

Chapter 16

Role of English-Bangla Code-Switching in Vocabulary Retention: A Case Study at University of Dhaka



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Abstract The use of code-switching in second and foreign language teaching has been a contentious issue. It has been mostly regarded as undesirable based on the assumption that it interferes with target language (TL) learning, especially by decreasing the exposure to the TL. In the last two decades, however, there has been a slow bilingual turn in English language teaching (ELT), calling for a judicious use of the first language in language teaching. This chapter reports a mixed-method study conducted at the University of Dhaka on the effects of teacher code-switching on learners' short-term vocabulary retention. Participants for the study were selected from 100 1st-year undergraduate students majoring in Psychology and 65 2nd-year undergraduate students majoring in Zoology. Using Vocabulary Knowledge Scale (VKS) developed by Wesche and Paribakht, 20 target words were made into a test paper. This test was administered as pretest and posttest to experimental groups that received explanations of the target words both in English and Bangla and control groups that received them only in English. A writing task and two focus group discussions were also used. Independent samples *t*-test was run between the scores of the experimental and control groups in order to see if there was any significant difference between the vocabulary retention by the code-switching and the English-only groups. The results show that students who received bilingual definitions outperformed those who received English-only definitions. The statistically significant findings indicate a need for re-evaluating the role of the first language in language pedagogy.

Keywords Code-switching · ELT · Vocabulary retention · Bilingualism

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Introduction

If you are an English language teacher in Bangladesh, how would you explain the word ‘heron’ to your English as a foreign language (EFL) learners? You could show them an image. You could explain the meaning in English using a monolingual English dictionary and say that it is ‘a large bird with a long neck and long legs that lives near water’. You could use many other techniques. Indeed, you could use a combination of techniques. You may also use a simple one-word Bangla or Bengali equivalent, but would you be able to do that without feeling guilty for using the mother tongue in the English class? In this chapter I intend to examine such uses of learners’ first language in addition to English in teaching vocabulary in order to see whether code-switching—in other words, alternate use of two or more language varieties—impedes or facilitates the learning of new lexical items. The chapter investigates the effect of using the first language (L1), in this case Bangla, by the teacher on learners’ retention of new words.

‘Code-switching’ (sometimes spelt as ‘codeswitching’ or ‘code switching’) is a sociolinguistic term that has been defined as ‘the alternative use by bilinguals of two or more languages in the same conversation’ (Milroy & Muysken, 1995, p. 7). In the context of classroom interaction, it can be defined as the alternation of more than one linguistic code by any of the classroom participants (Lin, 2008). Lin distinguishes between code-mixing (intra-clausal/sentential) and code-switching (inter-clausal/sentential). In terms of language classroom, other associated terms are use of L1 and translation. In this study, I use the term ‘code-switching’ as an umbrella term for alternating between the L1 and the second language (L2) in the language class, indicating a bilingual practice, which may or may not involve translation.

Language teaching pedagogy in recent times has endorsed monolingual rather than bilingual or multilingual practices that involve code-switching. Reviewing theoretical and empirical literature on teachers’ use of the target language (TL) and the first language in the second and foreign language classroom, Turnbell and Arnett (2002, p. 211) conclude that there is ‘near consensus’ that teachers should make maximum use of the target language. The main reason for advocating TL-only practices is that for many learners, language classroom is the only context for TL exposure (Littlewood & Yu, 2011). Code-switching in naturalistic language use is bilingual speakers’ ‘asset’ and ‘a valuable addition’ to their repertoire of communication strategies, but in language classroom discourse, it is not considered to be a valuable resource (Macaro, 2005, p. 63). Rather, Macaro maintains, code-switching is often referred to as ‘recourse to L1’ (p. 64), which indicates that it is seen as undesirable.

The influence of the monolingual principle in English language teaching in Bangladesh and elsewhere has been so extensive that teachers often do not feel comfortable in exploiting learners’ first language while teaching English. Inspired by Krashen’s (1981) input hypothesis and acquisition-learning hypothesis, language teaching in many parts of the world has focused on maximising the use of TL. Mixing

codes or using the mother tongue has been believed to interfere with learning. While there are situations where learners come from a variety of linguistic backgrounds and the teacher does not share the L1 with learners, making exclusive use of the TL a practical necessity, classroom situations in Bangladesh are mainly homogenous in terms of L1 since Bangla is the mother tongue of nearly 98% of the population (Bhatt & Mahboob, 2008; Hamid, Jahan, & Islam, 2014).

