

What do Foreign Language Learners Do in Their Academic Reading¹

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Competence in academic reading is a key component in obtaining higher degrees for foreign language learners in English medium universities. This paper summarizes research findings on academic reading obtained from a questionnaire, two sets of reading tests and a textbook analysis. Results revealed that the essential reading skills required of foreign language learners and the skills they have most problems with in their academic studies are 1) skimming; 2) reading a text or parts of a text more slowly and carefully to extract all the relevant information for a written assignment such as an essay, dissertation or examination; and 3) understanding unknown words. The correlations between reading tests which tested global skills and discrete skills were strong. The results indicated that if these learners did well on global skills, they also tended to do well on discrete skills and vice versa. Learners seemed to use their skills eclectically and holistically. The results suggest that too much emphasis in EAP reading has been given to reading for the main idea, at the cost of faster reading skills (skimming) and area-specific skills (understanding unknown words) which are required of learners and which they find most difficult.

INTRODUCTION

Background of the Research

Of all the varied activities of foreign language teaching and learning, reading is one of the most pervasive and important skills for learners. Obtaining higher degrees in English medium universities especially involves reading of academic materials written in English. Without good reading proficiency, learners are unable to carry out their academic studies and compete with their native English-speaking counterparts. Thus, for foreign students who aim to carry out such studies in English medium universities, being able to read effectively in English is crucial.

This study was carried out in the Centre for Applied Language Studies at the University of Reading in 1993. Each year a considerable number of multilingual students from around the world who use English as a foreign language come to the university to study for higher degrees. A pre-session course is offered to get them prepared before starting their academic studies. Once in the real academic setting, they are asked to read as much and be as capable as their native counterparts. They are expected to continue to develop as language learners, yet with little or no instructional support in the use of the language. They are also required to read selectively, intensively and at relatively higher speeds: skills crucial to their academic success.

Theoretical Background

In recent years, many research studies have concentrated either on the product of reading or the process of reading. However, more data needs to be collected on what reading skills are required by these learners in order to carry out their academic studies and which of these skills learners have problems with in their studies. A thorough understanding of the complex nature of academic reading skills based on data collection is essential for guiding teaching and testing of EAP (English for Academic Purposes) reading.

Reading involves employing various kinds of knowledge that readers bring to the text that they are reading. This knowledge falls roughly into three categories: linguistic knowledge, knowledge about the rhetorical structure of the text, and background knowledge concerning the content area assumed by the text passage. Reading theorists have hypothesized different models to emphasize the roles of different factors in the reading process. Several models are prominent in the area of second and foreign language acquisition and pedagogy. They are: (a) the bottom-up model (Carver, 1978; Cziko, 1978, 1980, 1981) which assumes a greater role for linguistic factors in the process of reading; (b) the psycholinguistic model (Coady, 1979) which is related to the top-down model (Goodman, 1973, 1976, 1988) in L1 reading and schema theory (Anderson & Pearson, 1988; Anderson, 1978; Pritchard, 1990; Rumelhart, 1980), emphasizing the content of a passage; and (c) the interactive model (Carrell, 1988; Carrell, Devine & Eskey, 1988; Rumelhart, 1977) which posits constant interaction between bottom-up and top-down processing. Good readers, according to this model, make effective use of both their linguistic knowledge and their knowledge of the world in decoding and interpreting the information in a text.

Many contemporary studies have been carried out within the framework of the above three models. There are two specific areas of research that are directly related to this study: a) The identifiability of the skills (Alderson, 1984b, 1990a, 1990b; Matthews, 1990; Rosenshine, 1980; Spearritt, 1972; Weir, Hughes, & Porter, 1990); and b) The question of whether FL Reading is a language problem or a reading problem (Alderson, 1984a; Carrell, 1991; Clarke, 1986, 1988; Cziko, 1978, 1980; Gamez, 1979; Hudson, 1988).

Research studies have attempted to discover whether reading is composed of different subskills that might relate to one another within a taxonomy or hierarchy of skills. There are many taxonomies that have been drawn up, varying in length from three or four skills to long lists comprising thirty or forty distinct skills as discussed in Alderson (1984a, 1984b), Matthews (1990), Munby (1978), Rosenshine (1980), and Seddon (1978).

However, there is little consensus as to the content of these taxonomies or the terminology used to describe them (Williams & Moran, 1989). Williams and Moran, in discussion of the work of Davies (1968), Davies and Widdowson (1974), Spearritt (1972) and others, observe that it may not be psychologically valid to list discrete reading skills. This is also supported by Alderson and Urquhart (1984)

who, referring to Lunzer and Gardner (1979), point out that attempts to identify skills are typically carried out through comprehension type exercises, but being able to do such exercises does not necessarily amount to reading. They go on to mention other drawbacks of the notion of skills: the concern with the product of reading rather than the process; the nature of the readers themselves and variables such as readers' purpose and motivation.

However, Williams and Moran also point out that "educators and material writers in the EFL world nevertheless have faith in the existence of such skills, and produce materials accordingly". Similarly, it has been suggested by some scholars (Carrell, Devine & Eskey, 1988, as cited in Williams & Moran, 1989) that ESL and EFL reading programs should include training in skills and strategies. These researchers find it possible to talk about distinct reading skills and feasible to help students to improve them.

