ABSTRACT
              This study compared the performances of four groups
of Hong Kong teachers of English as a Second Language on a language
teaching task. Subjects were two groups of native English-speaking
teachers, one of expert teachers and one of novices, and two groups
of non-native English-speakers, one of experts and one of novices.
All were asked to preview an English text and select 12 words they
thought would be unfamiliar to a specific student level. A group of
200 students from Hong Kong secondary schools took vocabulary tests
on the same text. Comparison of the results suggests that
native-speaker teachers are at a distinct advantage in identifying
problematic vocabulary in connection with reading texts, and that
while teaching expertise can improve non-native-speaking teachers'
ability, it can actually obscure the judgments of non-native speakers
by interfering with their more intuitive judgments about vocabulary
difficulty. The text used is appended. Contains 11 references and 5
tables. (MSE)

SOME CHARACTERISTICS OF NATIVE AND
NON-NATIVE SPEAKER TEACHERS OF ENGLISH

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Introduction

It is often assumed that teachers who teach their own mother tongue have a number of advantages over teachers who are not native speakers of the language they teach. Native speaker intuitions about language are supposed to result in the production of correct, idiomatic utterances, as well as providing the ability to recognise acceptable and unacceptable versions of the language. Most non-native speaker teachers of English can only aspire to this. However, a possible disadvantage faced by the native speaker teacher of ESL is the linguistic distance between teacher and learner. Are native English speakers likely to be less sensitive to their learners' language needs because they have less access to their students' language and, by extension, to the way in which their students process English as a second language?

This paper reports the results of a study which compares the performances of four groups of Hong Kong teachers on a language teaching task. Two of the groups consist of native English speakers, while the others consist of native speakers of Cantonese, which is the L1 of the students referred to in the study. The difficulties involved in defining precisely what constitutes a native speaker of a language have long been of interest to applied linguists. Davies (1991) argues that the differences are far from clear-cut and that there is the possibility of mobility from non-native to native speaker. However, as far as the subjects in the present study are concerned, none of the non-native speakers of English would wish to be considered as native speakers. While all of them grew up in Hong Kong and received most of their education there through the medium of English, their dominant language is Cantonese. Their use of English tends to be restricted to school and university, with Cantonese being used almost exclusively at home and on social occasions.

Background

The study addresses the issues of teachers' language awareness and their sensitivity to students' language difficulties, in particular the ability to anticipate the problems which learners face when exposed to particular texts. Brutten (1981) argues that ESL teachers are generally accurate in their anticipation of students' vocabulary difficulties. Her conclusions are based on a study which asked a group of native speaker ESL teachers to identify the difficult vocabulary items in a reading text intended for a particular level of ESL learner. A group of ESL students of the same proficiency level was asked to identify the words which they found most difficult in the text and the patterns of teacher and student selections were compared. The words identified by the teachers were largely the same as those selected by the students. When the Brutten study was replicated in Hong Kong (McNeill 1992), using Cantonese-speaking teachers and students, it was found that while the

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correlation between the teachers' and students' selections was high and indeed close to the correlation established by Brutten (r=.674, p<.01, Brutten 1981; r=.664, p<.001, McNeill 1992), some important differences emerged in the patterns of choice between the two groups. Since correlation is a trend analysis, it is not possible to conclude from the high correlations alone that the patterns of choice of the two groups were significantly similar. In order to determine whether there was any significant difference between the two groups' results, Brutten then ran a t-test, the results of which were not significant. By contrast, the results of a t-test on the Hong kong samples was highly significant (t=3.75, p<.0001), which suggested that differences existed in the patterns of choice, which merited closer investigation.

An obvious difference in the two studies lies in the use of native and non-native speaker teachers. Did the ESL teachers who were native English speakers have some sort of advantage as a result of their native speaker intuitions about English? In order to explore this line of investigation further, the present study compares groups of native and non-native speaker teachers on the same language task.