The current study was conducted at the University of Dhaka where most departments offer foundation English language courses to their undergraduate students from a realisation that most incoming university students had ‘poor standards of English proficiency’ (Chaudhury, 2013, p. 32). Although explicit medium of instruction policy in higher education in Bangladesh is flexible – it can be either Bangla or/and English – English dominates in science, medicine, engineering and technology, while Bangla is more common in many humanities and social science departments (Hamid, 2006). A mixture of Bangla and English is common in tertiary-level classroom interactions (Hamid et al., 2014). However, anecdotal evidence and observation suggest that English language courses are mostly English-only medium. The materials are monolingual, so are examinations; however the classroom is the only place the teacher and the students can make *use* of both languages. As Hamid et al. (2014) suggest, code-switching is not uncommon in Bangladeshi university lectures in general; however, whether teachers make *good* (in the sense of being productive) use of L1 in the English language class with confidence and conviction is doubtful, given the consensus in modern ELT discourse that TL use should be maximised (Turnbell & Arnett, 2002).

Unsurprisingly, most students at the University of Dhaka, on the other hand, come from Bangla-medium national education and find it difficult to cope at the university (Akhter, 2008). Research has found that most students come from outside big cities and the majority of them evaluate their English skills as inadequate (Akhter, 2008). There appears to be a mismatch between students’ English proficiency and the English language requirements at the university, hence the foundation courses. Studying the effects of English-only policy in Bangladeshi higher education, Sultana (2014) commented that it is creating language-based discriminations and is affecting learners’ classroom participation, power negotiation and identity formation. While Sultana’s study looked into the advantages and disadvantages that are created by English-only policies and other studies investigate attitudes of learners and teachers on the use of code-switching in the classroom (e.g. Chowdhury, 2012; Islam & Ahsan, 2011), there has been little experimental research in Bangladesh on the direct effects of either English-only or the bilingual classroom mode on learning. Therefore, research on the role of using Bangla in addition to English appears important.

This research, however, is small scale and particularly focuses on vocabulary teaching and learning. It explores the role of English-Bangla code-switching by teachers to explain unfamiliar words on learners’ short-term vocabulary retention. More specifically, this study attempts to determine whether there is any significant difference between learning new lexical items through English-only explanations and English-Bangla explanations. A second aim of the study is to explore whether

students prefer English-only or English-Bangla explanations in vocabulary teaching. In order to achieve these objectives, a mixed-method study was conducted at the University of Dhaka, which involved both quantitative and qualitative data analysis.

To Code-Switch or Not: The Great Debate

While approaches and methods of foreign language teaching have waxed and waned, one principle that has remained stable in the several decades is to maximise the use of the TL and minimise the use of L1. In this section I argue that the most common argument in the literature has been in favour of maximising the TL (e.g. Duff & Polio, 1990; Ellis, 1984; Krashen, 1981; Wong-Fillmore, 1985) although recent developments in the field have increasingly supported bilingual teaching-learning (Bhooth, Azman & Ismail, 2014; Celik, 2003; Cook, 2001; Cummins, 2008; Liu, 2008; Macaro, 2005; Macaro & Lee, 2013; Sampson, 2012).

The Monolingual Principle in Language Teaching

The monolingual tenet in foreign language teaching dates back to the Reform Movement of the 1880s and the Direct Method when the Grammar Translation Method (GTM) was found to be deficient for a number of reasons, one of them being the perceived need for exclusive use of L1. Most subsequent methods have followed this principle. The Audiolingual Method went as much as trying to render the L1 'inactive' while a new language is being learnt (Brooks, 1964, p. 142). One may ask whether such a process is possible at all. Later methods often ignored the use of L1 rather than proscribing it. Cook (2001) explained that the only time the proponents of communicative language teaching and task-based teaching mention the L1 is when they advise how to minimise using it. Using L1 even in organising tasks or managing behaviour is believed to deny learners 'valuable input in the L2' (Ellis, 1984, p. 133). Wong-Fillmore (1985) contended that use of translation short-circuits the process of understanding the TL in two ways: TL remains unmodified and learners tend to ignore the TL anticipating the use of translation. Duff and Polio (1990) acknowledged the need for letting low-proficiency learners use L1 as they may face anxiety if forced to use TL all the time; however, they mainly focused on the means to 'reduce the amount of L2-L1 translation' (p. 163) through verbal modification such as repetition, paraphrasing, slowing down pace, simplifying syntax and using high-frequency patterns and non-verbal means such as visuals and gestures. There is little discussion on how to exploit the L1.

Such practices were based on a number of assumptions. One such assumption is that L2 learning should be made similar to children's L1 learning as the latter is found to be the most complete kind of language learning. Krashen (1981), the main

advocate of the Natural Approach, for example, argued that acquisition, as opposed to learning, can happen in the adult L2 classroom if the environment can be created especially through $i + 1$, i.e. providing L2 input at a level slightly beyond the current level of the learners. Such opinions that adult learners should learn an L2 as directly as children learn their L1 disregard obvious differences between them. For one thing, the adult's mind, social development and memory capacity are obviously different from the child's (Singleton, 1989, as cited in Cook, 2001). Research also shows that the experience of acquiring the L1 works in hardwiring the circuitry of the child's brain (Pinker, 1994), which makes it difficult for the grown-up L2 learner to repeat the L1 experience. Furthermore, there was a generalisation that the aim of L2 learning is approximating the proficiency of the native speaker. From such a point of view, learning of L2 is doomed to be unsuccessful as the L2 learner is unlikely to achieve proficiency like a native speaker on all possible counts (Cook, 2001). Cook (2001) points out that 'whether L2 learners are successful or not has to be measured against the standards of L2 users, not those of native speakers' (p. 406).

