# Teacher＇s Use of Learners＇First Language During Instruction：Comparing Belief and Practice 

Akihiro Omote


#### Abstract

This paper examined teacher＇s use of the first language shared with students in language learning by comparing teacher＇s belief and practice．Data collection is twofold：（1）a questionnaire regarding teacher belief about the use of Japanese（L1） and English（L2），and（2）observations of two teachers＇reading classes，followed by additional interviews．The data were analysed quantitatively and qualitatively． Results revealed that both belief and practice were similarly dominant by L1 use， which amounted to $82.8 \%$ of the overall instructional speech．The functions of L1 use were identified with better comprehension，efficiency gain，and motivation maintenance．The L1 use seems to increase through a conflict of principled mindset between L1 and L2，although teachers make rational choices for the substantial classwork and the goal．I will present discussion points that seem effective in reducing the use of L1 to optimise the instructional speech．


## 1．Introduction

The use of learners＇first language（L1）has been a controversial issue in language（L2） instruction（Littlewood \＆Yu，2011；Omote，2017；Storch \＆Wigglesworth，2003；Turnbull \＆ Arnett，2002；Wells，1998）．After the anti－L1 attitude（i．e．，discouragement of L1 use）that boasted a mainstream in twentieth－century language teaching（Cook，2001），a surge of interest in the L1 use and re－examination of the function of L1 has occurred．For example，the use of L1 is viewed as cognitively（De la Colina \＆Del Pilar，2009），socially（Antón \＆DiCamilla，1999）， and motivationally（Auerbach，1993；Brooks－Lewis，2009）effective as a compensatory tool of＂a principled approach＂（Littlewood \＆Yu，2011，p．70）for the classroom teacher talk（instructional speech）．One reason for this is that the majority of learners are monolingual speakers taught by non－native（or bilingual）speaker teachers ${ }^{1)}$ in the English－as－a－foreign－language（EFL） settings（Çelik，2008；Macaro，2005；Song，2009；Wigglesworth，2005）．However，in Japan，little empirical research has investigated non－native speaker teacher＇s belief and practice regarding Japanese（L1）that teachers and learners share in English（L2）class．
Researchers have recognised the relevance of teacher belief to practice（Johnson，1992）or the connection between the belief system and the＂culture of teaching＂that underlies the
experience through practice (Richards \& Lockhart, 1996, p. 30). Kagan (1992) asserts that teacher belief substantially reflects on "the actual nature of the instruction the teacher provides to students" (p. 73). Meanwhile, a variety of factors that influence teachers' L1/L2 use-such as motivation, cognition, and compensation-have been found by empirical studies that quantified teachers' L1 use (e.g., Duff \& Polio, 1990; Rolin-Ianziti \& Brownlie, 2002). De la Campa and Nassaji (2009) quantified the German (L1) in English (L2) class and stated, "some of these factors were based on personal beliefs about language learning and teaching" (p. 757). Thus, my assumption is that teacher's personal belief should reflect on a principled mindset regarding the instructional speech (Duff \& Polio, 1990; Levine, 2003; Rolin-Ianziti \& Brownlie, 2002; Song, 2009; Tang, 2002). If so, their practice (the instructional speech) can be a measure to determine the extent to which teachers perceive themselves adequate and useful as a pedagogical tool in the classroom. However, the following questions are yet to be empirically studied: How and how often do teachers use the L1 in an EFL class? To what extent do teacher belief reflect on their practice?

## 2. L1 Use in the Instructional Speech

The issue of L1 use has long been a dispute with controversies arising and subsiding throughout the history of English language teaching. Brooks-Lewis (2009) mentions that the debate on the pros and cons of L1 avoidance seems rather "enigmatic" because there has been little empirical evidence that illustrates the effects of L2 use in the EFL classroom (p. 217). In a similar vein, Macaro (2001) comments that no studies have succeeded in demonstrating "a causal relationship between exclusion of the L1 and improved learning" (p. 544). In short, the two attitudes are principled, reflected by a belief system about instructional speech that varies widely in different contexts (e.g., second language/foreign language, and low-level learners/advanced learners). Some believe that L2 learning should not be hindered by the L1 (Ellis, 1984; Turnbull, 2001; Turnbull \& Arnett, 2002; Wong-Fillmore, 1985), whereas others believe that L1 use can enhance L2 learning (e.g., Atkinson, 1987, 1993; Butzkamm, 2003; Cook, 2001).
Cook (2001), for example, re-examined the function of L1 against the anti-L1 attitude to contend that L2 should not be exclusively maximised per se insofar as L1 can be a mitigatory classroom resource for learners who feel "the cost of the L2 is too great" (p. 418). Cook believes that the L1 can facilitate the explanation of difficult grammar points, clarification of new vocabulary, and classroom management. Nevertheless, Turnbull's (2001) response to Cook is convincing to us in that it arouses another contentious issue: A teacher's overreliance on L1 may be dangerous because it could "likely lead to student demotivation" (p. 535). The crux of the arguments has theoretically converged on the optimal balance between L1 and L2-a matter of optimal exposure for learners in the classroom (Turnbull \& Arnett, 2002; Littlewood \& Yu, 2011).
However, empirical studies reveal that such an optimum condition is somewhat elusive. Studies that have explored the degree to which teacher employed L1 in L2 class have found varied results
(e.g., Duff \& Polio, 1990; Kim \& Elder, 2005; Macaro, 2001; Polio \& Duff, 1994; Rolin-Ianziti \& Brownlie, 2002). For example, Duff and Polio (1990) asked 13 teachers of different target languages to English-speaking students at the University of California and found that they used the L1 $32.1 \%$ of the time (with a range of $10 \%$ to $100 \%$ ). Rolin-Ianziti and Brownlie (2002) studied four teachers of a French beginner's class in Queensland, Australia, and revealed 6.4\% L1 use for two native speaker teachers and $11.2 \%$ for two non-native speaker teachers.
One explanation for teachers to use L1/L2 is the teacher's L2 proficiency. However, Crawford (2004), with a survey administered to 581 teachers across different year levels, revealed that L1 choice, regardless of teachers' native languages, "did not appear to depend simply on the teachers' personal levels of proficiency" (p. 11). Song's (2009) results in native Chinese students class showed that "students' levels of L2 proficiency appear not to be a decisive factor" (p. 37). Song concluded that, because L1 functions as a shared and facilitative resource of teacher-student interaction in the context of China, L1 operates strongly, in no matter what proficiency level (e.g., English major/non-major students) the university teachers teach.
Another explanation counts on a social environment, such as the monolingual environment that a teacher and the learners share in the classroom ${ }^{2)}$ (Atkinson, 1987, 1993; Wigglesworth, 2005). The learning from a teacher in a linguistically homogeneous context may well yield more L1 use, given that teacher and students believe their L1 to be helpful and unavoidable to better understand the content of the class ${ }^{3)}$. For example, in contrast to Duff and Polio's (1990) sampled value of $32.1 \%$ L1 use, that of Kaneko (1992) is much higher with $71.8 \%$, as well as that of Liu, Ahn, Baek, and Han (2004) with $43 \%$. Song (2009) suggested that learners' L1 should be regarded as a helpful and indispensable resource rather than as a problem in such a monolingual environment. The similar view appears in Burden (2000), Cole (1998), Harbord (1992), and Joyce, von Dietze, and von Dietze (2009). De la Campa and Nassaji (2009) more recently suggested that the substantial functions of teachers' L1 use should attribute to the context "where the instructor knows the L1 and where all students share the same L1, such as in many foreign language contexts" (p. 757).
These empirical studies have presented an implication that teachers in the EFL context might take advantage of the function of L1 in the local context. In sum, teacher practice will adopt a principled mother tongue approach with a mindset formed in the local environment (Antón \& DiCamilla, 1999; Edstrom, 2006; Levine, 2003; Tang, 2002). No attempt has been made, however, to explore how and how often teacher belief reflects on their practice. Also, observations in past studies have been too fragmentary to generalise ${ }^{4)}$. Thus the aims of the present study are as follows: (1) to examine how teachers in EFL classrooms perceive the instructional speech (L1/L2), and (2) to compare the stated belief with practice over one teaching unit (approximately eight to ten reading class sessions). Three studies operated according to the aims: Study A asked teacher belief with a questionnaire (Appendix A) about instructional speech, Study B investigated two teachers' practice (Japanese/English) in the secondary EFL classrooms, and Study C compared the results from Study A (belief) with those from Study B (practice).