Furthermore, if knowledge is required as to what FL learners are doing when they read in their academic studies, we might have to consider the process of transferring L1 reading ability into L2 or FL reading ability since reading a second or foreign language involves a transfer of both first language reading abilities and their second or foreign language proficiency into the second or foreign language (Clarke & Silberstein, 1979; Carrell, 1988; Alderson, 1984b; Hudson, 1988). This above issue has been a matter of debate for some time. Some researchers (Jolly 1978; Coady, 1979) have argued that reading in a second language depends crucially upon reading ability in one's first language rather than upon one's level of ability in the second language.

According to this view, students who read poorly in the second language do so either because they do not possess good reading skills in their L1, or because they fail to transfer them. Once learners have matured in their ability to read in the first language, such reading skills may need to be relearned in the L2 or FL (Rigg, 1988; Gamez, 1979). However, other researchers have argued that reading ability in a second language appears to be largely a function of proficiency in that language, or at least some minimal threshold of proficiency needs to be attained in that language before good readers' first language reading strategies can be transferred to reading in an L2 or FL (Clarke & Silberstein, 1979; Carrell, 1988; Cziko, 1980; Devine, Carrell, & Eskey, 1987). This is the 'language threshold' or 'language ceiling' or 'short-circuit hypothesis' of second language reading. According to Carrell (1991), through his research hypothesis (L2 reading equals L1 reading ability combined with L2 language proficiency), both first language reading ability and second language proficiency have significant effects on second language reading ability.

The Present Study

The present study presupposes the existence of the reading skills mentioned above. I aim to find out what reading skills are most frequently required by learners in their academic studies and what reading problems learners have when

pursuing their higher degrees. If it is a reading problem, what essential skills are involved? If it is a language problem, what major problems do they have? Or if it is a combined problem of L1 reading and L2 or FL proficiency (Carrell, 1991), we would like to know what the most important reading problems are in learners' academic studies and what their existing language problems in L2 proficiency are. This study aims to answer the following research questions:

- 1) What reading skills do learners feel are essential and what reading skills do learners feel they have most problems with in their academic studies?
- 2) How is test performance on global reading skills related to test performance on discrete skills?
- 3) What is the relative balance of reading tasks and skills developed in the pre-sessional reading textbook designed to help learners cope with their academic studies?

METHOD

This study was designed as a multi-method descriptive and analytic study, which employed a variety of quantitative and qualitative research methods, including a questionnaire, two sets of reading tests and a reading task analysis.

Subjects

The subjects for the survey study were learners from a range of cultural, educational and specialist backgrounds. Questionnaires were issued to 120 those students who had been enrolled in the pre-sessional course in 1992 and who were still studying at the University of Reading at the time of the research. By that time, they had already finished the pre-sessional course and had already been following their academic studies for more than seven months. They knew exactly what reading skills had been required of them through their own experiences and the difficulties they had had in their academic reading.

Forty-eight similar subjects who came to Reading for the pre-sessional course in July 1993 were issued with two sets of reading tests testing global and discrete skills. The nature of their reading needs would be the same as the above group of students. However, they knew relatively little of what would be expected of them in their academic reading. Test results showed their general entrance level of reading proficiency and their performance on different levels of reading skills.

Four EFL teachers teaching the pre-sessional course were asked to analyze each reading task in the textbook and identify its main focus in terms of the reading skills that the task developed. The purpose of the analysis was to get a clear picture of the overall balance of skills developed through the reading tasks designed in the textbook.

Data Collection Procedures

Questionnaire

A questionnaire (see Appendix I) was designed to follow the pre-sessional reading course at the University of Reading to provide an indication for further needs analysis and evaluation. It aimed to collect data from the learners' points of view about both the essential reading skills that they find important and skills that they find difficult within their academic studies. It also would explore whether the skills learners perceive as important were necessarily perceived as difficult in their academic studies.

The initial stage of the questionnaire design was to analyze the reading process and identify the enabling skills which are necessary for successful performance in the target situation. This was used to establish a taxonomy of reading skills in the academic context drawn from the work of Munby (1978), Weir (1993, 1988, 1983), and Hughes (1988). The second stage was to identify the types of texts learners read in their subject areas by conducting informal interviews with those learners and their subject lecturers. However, as the preliminary results were in accordance with previous work done by Weir (1993) and Hughes (1988), this text analysis was eliminated from the questionnaire. The final stage was to decide on the importance and difficulty category scales on a 4-point likert scale. The specified reading skills in the questionnaire would thus form the basis for the investigation into EAP reading. The results from the survey would then form the subsequent criteria for evaluation of the content and construct validation of the teaching and the testing of reading in an EAP context.

Reading Tests

The reading tests used in this study consisted of one TEEP (Testing of English for Educational Purposes) test and two gap filling tests. All were designed and validated over several years in CALS at the University of Reading. The TEEP test consists of two parts. Part A tests learners' abilities to get main ideas and major supporting details in a reasonably short time. Part B tests reading thoroughly to understand specific structure and lexical items. The two gap filling tests test skills similar to Part B of the TEEP test.

