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## **READING IN ENGLISH FOR ACADEMIC PURPOSES: A CASE FOR LANGUAGE PROFICIENCY\***

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### **Introduction**

Nowadays reading is widely interpreted as a creative activity where the reader derives meaning from a text through an interaction with it. In the process of the interaction between the reader and writer through the medium of the written word, the reader brings to the task two potential sources of information:

- a) prior knowledge of the target language of the text context; and
- b) his own knowledge of the target language, more specifically, his level of proficiency in the second language.

Eskey (1968) suggests that the first source encompasses knowledge of substance which may be cultural, pragmatic and subject-specific. The second category (formal knowledge) includes graphophonemic, lexical, syntactic, semantic and rhetorical patterns of a language.

Research on ESL/EFL readers, through relatively sparse, suggests that far from relying heavily on contextual information as a way of circumventing their difficulties with unfamiliar words and idioms, they seem to be more attentive to graphic information than native language readers (Hatch, 1974; Oller, 1972). The foreign language reader (FLR), especially the poorer readers, tend to read in a word-by-word fashion, in the belief that attention to individual words and the comprehension of

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\*A version of this paper was presented as the Eighth Institute of Language in Education International Conference, Hong Kong, 15-18 December, 1992.

them will eventually result in total text comprehension. They will also appear to have difficulty in using contextual information in reading (Chihara, Oller, Weaver and Chavez Oller, 1977; Cziko 1978).

In discussing the possible sources of reading problems for FLR, Yorio (1971) notes that to read in the foreign language, one uses basically the same method as reading in the native language. A native language reader, according to Goodman's view of reading, is guided by his knowledge of his native language, picks up the graphic cues and relates them to syntactic, semantic and phonological cues. These choices are then decoded and stored in short-term memory to be subsequently tested and associated with further decoding choices. When these choices are applied to reading in a foreign language, it is easy to see how more difficult it is for the FLR to perform well. Yorio (ibid. 108) believes that there are new elements in a foreign reading situation which complicates the whole process:

*\* The reader's knowledge of the foreign language is not like that of the native speaker; the guessing or predicting ability necessary to pick up the correct cues is hindered by the imperfect knowledge of the language; the wrong choice of cues or the uncertainty of the choice makes associations more difficult. Due to the unfamiliarisation with the material and the lack of training, the memory span in a foreign language in the early stages of its acquisition is usually shorter than in our native language; recollection of previous cues then is more difficult in a foreign language than in a mother tongue, and at all levels and at all times there is interference of the native language."*

The new element as identified by Yorio can be said to be native language interference and inadequate knowledge of the target language. In the area of language transfer, Clarke (1979) suggests that this is effectively prohibited if there is a language deficit in the second/foreign language. In other words, language proficiency sets a ceiling to reading in that language. On a more detailed level, Cziko (1978) suggests that the language deficit may result in an inability to make full use of the syntactic, semantic and discourse constraints which serve as an important source of information for reading in the mother tongue. The implication is that increasing emphasis in L2 reading problem remediation should be in upgrading L2 proficiency rather than in the non-language skill factors. Clarke and Silberstein, in line with the new interest in language proficiency, observe:

*"Our students' efficiency in using reading skills is directly dependent upon their overall language proficiency - their general language skills."* (1977:145).

### Aim of study

The issue of the relative importance of familiarity of content and language proficiency in reading in a second/foreign language will be the concern of this study. It will investigate the validity of the finding that language proficiency can short-circuit comprehension of a text written in that language for an academic purpose.

### Sample

Three hundred and seventeen undergraduates from three faculties were selected to form the sample - 141 Medical, 95 Law and 81 Economics students. They were all in their third year of study, as it was felt that they would have qualified to be regarded as "specialists" in their own disciplines. This criteria would yield the content variable.