## 3. Method

## (3.1.) The Overall Context

Instructional English in Japan begins in elementary school (upper grades) and continues in lower (junior high) and then upper (senior high) secondary school. A majority of English teachers in Japan is native Japanese speaker who shares Japanese with students. While the goals of these lower and upper secondary schools focus on communication (e.g., the requirement of communicative part of the entrance examination), students at the university level are yet to be skilled in communicating in English in the classes at the university (Nishino, 2012; Omote, 2014). Tasks for Japanese translation or grammar explanation are the substantial daily classwork of English education at secondary school, where teachers are expected to use Japanese (L1) mainly in the solo reading classes to prepare students for the central part of the entrance examination.

## (3.2.) Study A

The participants in Study A were 108 native Japanese teachers ( 59 from the lower secondary and 49 from the upper secondary) in a mandatory language (English) classroom. The respondents were required to sign a consent form for ethical clearance (Appendix B). The age varied: $66.6 \%$ were over 40 , and $63 \%$ had more than 20 years of teaching experience. Four sections asked with a total of 31 items: (1) the biodata, (2) the estimates of the quantitative ratio of Japanese to English in a class (e.g., 4 to 6), (3) beliefs about the functions of L1/L2 use, and (4) the reasons and purposes of L1 use. A six-point Likert scaling operated to measure teacher self-efficacy (the reflection about the extent to which they feel efficacious) for the L1/L2 functions on a scale of one (I never agree: $0 \%$ ) to six (I agree very much: up to $100 \%$ ). The reason-and-purpose section asked to describe ideas freely. Cronbach's alpha for the belief section was .892 , which indicates that the reliability of the part is robust.

## (3.3) Study B

Study B was an observation of two teachers, Ichiro, and Sakura (the names are pseudonyms). Ichiro is a male over age 40, who taught Japanese in the U.S. for six years and then English at two senior high schools for 14 years in Japan. On coming back to Japan, Ichiro chose the L1 (Japanese) as the primary instructional speech because the goal was to facilitate his students to pass the entrance examination. The observation worked in a core reading class (second grade) composed of 24 boys and seven girls (all native Japanese). Ichiro and the students have preserved good relations. The other was Sakura, a female who had taught English in Japan for 20 years at junior high schools. She assumed that instruction goes smoothly by using Japanese. The observation was in a third-grade, native Japanese speakers' class ( 19 boys and 15 girls). The teacher-student relationship was irreproachable. During the observation, one team-taught class (with her assistant native English speaker teacher) was included-albeit the slight disproportion of the L1/L2 use-because the contents of the class in question were intertwined
in the lesson plan (the other team-taught classes were eliminated due to their irrelevant purpose).

Data sources were video and audio recordings of the English classes, followed by interviews. Both teachers agreed that the observation period should last over a series of cohesive lessons (i.e., one unit for five weeks except for the testing period and some of Sakura's team-taught classes). At the beginning of the session, each teacher informed the students briefly of the research purpose. An accidental recorder malfunction caused one of Ichiro's classes to be excluded from the observation analysis. A total of approximately 900 minutes ( 19 recordings, eight of Sakura's class and 11 of Ichiro's; a cross-class average of 47 minutes) were recorded with a non-directional microphone clipped to the teachers' clothes. A digital video recorder was also used in the back of the classroom to back up the recording from the front. This was done in corroboration of the later transcription validity. Pre- and post-interviews were separately given, recorded, and transcribed. The pre-interviews asked to determine the teachers' background experiences. The post-interviews did not operate until the entire session finished, lest they affect the teachers' behaviours including the instructional speech. The post-interviews first clarified the review by the teachers about the ratio of L1 to L2 over the observed sessions and then elicited the specific reasons and purposes of the teachers' speech.