A possible weakness of the two studies mentioned above is that there is no objective measurement of the students' vocabulary knowledge. The students simply underlined words in a text to indicate that they required explanation of the meaning. It is quite possible that the studies included students who over-estimated their vocabulary knowledge, e.g. by guessing wrongly the meaning of some words, as well as some students who under-estimated their vocabulary knowledge, e.g. by claiming they did not know the meaning of a word when they had inferred the meaning correctly from the context. McNeill's (1993) follow-up study introduced an objective vocabulary assessment. A 40-item vocabulary test was constructed, consisting of the 40 words which a sample of teachers identified as the most likely to present difficulty for ESL students reading the text. The vocabulary tests were administered to 200 upper-intermediate level (Form 6) secondary school students. The tests were given to each student twice: first as a list of 40 isolated words for which the student had to provide the L1 (Chinese) equivalent, then in connection with the reading text from which they were taken, allowing the students to consult the text and make use of contextual clues. The teachers' selections of words were then compared with the results of the two vocabulary tests. The extent to which teachers identified the difficult words in the second (contextualised) vocabulary test became the main focus of interest, since the ability to identify contexts which provide learners with clues to the meaning of unknown words is an essential part of the teachers 'sensitivity to learners' difficulties.

The ways in which ESL learners cope with contextual clues have been investigated by Liu and Nation (1985) and Li (1988). The characteristics of contexts which are helpful to language learners have also been examined (Perkins and Brutten 1983, Schouten van Parreren 1985). Since the teachers who took part in the study were meant to identify only the words which the students needed to know to understand the main ideas in the text, it was not intended that the students should learn new vocabulary from inferring the meaning of new words. Indeed, researchers are cautious about recommending inferring from context as a means of learning new vocabulary (Mondria, J.-A. and Wit-de-Boer 1991).

Research Questions

The present study addresses three questions:

1. Do (native speaker) ESL teachers, as a group, predict learners' vocabulary difficulties in reading texts accurately?

2. To what extent does the ability to predict learners' vocabulary difficulties vary among individual teachers?

3. What similarities and differences can be detected in the way native and non-native speaker teachers of English predict learners' vocabulary difficulties in reading texts?

Subjects

Four groups of teachers took part, two of whom were native speakers of English and two of whom were native speakers of Cantonese. The two groups for each language consisted of an experienced ("Expert") group and an inexperienced ("Novice") group. The Expert group of Cantonese speakers consisted of teachers who had completed a degree, a postgraduate qualification in English teaching and were, at the time of the study, in the process of following a master's degree in teaching ESL. Not only were they advanced users of English, as far as their own proficiency was concerned, but they also had a good knowledge of language analysis and had taken courses in language acquisition. The Expert group of English native speakers had all completed a relevant master's degree. All of the Experts had at least three years' experience of teaching ESL. By contrast, the Novice groups had had little exposure to education theory, language teaching methodology and very limited experience of teaching ESL. The Cantonese speaking group were all English majors in the first year of studying for a bachelor's degree in education. Their theoretical knowledge of language analysis and language acquisition was basic. The English native speaker Novices were attending the Royal Society of Arts Certificate in Teaching English as a Foreign Language at the British Council in Hong Kong. This is a pre-service course intended for teachers interested in embarking on a career in TEFL. None of the English native speakers in the study had more than a very basic command of Cantonese.

The four groups of teachers can be characterised as follows:

1. Native Speaker Expert (NSE)

2. Native Speaker Novice (NSN)

3. Non-native Speaker Expert (NNSE)

4. Non-native Speaker Novice (NNSN)

The use of the terms "Expert" and "Novice" to describe the two levels of teacher expertise is based on Berliner's (1989 and forthcoming) theory of the development of expertise in teachers. In the present study only two extremes of teacher expertise are included. Berliner's research compares the performance and attitudes of teachers across various levels of expertise: "novice", "advanced beginner", "competent", "proficient" and "expert".

The students are the 200 Form 6 pupils (Arts Stream) from Hong Kong secondary schools who took part in the vocabulary tests in McNeill 1993. The text used is the same as in the previous study. The students' scores on the two 40-item vocabulary tests mentioned above are also used in the present study.

Procedure

The four Teachers' groups were asked to preview the text, *The Sword That Can Heal* (Appendix) and to imagine that they would use the text in a reading skills lesson with Form 6 (Arts Stream) students (or Hong Kong students of equivalent English proficiency). They were asked to select the twelve words from the text which, in their judgement, the students would need to have explained to them in order to gain a general understanding of the text. It was assumed that the words selected would be new to the students and that the students could not be expected to infer the meanings of the words from the context. In making their selection, the teachers had to ask themselves the following questions:

1. Which words were unfamiliar to the students?

2. Which were essential for a grasp of the general sense of the text?

3. How many of the new words could the students deal with on their own, using contextual or word-internal clues?

Data Analysis

The data analysis was conducted as follows:

1. The patterns of four Teacher group selections were compared with the results of two Students' vocabulary tests (correlation).