### Instruments

The investigation deployed the following instruments:

- a) **The English**  
this test would provide information on the level of language proficiency of the sample. This test was originally used by the British Council to assess the English language proficiency of intending students seeking entry to British universities.
- b) **Discipline-related texts:** Three texts, one from each discipline - Parasitology, Family Law and Marketing - were selected to represent the areas of specialism. They were sourced from actual reference materials in each course. This, it was hoped, would ensure not only authenticity but also content validity, which in turn would lead to higher motivation to carry out the task more conscientiously and effectively

This distinction in text content served as the demarcation for a measurement of prior knowledge. The cloze procedure ( $n^d=10$ ) on these texts yielded a score on reading comprehension performance, based on the exact scoring method. Blanks were later classified into structural and content blanks to study the effect of language proficiency on them.

### Methodology

All the 317 students sat for the comprehension tests. Hence, it was a fully crossed design. They were also administered the English Proficiency Test Battery. It was possible then, with this design, to compare the performance of each group of students in their own discipline text as well as in texts that belonged to other disciplines.

### Definition of terms

**Familiar text:** a familiar text for a particular group of students would be that related to his discipline.

**Unfamiliar text:** an unfamiliar text would be that unrelated to the reader's discipline, for example, the economics and law texts for the medical students.

**Context words:** Adjectives, adverbs, verbs, nouns.

**Structural words:** the remaining parts of speech not covered by content words.

### Hypotheses

The hypotheses to be investigated in this paper are that students with high language proficiency perform significantly better than those with low language proficiency in the comprehension of

- a) familiar texts
- b) structural words but not content words of unfamiliar texts;
- c) unfamiliar texts.

Operationally, if hypotheses a) and c) were to be confirmed, it would mean that high language proficiency groups would score significantly better than the low proficiency group in the comprehension of familiar as well as unfamiliar texts. The same should obtain for structural words. A support for content words would be indicated by a no significant difference between the means of the two groups in their ability to fill in the content words.

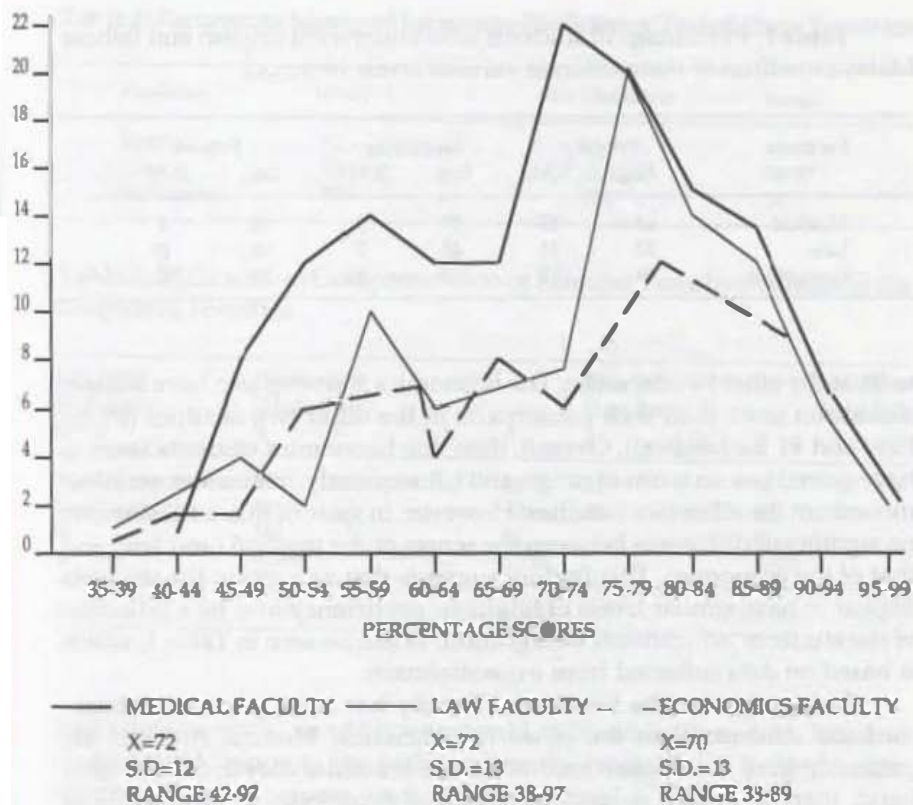


Figure 1: Distribution of Language Proficiency Scores in Medical, Law and Economics Faculties