The method of time sampling (Table 1) adapted from Duff and Polio (1990) quantified teacher utterances. A time-based coding scheme is less problematic for cross-linguistic comparison between Japanese and English since these two languages are typologically distinct from each other for counting words; that is, the number of parts of speech in Japanese is too different from that in English to give a valid distribution of the two languages for comparison. This is because orthographic, morphological, and syntactic systems of the two languages are unconnected. Given this consideration, Polio and Duff (1994) suggested that counting words is problematic due to the different types of language because "a word in an agglutinative language may be comparable to a sentence in another type of language" (p.325).

Table 1 Coding System for Teachers' Language Use ${ }^{\dagger}$

| L1 | The utterance is completely in L1. |
| :--- | :--- |
| L1c | The utterance is mostly in L1 with one word or phrase in L2. |
| Mix | The utterance is, approximately, an equal mixture of L1 and L2. |
| L2c | The utterance is mostly in L2 with one word or phrase in L1. |
| L2 | The utterance is completely in L2. |
| Other | There is no speech, or the utterance was not clear enough to be coded. |

Note. Modified from Duff and Polio (1990). $\dagger$ Duff and Polio presented examples of these types of utterances in English (L1) and Chinese (L2): "and where are we going to put this liang nian [two years]?" (L1c); "But the first time, wo mei zhua zhu [I didn't hold onto it]" (Mix); "Qing gei wo nide [Please give me your] homework" (L2c) (p. 156).

To determine the amount of L1/L2 utterance, teachers' utterances were noted at the observation point of every 15 seconds across the whole practice. Among the utterances that lay
within two seconds before and after the observation point (i.e., a four-second span of identification), the utterance that occupied the highest number of seconds within the span was identified and categorised according to the coding system (Table 1). Following De la Campa and Nassaji (2009), an utterance was determined by detecting it as having at least one of the following characteristics: "(a) occurring under one intonation contour, (b) bounded by a pause, and (c) constituting a single semantic unit" (p. 746). Pauses without speech, unclear parts, and student utterances were eliminated from the quantification due to the purpose of the present study. Below are examples of L1c, Mix, and L2c ("c" stands for citation) from the data.

## Examples

L1c: Wake up, wake up call toka shiranka [Don't you know phrases like this...]?
Mix: Hai, jaah roku-ten tamatta hito, Suzuki-kun [OK, now, those who won six points, Mr. Suzuki], sorry you got only two points, so please sit down.
L2c: Ja kokono rain [Then students in this line], three stamps I'll give you, so open the file.

Following Duff and Polio's (1990) procedure, two researchers (including the author) first trained together using 15 -minute segments excerpted from three class sessions in different classes. Then, 30 -minute segments were randomly selected from five of Ichiro's classes and four of Sakura's classes to check for inter-rater reliability. An agreement on this trial reached over $90 \%$. The disagreement was reconciled after the trial.

## (3.4.) Study C

Study C compared the three values of L1 ratio to L2: tallies from the questionnaire, perceived estimation obtained from Sakura and Ichiro's post-interviews, and the observational results of the two teachers' practice.

## 4. Results

Table 2 Summary of Perceived Ratio of L1 Use

|  | Lower secondary school teachers ( $\mathrm{n}=59$ ) |  | Upper secondary schools teachers ( $\mathrm{n}=49$ ) |  | $t$ value | $r$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $M(\mathrm{~L} 1)$ | $S D$ | $M$ (L1) | $S D$ |  |  |
| Direct teaching activities | 6.75 | 1.53 | 7.76 | 1.09 | $-3.997^{* *}$ | 0.37 |
| Indirect teaching activities | 8.46 | 1.52 | 9.16 | 1.38 | $-2.504^{*}$ | 0.24 |
| Mean | 7.60 | 1.27 | 8.46 | 1.02 | $-3.822^{* *}$ | 0.35 |

Note. * $p<.05 .{ }^{* *} p<.01$. Bonferroni correction is applied.

## (4.1.) Study A

Table 2 presents the summary of the perceived ratio of L1 use from the questionnaire. Means were calculated by identifying the quantity of item 13 (direct teaching activities such as

Table 3 Mean L1 Ratio of Teacher-to-Student Utterance

|  | Lower secondary |  | Upper secondary |  |  | $t$ value | $r$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $M$ | $S D$ | $M$ | $S D$ |  |  | 0.31 |
| Teacher | 6.32 | 1.29 | 7.19 | 1.41 |  | $-3.338^{* *}$ | 0.31 |
| Student $^{\dagger}$ | 3.68 | 1.29 | 2.81 | 1.41 |  | $3.338^{* *}$ | 0 |

Note. ${ }^{\dagger}$ Due to an inverse relationship between the teacher and student ratio, data in the student row show the same standard deviation, $t$ value, and effect size as those of teachers. ${ }^{* *} p<.01$.
teachers' activities directly connected to learning materials) and item 14 (indirect teaching activities such as activities regarding morale maintenance, administrative issues, or light conversations). The results revealed that teachers estimated their L1 use at the extremely high ratio between 7.60 and 8.46. A $t$ test with Bonferroni correction found that the L1 ratio in the lower secondary was significantly higher than in the upper secondary with $t(106)=-3.822, p$ $<.01$; however, it represented a medium size effect $r=.35$. The results also indicated that upper secondary teachers use more L1 than lower secondary teachers in direct teaching activities, $t(103.806)=-3.997, p<.01$ with a medium-sized effect $r=.37$, as well as in indirect teaching activities, $t(106)=-2.504, p<.05$ with a small-sized effect $r=.24$. Table 3 presents the mean L1 ratio of teacher utterance to students' utterance. The L1 ratio of upper secondary teachers utterance was significantly higher than lower secondary teachers, $t(106)=-3.338, p<.01$, a medium effect $r=.31$.
The description from free-writing section suggested an overall principled mindset by which secondary teachers choose the L1 so that their students can easily understand grammar items to be successful in the entrance examination. Below are two examples (translated from Japanese by the author) supporting such a mindset, which presumably explain the situation where upper secondary teachers use L1 more often than lower secondary teachers.

