

The Effects of 25 Years of Bilingual Education on Vocabulary Knowledge

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Abstract

One of the most fundamental, yet often overlooked, challenges facing all language learners is that of acquiring sufficient vocabulary for their needs. This study seeks to determine what kind of vocabulary knowledge has been acquired by a group of UBD undergraduates who are products of the bilingual education system some 25 years after its inception in Brunei schools. The study also seeks to determine to what extent this knowledge will meet their needs for an English medium university programme. Paul Nation's levels tests (receptive and controlled production) are used to measure their vocabulary. These tests are administered on entry to university and again after two years of their degree programme. Participants are also surveyed in an attempt to uncover their attitudes to, and practices for, vocabulary learning. The paper then considers the reasons for the findings, including the role of bilingual education, and whether or not the students are on target to meet the standards required by the academic and social communities they currently move in. Finally, the paper also considers any implications the findings may suggest for future developments in English language teaching in Brunei.

Introduction

Since Brunei Darussalam has by now had 25 years of bilingual education, it would seem appropriate to consider some of the effects on the learners who have passed through the system. It is important to try and assess how successful the system has been, especially in the various aspects of language learning, both Malay and English.

As a new approach, termed SPN21 (*Sistem Pendidikan Negara Abad Ke-21*, 'National System of Education for the 21st Century'), is currently being implemented in Brunei schools, this seems an especially apt time to reflect on the state of English language learning outcomes. Under SPN21, for example, students have even greater exposure to the English language as they study mathematics and science in English right from the onset of primary school, whereas in the past these subjects were taught in Malay for the first three years.

Specifically, this paper seeks to compare the vocabulary knowledge of a group of school leavers on their entry as trainee teachers at UBD with its development over their first two years of study.

Why study vocabulary?

Second language learners generally view having a good vocabulary in the target language as a high priority (Schmitt, 1997). This is the case even if the main purpose of learning the language is simply social, for example to allow the learner to participate in the many online activities currently popular among young people. Vocabulary takes on greater importance when the learner is embarking on a degree programme in which the target language will be the medium of instruction, and it becomes still more vital if the learner's ultimate goal is to be a teacher of the target language. Thus for the group of learners under scrutiny in this study, vocabulary knowledge is of considerable importance as they seek to become members of a range of communities that function in English. Such students will have multiple and diverse vocabulary needs if they are to successfully access and participate in the various genres they will encounter on their way to entering the workforce as effective practitioners of their trade.

While learners normally attach great importance to vocabulary learning, the same cannot always be said of the world of language teaching generally, and vocabulary has sometimes been pushed into a backseat position in the past. Although researchers took a greater interest in the area after the 1990s, it remains open to debate just to what extent recent interest has actually changed teaching materials and practices around the world. The tendency to overlook vocabulary has been mentioned, for example, by Richards (2000), who notes that teachers tend to assume that vocabulary learning will somehow take care of itself. It is especially important not to lose sight of the central role of vocabulary knowledge, particularly at a time when the focus tends to be on skills rather than on knowledge as well as the integration of skills and communication in the world of language teaching.

The Background of Brunei Learners of English

Brunei students appear to enjoy a number of advantages when it comes to learning English (Nicol, 2008). Many of these advantages are built into their education system, as by the time Brunei students start their university course, they will have had between eleven and thirteen years of studying English as a school subject (around four hours per week). Furthermore, the implementation of the bilingual system in 1984 has meant that, from Primary 4 onwards, the medium of instruction for most of their school subjects has been English (the exceptions being religious studies, Malay language and MIB). Students will have enjoyed the benefits of native speaker teachers for at least part of that time, for English language as well as for some other subjects, and they will have been taught English mostly by teachers with a TESOL background, both expatriates and locally-trained professionals. The advantages continue outside the classroom too, as most Brunei learners have access to satellite television in English as well as a daily English language newspaper although, despite the availability of printed material, students do not seem to read a great deal (Ghadessy & Nicol, 2001). In addition, there is a high level of access to, and usage of, the internet and mobile phone technology, much of which is in English.

Despite these advantages, many Brunei students struggle to get a credit in the Cambridge English language O level paper which serves as a gate-keeping examination for entry into higher education. The examination requires a comparatively high level of vocabulary knowledge and this has proved to be one of the most problematic parts of the paper for Bruneian students. For example Nicol (2004) showed that only 25% of all answers to vocabulary questions in the mock examination scripts of a group of students gained any marks at all.