While enthusiasm was high in favour of TL-only practices and keeping L1 and L2 separate, a few empirical studies demonstrated that such practices do actually give learners better opportunities for learning a second language (Cummins, 2008). Such policies, nonetheless, became very popular and served the purposes of the native speaker teachers of English with little or no control of learners' L1 and the publishers of the global ELT coursebooks (Butzkamm, 2003). These policies, however, have made bilingual teachers who share the L1 with their students either stop using L1 as a pedagogical resource or at times have resulted in a guilty feeling in them if they use it. Copland and Neokleous (2011) reported such cases where teachers denounced the L1 even though they had used it for learning purposes. Such guilt seems to be a result of the twentieth century ELT discourse where code-switching has become a taboo and use of L1 is often viewed to be associated with the GTM which is seen as a method of bygone times. As the discussion in this section suggests, the monolingual principle was propagated until the 1990s. Since then, and especially since the beginning of the twenty-first century, bilingual practices have been re-debated and re-explored.

Critiquing Code-Switching in L2 Pedagogy

Research in the last two decades has gradually yielded evidence to question policies and practices that forbid L1 in the L2 classroom (Bhooth et al., 2014; Celik, 2003; Knight, 1996; Lee, 2013; Liu, 2008; Macaro, 2005; Sampson, 2012). Cook (2001) argued that L2 meanings in the learner's mind do not exist separately from L1 meanings and that code-switching is a highly skilled activity where two languages are used simultaneously in a compound manner rather than one at a time in a coordinate manner. Sunderman and Kroll (2006) found that L1 is active in L2 lexical processing at both early and advanced stages of L2 learning.

Sampson (2012) in his study of the code-switching patterns of two groups of Spanish-speaking English learners in Colombia found that code-switching in the L2 classroom does not relate to proficiency level and performs useful communicative purposes such as expressing equivalence, metalanguage, floor holding, reiterating and socialising. The findings demonstrated that equivalence – the most common type of L1 use found in the study and used when a particular lexical item is missing in learners' interlanguage – is not only quicker but also allows learners to examine the differences between semantically similar L2 lexical items. While metalanguage in L1 helps with procedural concerns, using L1 expressions to hold floor assists in skills like continuing turns without pause or interruptions. Reiterating, i.e. using L1 for what has been said in L2, helps in clarifying and highlighting L2 input. Switches were also used for socialising, i.e. developing group solidarity and maintaining friendships. Sampson concluded that proscribing L1 is therefore ill-advised and detrimental to classroom communication and learning. He, however, maintained that learners' future language needs should be considered in making *informed* decisions about when to use L1 and when to encourage L2 coping strategies.

Similar findings were reported by Bhooth et al. (2014) who found that their participants at a Yemeni university considered Arabic as a functional strategy in learning English. They concluded that L1 can be used as a *scaffolding* strategy by students and as a pedagogical tool by teachers to enrich the learning experience and to enhance engagement in the L2 classroom. Studying the attitudes of Korean students, both adults and children, Macaro and Lee (2013) reported that neither of the learner groups favoured total exclusion of L1 from the classroom interaction. Knight (1996) found that learners who did a preparatory discussion in L1 performed better in a subsequent L2 writing task than those who did the same preparatory discussion in L2.

Thus, there appears to be a paradigm shift in progress, which advocates a *re-evaluation* of the role of L1 in L2 pedagogy. There is, however, a need for experimental studies to determine the effect of L1 use on L2 learning. Turnbull and Arnett (2002), in their review of recent literature, called for research on 'whether TL input might become intake more readily if teachers use the L1 judiciously to catalyze the intake process in some way' and to determine 'when it is acceptable and/or effective for teachers to draw on students' L1' (p. 211). This research is a response to such call.

Code-Switching in Vocabulary Teaching-Learning

Vocabulary teaching has often been cited as an area where L1 equivalence can be used (Cook, 2001; Liu, 2008; Schmitt, 2008). Even so, classroom practices under communicative language teaching have preferred monolingual strategies rather than bilingual ones. Most research on the subject, however, indicates that *principled* use of L1 can be conducive to learning. Regarding when to use L1, Cook (2001) highlighted four factors that need to be considered:

If there is no over-riding obligation to avoid the L1, each use can be looked at on its merits. One factor to consider is efficiency: Can something be done more effectively through the L1? A second factor is learning: Will L2 learning be helped by using the L1 alongside the L2? The third factor is naturalness: Do the participants feel more comfortable about some functions or topics in the first language rather than the second, as studies in code-switching have shown? The fourth factor is external relevance: Will use of both languages help the students master specific L2 uses they may need in the world beyond the classroom? (Cook, 2001, p. 413)

Citing findings from other research, Cook further argued that using L1 for conveying and checking meaning may be efficient and may help learning and feel natural by making the L2 environment more comfortable for learners, while using L1 for grammatical explanations, organising tasks and maintaining discipline can offer efficiency. Using L1 for personal contact with individual students ensures naturalness, while letting students use L1 and translate in main classroom activities prepare them for bilingual contexts, thus offering external relevance.