## Excerpts

Because the entrance examination weighs grammatical knowledge as well as reading skill more than communicative skills, grammar is considered very important, particularly for high school students. You can never manage to teach in such preparatory classes without Japanese (data \#1, the lower secondary).

It is not feasible for underachievers to have reading classes with English [-only policy] in such a way as teachers conduct the oral communication class. The high-school textbook contains substantial contents for them to succeed in the reading of university entrance examination (data \#22, the upper secondary).

Table 4 presents the mean degree of agreement on the function of the instructional speech. As shown in this table, there was an overall conflict with a significant difference in the principled mindset between L1 function and L2 function. The $t$ test carried out on each paired item (L1 and L2) revealed that L1 functions are, on the whole, agreed more than L2 functions. This difference was significant: $t(214)=5.519, \mathrm{p}<.01$; however, it represented a small effect, $r=.28$.

Table 4 Mean Degree of Agreement on the Functions of L1/L2

| Item <br> No. | I feel that Japanese/English in my class is efficacious because it: | L1 |  | L2 |  | $t$ value | $r$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | M | $S D$ | M | $S D$ |  |  |
| 18, 25 | is effective in goal achievement | 4.56 | 0.99 | 4.49 | 1.06 | 00.464 | 0.03 |
| 19, 26 | is necessary for goal achievement | 4.87 | 0.84 | 4.53 | 1.07 | 02.610* | 0.18 |
| 20, 27 | is significant for goal achievement | 4.69 | 0.88 | 4.52 | 1.05 | 01.331 | 0.09 |
| 21, 28 | is helpful to understand learning contents | 5.23 | 0.71 | 3.72 | 1.18 | $11.447^{* *}$ | 0.66 |
| 22, 29 | is helpful to enhance understanding | 5.10 | 0.79 | 3.67 | 1.17 | 10.559** | 0.61 |
| 23, 30 | smoothens learning activities | 4.81 | 0.92 | 3.60 | 1.29 | 7.892** | 0.49 |
| 24, 31 | enriches learning during learning activities | 4.30 | 1.14 | 4.74 | 0.96 | -3.102* | 0.21 |
| Mean |  | 4.79 | 0.95 | 4.18 | 1.20 | $11.004^{* *}$ | 0.28 |

Note. $\mathrm{n}=108 ; \mathrm{a}=.901$ (L1), $\alpha=.913$ (L2). ${ }^{*} p<.05 .{ }^{* *} p<.01$.

Paired items that manifested a significant priority of L1 function over L2 function were as follows: items 21 and 28, "helpful to understand L2 learning contents," $t(175.3)=11.447$, $p<.01$, and a large effect $r=.66$; items 22 and 29 , "helpful to enhance understanding L2 learning contents," $t(187.2)=10.599, p<.01$, a large effect $r=.61$; and items 23 and 30 , "smoothen learning activities," $t(193.7)=7.892, p<.01$, and a large effect $r=.49$. Importantly, for the paired items 24 and 31, "enrich the content during learning activities," however, teachers did not agree on L1 priority but the L2 priority. This difference was also significant: $t(208.1)=-3.102, p<.01$; it represented a small effect $r=.21$.

## (4.2.) Study B

Table 5 presents the breakdown of the language used by Sakura and by Ichiro. Japanese tallied up L1 and L1c; likewise, English tallied up L2 and L2c. Both Sakura (80.9\%) and Ichiro ( $89.4 \%$ ) revealed a considerable proportion of L1 use with a cross-teacher average of $85.2 \%$. Besides, no L2c utterances appeared in the coded data.

Table 5 Summary Amounts of Japanese, Mix, and English

|  | Japanese \% |  |  | Mix \% | English \% |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | L1 | L1c | L1+L1c |  | L2c | L2 | L2c+L2 |
| Sakura | 63.5 | 17.4 | 80.9 | 10.3 | 0.0 | 8.8 | 8.8 |
| Ichiro | 62.4 | 27.0 | 89.4 | 02.2 | 0.0 | 8.4 | 8.4 |

Table 6 shows the total amount of Sakura and Ichiro's English, Mix, and Japanese utterances as tallied for each lesson. The variations of Japanese use across lessons by one teacher were similar with $23.6 \%$ (from $98.2 \%$ to $74.6 \%$ in Ichiro's speech) and $22.2 \%$ (from $89.4 \%$ to $67.2 \%$ in Sakura's). The smallest percentage found Sakura's third lesson ( $67.2 \%$; this class was team-taught by Sakura and her native assistant), and the largest Ichiro's third lesson (98.2\%).

Table 6 Proportions in English, Mix, and Japanese Utterance by Lesson

| Lesson |  | 1 | 2 | $3^{\dagger}$ | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | $M$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sakura | E | 03.9 | 10.6 | 22.9 | 08.7 | 06.2 | 08.6 | 03.5 | 05.3 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | 08.7 |
|  | 07.7 | 15.9 | 09.8 | 12.4 | 09.6 | 12.4 | 09.4 | 05.3 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | 10.3 | 3.2 |
|  | J | 88.4 | 73.5 | 67.2 | 78.8 | 84.3 | 79.0 | 87.1 | 89.4 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | 80.9 |
| Ichiro | E | 15.6 | 25.4 | 01.2 | 02.0 | 20.3 | 00.0 | 07.7 | 05.2 | 19.3 | 02.0 | 04.9 | 09.4 |
|  | Mx | 00.0 | 00.0 | 00.0 | 02.7 | 03.5 | 06.3 | 03.9 | 02.2 | 01.8 | 03.3 | 01.0 | 02.2 |
|  | J | 84.4 | 74.6 | 98.2 | 95.3 | 76.2 | 93.7 | 88.5 | 92.5 | 79.0 | 94.7 | 94.2 | 89.4 |

Note. $\mathrm{E}=$ English utterance (\%); Mx = Mix utterance (\%); J = Japanese utterance (\%). $\dagger$ Sakura's third lesson was team-taught. During interactions with her assistant, $30.8 \%$ of English utterances in this lesson was made by Sakura, while $69.2 \%$ were made by her in interactions with students ( $53.9 \%$ ) and the assistant (15.4\%).