**Findings**

*1. Descriptive Statistics: Performance in Language Test (EPTB)*

To enable a visual comparison of performance, the scores of the three faculties are translated into graphs to help us identify the varying patterns of performance. Figure 1 shows the distribution of scores in the three faculties:

As is evident, the Medical and Law Faculties have identical means of 72 (s.d. 12 and 13, respectively). While the means are closely similar, the distribution of scores, too, appear to be hardly any different. The Medical students, however, have a slightly higher minimum score of 42 compared

Table 1: Percentage of students who underwent English and Bahasa Malaya medium of instruction at various levels in school.

Faculty	Primary		Secondary		Form 6	
	Eng.	B.M.	Eng.	B.M.	Eng.	B.M.
Medical	63	15	75	5	89	7
Law	52	11	45	7	32	45
Economics	44	11	39	14	34	42

to 38 of the other two faculties. The Economics students also have a lower maximum score than their counterparts in the other two faculties (89 for Law and 91 for Medical). Overall, then, the Economics students seem to have scored less (in terms of range, and subsequently, in mean scores) than those from the other two faculties. However, in spite of this, a t-test shows no significant difference between the scores of the medical (and law) and that of the economics. This finding suggests that as a group the students appear to have similar levels of linguistic proficiency may be a reflection of the students' educational background, as can be seen in Table 1, which is based on data collected from a questionnaire.

It appears that the Economics Faculty has relatively more Malay-medium students than the other two faculties. Medical students are primarily from the English medium at the secondary level. On the other hand, there is a stark reduction by 25% of Economics English-medium education at the same level. Students at the Law Faculty have also switched from English to Bahasa Malaysia at Form 6 (an increase of 38%). While the Medical Faculty seems to have had an obvious advantage in past language experience with English, it is remarkable that, overall, the three faculties are not significantly different from one another as judged by their mean scores on EPTB. The presence of some high scorers in those two faculties might help account for this offsetting effect.

## 2. Procedure for Analysing Levels of Language Proficiency

To test the significance of language proficiency on the three tests, it was necessary to divide the students into high and low proficiency groups. The procedure for operationalising the two levels of language proficiency is as follows:

As the means of the language proficiency test for all the three faculties were close, it was thought valid that the general means of 72% could act as the cut-off point for high and low proficiency groups. Thus, those belong-

**Table 2: Percentage Means of Language Proficiency Test of Three Faculties**

Faculties	Mean	Std. Deviation	Range
Medical	72	12.4	42-97
Law	72	13.0	38-97
Economics	70	13.0	38-97

**Table 3: Difference in Comprehension of Familiar Texts by Students in the Respective Faculties**

Language Proficiency Level	Medic. Text (Medical Fac)			Law Text (Law Fac)			Econ. Text (Econ. Fac)		
	n	$\bar{x}$	s.d.	n	$\bar{x}$	s.d.	n	$\bar{x}$	s.d.
High Lang. Prof.	69	49	5	52	58	8	39	36	4
Low Lang. Prof.	92	42	6	40	45	10	42	31	5
N	141			92			81		
R	0.668			0.728			0.671		
P	<0.000			<0.000			<0.000		

ing to the low group would have scored 1 - 72% while those with 73% and above would belong to the high proficiency group. Table 2 captures the details of the mean scores for the three faculties:

**Analyses**

T-test for testing significance of difference in mean scores was used to analyse the scores of the three faculties on their own familiar, discipline-related texts and on the unfamiliar texts according to the levels of language proficiency, as explained above.

**1. Comprehension of Familiar Tests**

Table 3 juxtaposes the results of the three faculties to enable inter-faculty comparison while also facilitating intra-faculty examination:

As shown in Table 3 above, there are significant differences between scores of the High Language Proficiency (HLP) group and the Low Language Proficiency (LLP) group in the comprehension of their own discipline-related texts. In the Medical Faculty, the HLP was scoring significantly better than the LLP on the medical text ( $\bar{x}=49$ ) as against

$\bar{x}=42$ ). The same was reported of the Law students on the law text ( $x=59$  as against  $\bar{x}=45$ ).

