

# Understanding the Correlation Between L1 Use Preference and L2 Proficiency: a Quasi-experiment Among Upper-intermediate EFL Learners

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## ABSTRACT

This paper reports the results of a quasi-experiment examining the correlation between upper-intermediate EFL learners' L1 preference and their L2 proficiency. The study started by a questionnaire eliciting scales of EFL learners' L1 preference and was followed by an existing/no-existing word judgement task proved efficient to represent L2 proficiency. The task performance was scored by the "Number of Correct Words" thereafter the higher number means the higher level of L2 proficiency. The data analysis consists of two sessions: the One Sample *t* Test on the number of correct words among learners with strong L1 preference, neutral, and L2 preference; the Pearson Correlation Analysis between L1 preference and L2 proficiency. Results from the One Sample *t* Test indicated each group's Number of Correct Words in the vocabulary-judgement task performance was not significantly higher than the grand average. The results of the Pearson Correlation Analysis revealed a marginal significant negative correlation ( $r = -0.16, p = 0.08$ ) between L1 Preference and Number of Correct Words, and an insignificant positive correlation ( $r = 0.16, p = 0.09$ ) between TL Preference and Number of correct words. It is concluded that in general the EFL learners' preference to L1 use is correlated to their L2 proficiency.

**Keywords:** L1 use preference, L2 proficiency, EFL learners.

## 1. INTRODUCTION

In the field of Second Language Acquisition (SLA), the effects of L1 use in L2 learning has been discussing for more than a half century. The practitioners of traditional grammar-translation approach supported L1 use. But since the advent of communicative approach in 1970s, the role of L1 in the teaching of L2 seems to have lost position in modern language lessons [1], and was challenged by the teaching method emphasizing the use of authentic language and a rich L2 environment to maximize exposure to extensive L2 input [2, 3].

However, beginning in the 1990s, a slow but steady trend to reconsider the use of L1 in the field of language education was identified by Hall and Cook [4], who observed after reviewing relevant literature the use of L1 was a realistic choice in the classroom setting and played a valuable role in multiple pedagogical functions [1]. Along with this trend, studies emerged from teachers' perspective exploring the quantity of L1 use, functions of L1

use and reasons underlying L1 use [5], and studies eliciting students' views towards L1 use were also conducted among various levels of learners, including one studying the views from beginners of French at an Australian University [6].

Apart from understanding learners' attitudes towards L1 use in FL classrooms, more researches attempted to summarize the purposes of using L1<sup>1</sup> [7], to expound the reasons of L1 use<sup>2</sup> [8], and to generalize the functions of L1 use<sup>3</sup> [9] to justify the

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1. The purposes of using L1 are summarized as grammar instruction, classroom management and compensation for a lack of comprehension.

2. Rolin-Ianziti & Varshney added "affective goals" to the list of reasons including medium-oriented goals and framework goals.

3. The functions of L1 use were summarized into 14 items: Translation, L1-L2 contrast, Evaluation, Activity instruction, Activity objective, elicitation of students' contribution, personal comment, comprehension check, classroom equipment, administrative issues, repetition of students L1 utterance, reaction to students question, humor and instructor as bilingual.

more common practice of L1 use in FL classroom. Empirical experiments were also conducted to examine the effects of explicit L1 use in L2 learning [10,11] and some of them found the positive L1 effects in L2 listening [12], reading [13-15] and writing [16] when attempting to examine the quality of L1-inclusive teaching.

The issue on L1 use shifted from whether it is helpful to how to use L1 in L2 learning. With this shift, a recent study set in a beginner FL classroom was conducted again to examine the role of L1 in SLA [17], but few attempts in upper-intermediate classroom were carried out. What's more, researches on why using L1 and how to use L1 in L2 learning are ubiquitous, while endeavors to examine the role of L2 learners' personal preference in L2 learning were not so thriving. More work is needed to explore the roles the upper-intermediate learner's preference to L1 play in the learning of L2.

## 2. RESEARCH QUESTIONS

Three research questions were formulated in this current study based on the review of literature:

Research question 1: What are the upper-intermediate EFL Learners' attitudes towards L1 use?

Research question 2: When holding various extents of L1 preference, are they identical at L2 proficiency? How will their performance at vocabulary-judgement-task be various from each other?

Research question 3: Is there a correlation between L1 use preference and L2 proficiency?