The nature of the examination paper would seem to indicate that vocabulary learning should be a high priority in Brunei English language textbooks and classrooms, but this has not necessarily been the case. In fact there seem to be a number of mismatches between the various elements in the English language learning situation in Brunei. On the one hand there is what many would consider to be an out-dated exam (the Brunei Cambridge O level) being taught by teachers (both local and expatriate) who are trained in contemporary western EFL methodologies. Teaching materials and methodologies currently in use in Brunei have been influenced by communicative language teaching practices in recent years, and as a result explicit vocabulary teaching has not always been in the foreground. There are textbooks and teaching materials in use that attempt to meet the expectations of current views on language learning, yet at the same time defer to more traditional Asian values as well as Islamic sensitivities.

Added to this is the fact that the learning process takes place in schools that are often managed by administrators with a fairly conservative, traditional view of education, and in which teachers of other subjects may also take relatively conservative approaches (Ghadessy & Nicol, 2002; Saxena, 2008). The wider society in which these schools operate, whilst placing great value on education, continues to place considerable trust in traditional approaches to learning (Jones, Martin & Ozog,

1993). All of this is unlikely to match the attitudes and values held by recently-trained EFL specialists.

It was in the context of this potentially confusing background that the researchers decided to investigate the outcomes in terms of the vocabulary knowledge of a group of Brunei learners.

The study

The study seeks to measure the vocabulary size of a particular group of students at the start of their undergraduate studies, to gauge whether or not it was sufficient for their academic needs, to determine to what extent they were using the vocabulary available to them, and to measure any progress made by these students over the first two years at university.

First, it is important to consider what their specific needs might be.

Vocabulary and academic reading

The first question concerns the vocabulary size needed for successful academic reading. Estimates vary, but a vocabulary size at the 5000 word level can be considered the absolute minimum for academic work (Laufer, 1989), as it would give 95% text coverage. Laufer (1997) estimates that the threshold for successfully inferring the meaning of new words is probably around 5000 words. Other researchers suggest that a vocabulary of 8-9000 words would give 98% coverage, so one word in fifty is unknown (Hu & Nation, 2000). This should ensure comprehension of a range of authentic texts (Schmitt, 2008), would allow transfer of skills from the first language, and should also permit sufficient understanding of the surrounding text to let students have a reasonable chance of successfully inferring the meaning of new words.

Vocabulary and understanding spoken discourse

For understanding day-to-day spoken discourse, Nation (2006) estimates a vocabulary of 6-7000 words would be sufficient, although others have suggested that a reasonable level of comprehension can take place with lower vocabulary levels. For example, Schmitt (2008) calculates that a vocabulary as low as 2-3000 words may be adequate. Staehr (2008) confirms that there is a correlation between vocabulary size and listening skills although this is not as strong as the correlation between vocabulary and reading.

Vocabulary and student writing

There appears to be a strong correlation between a student's vocabulary use and the perceived quality of a piece of writing by markers (Nation, 2001). Coady (1997) suggests that a controlled productive vocabulary of 4-5000 words is needed for academic writing.

Methodology

The study took place over two academic years from August 2007 until May 2009.

Participants

The participants were from the TESL programme at UBD (a programme which has since been discontinued). They had chosen to study an English-medium programme in English language and linguistics as well as education, qualifying them after four years of university study to become English teachers in Brunei schools. This might suggest a fairly high level of proficiency, but in fact over half of them had only a credit pass in O level English language, which is the minimum requirement for those wishing to pursue tertiary education in Brunei. Thus although they had confidence and interest in the study of English, they may not have been significantly more proficient than other UBD undergraduates. Over the two-year period, the students took a course in

language development with the two authors of this paper. A total of 12 students were present for all parts of the study.

Instruments

The instruments used in the study were Nation's 1983 and 1990 receptive vocabulary levels test at the 2000, 3000, 5000 and 10,000 word levels as well as the University Word List level, and Nation's 1999 controlled production test. In the receptive vocabulary test, subjects are required to match the equivalent meaning for three words from six alternatives – a total of 30 items for each level and, in total, 150 items. An example item in the University Word List level is:

- | | | |
|----|-----------|-----------------------------|
| 1. | agree | |
| 2. | poster | _____ have the same opinion |
| 3. | colouring | _____ something put in food |
| 4. | second | _____ normal |
| 5. | average | |
| 6. | result | |

In Nation's 1999 controlled production levels test, the subjects are required to provide a missing word to complete a sentence. The students are given the first letter(s) of a word in order to restrict possible answers. There were 18 items at each level, so in total 90 items. Two example items are as follows, where the correct answers are *parole* and *orchids* respectively.

1. The prisoner was released on par_____
2. Her favourite flowers were or_____

These tests were chosen since a number of other researchers (Cobb & Horst, 2000; Laufer, 1994) have used them for similar studies, so comparisons with the findings of other studies would be possible.

Finally the researchers administered a brief survey to determine what attitudes, beliefs and practices the participants had concerning the learning of vocabulary.

All tests and the survey were carried out in lecture time by one or other of the two researchers.