Celik (2003) reported that selective use of code-mixing in teaching vocabulary neither slowed acquisition nor decreased fluency. Similarly, reviewing a number of studies on the influence and role of L1 in L2 vocabulary learning, Schmitt (2008) commented that exploiting L1 offers advantage especially in establishing form-meaning linkage while introducing new vocabulary items. Liu (2008) found that adult Chinese learners who received bilingual explanation of new words outperformed those who had received L2 explanations *only*. Zarei and Arasteh (2011), however, found that thematic clustering made a bigger difference in vocabulary production than both code-mixing and contextualisation in L2. This finding suggests that code-switching is only one of the many viable ways of explaining vocabulary items.

Despite the interest and widely felt need, research on the potential role of L1 in L2 teaching is still far from conclusive. While L1 use is humanistic and learner-centred, too much of it may discourage TL practice, and therefore there remains a need for more guidance to teachers from teacher educators as to when mother tongue use might be beneficial (Carless, 2008). This also means that there is a need for classroom-based experimental studies examining the actual effects of using L1 on L2 learning.

Methodology

A mixed-method research design was adopted for this study. The study was conducted in two parts. There was an experiment involving two experimental groups and two control groups of students with whom a vocabulary test and a writing test were conducted. This experiment was substantiated by two focus group discussions (FGDs) in order to investigate learner views on the use of L1.

Experimental Design

Participants for the study were selected from 100 1st-year undergraduate students majoring in Psychology and 65 2nd-year undergraduate students majoring in Zoology. The researcher had been teaching an English language course in both the classes. All the students shared Bangla as their mother tongue, and all of them, except three, came from a Bangla-medium mainstream education based on the national curriculum of Bangladesh. From a reading passage called ‘Home of the Royal Bengal Tiger’, 20 target words were selected. This reading passage was a part of a unit in an English language textbook called *Endeavour: An Introductory Language Coursebook* by Sinha, Mahboob, Bashir, Basu, & Akhter (2014) designed for university students by the Department of English, University of Dhaka. The number of words might appear arbitrary, but it was selected considering the class duration which was 1 h. Selecting more words would have definitely yielded better results; however, this study was done in classroom situations which had time constraints.

The selected words were made into a test paper using the Vocabulary Knowledge Scale (VKS) developed by Wesche and Paribakht (1996) in which knowledge of each lexical item can be scored from 1 to 5 in the following way:

1. I don't remember having seen this word before.
2. I have seen this word before, but I don't know what it means.
3. I have seen this word before, and I think it means...(synonym or translation)
4. I know this word, and it means... (synonym or translation)
5. I can use this word in a sentence: ... If you do this item, please do the previous item too on the list (number 4).

There are a number of advantages of this scale. First, it is easily quantifiable as each of the responses has a numerical value assigned to it. Also, it tests both the receptive and productive knowledge of words. Most importantly, combining self-report and elicitation of responses that can be verified (Read, 1993), this scale can measure the *breadth* of vocabulary, i.e. how many words a learner knows, as well as the *depth*, i.e. how well does he/she know these words. The VKS-based vocabulary test was conducted twice with both groups of participants – once as pretest and later on as posttest. The purpose of the pretest was to select participants who did not know the target words well. The pretest was conducted in classroom settings where students were asked to indicate their knowledge of each target word by selecting one of the five options on the VKS. As the pretest contained 20 vocabulary items, each with a score ranging between 1 and 5, 100 was the maximum, and 20 was the minimum possible score for each student.

The test papers were scored, and a low-scoring group (scoring less than 60 out of 100) from each class was primarily selected for the study to ensure valid posttest

score. Each class was then randomly assigned to an experimental and a control group. There were, therefore, two experimental and two control groups. The experimental group from Psychology would be referred to as CS1, and the control group from this department would be referred to as EO1, while the two groups from Zoology would be referred to as CS2 and EO2.

