Postgraduate Students' use of Reading Strategies in L1 and ESL Contexts: Links to Success[1]

Leyla Tercanlioglu
School of Education, Ataturk University, Turkey *leyla@atauni.edu.tr*

The article reported the results of an investigation conducted in a university in the United Kingdom. The general research question addressed in the study was: How did students approach the task of academic reading. Data for this study came from five sources: audio taped interviews of 17 postgraduate students; a demographic questionnaire; the Adult Survey of Reading Attitude (ASRA); a reading efficacy belief instrument; and three texts that measured reading comprehension. Results of the study revealed that: a) ESL students rated anxiety and difficulty highly, whereas, L1 students rated modalities on the ASRA as more important; b) L1 students rated scores on both efficacy items on the reading efficacy belief instrument higher than ESL students; c) interviewees from both groups showed a clear preference for cognitive strategies, followed by metacognitive and support strategies (however, where L1 students reported high and frequent use of metacognitive strategies, ESL students reported more frequent use of support strategies); and d) reading comprehension scores were similar for both groups of students on the instruments used.

Reading strategies, English as a second language, first and second language reading, English for academic purposes, academic reading, United Kingdom

INTRODUCTION

Reading involves a variety of factors, which may have an impact on learners' target language reading ability. Some of these factors are: learners' lack of target language proficiency and vocabulary (Kasper, 1993), unfamiliarity with the content and/or formal schemata of the texts to be read (Carrell and Floyd, 1987) and inefficient reading strategies (Carrell, 1989).

Strategies have been investigated widely for reading comprehension in general and in second and foreign language contexts, in particular. These studies have discovered that readers spontaneously use different strategies in the reading process. As Paris and Jacobs (1984, p.2083) state,

> skilled readers often engage in deliberate activities that require planful thinking, flexible strategies, and periodic self-monitoring... [while] novice readers often seem oblivious to these strategies and the need to use them.

The study has been designed to document what postgraduate readers do to facilitate their reading with the possible influence of the reading context in mind and to examine how the strategy they have adopted is related to their overall reading comprehension. Two distinct groups of readers are examined: ESL and L1 readers. Students in these two groups are reading in two very different contexts. Readers in one group, referred to as the English as a second language (ESL) learners, are non-native-English-speaking international students and students in the second group are students

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whose first language is English. They are native-English-speaking students and are referred to as (L1) learners.

Research questions

The general research question addressed in the study was: How did L1 and ESL students approach the complex task of reading? The specific research questions were:

a) what was the reading comprehension, reading attitude and reading efficacy profile of postgraduate students?

b) can readers be grouped according to the reading strategy or set of strategies that dominate their approach to learning?

BACKGROUND TO THE STUDY

This research review examines the conceptual framework of reading strategies and previous research into reading strategy usage.

Conceptual framework of reading strategies

Many applied linguists, (for example, Ellis, 1994), have commented on the lack of consensus about the definition of the term 'reading strategies'. This diversity is largely due to the way the term has been used in different contexts, such as first, second or foreign language learning (Cohen, 1998).

Reading strategies, as noted by Garner (1987), may be defined as an action or series of actions employed in order to construct meaning. Bamett (1989, p.66) has used the term reading strategy to refer to the mental operations involved when readers purposefully approach a text to make sense of what they read. In the light of these somewhat tangled concepts, definitions and arguments, the term 'reading strategy' is defined for the purposes of this research as specific actions consciously employed by the learner for the purpose of reading.

Why investigate reading strategies?

Reading comprehension is essential to academic learning areas, to professional success and to lifelong learning. In a review of the developments in second language reading research, Grabe (1991) points out that the crucial importance of reading skills in academic contexts has led to considerable research on reading in a second language. Levine, Ferenz and Reves (2000, p.1) state that:

> the ability to read academic texts is considered one of the most important skills that university students of English as a second language (ESL) and English as a foreign language (EFL) need to acquire.

Shuyun and Munby (1996) note that ESL academic reading is a very deliberate, demanding and complex process in which the students are actively involved in a repertoire of reading strategies.