2. Individual differences within the four Teachers' groups were analyzed (scatterplot, phi coefficient).

3. The four Teachers' groups' ability to identify the words which the Students found most difficult words was compared (ANOVA).

Results and Discussion

The correlations between the four Teachers' groups' selections and the words which were unknown to the Students are shown in Table 1.

Table 1

Correlations Between Teachers' Selections

and Students' Unknown Words

	Condition	
Group	Words in isolation	'Words in context
NNS Expert	.5061	.4564
NNS Novice	.5889	.5199
NS Expert	.2002	.2298
NS Novice	.0487	.0796

Basically, the correlations between the two non-native speaker Teachers groups' selections are high, both for words in isolation and words in context, whereas both of the native speaker Teachers groups show low correlations with both tests. For all of the teachers it appears to be more difficult to predict the words which will cause learners difficulties when they appear in context than when they appear in isolation. The group which is most successful in predicting the Students' vocabulary needs is the group of Novice non-native speakers (NNSN), while the group which is least successful is the group of Novice native-speakers (NNS). The correlation results suggest that teachers who speak the learners' L1 have a distinct advantage when it comes to identifying vocabulary needs. Even the Expert native speaker teachers (NSE) made a poor show of identifying the vocabulary difficulties, which suggests that their experience and training had not had a major effect on their ability to identify the learners' difficulties in this particular text. In fact, it might be argued that the NNSN group were at an advantage over their NNSE colleagues inasmuch as they had not been influenced by any linguistic or educational theory which might have interfered with their selection of the difficult vocabulary items.

Interesting as these results are, they do not really tell us how the individual members of each group performed. For example, we cannot really tell whether all of the native speakers were weak at identifying the vocabulary difficulties or whether some were good and others were bad. In order to get a more detailed picture of the behaviour within each group, the teachers' selections were analyzed in more detail. It was noted that out of the 40 words in the second (contextualised) vocabulary test, eight words were known by only 15% of the students. There were

also eight words which 85% of the students got right. Ideally, the teachers should have selected the eight "hard" words and completely ignored the eight "easy" words. To find out how well each teacher performed in identifying the "hard" words and in avoiding the "easy" words, each teacher's selection was examined and given two scores out of eight: (a) the number of "hard" words selected and, (b) the number of "easy" words selected. The scores were then used to prepare scatterplots for the four groups. These are shown in Figures 1 to 4.

Figure 1

Teachers' selections of "hard" and "easy" words

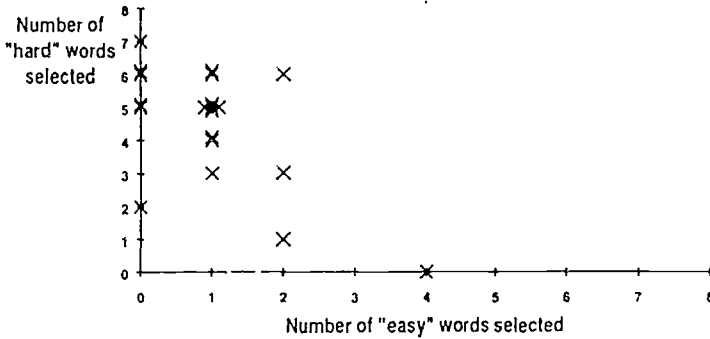### (Group NNSE)

Number of "hard" words selected

Number of "easy" words selected

Figure 2

Teachers' selections of "hard" and "easy" words

(Group NSE)

Number of "hard" words selected

Number of "easy" words selected
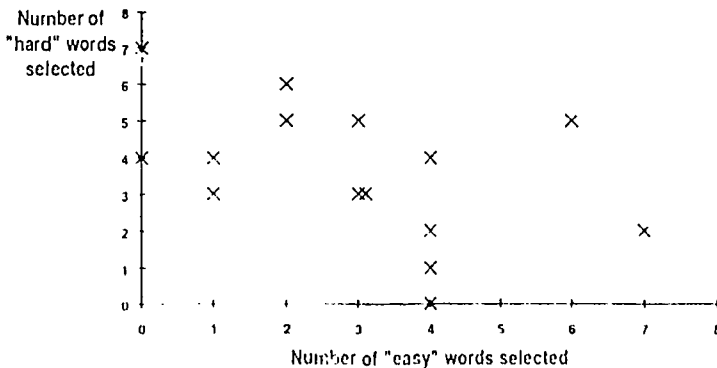
Figure 3