One week after the pretest, all groups were separately offered a lesson in which they were given a copy of the reading passage ‘Home of the Royal Bengal Tigers’ which contained a description of the Sundarbans, a mangrove forest situated on the south coast of Bangladesh. Students were asked to read the text once or twice so that they could understand the context in which the target words were used and get information on the forest on which they would be asked to write a paragraph in the posttest. The students then received explanation of the unfamiliar words from the teacher. However, the experimental groups received explanations both in English and Bangla, while the control groups received them only in English. Word meanings were given orally and shown using a multimedia projector. English definitions of the words were taken from three online dictionaries—*Oxford Learner’s Dictionary*, *Merriam-Webster’s Dictionary* and *Collins Dictionary*—whichever seemed easier for the students. Bangla definitions were taken mainly from *Bangla Academy English to Bangla Dictionary*, the most commonly used and accepted English-Bangla dictionary in Bangladesh. Students were not told that they would be given tests after the lessons so that they were not extra careful in learning the words.

Two posttests, one involving the same test used as pretest and the other involving a writing test (which was given only as posttest), were administered after 2 weeks to see if there was any significant difference between the vocabulary retention by the code-switching group and the English-only group of each class. This time frame was considered enough as the aim was to check short-term retention. The writing test was given first in which students were asked to write a description of the Sundarbans. The main purpose of this test was to see whether there was a significant difference in the productive vocabulary knowledge of the experimental and the control groups of both classes.

Two FGDs were carried out after the tests to check learner attitudes to the use of L1. Each of them consisted of six students with one group from Psychology and the other from Zoology.

Data Analysis

Quantitative analysis was done for both the VKS-based posttest and the writing test. A number of steps were followed to prepare the data for statistical analysis. It was found that some students responded in option 4: ‘I know this word, and it means ... (synonym or translation)’; however, the meaning they wrote was either completely wrong or only partially correct. If the meaning was wrong, the response was regarded as 2: ‘I have seen this word before, but I don’t know what it means’. If the answer was partially correct, the response was regarded as 3: ‘I have seen this word

before, and I think it means ... (synonym or translation)'. If they wrote a sentence in 5 but the use was not appropriate, the response was considered either 3 or 4, depending on how correct the meaning was. Also, some students did not give response against some words; these responses were considered 2, as the students saw the words at least twice in pretest and in the lesson itself.

As mentioned earlier, students were not told beforehand of the lesson and posttests. To ensure validity of data, no extra importance was put on the sessions from which data was collected. As a result, some students missed some of the sessions. Also, students who performed well in the pretest were randomly assigned to groups to ensure a "normal" classroom setting; however, data from students who scored 60 or above in the pretest was excluded in the analysis. Also, students who missed any of the three sessions were excluded from statistical analysis altogether. In accordance with these conditions, the final number of participants was 106–24 students in CS1, 30 in EO1, 28 in CS2 and 24 in EO2.

The posttest papers of the VKS-based test were scored by the researcher, and each student's score was calculated out of 100. Scripts of the writing test in which students were asked to write a description of the Sundarbans were checked by the researcher for the number of target words each student used. As there was 20 target words, the highest possible score in this case was 20, the lowest being 0, indicating no use of the target words. In counting the words used, minor spelling and usage mistakes were disregarded.

Independent samples *t*-tests were run between the scores gained by the code-switching group and the English-only group of each class in the pre- and posttests in order to determine if vocabulary retention by the code-switching groups and the English-only groups was different in a statistically significant way. As the purpose of the writing test was to examine productive use of the target words, student scripts were checked for the number of these words used. Independent samples *t*-tests were then run between the scores of experimental and control groups of each class. FGDs were analysed qualitatively to gain an in-depth insight into the learner perceptions about use of L1 in L2 vocabulary teaching.

Results

As already mentioned, two posttests were conducted after 2 weeks of offering the lessons. One test involved a VKS-based vocabulary test in which each student scored a mark out of 100. The other involved a writing test in which students wrote a description of the Sundarbans, and a score out of 20 was given to each student for the productive use of the 20 target words. Two FGDs were conducted after the tests.

Table 16.1 Group statistics for Psychology participants in VKS-based pretest and posttest

Group	Pretest					Posttest				
	<i>N</i>	Mean	Std. Dev.	<i>t</i>	<i>p</i>	<i>N</i>	Mean	Std. Dev.	<i>t</i>	<i>p</i>
CS1	24	39.29	6.040	-.69	.49	24	83.92	10.325	3.83	.000
EO1	30	40.43	5.958			30	72.57	11.169		

Table 16.2 Group statistics for Zoology participants in VKS-based pretest and posttest

Group	Pretest					Posttest				
	<i>N</i>	Mean	Std. Dev.	<i>t</i>	<i>p</i>	<i>N</i>	Mean	Std. Dev.	<i>t</i>	<i>p</i>
CS2	28	42.93	6.616	-.22	.82	28	85.04	9.841	2.24	.03
EO2	24	43.33	6.552			24	78.58	10.966		

Table 16.3 Group statistics for Psychology participants in writing test

Group	<i>N</i>	Test	Mean	Std. Dev.	<i>t</i>	<i>p</i>
CS1	24	Target words in writing	5.38	5.097	2.29	.026
EO1	30		2.90	2.695		

Findings of Pretests and Posttests

The results show that both groups of each class were similar in vocabulary size in the pretest. As shown in Table 16.1, the two groups of Psychology, CS1 and EO1, had means of 39.29 and 40.43, respectively, which shows that EO1 had a little higher mean, although the difference was not significant ($t = -.69, p = .49$). The two groups from Zoology, CS2 and EO2, had means of 42.93 and 43.33, respectively, which again did not exhibit any significant difference ($t = -.22, p = .82$). It is to be noted that participants from Zoology, who were in the 2nd year at the university, had a slightly higher vocabulary size before the experiment, as is evident in the pretest means of both the classes.