### 2.1 Methods

#### 2.1.1 Participant

The participants recruited for the current study were 117 graduates majoring in material science and automobile engineering aged from 21 to 23 years old, among whom 46 participants are females and 71 are males. They were from 4 randomly-grouped classes under the instruction of one teacher to take the Academic Writing Course. All the participants took the English class during the second semester of the first academic year and were instructed in enhancing the competence of academic writing. They had passed the National Graduate English Test in the previous year and scored between 55-65 points (total =100). They had

not attended any English classes for at least two years until the time of taking this Academic Writing Course. To guarantee the active participation, of the quasi-experiment, the participants were given 5 points in ordinary performance for participating in this survey.

#### 2.1.2 Questionnaire and Vocabulary-Judgement Task

The questionnaire was adapted from a previous study eliciting students' views regarding the use of the first language French in EFL learning [8]. It changed the first language from French to Chinese in the questionnaire and removed the open questions thus 24 closed questions were included. Each question includes five options scaling from "Strongly agree", "Agree", "Neither agree nor disagree", "Disagree", "Strongly disagree". Participants were informed clearly of choosing the option which is best describing their views on the question.

Among these questions, six were designated to elicit students' preference to L1 use in medium-oriented instructions to teach vocabulary and grammar, five to elicit the preference to target language exclusivity, and two to reveal the preference to L1 use in organizing class or assessment. The left ten questions were not with very specific purposes.

The vocabulary-judgement task is LexTALE, which is a 60-word vocabulary test including 40 rare-used words and 20 non-words. LexTALE was proved to be a valid predictor of English vocabulary knowledge and efficient to identify the L2 proficiency of FL learners by its substantial correlation with a measure of general English proficiency [18]. The test can be carried out on or downloaded from [www.lextale.com](http://www.lextale.com).

These two documents are available at the appendix of the current paper.

#### 2.1.3 Procedures

The quasi-experiment was conducted in the first week of the 12-week course. At the first time of meeting the participants, the instructor introduced briefly to the syllabus and classroom disciplines of the Academic Writing Course and explained the purpose of the present study was to investigate students' attitudes towards using L1, which might help the teacher adjust the quantity of L1 use in this English class. The instructor informed the students'

of the steps of completing the questionnaire and told them they could get 5 extra points in ordinary performance for participating in the survey.

In order to elicit their true feelings on L1 use preference, the instructor relieved the participants that it was an anonymous survey and they could feel free to choose the option representing their true standpoints. Then the questionnaire was distributed to the participants to finish with a 20-minute time limit.

After all the participants had completed the survey, the instructor did not collect it but informed the students they would take a self-test on vocabulary to know how much endeavors they need to make in this semester. Then the participants were given a list of words including 40 “existing words” and 20 “no-existing words” in English. They were instructed to write “yes” for existing words and “no” for no-existing words without discussing with others or consulting electronic dictionaries. They were also asked to read the directions carefully before doing the task. No time-limit was required. For the convenience of analyzing the correlation of each participant’s L1 use preference and L2 proficiency, the participants were requested to hand in the vocabulary judgement task together with the survey result.

#### 2.1.4 Scoring and Analysis

The questionnaire with five scales like “Strongly agree”, “Agree”, “Neither agree nor disagree”, “Disagree” and “Strongly disagree” is rated as 5, 4, 3, 2, and 1 respectively.

The yes/no-vocabulary-judgement-task was scored by the number of correct words. Since this vocabulary list has been identified efficient to present L2 proficiency [18], the lower number of correct words means the higher level of L2 proficiency in this study.

In the questionnaire, questions of No. 2, 5 and 6 are eliciting students’ L1 use preference to vocabulary, so students who “strongly agree” with any of these three questions will be labeled as the “Strong L1 Preference” group. Likewise, students who chose “Strongly agree” in any of the five questions (No.3, 7, 9, 13, 16), which are collecting views on Target Language (TL) preference, will be labelled as the “Strong TL Preference” group. Those who have not chosen “Strongly agree” in any of these above-mentioned 8 questions will be grouped as “Neutral”.

A grand depiction on the 117 subjects will be presented. First, each group’s views on L1 use preference will be demonstrated; then, each group’s performance of the vocabulary task, scored by the “Number of Correct Words”, will be described; what’s more, the average “Number of Correct Words” of all the 117 participants will be calculated out for a further One Sample t Test. In SPSS 22, the One Sample t Test will compare each group’s performance in the vocabulary-judgement task with the grand performance among all the participants.