Note that the percentage does not indicate the proportion of the total utterances (including students' utterances, or utterances from CDs) in each class but the proportion of the teacher utterances. Sakura's team-teaching with her native speaker assistant seems to have boosted the increment of English and mixed uses in the lesson with $22.9 \%$ and $9.8 \%$, respectively.

The post-interview acquired supplementary data representing the L1 used for various purposes and reasons. For example, Sakura explained about highest frequency of hai (Japanese) in her instructional speech (she used the term at a rate of 7.1 times per minute). The utterance-literally means yes-often implied now or come on, everybody, which functioned as a cue for a variety of classroom administrative purposes (e.g., chorus repetition of vocabulary, asking questions, and even drawing attention). The high frequency symbolised an explicit instrument to implement her facilitative principle: by using the term, more often than not, she encouraged students to seise an opportunity and repeat in a chorus for the sound drill; and, moreover, she attempted to alleviate her students' anxiety by the utterance. Sakura articulated, "because students are always too shy to read English aloud, it goes awry unless I use this explicit encouragement, and because chorus reading on a signal is important, creating a feeling of individual contribution with a minimum cost in class" (excerpt from Sakura's post-interview).

On the other hand, Ichiro used a significant number of English-plus-citation (L1c) forms ( $27.0 \%$ ) and a small number of mixed ones ( $2.2 \%$ ) as compared with Sakura ( $17.4 \%$ and $10.3 \%$, respectively). The finding showed that his utterance in English functioned not as the means of communication but the target-note that the figure of Ichiro's L2 is over one-third that of his L1c (Table 5), which indicates that many of his English lie in Japanese sentences. Concerned about this, Ichiro observed that his principle was to use Japanese for teaching grammar in enhancing reading comprehension. He articulated a clear understanding of the communicative goal to which he should use more English in class but gave a couple of reasons for not doing so. One was that he had a mindset that his students wanted to learn strategic materials for the examinations, where he is expected to cover it within the limited program provided by the school policy. The other is related to the shared L1 between teacher and students. He said,
"They won't understand me if I use English. When it comes to grammar, using mother tongue is more natural, easier, and not time-consuming as well, due to the inference and abstract reasoning to understand a linguistic structure of the target language" (excerpt from Ichiro's post-interview).

## (4.3.) Study C

Table 7 Comparison of L1 Ratio in Belief and Practice

|  | Belief \% | Practice $\%$ |  |
| :--- | :---: | :---: | :---: |
|  | Questionnaire | Interview | Observation |
| Lower secondary / Sakura | 76.0 | 75 | 80.9 |
| Upper secondary / Ichiro | 84.6 | 85 | 89.4 |
| Mean | 80.3 | 80 | 85.2 |

Table 7 shows the comparison between the questionnaire, post-interview, and the classroom observation, which revealed that L1 was overall dominant in the instructional speech. The questionnaire ( $80.3 \%$ ) and the interview ( $80.0 \%$ ) demonstrated a similar proportion of L1 use, whereas the observation ( $85.2 \%$ ) marked slightly larger. The instructional speech in the secondary school in Japan appeared disproportional caused by the L1 overuse both in practice (all through one unit) and belief (stated in a survey on 108 teachers).

## 5. Discussion

The present study found that teachers' practice reflected teacher belief system (Kagan, 1992; Richards \& Lockhart, 1996). Further, the finding shed light on the secondary school teachers' principled mindset that manifested a disproportional practice concerning the first (L1) versus the targeted (L2) language. Study A revealed that overall predominance of L1 to L2 corresponded to a mindset that L1 functions more efficaciously than L2 (e.g., the enhancement of understanding, smoothening of the learning activities). The data elicited from interview partly confirmed the principled practice of the teachers, corroborating the finding: Ichiro's assumption that students need the L1 to understand the abstract reasoning better (enhancer function), and Sakura's encouragement with using the anxiety-alleviating hai (smoother function). If so, why does L1 use increase in the present context? Could it possible to reduce the L1 use? Here I present discussion points to alter the mindset of teacher's instructional speech.

First, the findings of the present study shed light on a conflict of teacher mindset and a clue to resolve it. Specifically, teachers considered the L1 less efficacious, when asked about self-efficacy for enrichment (e.g., actual participation of the student in L2 communication) and indicated significant L2 predominance. Simply put, this implies a solution that teachers can reduce instructional L 1 for the communicative enrichment of the class. However, the reality is not so simple as above mentioned. Omote (2017), based on the socio-cognitive model of teacher
psychology, demonstrated that such a conflict between L1 and L2 should lie in self-regulatory maintenance. He claimed that a non-native speaker (NNS) teacher tends to take advantage of being efficacious more than that of language choice at a certain moment of classwork activity. This means that there will be more productive (richer) L2 choice, as teachers feel more efficacious for students' feedback, whereas more compensatory L1 choice to maintain teacher self-efficacy will occur, as they feel less efficacious for students' feedback. Interestingly, Duff and Polio (1990) stated that native speaker teachers reserve L2 to avoid conflicts but further understanding. Omote suggested that NNS teachers might be able to reserve the L1 (i.e., reduce the L 1 choice to boost the L 2 use) to avoid being embarrassed in the classroom, such as when they face student's slothful manner or wish to create more exposure to student's L2 use.

