2 self)	5	.82	AL	61	4.22*	.90	AL > TL
			TL	68	3.79	.96	
MF 3 (ought-to L2 self)	4	.71	AL	61	3.02	.97	AL = TL
			TL	68	3.31	1.11	
MF 4 (family influence)	4	.84	AL	61	3.05	1.19	AL = TL
			TL	68	3.12	1.46	
MF 5 [instrumentality (promotion)]	5	.66	AL	61	5.11	.64	AL = TL
			TL	68	4.94	.75	
MF 6 [instrumentality (prevention)]	5	.81	AL	61	3.50	1.13	AL < TL
			TL	68	4.04**	.99	
MF 7 (attitudes to learning English)	4	.84	AL	61	4.93**	.76	AL > TL
			TL	68	4.27	.82	
MF 8 (cultural interest)	4	.78	AL	61	5.00**	.72	AL > TL
			TL	68	4.56	.94	
MF 9 (attitudes to L2 community)	4	.83	AL	61	5.38	.60	AL = TL
			TL	68	5.22	.85	
MF 10 (integrativeness)	3	.65	AL	61	5.30*	.63	AL > TL
			TL	68	4.96	.98	

\*\* $p < .01$ , \* $p < .05$ . † SC represents statistical comparison.

variances. It was revealed that AL students were significantly higher in the means of these MFs except for MF 6. The effect sizes as a whole were not small, being medium in MFs 6 and 8 and large in MF 7.

These five MFs, with higher means for AL, are known to be related to each other (Miyasako, 2016b, Taguchi, et al., 2009), which was the case with them in moderate correlations ( $.42 \leq rs \leq .69$ ,  $p < .01$ ). Considering that ideal L2 self is a concept replacing integrativeness (Dörnyei, 2005, 2009), these relationships between the MFs may be interpreted as showing that students with interest in ELT are likely to make English learning effort (MF 1) because they wish to be proficient users of English in the future (MF 2), possessing interest in English speaking cultures (MF 8) and positive attitudes to learning

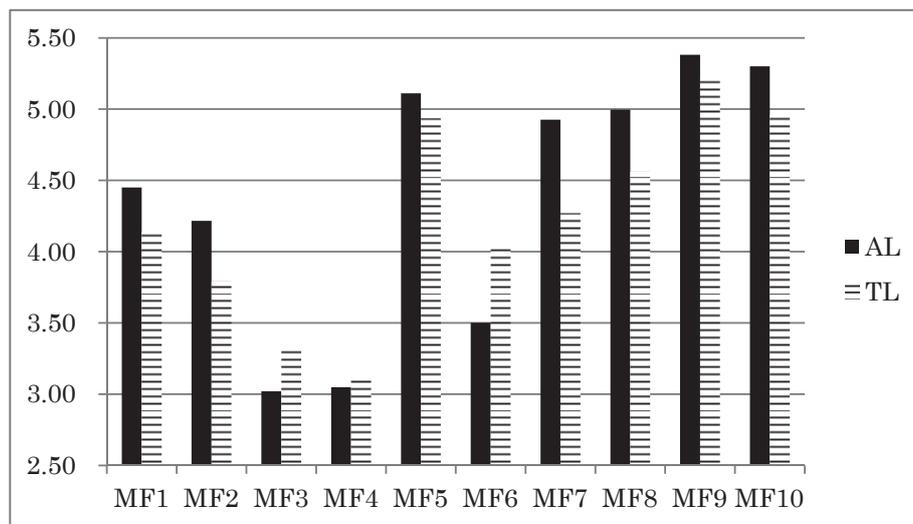


Figure 3. Means of the participants' MFs

English (MF 7).

Since the surveys of their L2 learning motivation were taken at the end of the courses, AL may have helped to enhance these MFs, particularly, attitudes to learning English (MF 7), whose effect size in the *t*-test was large ( $d = .83$ ). This makes sense because MF 7 out of the five factors is assumed to be the most relevant to the teaching manner, AL or TL.

On the other hand, the negative MF 6 [instrumentality (prevention)] had hardly any relationships with the other five MFs, showing just a weak correlation with MF 2 (ideal L2 self;  $r = .20, p < .05$ ). This MF represents learner motivation of using English as a tool for preventing unwanted outcomes, such as failing in the CBI course or in obtaining the English teaching certificate.

Admittedly, the demanding nature of the TL course may have been partially responsible for the students being higher in MF 6 and lower in the positive MFs than the counterpart. However, these characteristics suggest that TL students were directly or indirectly affected in the MFs by the teaching manner. Consequently, the third research question can be answered positively. It seems that AL is more motivating than TL in an ELT-CBI for university students with interest in ELT.

## 5. Conclusion

This paper compared AL and TL ELT-CBI to university students with interest in ELT, pertaining to the effectiveness, the students' perceptions of ELT-CBI and L2 learning motivation. Findings for university students with interest in ELT were concisely: (a) AL ELT-CBI is not less effective than TL ELT-CBI; (b) AL ELT-CBI is more favorably perceived than TL ELT-CBI; and (c) AL ELT-CBI is more motivating than TL ELT-CBI.