Reading Task Analysis

A pro forma of reading task analysis of the pre-sessional textbook was designed on the basis of the four major reading skills in the questionnaire. Three

5. Pre-reading activities: Predicting and surveying, which involve quickly looking through a book, a chapter of a book, article of a journal, etc., to decide whether or not it is suitable for your purpose.
6. Follow-up activities leading to writing.
7. Understanding structure at the sentence level (within and between).

Table 1: Three Reading Skills Additional to Those in the Questionnaire

other reading skills have been added to the analysis to avoid oversimplifying the teaching situation. They were as shown in Table 1.

Data Analysis Procedure

The questionnaire was analyzed to obtain a clear picture of the skills that learners feel essential and the skills that learners found problems with in their academic studies. Cross tabulations were done to find out the implicational relationships between skills learners regarded as important and as difficult. Of the 120 questionnaires issued by internal mail within the University of Reading, 63 respondents were included in the study. Later respondents were not included due to the time pressure of the research. The fact that the majority of the students were working toward completing their masters at the time of the survey might also have contributed to the low return rate. However, the respondents represented a wide range of learners' subject areas and were representative of the international students at the university. Quantitative data were coded and analyzed according to the ratings given by the learners on the importance and difficulty scales for the reading skills.

Qualitative data from the two open-ended questions in the questionnaire were classified and categorized into the major areas of problems the learners encountered in their academic reading. Both qualitative and quantitative data from the survey facilitated an understanding of the substance and meaning of EAP reading.

Test results were analyzed using SAS² to find out whether or not there was a relationship among tests which tested different skills. Correlations were carried out on the different sub-tests to find out the correlation between 1) Part A and Part B of the TEEP test and 2) Part A of the TEEP test and the two gap-filling tests. The test results showing the relationships between these tests would provide feedback to EAP teaching from the point of view of testing.

The Pro forma for textbook analysis was analyzed to discover the relative balance between reading tasks and reading skills designed in the pre-sessional textbook. This part of the results would provide information from the point of view of teaching material in the EAP context.

RESULTS

Questionnaire

Quantitative data

A descriptive analysis of the data was first carried out to explore how learners perceived the reading skills under each category from 1 to 4 on the importance and difficulty scales (see Appendix 1 and Table 2).

Figure 1 was created by combining the two highest ratings on the importance and difficulty scales. Results in the fourth category (Not Sure) are treated as missing data. Figure 1 shows the relationship between the reading skills that learners perceived as important and the skills that learners perceived as difficult. It can be observed that learners tended to grade the skills higher on the importance scale

Variables	Valid Cases	Means	Standard Deviation	Very Important	Important	Not Important
Skimming	62	1.52	.57	51.6%	45.2%	3.2%
Scanning	60	1.68	.70	45.0%	41.7%	13.3%
Main ideas	60	1.48	.65	60.0%	31.7%	8.3%
Vocabulary	56	2.01	.59	16.1%	66.1%	17.9%

Variables	Valid Cases	Means	Standard Deviation	Very Difficult	Difficult	Not Difficult
Skimming	57	2.53	.57	3.5%	40.4%	56.1%
Scanning	58	2.62	.59	5.2%	27.6%	67.2%
Main Ideas	55	2.33	.72	14.5%	38.2%	47.3%
Vocabulary	52	2.17	.68	15.4%	51.9%	32.7%

Table 2 Description of the Quantitative Data

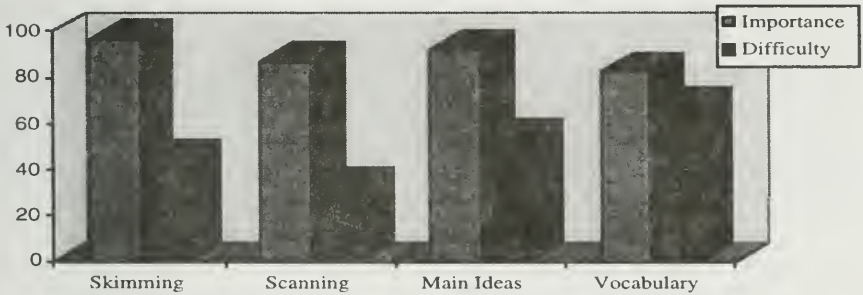


Figure 1: Percentage of learners who considered each skill important or difficult

than on the difficulty scale. The reasons for this, however, could not be explained through the questionnaire results.

Qualitative Data

The following qualitative results were obtained from the two open-ended questions in the questionnaire. The results were summarized into the following four major categories. Quoted words are in learners' verbatim form.

Understanding unknown words. Of all the responses, 26 learners, slightly more than one third of the respondents, mentioned that understanding unknown words was the skill they had the most problem with and which was crucial in their studies.

In the last exam, I found unknown words in an exam question and hence I could not choose the question.

My main problem is when I find an important word in a text and I don't know the meaning, and probably without that word you [I] can not understand the text."

Reading speed. Another one third of the subjects (21 students in all) regarded reading speed as something that caused difficulties in their academic reading, which was in conflict with thorough understanding of a text. Learners complained that they simply could not read fast enough, yet there was an urgent need to get a large amount of information through reading in their academic studies. One learner described his experience in the following way.