More research is needed, however, whether NNS teachers are fundamentally capable of retaining an immediate L1-reserving principle to enhance the L2 use, since, as the present study shows, teachers seem to rely strongly on the mindset that prioritises L1 function (i.e., motivational, smoothening, and anxiety-alleviating). Sakura, for example, attempted to alleviate student's anxiety to motivate them to learn English sounds, but she seemed to have no apparent attempt to reserve her L1 for doing so toward the communicative goal. Nevertheless, it seems feasible and practical to change the highly used signal word, hai, in English terms, such as okay, all right, attention, or look. Ichiro changed his mindset when he returned to Japan. Namely, he chose L1 instead of L2, based on the school policy, as well as efficacious feeling he felt in student feedback. Notably, Ichiro did not give any precise purpose for the assumption that L2 is inadequate to attain the goal (examination). Alternatively, there is no purposeful answer whether or not less L1 choice is more inadequate for skills to pass the exam unless teachers attempt to reserve the L1 but keep the instruction efficacious with a boost of L2 use.

Another discussion point is that a drive to choose the L1 is not necessarily derived from the entrance examination (e.g., the understanding of grammatical knowledge) but from keen attention to the local context. Principles of instructional speech regarding L1/L2 may vary according to every specific dimension of all coursework contexts (e.g., second language/foreign language, and low-level learners/advanced learners). In such settings, teachers learn when and how they should (or should not) use the L1 to function efficaciously (Omote, 2017; Littlewood \& Yu, 2011; Turnbull, 2001). De la Campa and Nassaji (2009), for example, commented on the experienced teachers' judiciousness. They state that a wise teacher, facing a problem, would explicitly choose L1 "not only for L2 learning purposes but also for making the learning environment enjoyable so that students become motivated to engage with L2" (p. 755). This kind of teacher judiciousness might work well for the wise and contingent choice of L1, raising the integrated variability of the instructional speech.

From Ichiro and Sakura's point of view, choosing L1 is perceived as a positive, tactical tool of the classroom (school) management, which will provide convincing reasons and purposes for their instructional speech (motivation maintenance, efficiency/efficiency gain, classroom administration, etc.) However, local teachers are yet to establish the integrated use of the
instructional speech. In the long run, therefore, one answer to the optimal balance between L1 and L2 lies somewhere in such a precautionary principles that control the reliance on the L1 use (Turnbull, 2001) and will improve the current instructional speech in response to the classroom environment. If local teachers in Japan will be able to hold a context-innovative mindset that affects more common choices of L2 (e.g., with principled L1 reduction or containment), teacher and students can work more efficaciously together even in a linguistically homogeneous L1 setting.

## 6. Conclusion

The aim of the present study is (1) to explore how teachers perceive the instructional speech (L1/L2), and (2) to compare teacher belief with their practice. The study demonstrated that EFL teachers in Japan use a considerable amount of L1 in L2 class (over 80\%) and that they do so due to the principled mindset affecting their practice for substantial purposes. The L1 enhances comprehension, motivation, efficacy, and efficiency, whereas it does not enrich the learning content. I agree, however, with Turnbull (2001) in that a wise and experienced teacher should be responsible for his or her judicious language (L1) choice. Thus, teachers need to improve their instructional speech by reducing the shared L1 to optimise it as they work appropriately and meaningfully in response to the local EFL context.

Several limitations should be reconciled in future research. First, because a primary focus of the study was on teachers' instructional speech rather than on the teacher and students' interaction, it remains unclear how much of the data was influenced by student response; learners' contribution during instruction may have a great impact on teachers' behaviour and the L1 use. Second, the present study, with a fundamental aim of exploring teacher mindset and principles, only captures a single picture from a teacher's point of view. It should be considered further with social as well as theoretical perspective and methodology (e.g., socio-cognitive theories).

Further study is needed to answer the extended questions: How is teacher mindset formed? How faithfully does teacher practice reflect the mindset? To explain these compelling issues, the reasons and purposes of teachers' L1 reliance require closer investigations and broader discussions on a specific function of the L1 in the class and coursework. Future research will contribute to the issue of L1 use at least from two standpoints: environmental factors, and teacher development. The former is important because researchers have hardly investigated the reduction of the L1 in L2 instruction. The focus on the environment of linguistic homogeneity in which a teacher and learners share the same L1 is, in particular, socio-cognitively significant since this problem is standard in EFL countries (Çelik, 2008; Liu et al., 2004; Song, 2009; Tang, 2002). Besides, the environment is fundamentally distinct from the second language learning setting. The other involves the issue of teacher mindset and development (Kagan, 1992; Omote, 2012, 2017), on which future research is expected to operate with more longitudinal and diverse data sets and analyses.