Table 16.1 also shows the posttest results of CS1 and EO1. Mean and standard deviation (SD) were 83.92 and 10.325, respectively, for CS1 while 72.57 and 11.169 for EO1. The results show that students who received explanation of unknown words in both English and Bangla outperformed the students who received explanations only in English ($t = 3.83, p = .000$).

Table 16.2 shows the pretest and posttest results of CS2 and EO2. In posttest, mean and SD were 85.04 and 9.841 for CS2 while 78.58 and 10.966 for EO2. The *t*-test results show significant difference in posttest performance of the two groups: $t = 2.24, p = .03$. That is, the code-switching group from Zoology (CS2) did significantly better than the English-only group (EO2).

The *t*-test scores of the experimental and control groups of both departments demonstrated differences in the writing test, too. As shown in Table 16.3, the experimental and control groups of Psychology had a statistically significant difference in

Table 16.4 Group statistics for Zoology participants in writing test

Group	N	Test	Mean	Std. Deviation	<i>t</i>	<i>p</i>
CS2	28	Target words in writing	3.93	2.210	.81	.422
EO2	24		3.38	2.716		

the use of the 20 target words in their writing test. In this case, mean and SD were 5.38 and 5.097 for CS1 and 2.90 and 2.695 for EO1, while *t* was 2.29 and *p* was .026.

The two groups from Zoology showed difference in their use of the target words. As illustrated in Table 16.4, in this case mean and SD were 3.93 and 2.210 for CS2 and 3.38 and 2.716 for EO2. This difference, however, was not statistically significant: *t* = .81, *p* = .422.

Findings from FGDs: Finding the Meaning of Meanings

Two focus group discussions, one with Psychology students and the other with Zoology students, were conducted after the posttests. There were six students in each FGD, of whom three were boys and three girls. They were mainly from Bangla-medium education except for one student in each group from English-medium education. The FGDs revealed student perspectives on the use of L1 in English classroom.

Not surprisingly, all students except the two from an English-medium educational background overwhelmingly supported the use of Bangla in explaining new words. Most of them pointed out that using English-only teaching hinders understanding whereas a quick Bangla explanation may accelerate the learning process. One student gave the example of the word ‘herd’ which was included in the list of words in this experiment. He said that the meaning of the word was far from clear when the English definition was used; however, it turned out to be very easy when the Bangla equivalent was used. One student said:

If English definition is easy, I face no problem, but sometimes I do not understand words that are used in the definition. That’s why I have to look for “meaning of meaning”.

Three students remarked that it is better for them to learn by understanding in L1 rather than memorising L2 definitions without understanding. One of them went further, saying using too much of English boils down to nothing if students do not understand the concepts. One student explained that sometimes they were indeed familiar with the concept in their mother tongue, only that they did not know the equivalent English word. A quick use of L1 equivalent in these cases enhanced the vocabulary learning process.

While commenting, many of the students referred to their proficiency levels, which according to them was not suitable for English-only teaching-learning. However, most students were in favour of using *mostly* English in the English

classroom while occasionally using Bangla where students failed to understand or communicate. Both of the two students with an English-medium background expressed preference for English-only explanations, one of whom commented that sometimes L1 definitions did not indicate the right use. The other argued that using Bangla killed curiosity and discouraged taking risks in using L2.

To sum up, most of the 12 students in the two FGDs supported the use of the mother tongue when necessary, especially when students failed to understand and when monolingual meanings made learning of new words more difficult than the target words themselves.

Discussion

This research explored the role of L1 in L2 vocabulary learning in a tertiary-level setting in Bangladesh. In this study the use of code-switching in vocabulary teaching was examined through an experimental research design. Two classes of learners were selected to ensure a reasonable number of participants in the study. Students' retention of new words was investigated at both the receptive and productive levels by using the Vocabulary Knowledge Scale (VKS) developed by Wesche and Paribakht (1996). As shown in the previous section, in all posttests, the students who received both English and Bangla explanations from the teacher outperformed the students who had received English-only explanations. In the VKS-based posttests, the experimental groups from both Zoology and Psychology had a clear edge over the control groups in recognising and producing the target words. Similarly, in the writing test, the experimental and the control groups exhibited difference in using the target words. Except for one test, the differences were statistically significant. The findings are congruent with the findings of other studies (Baleghizadeh & Mirzaei, 2011; Celik, 2003; Liu, 2008) in which the use of L1 was found to be a boon rather than bane.