The most important is to read in depth which is crucially required in my discipline. The problem is I still have a problem in reading speed. I normally take an incredible long time to read through a long passage that the speed in reading sociological text is not relevant to good reading. It is sure that I can get much information by skimming and scanning, but it is unlikely to help me to understand.

Reading academic texts. Eighteen students in the survey reported that their problems in reading were due to the lack of training in reading in their specialized areas. They commented that the pre-session course should have provided them with extra help in reading academic texts in their own areas.

If they (CALS) provide such reading materials that are very close to each student's field of future study, it could be more helpful. The pre-session reading course is helpful for improving one's general reading skill, but in the case of academic reading, it seems to me that to learn as many words related to one's own study field as possible would be more important than to learn skimming and scanning skills.

There is, therefore the need for an individual pursuing the pre-session reading course to be exposed to some technical text relevant to his/her area of specialization. Material for reading practice should be relevant to an individual course of specialization.

Reading for overall comprehension. Sixteen students, about a quarter of the subjects, mentioned that they had difficulties in understanding text organization and writer's attitude. They commented:

Difficulty in understanding the writer's attitude towards the argument she or he makes. Whether the writer is agreeing, disagreeing, supporting or convincing the reader with his or her view.

The results further showed that understanding the complex nature of academic text requires not only a knowledge of grammar but also an understanding of the ideas embedded within the reasoning used in the academic texts.

Reading Tests

Two sets of reading tests were issued to 48 students at the beginning of their pre-session course. The aim of these tests was to find out the students' level of proficiency in different reading skills and the possible relationships between tests of different skills. Correlations were carried out to discover the relationships between these tests. Results in Figures 2a, 2b & 3 below show the relationships between testing of global and discrete skills

It can be seen that the correlations between the global skills test and the three tests of discrete skills are 0.5743, 0.7426 and 0.7069 ($P < 0.01$). The correlations for the testing of global skills and testing of discrete skills are strong and directly proportional. If the learners did well on the testing of global skills, they also tended to do well on the testing of discrete skills and vice versa. The results also indicate that the two sets of tests that are designed to test global skills and discrete skills separately might have actually tested similar reading skills.

Reading Task Analysis

A reading task analysis was done of the textbook *Reading* (McGovern, Matthews, & Mackay, 1994), which is assigned for the pre-session course. This textbook consists of seven units. There are altogether 103 tasks in the whole textbook. The analysis was carried out by four ELT teachers through a pro forma matching form. The analysis consisted of two parts: 1) a descriptive analysis (by the teachers) of frequency of reading skills developed through all 103 reading