Research Questions

The research questions were:

1. How large was the vocabulary of this cohort of students on entry to UBD?
2. Was their vocabulary sufficient for academic reading, writing and understanding spoken discourse?
3. How much progress, if any, did they make over the first four semesters at UBD?
4. What factors might account for the state of their vocabulary and what recommendations might be made for improving matters?

Findings

The test results for receptive vocabulary in 2007 are shown in Table 1 (where UWL refers to 'university word list'). These results show that, on entry to UBD, all students passed all levels for receptive vocabulary except for the 10,000 word level, which just under half of them passed. This would suggest a receptive vocabulary of around 6,000 or 7,000 words.

| 2,000 | 3,000 | 5,000 | UWL | 10,000 |
|-------|-------|-------|------|--------|
| 100% | 100% | 100% | 100% | 41% |

Table 1. Percentage of students on entry to UBD passing at each level for receptive vocabulary

Table 2 shows the comparable results for 2007 for productive vocabulary. This shows that the controlled productive vocabulary for the students on entry to UBD is considerably lower than their receptive vocabulary. Most students were below the 4,000 level required for academic writing.

| 2,000 | 3,000 | 5,000 | UWL | 10,000 |
|-------|-------|-------|-----|--------|
| 100% | 75% | 16% | 8% | 8% |

Table 2. Percentage of students on entry to UBD passing at each level for controlled production

For receptive vocabulary after four semesters at UBD, 50% of the students passed the 10,000 level test. This is only a small improvement over the 41% who passed on entry to UBD (as shown in Table 1).

The results for productive vocabulary after two years at UBD are shown in Table 3, and the results are compared with the earlier results. In this table, the average scores for all levels except the basic 2000 level are shown in addition to the percentage of students passing each level.

| | 2,000 | 3,000 | 5,000 | UWL | 10,000 |
|------|-------|----------------|----------------|----------------|----------------|
| 2007 | 100% | 75% (82.8%) | 16% (64.3%) | 8% (72.6%) | 8% (66.6%) |
| 2009 | 100% | 66% (85.1%) | 33% (72.2%) | 33% (75.9%) | 16% (68.9%) |

Table 3. Percentage of students on entry to UBD and after two years passing at each level for controlled production (average scores are shown in brackets)

Table 3 shows that there was a small improvement at each level, except for the percentage passing the 3,000 word level. However, even for the 3,000 level, the average score rises. The greatest improvement in average scores is at the 5,000 word level, even though most students still remain below the target level. (It is unclear why the average score for the 10,000 word level should be slightly higher than for the 5000 word level in 2007.)

Discussion

The first two research questions consider receptive vocabulary size on entry to university and if it is sufficient for academic reading, understanding spoken discourse, and writing.

The results suggest that on entry to university the students had, by and large, already achieved the basic receptive levels needed for academic reading and understanding spoken discourse, or at worst, had come close. They all met the lower 5,000 word estimate. These results compare favourably with other learners in the region. For example, Table 4 compares the UBD results with those of a study at Hong Kong City University conducted with first and second year students taking an English language higher diploma course (Cobb & Horst, 2000).

| | 3,000 | 5,000 | Word List |
|------------|-------|-------|-----------|
| HK Year 1 | 91.7% | 64.4% | 72.2% |
| HK Year 2 | 91.0% | 73.4% | 72.0% |
| UBD Year 1 | 98.0% | 93.6% | 97.7% |
| UBD Year 2 | 98.6% | 95.5% | 98.6% |

Table 4. Percentage passing each level for Brunei and Hong Kong students

It is possible that the relative success of the UBD students arises from the advantages enjoyed by students in Brunei that were mentioned earlier in this paper, including the bilingual system they had come through as well as the rigorous practice of reading comprehension past papers for the O level examination. For example they nearly all show mastery of the university word level. It may be that the nature of the O level examination to some extent complements the influence of communicative language teaching. The communicative approach may not place a great deal of emphasis on vocabulary knowledge, but preparation for the O level examination ensures that students are at least exposed to a considerable amount of vocabulary, even if they are unable to produce or re-express it to the level required by the O level examination. These results suggest that these learners have left school with a receptive vocabulary generally considered sufficient for academic study.

For controlled production, the results suggest that the majority of the students fall somewhat short of the target suggested for academic writing. It is normal for there to be a gap between receptive and productive vocabulary (Webb, 2005). However, these scores suggest the gap is larger than expected.

One possible explanation for this is that school students may not be given sufficient opportunity to compose and produce stretches of language either in written or spoken form. This could be due to the prevailing learning and teaching styles, emphasis on examination technique, large classes, and a reluctance to take risks. It may be that the relatively high level of receptive vocabulary is being developed at the expense of productive vocabulary.