The experimental and the control groups of both classes started at a similar vocabulary level and the grouping was randomly done. It could, therefore, be argued that the L1 was a resource rather than a hindrance for the participants in this study. L1, as pointed by participants of FGDs, may help students to link new words with concepts which they already knew. While a monolingual explanation exposes learners to additional input, it may however delay the learning of the target words. As a result, even though the quantity of input might be increased, the quality of retention might not.

The findings in this study speak in favour of exploiting L1 in explaining new vocabulary items. As Cook (2001) points out, L2 meanings do not necessarily exist independent of L1 meanings. Vocabulary teaching, therefore, should involve an effort to enhance the connection of concepts learned in L1 and L2. The findings can also be analysed in terms of Cook's four factors for using L1: efficiency, learning, naturalness and external relevance. Using both L1 and L2 was viewed by learners to be more efficient than using L2 only, while posttest results indicate that learning of

words, though short-term, was better in the bilingual mode. Use of L1 in explaining meaning also appears to be natural, as cited in the case of the word 'heron'. Words like this can be quickly translated into Bangla because the one-morpheme Bangla word *bok* seems to be much easier than the definitions in the monolingual dictionaries. Moreover, code-switching does have an external relevance in Bangladeshi society as it has uses for both English and Bangla outside the classroom.

The results are also congruent with Sampson's (2012) findings that L1 use serves communicative and learning purposes. He found that L1 expressions are used among other reasons for equivalence and clarification. In this study, L1 was used in a similar way which appeared to have contributed to learning. The use of L1 in this study can also be called a 'scaffolding strategy' that enhances learning as reported by Bhooth et al. (2014).

'Principled' or 'judicious' use of L1 has been discussed in scholarly literature. As research in the area is still far from conclusive, interpretation of these terms has been more intuitive than evidence-based. This research indicates one particular area – namely, explaining new words – where L1 might be beneficially used, although it is acknowledged that generalising based on a small-scale research like this may be insufficient. Further research may be able to cast light on the best uses of L1 in L2 pedagogy in similar sociolinguistic contexts.

The study had a few other limitations, too. Attempts were made to control extraneous variables. For example, students were randomly assigned to groups, high scorers were excluded from the test, and students missing any of the three sessions were excluded. There might still have been other variables which could not be controlled, such as motivation or the actual time individual students employed in learning the new words after the pretest and the lesson. The higher standard deviations in the posttests than pretests suggest that some unidentified variables might have been present, although they did not affect the results in a major way since the results were statistically significant and consistent in all cases. Another limitation of the study was that it examined only short-term retention of words. Future research might be necessary to determine if code-switching helps in long-term retention of new lexical items.

Conclusion

The use of code-switching in L2 teaching-learning was proscribed throughout most part of the twentieth century and is still viewed undesirable by many. In recent years, however, there appears to be a more critical appraisal and evaluation of the role of L1 in L2 pedagogy. Recent literature shows that in L2 teaching, especially in vocabulary teaching, L1 may serve as a productive resource which is readily available, easy and quick. L1 may serve as an aid or scaffolding tool for the learners. This small-scale case study attempted to examine the role of English-Bangla code-switching in learning new words in a Bangladeshi university setting. The findings of the study showed that L1 worked as a resource for the learners in the study. Learners

who received explanation of new English words in both English and Bangla performed better than those who received explanations only in English. Further research is necessary to ascertain conclusively the role of L1 in L2 vocabulary teaching and learning. This study, nevertheless, offers an experimental investigation into the effect of L1 use in L2 vocabulary pedagogy. Research of this nature has not been very common, especially in Bangladeshi context. The study has been able to indicate that L1 can be exploited to learners' benefit in explaining new words.