Admittedly, these findings may not have much reinforced the reviewed supremacy in effectiveness of AL over TL, revealed in the meta-analyses of university instruction in North America. However, AL seems a beneficial instruction when viewed from another perspective, for it is better perceived and more motivating with the same level of effectiveness as more demanding TL.

A limitation of this study lies in the combination of TL and demanding assignments in the treatment. One reason for this combination was instructional in aiming to improve students' content understanding. The other came from our assumption that AL supremacy in effectiveness over more demanding TL would be convincing. However, the combination made the assessment of the effectiveness complex, and

may have affected TL students' perceptions of the CBI and L2 learning motivation. Simple comparisons should be performed between AL and TL in future research.

Others include the timings of survey taking and nature of the instruments. Nevertheless, it is significant that this study examined the effectiveness of AL and TL, showing that AL is a beneficial instruction. Since AL will come and stay with ELT, it is important to conduct research investigating how effective AL is, what part of it is effective, and how it is utilized, for the betterment of not only our daily educational practices but also ELT in Japan. This study may be a step on this route.

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**Appendix A: 15 question items for ELT-CBI factors**

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**Factor 1: Effective** ( $\alpha = .88$ ): CBI is effective in content understanding and in developing English proficiency

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CBI is useful in ELT.

CBI is tough but rewarding.

This CBI raised my motivation on ELT.

Do you think CBI can raise your English learning motivation?

This CBI allowed me to learn a lot about ELT.

\*This CBI was irrelevant to what I wanted to study.

This CBI allowed me to learn English a lot.

Do you think CBI can deepen your knowledge of ELT?

Do you think you can learn overall English in CBI?

---

**Factor 2: English Use** ( $\alpha = .78$ ): acknowledging English use in CBI on ELT

---

I had sufficient occasions to discuss things in this CBI.

This CBI had more student-teacher interaction than other courses.

This CBI had more student-student interaction than other courses.

---

**Factor 3: Favorable** ( $\alpha = .63$ ): having a favorable impression of CBI on E

---

This CBI matched the students' intellectual levels.

\*Would you dislike all English courses being taught as CBI?

Would you like all English courses to be taught as CBI?

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\*These items were reversely calculated.

Miyasako (2017, p. 79)

**Appendix B: 42 question items for L2 learning motivation**

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**Criterion measures** ( $\alpha = .63$ )

If an English course was offered at university or somewhere else in the future, I would like to take it.

I am working hard at learning English.

I am prepared to expend a lot of effort in learning English.

I think that I am doing my best to learn English.

---

**Ideal L2 self** ( $\alpha = .82$ )

I can imagine myself living abroad and having a discussion in English.

I can imagine a situation where I am speaking English with foreigners.

I imagine myself as someone who is able to speak English.

Whenever I think of my future career, I imagine myself using English.

The things I want to do in the future require me to use English.

---

**Ought-to L2 self** ( $\alpha = .71$ )

I study English because close friends of mine think it is important.

I have to study English, because, if I do not study it, I think my parents will be disappointed with me.

Learning English is necessary because people surrounding me expect me to do so.

My parents believe that I must study English to be an educated person.

---

**Family influence** ( $\alpha = .84$ )

My parents encourage me to study English.

My parents encourage me to take every opportunity to use my English (e.g. speaking and reading).

My parents encourage me to study English in my free time.

My parents encourage me to attend extra English classes after class (e.g. at English conversation schools).

---

**Instrumentality (promotion)** ( $\alpha = .66$ )

Studying English can be important to me because I think it will some day be useful in getting a good job.

Studying English is important to me because English proficiency is necessary for promotion in the future.

Studying English is important to me because I would like to spend a longer period living abroad (e.g. studying and working).

Studying English can be important for me because I think I'll need it for further studies in my major.

Studying English is important to me because with English I can work globally.

---

**Instrumentality (prevention)** ( $\alpha = .81$ )

I have to learn English because without passing the English course I cannot graduate.

I have to study English because I don't want to get bad marks in it at university.

I have to study English; otherwise, I think I cannot be successful in my future career.

Studying English is necessary for me because I don't want to get a poor score or a fail mark in English proficiency tests.

Studying English is important to me because, if I don't have knowledge of English, I'll be considered a weak student.

---

**Attitudes to learning English** ( $\alpha = .84$ )

I like the atmosphere of my English classes.

I find learning English really interesting.

I always look forward to English classes.

I really enjoy learning English.

---

**Cultural interest** ( $\alpha = .78$ )

Do you like the music of English speaking countries?

Do you like English films?

Do you like English magazines, newspapers, or books?

Do you like TV programmes made in English-speaking countries?

---

**Attitudes to L2 community** ( $\alpha = .83$ )

Do you like to travel to English speaking countries?

Do you like the people who live in English-speaking countries?

Do you like meeting people from English-speaking countries?

Would you like to know more about people from English-speaking countries?

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**Integrativeness** ( $\alpha = .65$ )

Do you think learning English is important in order to learn more about the culture and art of its speakers?

Would you like to become similar to the people who speak English?

Do you like English much?

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Taguchi et al. (2009, pp. 90-97)