Teachers' selections of "hard" and "easy" words

(Group NNSN)

Number of "hard" words selected (y-axis, 0–8)
Number of "easy" words selected (x-axis, 0–8)

Figire 4

Teachers' selections of "hard and "easy" words

(Group NSN)

Number of "hard" words selected (y-axis, 0–8)
Number of "easy" words selected (x-axis, 0–8)
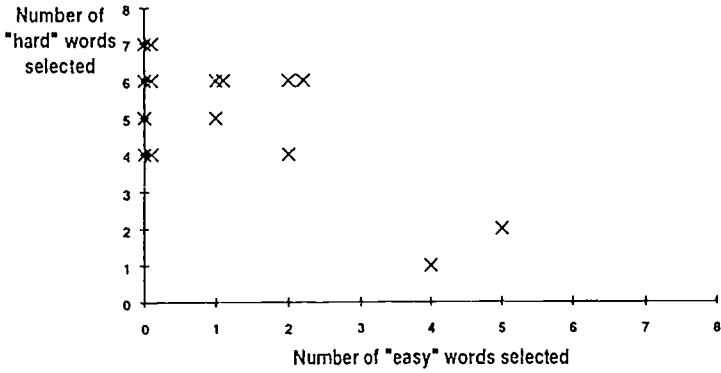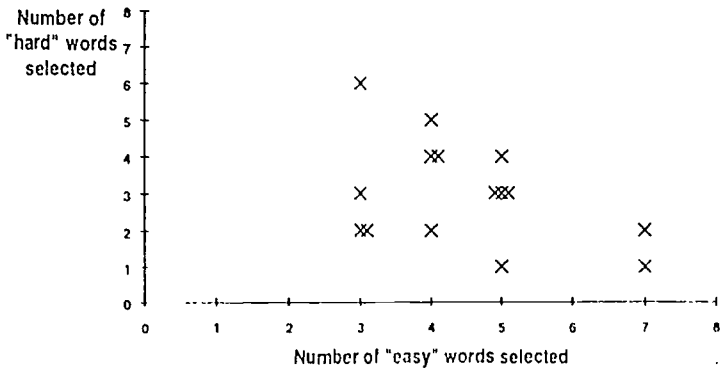
The scatterplots provide a visual impression of how the individual members of each group performed. Good predictors can be found in the top left area of each figure, since most of their selections are from the hard words. Poor predictors can be found on the bottom right, with the majority of their selections based on words which most of the learners either already knew or could work out for themselves. The pictures suggest that both non-native speakers groups, NNSE and NNSN, tend to perform consistently well on the task, with two exceptions in each group. Although the majority make good selections, two individuals in each group fail to identify more than two "hard' words and include "easy" words in their selections. As far as the native speakers are concerned, the pattern of choice is less systematic among the Experts (NSE), with some teachers focusing successfully on "hard" words and ignoring most of the "easy" ones, while others fail to identify more than a couple of "hard" words and include several "easy" words in their selection. As for the Novices among the native speakers (NSN) a more systematic pattern can be detected. However, it is systematic in its preference for "easy" over "hard" words.

In order to establish whether the differences within each group were significant, the scores on the "hard" and "easy" words were used to calculate the phi coefficient, using the matrix in Figure 5.

Figure 5

Data table for computing phi coefficient

	"Hard" Words	
"Easy" Words	High Scorers	Low Scorers
High Scorers		
Low Scorers		

The results of the calculation are shown in Table 2.

Table 2

Phi coefficient per teacher group

NNS Expert	.58
NNS Novice	.0714
NS Expert	.69
NS Novice	.087

Significant results are obtained for both Expert groups, indicating that differences in individual performances are significant. Further research is required in order to look in more detail at the poor performers in these groups, to establish why such so many Experts found it difficult to focus on the students' actual vocabulary difficulties. The lack of significant phi coefficients for the two Novice groups suggests, on the one hand, that the non-native speakers are homogeneous as a group of good predictors and, on the other, that the native speakers are homogeneous as a group of poor predictors.

The four groups' scores on the "hard" words and on overall vocabulary judgment (calculated by subtracting each teacher's "easy" word score from the "hard" word score) were then compared by means of a one-way ANOVA. The results are shown in Tables 3 and 4.