References

- Akhter, N. (2008). *Speaking English in the English Department: An analysis of the textbook, teacher and student perceptions on the approaches to speaking in an English language course at Dhaka University*. MA thesis, University of Warwick.
- Baleghizadeh, S., & Mirzaei, A. (2011). A comparison of two different types of vocabulary treatment: Inclusion or exclusion of L1? *Theory and Practice in Language Studies*, 1(7), 765–770.
- Bhatt, R. M., & Mahboob, A. (2008). Minority languages and their status. In B. B. Kachru, Y. Kachru, & S. N. Sridhar (Eds.), *Language in South Asia* (pp. 132–152). New Delhi, India: Cambridge University Press.
- Bhooth, A., Azman, H., & Ismail, K. (2014). The role of the L1 as a scaffolding tool in the EFL reading classroom. *Procedia-Social and Behavioral Sciences*, 118, 76–84.
- Brooks, N. (1964). *Language and language learning*. New York: Harcourt Brace.
- 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(1), 29–39.
- Carless, D. (2008). Student use of the mother tongue in the task-based classroom. *ELT Journal*, 62(4), 331–338.
- Celik, M. (2003). Teaching vocabulary through code-mixing. *ELT Journal*, 57(4), 361–369.
- Chaudhury, T. A. (2013). *English language needs: An in-depth study on Dhaka University students*. Dhaka, Bangladesh: Osder Publications.
- Chowdhury, N. (2012). Classroom code switching of English language teachers at tertiary level: A Bangladeshi perspective. *Stamford Journal of English*, 7, 40–61.
- Cook, V. (2001). Using the first language in the classroom. *Canadian Modern Language Review*, 57(3), 402–423.
- Copland, F., & Neokleous, G. (2011). L1 to teach L2: Complexities and contradictions. *ELT Journal*, 65(3), 270–280.
- Cummins, J. (2008). Teaching for transfer: Challenging the two solitudes assumption in bilingual education. In J. Cummins & N. J. Hornberger (Eds.), *Encyclopedia of language and education, Bilingual education* (Vol. 5, pp. 65–75). New York: Springer.
- Duff, P., & Polio, C. (1990). How much foreign language is there in the foreign language classroom? *The Modern Language Journal*, 74(2), 154–166.
- Ellis, R. (1984). *Classroom second language development*. Oxford, UK: Pergamon.
- Hamid, M. O. (2006). English teachers' choice of language for publication: Qualitative insights from Bangladesh. *Current Issues in Language Planning*, 7(1), 126–140.
- Hamid, M. O., Jahan, I., & Islam, M. M. (2014). Medium of instruction policies and language practices, ideologies and institutional divides: Voices of teachers and students in a private university in Bangladesh. In M. O. Hamid, H. T. M. Nguyen, & R. B. Baldauf Jr. (Eds.), *Language planning for medium of instruction in Asia* (pp. 144–163). Abingdon, UK: Routledge.
- Islam, M. J., & Ahsan, S. (2011). Use of Bangla in EFL classes: The reaction of the secondary level students and the teachers in Bangladesh. *ASA University Review*, 5(2), 197–222.

- Knight, T. (1996). Learning vocabulary through shared speaking tasks. *The Language Teacher*, 20(1), 24–29.
- Krashen, S. (1981). *Second language acquisition and second language learning*. Oxford, UK: Pergamon.
- Lin, A. M. Y. (2008). Code-switching in the classroom: Research paradigms and approaches. In K. A. King & N. J. Hornberger (Eds.), *Encyclopedia of language and education, vol. 10: Research methods in language and education* (pp. 273–286). New York: Springer.
- Liu, J. (2008). L1 use in L2 vocabulary learning: Facilitator or barrier. *International Education Studies*, 1(2), 65–69.
- Littlewood, W., & Yu, B. (2011). First language and target language in the foreign language classroom. *Language Teaching*, 44(1), 64–77.
- 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). Boston: Springer.
- Macaro, E., & Lee, J. H. (2013). Teacher language background, codeswitching, and English-only instruction: Does age make a difference to learners' attitudes? *TESOL Quarterly*, 47(4), 717–742.
- Milroy, L., & Muysken, P. (1995). Introduction: Code-switching and bilingualism research. In L. Milroy & P. Muysken (Eds.), *One speaker, two languages: Cross-disciplinary perspectives on code-switching* (pp. 1–14). Cambridge, UK: Cambridge University Press.
- Pinker, S. (1994). *The language instinct: How the mind creates language*. New York: Harper Collins.
- Read, J. (1993). The development of a new measure of L2 vocabulary knowledge. *Language Testing*, 10(3), 355–371.
- Sampson, A. (2012). Learner code-switching versus English only. *ELT Journal*, 66(3), 293–303.
- Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329–363.
- Sinha, B. S., Mahboob, T. S., Bashir, A., Basu, B. L., & Akhter, N. (2014). *Endeavour: An introductory language Coursebook*. Dhaka, Bangladesh: Department of English, University of Dhaka.
- Sultana, S. (2014). English as a medium of instruction in Bangladesh's higher education: Empowering or disadvantaging students? *Asian EFL Journal Quarterly*, 16(1), 11–52.
- Sunderman, G., & Kroll, J. F. (2006). First language activation during second language lexical processing. *Studies in Second Language Acquisition*, 28, 387–422.
- Turnbell, 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.
- Wesche, M., & Paribakht, T. S. (1996). Assessing second language vocabulary knowledge: Depth versus breadth. *The Canadian Modern Language Review*, 53, 13–40.
- Wong-Fillmore, L. (1985). When does teacher talk work as input? In S. M. Gass, M. Carol, & C. M. Madden (Eds.), *Input in second language acquisition* (pp. 17–50). Rowley, MA: Newbury.
- Zarei, A. A., & Arasteh, S. T. (2011). The effects of code-mixing, thematic clustering, and contextualization on L2 vocabulary recognition and production. *Journal of Language and Culture*, 2(6), 96–102.