Similarly, the Economics HLP ( $\bar{x}=36$ ) performed significantly better than the LLP ( $\bar{x}=31$ ) on the economics text. The HLPs were seen to be consistently scoring higher than the LLPs. Hypothesis 1 - that language proficiency has a significant effect on the comprehension of familiar text - is supported and confirmed by the performance of the three faculties.

## 2. Comprehension of Structural and Content Words

If text comprehension in a foreign language is determined to a large extent by competence in the foreign language, it would be interesting to see whether it exerts the same effect on the understanding of structural and content words. According to the hypothesis, since structural words are considered an important component of language proficiency, the latter should influence its understanding to a greater extent than it should on content words.

Table 4: Difference in Comprehension of Medical Text (structure), Law Text (structure) and Economics Text (structure) by Medical, Law and Economics Students

Language Proficiency Level	Medical Text (Structure)			n	Law Text (Structure)			Econ. Text (Structure)		
	n	$\bar{x}$	s.d.		$\bar{x}$	s.d.	n	$\bar{x}$	s.d.	
High Lang. Prof.	69	24	2	52	30	4	39	19	2	
Low Lang. Prof.	72	22	3	40	24	5	42	17	2	
N	141			92			81			
R	0.497			0.652			0.643			
P	<0.000			<0.000			<0.000			

As hypothesised, a knowledge of the target language does have a significant role in the understanding of structural words, as reflected in the performance of all three faculties in their own discipline-related texts. The correlational findings are equally interesting. The pattern of correlation here is identical to that of Table 5 below, with the highest correlation found in the Law faculty, followed by the Economics and the lowest in the Medical Faculty. The lowest correlation in the Medical Faculty might be attributed to the role of prior knowledge as an equally strong determinant of reading comprehension.



**Table 5:** Differences in Comprehension of Medical text (content), Law text (content) and Economics text (content) by Medical, Law and Economics students.

Language Proficiency Level	Medical Text (Content)			Law Text (Content)			Econ. Text (Content)		
	<i>Med. fac</i> n	$\bar{x}$	s.d.	n	$\bar{x}$	s.d.	n	$\bar{x}$	s.d.
High Lang. Prof.	69	25	5	52	30	4	39	17	3
Low Lang. Prof	72	20	4	40	22	5	42	14	4
N	141			92			81		
R	0.644			0.706			0.689		
P	<0.000			<0.000			<0.000		

When performance in content words of the cloze blanks in each text is examined separately in relation to the discipline-related faculty, it is revealed in Table 5 above that language proficiency has a significant effect on its understanding. This finding is repeated in the three faculties. This is an unexpected finding, and contrary to the hypothesis. However, it does corroborate the Pearson correlational finding between language proficiency as a significant effect on its understanding. This finding, and contrary to the hypothesis. However, it does corroborate the Pearson correlation finding between language proficiency and content words, which is high and significant. This trend is also noted in the correlation between language proficiency and the comprehension of the text as a whole, as found in Table 3. Although the content words would seem, logically, to present a more pointed test of proper knowledge of the content area, it appears that a linguistically proficient person is able to understand content words to a significant extent because of his ability to take advantage of the contextual clues in the form of semantic constraints that are crucial to cloze testing. The significant correlation between language proficiency and the discipline-related, familiar text is to be expected as language proficiency is hypothesised to be an important factor in the reading comprehension process.