Table 3

One-way ANOVA for "Hard" Word Identification

Source	df	SS	MS	F	p<
Between groups	3	128.3795	42.7932	19.6171	.000
Within groups	61	133.0667	2.1814		

Table 4

One-way ANOVA for overall vocabulary judgement

Source	df	SS	MS	F	p<
Between groups	3	293.6449	97.8816	12.3768	.000
Within groups	61	482.4167	7.9085		

While significant differences emerge in both measures, they are higher for the "hard" words than for overall judgement. In order to establish whether significant differences exist between particular pairs, Tukey's Multiple Range Test was run using the Overall Vocabulary Judgement scores. The results are shown in Table 5.

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Table 5

Tukey's Multiple Range Test for Overall Vocabula·y Judgement

Differences between groups by Language		
Native Speaker	Non-native speaker	
Expert	Expert	
Novice	Novice	
		all significant
Expert	Novice	(p<.05)
Novice	Expert	
Differences between groups by Expertise		
Expert	Novice	
Native speaker	Native speaker	no significant
Non-native speaker	Non-native speaker	differences (p<.05)

Significant differences emerge between all groups when compared by language, regardless of teaching expertise. By contrast, no significant differences emerge when comparing teachers by expertise within the same language.

Conclusion

The results of the study suggest that teachers who are native speakers of their students' L1 are at a distinct advantage when identifying their learners' vocabulary needs in connection with reading texts. While teaching expertise can improve non-native speaker teachers' ability in this direction, it can actually obscure the judgements of non-native speakers by interfering with their more intuitive judgements about vocabulary difficulty.

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Appendix 1

Reading text used in the study

The Sword That Can Heal

While military scientists test lasers against satellites, surgeons use them as miraculously accurate scalpels. They can even be used to detonate hydrogen bombs. The beam can be focused to spot one fiftieth the size of a human hair; yet its intensity is enough to kill cancer cells or drill through the most delicate bones.

More than a decade ago, eye surgeons realised that they could use the laser's beam to seal individually, the microscopic blood vessels in the retina. The beam is so fine that only the target is heated. Now its pin-point blasting power has been turned to destroying cancer cells and reducing birthmarks. For cancer treatment, the

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diseased cells must be killed while their healthy neighbours are left unharmed. Where the cancer can be directly and accurately attacked, laser treatment does well: early cancer of the cervix and skin cancers have been widely and successfully treated. This type of cancer is not very easy to reach. For cancers that are less accessible, there is a new and potentially valuable technique in which the patient is injected with a chemical that then attaches itself preferentially to cancer cells. When the laser strikes the chemical, it releases a form of oxygen that kills these cells.

The marvellous accuracy of the surgical laser can be increased by sending the beam along fibres of glass far finer than the human hair. The "optical fibres" carry it around corners and direct it precisely at a tiny area; so little of the beam spills from the glass that there is no risk of damaging healthy cells.This technique is particularly useful in ear surgery.

Furthermore, the laser beam can also remove bone, and so it is invaluable in ear surgery. The sounds we hear are carried from the eardrum to the nerves of the ear by a delicate set of pivoting bones which sometimes solidify, causing deafness. A laser beam vaporises the bone without touching any of the surrounding tissue. The beam is diffused to avoid scarring and the mark becomes inconspicuous. This accuracy in targeting makes the laser a useful tool for the dentist also - a nerve can be reached through a hole drilled in the enamel.

Birthmarks, once almost untreatable, are a mass of blood vessels and, being red, they absorb the laser beam strongly. It seals them so that the mark becomes less conspicuous. The normal cells of the skin's surface, which don't absorb much of the laser beam, act in the healing and help to conceal the mark. The beam can cut with a precision that no scalpel could achieve. The operation can transform the lives of people who were previously doomed to a lifetime of cosmetic surgery.

Though this application is widely used in America, there are in Britain only two hospitals offering the treatment, and one feels bound to warn patients that success is not certain. However, some ten new centres will soon be opened.Britain, though, is one of the leaders in the laser treatment of bleeding peptic ulcers and this, combined with new medicines can mean ulcer treatment without conventional surgery. The laser is now being used to treat all kinds of illnesses in this country.

(Tony Osman in The Sunday Times Colour Magazine, reproduced in S. Greenall and M. Swan. *Effective Reading,* Cambridge: Cambridge University Press, 1986)

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