A Pearson Correlation Analysis will be employed to analyze the correlation between the three groups’ different extents of preference to L1 use indicated by the five ratings scaling from “Strongly agree” to “Strongly disagree” and each group’s performance in the vocabulary-judgement task indicated by the “Number of Correct Words”. In other words, the Pearson Correlation Analysis is to examine the correlation between upper-intermediate EFL learners’ L1 preference and their L2 proficiency.

## 2.2 Results

The results of each group’s views on L1 use preference are illustrated in Figure 1. From it, we could tell that among the 117 subjects of this quasi-experiment, 47 members hold “Strong L1 preference”, only 10 have “TL preference”, and the majority of them is “Neutral”.

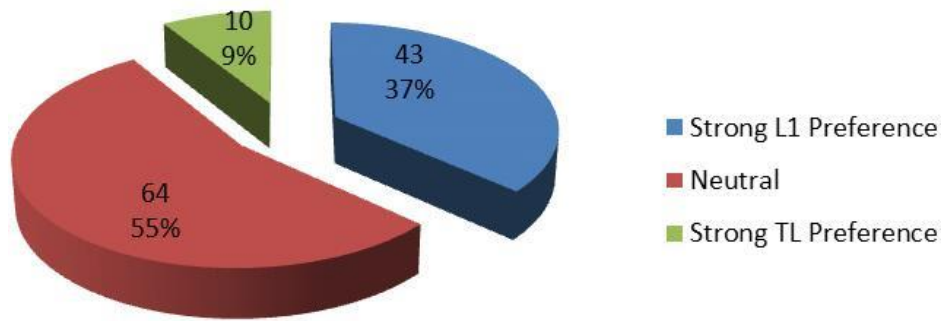


Figure 1 The distribution of subjects on L1 use preference.

By calculation, the grand average Number of Correct Words among the 117 subjects was 35.7. As shown in “Figure 2”, the Strong L1 Preference group (35.1) is the only group which scores lower

than the grand average. Both the Neutral group and the Strong TL Preference group scored a little bit higher than the grand average.

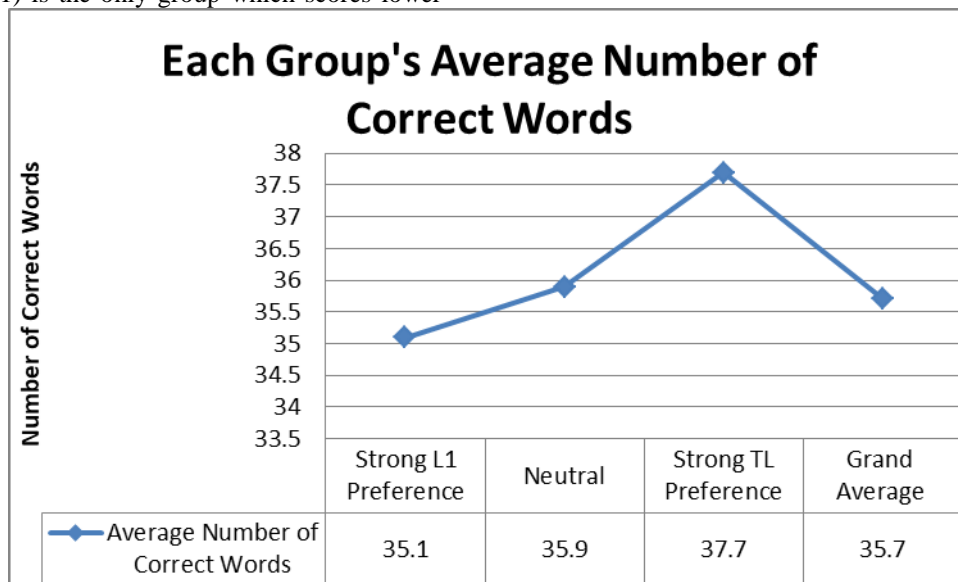


Figure 2 Each group’s average number of correct words.

As “Table 1” shows, the analysis of the data using One Sample t Test for “Strong L1 Preference” group (M=35.12, SD=4.18) indicate that their “Number of Correct Words” in the vocabulary-judgement task performance was not significantly higher than the grand average “Number of Correct Words” ,  $t(42) = -0.92$ ,  $p=0.37$ .