Fig 2a Relationship between Part A of TEEP Test and Gap Filling One

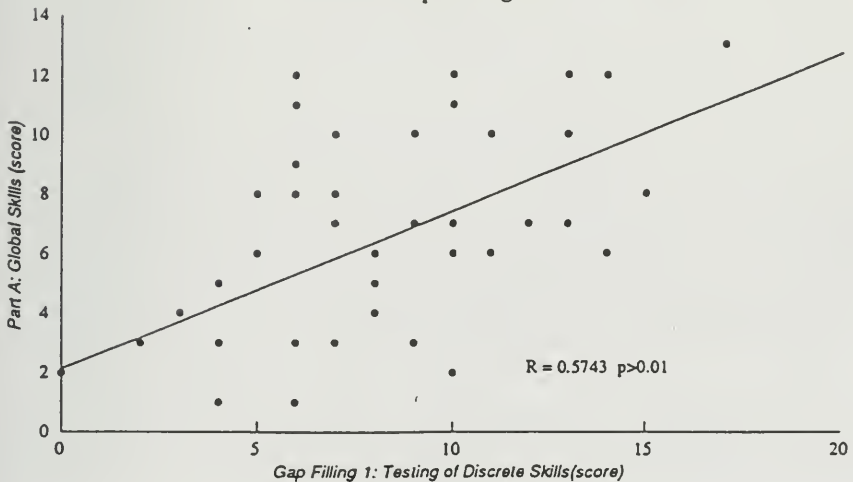


Fig 2b Relationship between Part A of TEEP Test and Gap Filling Two

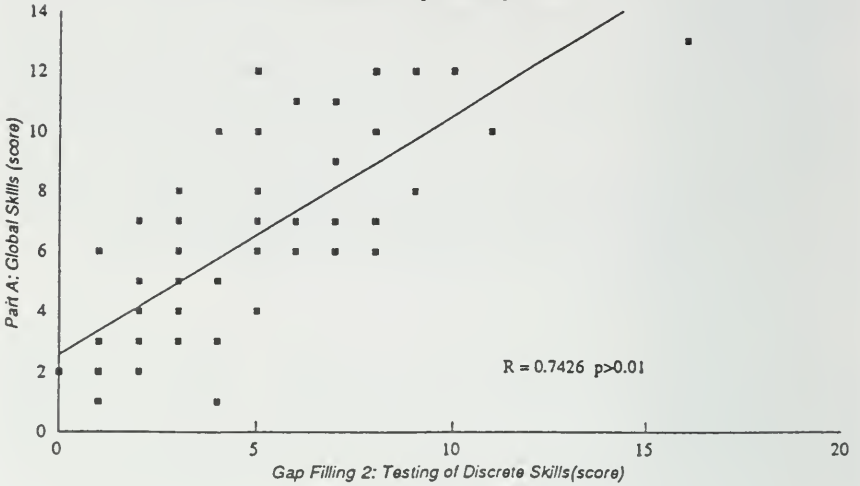
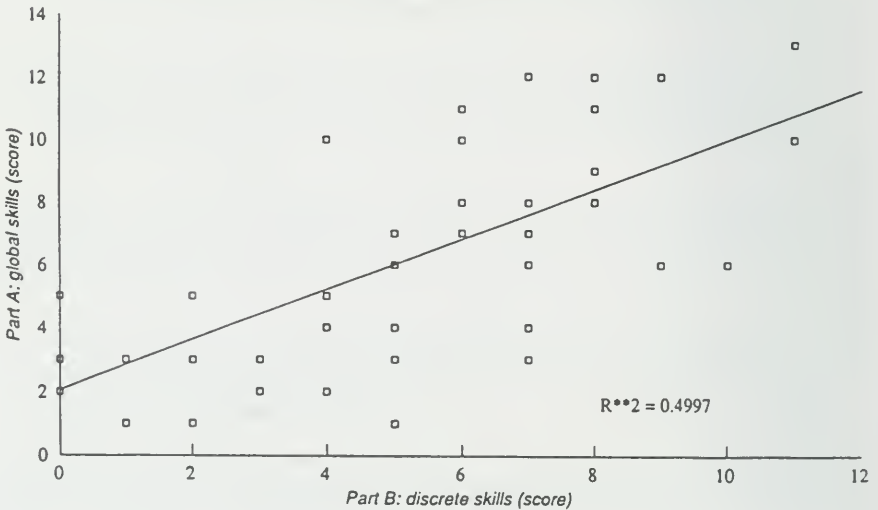


Fig 3 Relationship between Testing of Part A and Part B



	Skim- ming	Scan- ning	Main Ideas	Vocab- ulary	Pre- reading	Follow-up to writing	Structure
Tasks	13	18	42	14	4	4	8
Percent	12.6%	7.5%	40.7%	13.6%	3.9%	3.9%	7.8%

Table 3: Percentage of total tasks which develop each skill

tasks presented in the textbook; and 2) the teachers' degree of agreement on the analysis. Table 3 above shows the number of tasks in the textbook which teachers described as devoted to each skill (numbers were attained by averaging teachers' responses).

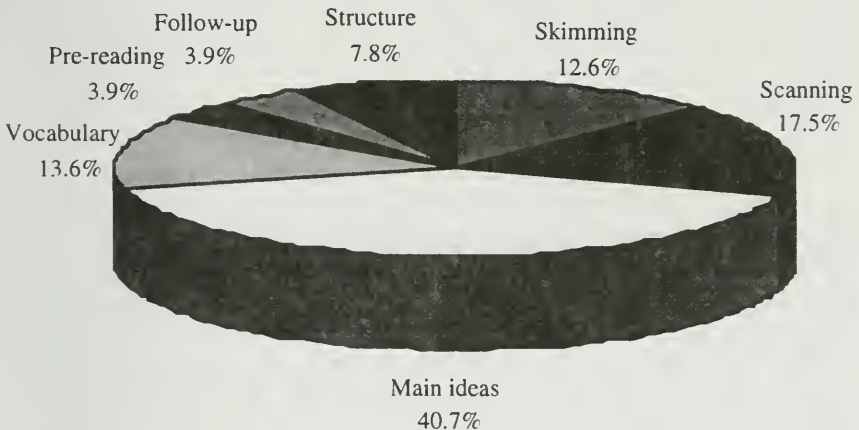


Figure 4: Skills developed through the tasks in the textbook

Figure 4 above shows that, according to teachers' descriptions, reading for the 'main idea' (reading a text or parts of a text more slowly and carefully to extract all the relevant information) was developed by 40.7% of all the tasks in the textbook. The other three main reading skills in the study were practised in a similar number of tasks (44% altogether). As can be seen from the figure above, teachers found that pre-reading activities and follow-up activities to writing were practised the least through these activities.

The second part of the analysis showed there was a general consensus among the teachers who did the textbook analysis regarding discrimination of separate skills developed through each task. The results showed that of the 103 reading

tasks in the textbook, the four teachers reached total agreement on the analysis of 47 % of the tasks. Three of the teachers agreed with each other on 21% of the tasks. Thus general consensus was reached among teachers on 68% of the analysis. Teachers' opinions differed over the rest of the tasks as to which skills were developed through which reading tasks.

DISCUSSION

Learners' Perceptions of the Essential Reading Skills Required of Them and the Skills They Find Most Problems with in Their Academic Studies

The questionnaire results in Table 2 & Figure 1 reveal both the skills learners perceived as important and the skills they perceived as difficult. However, the essential reading skills were not necessarily rated in the same order on the importance and difficulty scales. They are not proportional. According to Figure 1 on the importance and difficulty scale, *skimming* came highest on the importance scale, while it was the third lowest on the difficulty scale. The skill of *main ideas* was the second highest on both the importance and difficulty scale indicating a general agreement among learners' perceptions toward this skill. *Scanning* was relatively important (similar to the skill of *vocabulary*), yet certainly rated as much less difficult (lowest on the difficulty scale). The least important skill (*vocabulary*) came the highest on the difficulty scale.