## References

Antón, M., \& DiCamilla, F. J. (1999). Socio-cognitive functions of L1 collaborative interaction in the L2 classroom. The Modern Language Journal, 83, 233-247.
Atkinson, D. (1987). The mother tongue in the classroom: A neglected resource? ELT Journal, 41, 241-247.
Atkinson, D. (1993). Teaching Monolingual Classes. New York: Longman.
Auerbach, E. R. (1993). Reexamining English only in the ESL classroom. TESOL Quarterly, 27, 9-32.
Brooks-Lewis, K. A. (2009). Adult learners' perceptions of the incorporation of their L1 in foreign language teaching and learning. Applied Linguistics, 30, 216-235.
Butzkamm, W. (2003). We only learn language once. The role of the mother tongue in FL classrooms: Death of a dogma. Language Learning Journal, 28, 29-30.
Burden, P. (2000). The use of the students' mother tongue in monolingual English "Conversation" classes at Japanese universities [online]. The Language Teacher, 24. Available: http://www.jalt-publications. org/tlt/articles/2000/06/burden.
Cook, V. (2001). Using the first language in the classroom. Canadian Modern Language Review, 57, 402-423.
Cole, S. (1998). The use of L1 in communicative English classrooms [online]. The Language Teacher, 22, 11-13. Available: http://jalt-publications.org/tlt/files/98/dec/cole.html.
Çelik, S. (2008). Opening the door: An examination of mother tongue use in foreign language classrooms. Hacettepe University Journal of Education, 34, 75-85.
Crawford, J. (2004). Language choices in the foreign language classroom: Target language or the learners' first language? RELC Journal, 35, 5-20.
De la Campa, J. C., \& Nassaji, H. (2009). The amount, purpose, and reasons for using L1 in L2 classrooms. Foreign Language Annals, 42, 742-759.
De la Colina, A. A., \& Del Pilar, G. M. (2009). Oral interaction in task-based EFL learning: The use of the L1 as a cognitive tool. International Review of Applied Linguistics in Language Teaching, 47, 325-345.
Duff, P., \& Polio, C. (1990). How much foreign language is there in the foreign language classroom? The Modern Language Journal, 74, 154-166.
Edstrom, A. (2006). L1 use in the L2 Classroom: One teacher's self-evaluation. Canadian Modern Language Review, 63, 275-292.
Ellis, R. (1988). Classroom second language development. London: Prentice Hall.
Harbord, J. (1992). The use of the mother tongue in the classroom. ELT Journal, 46, 350-355.
Johnson, K. E. (1992). The relationship between teachers' beliefs and practices during literacy instruction for non-native speakers of English. Journal of Reading Behavior, 24, 83-108.
Joyce, P., von Dietze, A., \& von Dietze, H. (2009). Inviting students to use their L1 in the EFL classroom. Kinki University English Journal, 6, 11-33.
Kagan, D. M. (1992). Implications of research on teacher belief. Educational Psychologist, 27, 65-90.
Kaneko, T. (1992). The role of the first language in foreign language classrooms. Unpublished doctoral dissertation; Temple University, Philadelphia.
Kim, S.-H. \& Elder, C. (2005). Language choices and pedagogic functions in the foreign language classroom: A cross-linguistic functional analysis of teacher talk. Language Teaching Research, 9, 355-380.
Levine, G. (2003). Student and instructor beliefs and attitudes about target language use, first language use, and anxiety: Report of a questionnaire study. The Modern Language Journal, 87, 343-356.
Littlewood, W. \& Yu, B. (2011). First language and target language in the foreign language classroom. Language Teaching, 44, 64-77.
Liu, D., Ahn, G.-S., Baek, K.-S., \& Han, N.-O. (2004). South Korean high school English teachers' code switching: Questions and challenges in the drive for maximal use of English in teaching. TESOL Quarterly, 38, 605-638.
Macaro, E. (2001). Analyzing student teachers' code-switching in foreign language classrooms: Theories and decision making. The Modern Language Journal, 85, 531-548.

Macaro, E. (2005). Codeswitching in the L2 classroom: A communication and learning strategy. In E. Llurda (Ed.), Non-native language teachers: Perceptions, challenges and contributions to the profession (pp. 63-84). New York: Springer.
Nishino, T. (2012). Modeling teacher beliefs and practices in context: A multimethods approach. The Modern Language Journal, 96, 380-399.
Omote, A. (2012). What do teachers think of "all-in-English" lesson?: A qualitative analysis on teacher beliefs through interview method. Journal of Kansai University Graduate School of Foreign Language Education and Research, 10, 21-56.
Omote, A. (2014). Is instructional principles for self-regulation in English as a foreign language students validated in postsecondary education?: Focused on a linkage between classwork and homework. Journal of The Center for The Promotion of Higher Education and Learning, 1, 85-103.
Omote, A. (2017). Teacher self-efficacy and instructional speech. JALT Journal, 39, 89-116.
Polio, C., \& Duff, P. (1994). Teachers' language use in university foreign language classrooms: A qualitative analysis of English and target language alternation. The Modern Language Journal, 78, 313-326.
Richards, J. C., \& Lockhart, C. (1996). Reflective teaching in second language classrooms. New York: Cambridge University Press.
Rolin-Ianziti, J., \& Brownlie, S. (2002). Teacher use of learners' native language in the foreign language classroom. Canadian Modern Language Review, 58, 402-426.
Song, Y. (2009). An investigation into L2 teacher beliefs about L1 in China. Prospect Journal, 24, 30-39.
Storch, N., \& Wigglesworth, G. (2003). Is there a role for the use of the L1 in an L2 setting? TESOL Quarterly, 37, 760-770.
Tang, J. (2002). Using L1 in the English classroom. English Teaching Forum, 40, 36-43.
Turnbull, M. (2001). There is a role for the L1 in second and foreign language teaching, but... Canadian Modern Language Review, 57, 531-540.
Turnbull, M., \& Arnett, K. (2002). Teachers' uses of the target and first languages in second and foreign language classrooms. Annual Review of Applied Linguistics, 22, 204-218.
Wells, G. (1998). Using L1 to master L2: A response to Antón and DiCamilla's "Socio-cognitive functions of L1 collaborative interaction in the L2 classroom." Canadian Modern Language Review, 54, 343-352.
Wigglesworth, G. (2005). Research in use of L1 in adult learning settings. In D. E. Murray (Ed.), First language support in adult ESL in Australia (pp. 2-11). Sydney: National Centre for English Language Teaching and Research.
Wong-Fillmore, L. (1985). When does teacher talk work as input? In S. M. Gass \& C. G. Madden (Eds.), Input in second language acquisition (pp. 17-50). Rowley, MA: Newbury House.

## End Notes

1) Macaro (2005) prefers the terms "monolingual teacher" and "bilingual teacher" to terms, such as "native speaker" and "non-native speaker" ( p .64 ) because his research on L1 use has been conducted in classrooms where learners share the same L1 and learn from teachers who are as much competent in the learners' L1 as they are in the learners' target language. By his definition, a bilingual teacher functions contextually different from the one a monolingual native speaker teacher does.
2 ) Cole (1998) refers to classrooms with culturally homogeneous environments, such as those in Japan, as "monolingual classrooms" ( p .11 ). This term, however, seems rather tricky and misleading to the reader in that it also implies the policy of teaching L2 only by the term "monolingual approach." Thus, I prefer to use the term "linguistically homogeneous classroom."
3 ) Antón and DiCamilla (1999) argued the unnaturalness or artificiality of L2 talk among such monolingual learners when they execute tasks in the L2 classroom. De la Colina and Del Pilar (2009) also argued that L1 shared by learners with low proficiency in the target language functions as a cognitive tool when it is used in task-based EFL learning.
4 ) The only exception is De la Campa and Nassaji's (2009) study, which observed two German foreign language classes recorded four times for 50 minutes each course section. Their recording criteria were also explicitly directed as follows: "(1) The lessons should cover the same course content, and (2) no quizzes or tests were to be administered on the recording day" (p. 745).