The One Sample t Test on learners with “Strong TL Preference” (M=37.7, SD=5.14) indicate that they do not significantly outnumber the grand average Number of Correct Words,  $t(9) = 1.23$ ,  $p=0.25$ .

Similarly, the One Sample t Test on learners from “Neutral” (M=24.1, SD=5.11) indicate their average Number of Correct Words do not significantly outnumber the grand,  $t(63) = 0.25$ ,  $p=0.80$ .

Table 1. Summary One-Sample statistics in three groups of participants

	N	Mean	SD	T	df	Sig. (2-tailed+d)	MD
Strong L1 Preference	43	35.12	4.18	-0.92	42	0.37	-0.58
Neutral	64	35.86	5.11	0.25	63	0.80	0.16
"Strong TL Preference"	10	37.70	5.14	1.23	9	0.25	2.00

From the One Sample t Test results indicated in "Table 1", "Table 2" and "Table 3", the study observed no significant difference from average L2 proficiency level among learners with various extents of L1 preference.

As to the results of the correlation between L1 Use Preference and L2 Proficiency, the Pearson

Correlation Analysis was utilized to analyze two typical and representative questions eliciting "L1 Use Preference" and "TL Preference" respectively, which are Question 2 and Question 7.

As shown in "Table 2", a marginal significant positive correlation ( $r=0.16$ ,  $p=0.08$ ) is observed in Question 2.

Table 2. Correlation statistics in a typical L1 Preference eliciting question

	Pearson Correlation	Sig. (2-tailed)	BCa 95% Lower, Upper
Question 2	-0.16	0.08	-0.35, 0.03

The Pearson Correlation Analysis on Question 7 revealed a marginal significant positive correlation ( $r=0.16$ ,  $p=0.08$ ), as shown in "Table 2".

Table 3. Correlation statistics in a typical TL Preference eliciting question

	Pearson Correlation	Sig. (2-tailed)	BCa 95% Lower, Upper
Question 7	0.16	0.09	-0.01, 0.33

### 2.3 Discussion

This study carried out a quasi-experiment, including a survey and a vocabulary-judgement-task to examine the correlation between L1 preference and L2 proficiency among upper-intermediate EFL learners. The data analysis was conducted by the One-Sample t -Test and the Pearson Correlation Analysis.

First, based on the results, the three research questions will be answered as follows:

Research question 1: What are the upper-intermediate EFL Learners' attitudes towards L1 use? The upper-intermediate EFL Learners'

attitudes towards L1 use are various, some hold extremely strong preference to L1 use while some are on the opposite side by holding a strong preference to TL use. According to the attitudes, they could be classified into three groups

Research question 2: When holding various extents of L1 preference, are they identical at L2 proficiency? How will their performance at vocabulary-judgement-task be various from each other?

EFL learners' L2 proficiency varies. Though the One Sample t Test observed no significant higher "Number of Correct Words" than the grand average, each group scored differently from the grand

average, thus implying they are not identical at L2 proficiency.

Research question 3: Is there a correlation between L1 use preference and L2 proficiency?

The answer to research question is evident. The Pearson Correlation Analysis observed marginal significant correlation both in “L1 Preference” question and “TL Preference” question. EFL learners’ L1 use preference does impact on L2 proficiency.

In compatibility with the purpose of the study, which attempts to explore the correlation between L1 use preference and L2 proficiency, the present paper made extra effort in analyzing the data of questions relating to L1 use preference or TL preference (namely 2,5,6 & 3,7,9,13,16) . But the results on the other questions were also collected and were compared with the previous relevant researches.

Questions eliciting students’ views of “why using L1”, which are numbered 1, 11, and 19, indicated a similar result to previous studies [6,8,9], implying that L1 is expected to be used to fulfill “medium-oriented goals” to explain the meaning of new vocabulary and to teach the grammar of the TL.

Students’ views from questions 10 and 14 are in line with studies carried out by Turnbull [7] and Juian & Horsein[9], indicating that L1 has been utilized to solve some administrative issues and assess learners’ performance.

### 3. CONCLUSION

The issue that EFL learners’ views towards L1 use impact L2 learning has been one of the most common issue in the field of SLA. However, how the learners’ different scale of L1 preference affected L2 proficiency has not been studied substantially. This paper attempts to provide more evidence to the issue by examining the correlation between upper-intermediate EFL learners’ L1 preference and their L2 proficiency via a questionnaire and a word-judgement-task. The results from the *One Sample t Test* and the Pearson Correlation Analysis both indicated that L1 Use Preference did impact on L2 proficiency: the stronger preference to L1 use, the lower level of L2 proficiency; the stronger preference to TL use, the higher level of L2 proficiency. EFL learners’ preference to L1 use is correlated to their L2 proficiency. So pedagogically, EFL teaching needs to make more endeavors in guiding learner to adjust

their preference to L1 use from being strong and engaged to being weak and detached.