It can be seen from the above results that the academic reading skills learners perceive as essential are *skimming*, followed by *main ideas*. These learners, facing a massive amount of information to process in their academic studies, are required to read selectively by applying the skill of *skimming*. It is crucial for both native speaking learners and non-native speaking learners in the academic setting to read widely about their subjects in order to carry out their research. However, there is always a conflict of time and the ability to search for the necessary information. Learners are often at a loss with a large amount of written information to read in order to find the information they need. Therefore, both *skimming* and efficient reading for *main ideas* are important study skills for learners in the EAP context.

Although the skill of *understanding unknown words* was perceived as the least important among other skills by the learners, learners commented that *vocabulary* caused difficulty in their academic reading according to the qualitative data. Two possible reasons for this difficulty might be, firstly, for non-native learners who learned English as a foreign language, English has not been their medium of instruction in most cases. Their proficiency is not at a level which allows them to cope with their academic studies in English as comfortably as in their native languages. It requires quite a long time and effort for these adult learners to achieve the same level of proficiency as in their native languages. Therefore, reading at this stage is a language problem especially in terms of having a large stock of vocabulary.

Secondly, the difficulty with subject-specific terminology is another big problem for these learners pursuing higher degrees. Terminology for them is not simply a language problem but also a problem related to their subject studies. The nature of their academic studies requires them to know the words with relatively common meanings and with specialized meanings in their particular areas as well. To some extent, the more they knew about their subject areas, the fewer difficulties they would have with terminology. However, it is not clear from the survey results how far it is a language problem and how far it is a problem of their subject studies. The degree of difficulties in academic reading certainly differs between learners of different proficiencies.

Learners' Performance on Tests Which Test Different Reading Skills

The strong and directly proportional relationships between the tests of global and discrete skills indicate that students' performance on both sets of the tests were correlated. There is a general tendency for students who did well on the global skills to do well on the discrete skills as well. These results suggest that students use their skills eclectically and holistically when tackling reading skills during the tests and applying discrete skills to handle global reading tasks. On the other hand, there is no clear indication that these two sets of tests are testing different reading skills. From the point of view of testing reading, discrete and global skills seem to be developed simultaneously.

Textbook Analysis of the Balance of Reading Tasks and Skills

The fact that there were almost as many tasks aimed at developing *main idea* skills as there were tasks to develop the skills of *skimming*, *scanning* and *vocabulary* put together suggests that there might be a gap between what the material writers and teachers provide students with and what the students are really in need of. As can be seen from the above results (see Figure 1), skimming was rated as important by more learners than any other skill.

On the other hand, the skill of *understanding unknown words* was practised in one third as many reading tasks (13.6% compared with 40.7% of the tasks) as those related to finding the 'main idea' (see Table 3). Yet understanding unknown words was the skill learners rated as most difficult in their academic reading. Therefore, the balance of skill training might be better shifted more toward the training of fast and selective reading such as *skimming* and to the study of the *vocabulary* used in more specialized texts to help learners become familiar with the terminology of their subject areas.

There appeared to be a general agreement among the four teachers upon which reading task was designed to practice which particular skills. From the teachers' point of view, therefore, these reading skills are separate, divisible and identifiable and can be taught through different kinds of reading tasks. Learners, according to these teachers, can benefit from practicing certain skills by doing relevant tasks. Nevertheless, those skills from which students feel they could most benefit

(*skimming* and *understanding unknown words*) are not those skills which their textbook primarily addresses (*main idea*). These results suggest that too much emphasis in EAP reading has been given to reading for the *main idea*, at the cost of faster reading skills (*skimming*) and area-specific skills (*understanding unknown words*) which are required of learners and which they find most difficult.

CONCLUSION

The continuing importance of the reading sub-skills has been considered in this study. They are considered from the perspectives of learners, teaching materials and test design in the EAP context. Synthesizing all three sources of data, we can conclude tentatively that the distinction between separate, divisible, and identifiable reading skills is useful from the perspectives of teaching, learning, and materials writing. It is not suggested that these subskills 'exist' in any tangible way, but rather that they represent a useful construct with which teachers may work.

Teachers and testers, and others involved in EAP teaching and learning, certainly need something concrete in the concept of reading skills to rely on, from which they could embark on syllabus design, teaching, material writing and test construction. Results from this study show that separate skills did exist in learners' minds, and while teachers were not in 100% agreement in defining any particular skills as being related to certain reading tasks, they did reach general consensus (68%) as to which skill was being practised by which task in the textbook analysis.

The testing situation, however, was more complicated. It is not clear from the test results that these subskills exist. The test results showed that testing of global skills and discrete skills were strongly correlated and proportional. This indicates that testing of learners either on global skills or on discrete skills would produce similar results (see Figures 2a, 2b & 3). What we know from the results is that the tests in this study tested overlapping reading skills. As is true in most testing situations, learners tend to refer to any skills and employ any available test taking strategies to achieve high scores. This might be different from their everyday academic reading since reading in an academic context is more purposeful and selective.