## (Appendix A)

# L1 and L2 Use Questionnaire for Teachers <br> (the original written in Japanese) 

This questionnaire investigates your beliefs about the amount and function of using L1 (Japanese) in L2 (English) classrooms in order to explore the more effective methods of foreign language teaching and learning. Your responses are to be statistically calculated for numerical data such as mean or percentage, and your complete anonymity will be secured.

## Part 1: About yourself

1. Sex 1. male
2. female
3. Mother tongue 1. Japanese 2. other ( )
4. Age 1.20-29
5. 30-39
6. 40-49
7. 50-59
8. over 60
9. Years of career experience $1.0-5$
10. $6-10$
11. $11-15$
12. 16-20 5.21-25 6.over 26
13. School
14. elementary
15. lower secondary
16. upper secondary (normal)
17. upper secondary (vocational) 5. vocational college 6. university
18. Grade
1 1st 2.2nd 3.3rd
19. 4th
20. 5th
21. 6th

Part 2: About your class Imagine one main class if you teach more than two classes now.
$\begin{array}{lllllll}7 \text { 7. The goal } & 1 \text {. writing } & 2 \text {. reading } & 3 \text {. listening } & 4 . \text { speaking } & 5 \text {. multi-purpose } & 6 \text {. other ( ) }\end{array}$ Hereafter, please answer the questions about the class you chose in Item 7.
8. Students' L1

1. only Japanese
2. Japanese + others
3. Japanese + other (
4. other language
)
5. Class size
6. less than $10 \quad$ 2. 11-20
7. 21-30
8. 31-40
9. more than 41
10. Estimation of students' overall current achievement
11. $0-20 \%$
12. $21-40 \%$
13. $41-60 \%$
14. $61-80 \%$
15. $81-100 \%$
16. The instruction style is relatively:
17. learner-centered 2 . even $\quad$ 3. teacher-centered
18. Main activities relatively focused on:
19. communication 2 . even 3 reading comprehension/drills
20. Reflection on the ratio of Japanese (L1) to English (FL) speech in task (e.g., $4: 6$ in a total of 10)

L1 : FL = $\qquad$ : $\qquad$
14. Reflection on the ratio of L1 to FL teacher speech in the classroom management

L1: FL = $\qquad$ : $\qquad$
15. Reflection on the ratio of L1 to FL speech in students' task

L1: FL = $\qquad$ : $\qquad$
16. Reflection on the ratio of L1 to FL students' speech in the classroom management

L1: FL = $\qquad$ : $\qquad$
17. Reflection on your speech ratio to students' speech in the class

You: Ss = $\qquad$ : $\qquad$

## Part 3

Please indicate the extent to which you agree with the items below showing the efficacious function of Japanese/English on the six-point scale. Please circle the number that most appropriately matches your opinion about the classroom you imagined in the items above. Even if you agree $50 \%$ with the item, please choose either 3 or 4 .

1. I do not agree at all ( $0 \%$ ). 2. I agree a little. (up to $20 \%$ ). 3 . I do not agree much (up to $40 \%$ ).
2. I agree somewhat (up to $60 \%$ ). 5 . I agree mostly (up to $80 \%$ ). 6. I agree very much (up to $100 \%$ ).

| A I feel that Japanese in my class is efficacious because it: | $0 \%$ | $\sim 20 \%$ | $\sim 40 \%$ | $\sim 60 \%$ | $\sim 80 \%$ | $\sim 100 \%$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 is effective in goal achievement. | 1 | 2 | 3 | 4 | 5 | 6 |
| 19 is necessary for goal achievement. | 1 | 2 | 3 | 4 | 5 | 6 |
| 20 is significant for goal achievement. | 1 | 2 | 3 | 4 | 5 | 6 |
| 21 is helpful to understand learning contents. | 1 | 2 | 3 | 4 | 5 | 6 |
| 22 is helpful to enhance understanding. | 1 | 2 | 3 | 4 | 5 | 6 |
| 23 smoothens the learning activities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 24 enriches learning during learning activities. | 1 | 2 | 3 | 4 | 5 | 6 |

B I feel that English in my class is efficacious because it:

| 25 is effective in goal achievement. | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 26 is necessary for goal achievement. | 1 | 2 | 3 | 4 | 5 | 6 |
| $27 \underline{\text { is significant for goal achievement. }}$ | 1 | 2 | 3 | 4 | 5 | 6 |
| 28 is helpful to understand learning contents. | 1 | 2 | 3 | 4 | 5 | 6 |
| 29 is helpful to enhance understanding. | 1 | 2 | 3 | 4 | 5 | 6 |
| 30 smoothens the learning activities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 31 enriches learning during learning activities. | 1 | 2 | 3 | 4 | 5 | 6 |

Part 4 Please write about the purpose or reasons for teachers' using L1 in an L2 classroom.


## (Appendix B)

## Letter of Consent

I have read the explanatory note and understand the conditions under which the present investigation, L1 and L2 use questionnaire for teachers, is implemented. I hereby give prior consent to participate in the investigation as a respondent.

Please check with $\checkmark$
$\square$ I have confirmed the content of the explanatory note and the letter of consent.

Name (signature) $\qquad$

Date $\qquad$

If you participate in this survey anonymously, there is no need for a signature.

If you would like the summary of this study, please check the box below and write down your address or e-mail address.

- I would like you to send me the summary of the study at the following address.

Address $\qquad$

Phone number or e-mail address $\qquad$