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## Appendix

### The use of Chinese in English language classroom

Using the following abbreviations, how strongly do you feel about the following statements? Please circle the appropriate response.

1. I find it easier to understand the grammar of English when my teacher explains it in Chinese.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
2. I like it when my teacher uses Chinese to translate vocabulary items.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
3. I believe that to learn another language well, the student should use that language all the time in class.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
4. I prefer textbooks written only in English.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
5. I think that translating vocabulary items helps me to learn them,  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
6. When I don't know a word in English, I prefer to have it explained to me in English.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
7. Students should not use Chinese in the language classroom.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)

8. I think it is natural for a native Chinese-speaking teacher to use Chinese in the classroom.  
SA (strongly agree), A (agree), N(neither agree nor disagree), D (disagree), SD (strongly disagree)
9. I believe that translation from a foreign language into Chinese is not a good way to learn English.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
10. I think the teacher should give instructions (about exercises, activities and homework, etc.) in English.  
SA(strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
11. I like to read explanations in Chinese about English.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
12. I use Chinese to help me study for my language exams.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
13. Teachers should use only English in the language classroom.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
14. Assessment details and class outlines should only be given in Chinese.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
15. I expect that language teachers who are native Chinese-speaking teachers should use Chinese in class when needed.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
16. I believe that students should use only English when working together on a task in the classroom.  
SA (strongly agree), A (agree), N (neither agree nor disagree); D (disagree), SD (strongly disagree)
17. It is confusing when the teacher switches from one language to another during class.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
18. When preparing for exams, I think you should use only English.  
SA (strongly agree), A (agree), N(neither agree nor disagree), D (disagree), SD (strongly disagree)
19. When my teacher explains how sentences are constructed in English, I prefer the explanation in English.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
20. I expect that a teacher who uses only English in class is less approachable than one who uses Chinese more frequently.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
21. I feel more at ease when my teacher uses Chinese.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
22. In English class, I take every chance to speak or use English.  
SA (strongly agree), A (agree),N (neither agree nor disagree), D (disagree), SD (strongly disagree)
23. In English class, I avoid using English.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)
24. In English class, I use English and Chinese in an even proportion.  
SA (strongly agree), A (agree), N (neither agree nor disagree), D (disagree), SD (strongly disagree)



### A vocabulary test

This test consists of about 60 trials, in each of which you will see a string of letters. Your task is to decide whether this is an existing English word or not. If you think it is an existing English word, you click on "yes", and if you think it is not an existing English word, you click on "no".

If you are sure that the word exists, even though you don't know its exact meaning, you may still respond "yes". But if you are not sure if it is an existing word, you should respond "no".

In this test, we use British English rather than American English spelling. For example:

"realise" instead of "realize"; "colour" instead of "color", and so on. Please don't let this confuse you. This test is not about detecting such subtle spelling differences anyway.

You have as much time as you like for each decision. If everything is clear, you can now start.

eg.	platory	no	19	spaunch		40	magrity	
eg.	denial	yes	20	allied		41	nourishment	
eg	generic	yes	21	slain		42	abergy	
1	mensible		22	recipient		43	proom	
2	scornful		23	exprate		44	turmoil	
3	stoutly		24	eloquence		45	carbohydrate	
4	ablaze		25	cleanliness		46	scholar	
5	kermshaw		26	dispatch		47	turtle	
6	moonlit		27	rebondicate		48	fellick	
7	lofty		28	ingenious		49	destription	
8	hurricane		29	bewitch		50	cylinder	
9	flaw		30	skave		51	ensorship	
10	alberation		31	plaintively		52	celestial	
11	unkempt		32	kilp		53	rascal	
12	breeding		33	interfate		54	purrage	
13	festivity		34	hasty		55	pulsh	
14	screen		35	lengthy		56	muddy	
15	savoury		36	fray		57	quirty	
16	plaudate		37	crumper		58	pudour	
17	shin		38	upkeep		59	listless	
18	fluid		39	majestic		60	wrought	