### 3. Comprehension of Unfamiliar Texts

This section replicates the previous analysis by using unfamiliar texts belonging to other disciplines. If understanding of familiar texts is, as found, significantly affected by proficiency in the target language, then it is hypothesised that its effect would, in like manner, be extended to the

**Table 6: Differences in Comprehension of Law and Economics Texts by Medical Students according to Language Proficiency**

Language Proficiency Level	Law Text			Econ. Text		
	n	$\bar{x}$	s.d.	n	$\bar{x}$	s.d.
High Lang. Prof.	68	49	8	69	33	5
Low Lang. Prof.	71	38	10	72	27	5
N	139			141		
R	0.7236			0.6910		
P	<0.000			<0.000		

**Table 7: Differences in Comprehension of Medical and Economics Texts by Law Students according to Language Proficiency**

Language Proficiency Level	Medical Text			Econ. Text		
	n	$\bar{x}$	s.d.	n	$\bar{x}$	s.d.
High Lang. Prof.	52	39	6	52	35	4
Low Lang. Prof.	42	31	8	42	29	5
N	94			94		
R	0.728			0.638		
P	<0.001			<0.001		

comprehension of other texts as well. To recall, unfamiliar texts in this instance, would refer to texts that are not related to the discipline of the faculty. Hence, it would be law and economics texts for medical students, medical and economics texts for law students, medical and law texts for economics students. The results are presented in Tables 6, 7 and 8:

Table 6 shows that the HLP groups have scored significantly better in both the law and economics texts than the LLP groups. The means of the HLP in the two texts are 49 and 33, respectively, while the means of the LLP are 38 and 27, respectively.

The findings of the medical students in Table 6 are repeated in Table 7 with the Law group. The HLPs scored significantly higher than the LLPs in the medical and economics texts. Means for the HLPs are 39 and 35, respectively, while means for the LLPs are 31 and 29, respectively.

The pattern of performance in the Economics Faculty is identical to that of the other two faculties. The significant difference in comprehension performance in the medical and law texts between the HLPs ( $\bar{x}=38$  and  $\bar{x}=48$ ) and the LLPs ( $\bar{x}=31$  and  $\bar{x}=39$ ) provides support for the language hypothesis.

**Table 8: Differences in Comprehension of Medical and Law Texts by Economics Students according to Language Proficiency**

Language Proficiency Level	Medical Text			Econ. Text		
	n	$\bar{x}$	s.d.	n	$\bar{x}$	s.d.
High. Lang. Prof.	39	38	4	39	48	5
Low Lang. Prof	41	31	7	39	39	9
N	80			78		
R	0.671			0.732		
P	<0.001			<0.001		

Of interest, however, is the comparison of performance in each of these texts by the 'outsiders' on the basis of mean scores. It is apparent across Table 6 and 8 that the means of the HLPs and the LLPs in both the medical and economics faculties on the law texts are similar (49 and 48 for the HLPs and 38 and 39 for the LLPs).

On the medical text, the HLPs and the LLPs of the law (Table 7) and economics faculties (Table 8) again show a more than coincidental similarity (39 and 38 for the HLPs and 31 and 31 for the LLPs).

Performance on the economics text by the medical (Table 6) and law students (Table 7) show a slight difference. Comparing just the HLPs in both the faculties, the law students have a higher mean (35) than the medical group (33). The same is observed of the LLPs: The law students have a higher mean score than the medical LLPs (29 vs. 27).

It would seem that generally the HLPs and the LLPs in all the faculties have remarkably similar scores on the medical and law texts, implying that the group ability is rather homogenous except in the economics text. The slight difference here might possibly be attributed to the advantage of an Economics background for the Law students as a great majority of the sample had taken Economics at the sixth form level.

### Summary

High and low proficiency groups in each faculty were studied for their differential performance on three criterion tests, labelled as either familiar or unfamiliar texts. Using t-test for significance of difference in means, the findings are as follows:

1. In the comprehension of familiar, discipline-related texts, the HLPs in all three faculties were consistently scoring higher than the LLPs.

2. In the comprehension of unfamiliar texts, the HLPs were also scoring significantly better than the LLPs in all the three faculties.
3. The same finding was reached for the understanding of content and structural words where the HLPs were significantly better than the LLPs in terms of means.

Hence, one can say with confidence that proficiency in the target language does affect the reading comprehension process to a significant extent. The language hypothesis is therefore supported not only in the reading of one's own discipline (familiar) but also in texts outside the discipline (unfamiliar). The confidence rests, in the main, on the fact that the findings are repeated in three faculties representing three different disciplines.

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