A further possible explanation might lie in the style of vocabulary learning the students have experienced. There is general agreement amongst researchers (Paribakht & Wesche, 1997; Schmitt, 1997, Sokmen, 1997, O'Dell, 1997) that learning which involves some active processing of new words is more likely to make those words available for future productive use. It is possible that Brunei learners have come to rely more on incidental and passive learning strategies for vocabulary learning. For example, studies have found almost no processing of new vocabulary encountered during a reading comprehension class in Brunei (Nicol, 2004; Ho, 1998).

The third research question asks how much progress, if any, the students made over the first four semesters at UBD. We find that the levels of receptive vocabulary change very little, if at all, over the two year period.

This is possibly because the students have already reached a level that is sufficient for their purposes for the time being, and so there is currently no great pressure or motivation to increase it. At this stage in their education there is probably little, if any, explicit vocabulary instruction, and research suggests that incidental learning will only take place if large quantities and varieties of text are read. For example, Hill and Laufer (2003) estimate that in order to increase vocabulary by 2000 words by means of incidental learning alone, a learner would have to read the equivalent of about 420 novels. If the students in the study are currently, as they report, reading little or a limited range of genres, then increase in vocabulary size is unlikely.

There is, on the other hand, slightly more progress with controlled production levels. It is possible that students are by now experiencing more opportunities for production and are able to retrieve and use more vocabulary items. However, progress is disappointingly slow. It is worth noting that written tasks completed during the two years show that the students had, overall, more successfully mastered a number of other features of academic writing over the period.

The fourth research question considers insights from attitude surveys completed by the students at the start of the research period. As is often the case with surveys of this nature, the students are aware of the importance of vocabulary in their development of English language skills (Read, 2000) and in fact all ranked vocabulary in their top three priorities for improvement, along with grammar and confidence with speaking in formal situations.

Paradoxically, they reported doing almost nothing to actively increase or in any other way develop their vocabulary skills. Nor did they report a desire to have explicit vocabulary teaching,

although research suggests that this is useful. Instead, they reported that the majority of new words were encountered in either leisure reading or study-related reading and lectures. It seems that they depended mostly on print sources rather than electronic media at this stage.

As for their beliefs about vocabulary learning, they all reported a conviction that reading more would be the best way to improve their vocabulary. Some conceded that they did not read a wide enough range of genres for this to happen, but the general feeling was that the input environment was adequate. However, it may be that they place too much faith in the incidental learning approach, as the amount of reading they engage in is insufficient for significant vocabulary gains to be made. Other researchers have reported a tendency for over reliance on mechanical or passive methods with Asian students (Wei, 2007) and recommended a much broader approach to vocabulary learning generally (Gu, 2003).

The students also reported a belief that having opportunities to use their existing vocabulary was crucial but reported that they felt they had insufficient opportunity to do so. Research suggests that they are correct in their belief (August *et al*, 2005) and it may well be that they lack opportunities to practice production and fluency skills and therefore the output environment could be better. If the participants are correct, then perhaps it can be assumed that, while the school system has served them well in developing receptive vocabulary, it may have served them less well in terms of production opportunities, and this may be a situation that continues during their early university years. However, it is perhaps worth noting here that Fan (2003) found discrepancies between the strategies learners believed to be useful and those that they actually used.

An interesting and potentially significant attitude was their belief that having a high level of vocabulary would be of little use to them as few other people would know what the words meant. It was further felt to be undesirable as it would make them appear to be showing off – the higher your vocabulary level, the greater the social distance between you and your peers. Perhaps it can be inferred from this that the desire of these students to remain members of the socially cohesive community of English language users among young Bruneians may actually inhibit them from acquiring the productive vocabulary they need in order to function more effectively in the academic community.

Tentative conclusions and recommendations

In conclusion it appears that the students involved in this study left school with relatively high levels of receptive vocabulary. This may be a result of the exposure offered by the bilingual system, the particular demands of the O level examination, and the ease of access to electronic and print material. The levels attained should be sufficient to allow them to engage in academic reading and listening.

On the other hand this success was not matched with controlled production. This could be a result of a limited range of approaches to vocabulary learning by students and their teachers. A further obstacle for Brunei learners could be that the learning environment in which they operate does not offer them enough practice in productive language use. These two problems should be addressed within the English language programmes in use in schools.

Two further potential obstacles came to light during the study. One is that the success enjoyed by the participants with their receptive vocabulary may cause them to become complacent, as they feel they manage quite well with the vocabulary they have. The other is that despite being aware of the importance of a good productive vocabulary for academic communication, they are conscious of it being of little value, or possibly even affecting them negatively, in social contexts. These last two obstacles would be more complex to address and would be interesting areas for further study.

While 25 years of bilingual education seem to have served Brunei's students well in terms of some aspects of their vocabulary development, there remain areas that could benefit from greater attention in the years to come.

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