Therefore, the first step in designing a reading course and a reading test in such an EAP context would have to involve the construct we would like to teach and test. It then requires a reference not only to reading theories but to the needs analysis from all possible sources. These sources should include opinions from the learners, language teachers, and subject lecturers in the related academic areas. It is then necessary to make it a priority that the skill specifications prepared at the design stage adequately reflect the domain of reading that would be required of learners in their academic studies; this is the domain that we should teach and test.

NOTES

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² SAS stands for Statistical Analysis System - a software system for data analysis.

REFERENCES:

- Alderson, J. C. (1984a). Introduction: What is reading? In J. C. Alderson & A.H. Urquhart (Eds.), *Reading in a foreign language*. (pp. xiii-xxviii). London: Longman
- Alderson, J.C. (1984b). Reading in a foreign language: A reading problem or a language problem. In J.C. Alderson & A.H. Urquhart (Eds.) *Reading in a foreign language*. (pp. 1-27). London: Longman
- Alderson, J.C. (1990a). Testing reading comprehension skills (Part One). *Reading in a foreign language*, 6 (2), 425-438.
- Alderson, J.C. (1990b). Testing reading comprehension skills: Getting students to talk about taking a reading test (Part Two). *Reading in a Foreign Language*, 7, 1, 465-503.
- Alderson, J.C. & Urquhart, A.H. (1984). *Reading in a foreign language*. London: Longman
- Anderson, R. C. (1978). Schema-directed process in language comprehension. In A. M. Lesgold, J. W. Pellegrino, S. D. Fokkema, & R. Glaser (Eds.), *Cognitive psychology and instruction*. (pp. 67-82). New York: Plenum Press.
- Anderson, R. C. & Pearson, P. D. (1988). A schema-theoretic view of basic processes in reading comprehension. In P. L. Carrell, J. Devine & D. E. Eskey (Eds.), *Interactive approaches to second language reading*. (pp. 37-55). Cambridge: Cambridge University Press.
- Carrell, P. L. (1988). Interactive text processing: Implications for ESL/Second language classrooms. In P. L. Carrell, J. Devine, & D. E. Eskey (Eds.), *Interactive approaches to second language reading*. (pp. 239-259). Cambridge: Cambridge University Press.
- Carrell, P. L. (1991). Second language reading: Reading ability or language proficiency? *Applied Linguistics*, 12, 2, 159-179.
- Carrell, P. L., Devine, J. & Eskey, D.E. (Eds.) (1988). *Interactive approaches to second language reading*. Cambridge: Cambridge University Press.
- Carver, R. P. (1978). Towards a theory of reading comprehension and reading. *Reading Research Quarterly*, 13, 8-63.
- Clarke, M.A. (1986). Mentalistic measures in reading strategy research: Some research findings. *English for Specific Purpose*, 5, 2, 131-145.
- Clarke, M.A. (1988). The short circuit hypothesis of ESL reading—or when language competence interferes with reading performance. In P. L. Carrell, J. Devine, & D. E. Eskey (Eds.), *Interactive approaches to second language reading*. (pp. 114-124). Cambridge: Cambridge University Press.
- Clarke, M.A. & Silberstein, S. (1979). Toward a realization of psycholinguistic principles in the ESL reading class. In R. Mackay, B. Barkman, & R. R. Jordan. (Eds.), *Reading in a second language: Hypotheses, organization, and practice* (pp. 48-65). Rowley, MA: Newbury House Publishers.
- Coady, J. (1979). A psycholinguistic model of the ESL reader. In R. Mackay, B. Barkman, & R. R. Jordan. (Eds.), *Reading in a second language: Hypotheses, organization, and practice* (pp. 5-12). Rowley, MA: Newbury House Publishers.
- Cziko, G.A. (1978). Differences in first and second language reading: The use of syntactic, semantic and discourse constraints. *Canadian Modern Languages Review*, 34, 3, 473-489.
- Cziko, G.A. (1980). Language competence and reading strategies: A comparison of first and second language oral reading errors. *Language Learning*, 30, 101-116
- Cziko, G.A. (1981). Psychometric and edumetric approaches to language testing: Implications and applications. *Applied Linguistics*, 11, 1, 27-44.

- Davies, A. (Ed.) (1968). *Language testing symposium: A psycholinguistic approach*. Oxford: Oxford University Press.
- Davies, A. & Widdowson, H. G. (1974). Reading and writing. In J. P. B. Allen & S. P. Corder (Eds.), *The Edinburgh Course in Applied Linguistics 3* (pp. 155-201). Oxford, Oxford University Press.
- Devine, J., Carrell, P. L. & Eskey, D.E. (1987). *Research in reading English as a second language*. Washington D. C.: TESOL.
- Gamez, G. L. (1979). Reading in a second language: Native language approach vs. direct method. *The Reading Teacher*, 33, 5-8, 665-670.
- Goodman, K. S. (1973). Psycholinguistics universals in the reading process. In F. Smith (Ed.), *Psycholinguistics and Reading* (pp. 21-27). New York: Holt, Rinehart and Winston.
- Goodman, K. S. (1976). Reading: A psycholinguistic guessing game. *Journal of the Reading Specialist*, 6, 4, 126-135.
- Goodman, K. S. (1988). The reading process. In P. L. Carrell, J. Devine & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 11-21). Cambridge: Cambridge University Press.
- Hudson, T. (1988). The effects of induced schemata on the "short-circuit" in L2 reading: Non-decoding factors in L2 reading performance. In P. L. Carrell, J. Devine & D. E. Eskey (Eds.), *Interactive approaches to second language reading*. (pp. 183-205). Cambridge: Cambridge University Press.
- Hughes, A. (Ed.) (1988). *Testing English for university study: ELT Documents 127*. Oxford: Modern English Press.
- Jolly, D. (1978, October). The establishment of a self-access scheme for intensive reading. Paper presented at the Goethe Institute, British Council Colloquium on Reading, Paris.
- Lunzer, E. & Gardner, K. (Eds.) (1979). *The effective use of reading*. London: Heinemann Educational Books.
- McGovern, D, Matthews, M., & Mackay, S. E. (1994). *Reading*. London: Prentice Hall International.
- Matthews, M. (1990). Skill taxonomies and problems for the testing of reading. *Reading in a Foreign Language*, 7, 1, 511-517.
- Munby, J. (1978). *Communicative Syllabus Design*. Cambridge: Cambridge University Press.
- Pritchard, R. (1990). The effects of cultural schemata on reading processing strategies. *Reading Research Quarterly*, 25, 237-295
- Rigg, P. (1988). The miscue ESL project. In P. L. Carrell, J. Devine, & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 206-220). Cambridge: Cambridge University Press
- Rosenshine, B. V. (1980). Skill hierarchies in reading comprehension. In R. J. Spiro, B. C. Bruce & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension: Perspectives from cognitive psychology, linguistics, artificial intelligence, and education* (pp. 535-554). Hillsdale, N. J.: Erlbaum.
- Rumelhart, D.E. (1977). Toward an interactive model of reading. In S. Dornic (Ed.), *Attention and performance VI: Proceedings of the Sixth International Symposium on Attention and Performance*. (pp. 573-603). Hillsdale, N. J.: Erlbaum.
- Rumelhart, D.E. (1980). Schemata: The building blocks of cognition. In R. L. Spiro, B. C. Bruce & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension: Perspectives from cognitive psychology, linguistics, artificial intelligence, and education*. (pp. 33-58). Hillsdale, N.J.: Erlbaum.
- Seddon, G. M. (1978). The properties of bloom's taxonomy of educational objectives for the cognitive domain. *Review of Educational Research*, 48, 2, 303-323.
- Spearritt, D. (1972). Identification of subskills in reading comprehension by maximum likelihood factor analysis. *Reading Research Quarterly*, 8, 92-111.
- Weir, C. J. (1993). *Understanding and developing language tests*. London: Prentice Hall.
- Weir, C. J. (1988). The specification, realization and validation of an English language proficiency test. In A. Hughes (Ed.), *Testing English for university study* (pp. 45-110). London: Modern English Publications.

- Weir, C. J. (1983). *Identifying the language needs of overseas students in tertiary education in the United Kingdom*. Unpublished doctoral dissertation, University of London, Institute of Education.
- Williams, E. & Moran, C. (1989). Reading in a foreign language at intermediate and advanced levels with particular reference to English. *Language Teaching*, 22, 4, 217-228.
- Weir, C. J., Hughes, A., & Porter, D. (1990). Reading skills: Hierarchies, implicational relationships and identifiability. *Reading in a Foreign Language*, 7, 1, 505-510.

APPENDIX I

Reading Skills Questionnaire

Dear colleague,

We want to establish (1) what the most important reading skills for your course are and (2) the difficulties you *still* have in reading. To help us, please fill out this short questionnaire according to your own experience after the pre-sessional reading course last year. *All information will be treated in the strictest confidence*. Please send the questionnaire back through the internal mail in the envelope provided *as soon as possible*. Thank you very much for your help.

Your department _____ Your course _____

(questionnaire continued on following page)

Part I Please think about the reading skills required in the course you study.

1. Please tick in the boxes below how important it was for you to perform each skill

- 1= Very Important
2= Important
3= Not Important
N= Not Sure

2. Please tick in the boxes below how difficult it was for you to perform each skill

- 1= Very Difficult
2= Difficult
3= Not difficult
N= Not Sure

1	2	3	N	Reading Skills	1	2	3	N
				1. Skimming: reading a text quickly in order to establish a general idea of the content, e.g. to determine what part, or whether part or whole, is relevant to an established purpose and should be read again more carefully.				
				2. Scanning: looking through a text quickly in order to locate specific information, e.g., to check a date, a figure in a graph or a key word in the text.				
				3. Reading a text or parts of a text more slowly and carefully to extract all the relevant information, e.g., to carry out a written assignment such as an essay, dissertation or examination.				
				4. Understanding unknown words in the text.				
				Please specify any other important reading skills you use.				
				5.				
				6.				

Part II Please answer the following questions according to your own experience.

1. Please describe the main problems you *still* have in your academic reading.
2. Do you think the pre-sessional reading course can be improved to prepare you better for your academic reading? Please tick Yes [] No []

If Yes, Please explain how.

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