Existing research has shown that, based on the specific needs of their research projects, professional readers make choices as to what to read. That is to say, when readers encounter comprehension problems they use strategies to overcome their difficulties. Different learners seem to approach reading tasks in different ways, and some of these ways appear to lead to better comprehension. It has been noted that the paths to success are numerous and that some routes seldom lead to success. The hope is that if the strategies of more successful readers can be described and identified, it may be possible to train less successful learners to develop improved strategies.

Impact of reading strategies on reading comprehension

An impressive number of empirical investigations have established a positive relationship between strategies and reading comprehension. For instance, Brookbank, Grover, Kullberg, and Strawser (1999) have found that the use of various reading strategies improved the students' reading comprehension. Certain studies in second language (L2) contexts have shown that reading comprehension may be attributed to the level of the effective use of reading strategies (Braum, 1985; Dermody, 1988).

Other studies that have attempted to investigate the relationship between reading strategies and success in comprehension by speakers of other languages have produced interesting results. These studies have demonstrated that different text types may call for the use of different reading strategies. Studies examining the reading strategies of both good and poor readers have shown a differential use of strategies pertaining to text type. Golinkoff (1975) has stated that poor readers peruse all types of texts in the same manner. Similarly, Jiménez, Garcia and Pearson (1996) show that less successful bilingual readers read both narrative and expository texts in similar ways. Furthermore, researchers argue that the strategies preferred in the beginning stage of learning are not the same as those preferred in the advanced stage (Takeuchi, 2002).

Sheorey and Mokhtari (2001) state that literature on the reading strategies of advanced or proficient second language learners that compares the strategies of such learners with those of L1 speakers is almost nonexistent. The present study is intended to fill that gap by reporting on a study that compares the reading strategies of ESL students studying in the United Kingdom with those of native English-speaking British postgraduate students.

METHOD

Participants

The setting for the current study was a school of education in the United Kingdom. The study involved 11 postgraduate non-native-English-speaking international students from different countries including Japan, Korea, Qatar, China, Greece and New Zealand and six native English-speaking British students who were doing postgraduate study. All participants were female. This is typical of teacher education postgraduates where the intake has historically consisted of more female students. Ninety-two per cent of the sample was over the age of 26 years.

As part of their application for admission to the university, the ESL students had to attain a score of 550 or better on the Test of English as a Foreign Language (TOEFL), a score level considered by many universities to be indicative of a proficiency level in English sufficient to pursue university-level course work without language-related restrictions.

Furthermore, before their full-time academic study, ESL students were enrolled in an intensive ESL program where academic language skills were taught. Over 75 per cent of the international students in the sample reported that they had studied English for at least three years. In addition, the L1 students were able to speak at least two foreign languages, generally, French, Spanish or German.

Instrumentation

Data for this study came from five sources. First, a demographic questionnaire was used to elicit information about the participants. Second, the Adult Survey of Reading Attitude (ASRA) was used to gather information on the students' attitude to reading. Third, a reading efficacy belief instrument was used to collect data on students' self-efficacy beliefs. Fourth, three texts were used

to elicit information about reading comprehension. Fifth, selected postgraduate students were interviewed to explore students' patterns of reading strategies in more detail.

Demographic questionnaire

Each student completed a single page questionnaire that contained questions or statements about the participant's age, sex, educational and cultural background.

The Adult Survey of Reading Attitude (ASRA)

The attitude to reading survey, based on the work of Smith (1991) consisted of 40 items. Subjects responded to the statements on a five-point Likert-type scale (where 5=Strongly Agree and 1=Strongly Disagree). Three dimensions of reading attitude were assessed. The Anxiety and Difficulty scale (11 items) measured the extent to which the person experienced problems or confusion when reading. The Social Reinforcement Scale (six items) assessed the extent to which the person's reading activities were recognised and reinforced by others, for example family and friends. The Modalities Scale (six items) measured the extent to which the individual preferred to use sources other than reading when faced with a learning task. The ASRA was been shown to have high reliability (Cronbach alpha = 0.81 in this study).

Reading efficacy beliefs instrument

The reading efficacy beliefs instrument consisted of questions relating to language efficacy, where students were asked to rate themselves on a scale from one to three in order to indicate how good they thought they were at reading English (1=Disagree, 2=Undecided, 3=Agree). The questionnaire was shown to have reliability of 0.73 in this study.

Texts to measure reading comprehension

The texts used for the study were three 300-350 word TOEFL texts, which were selected from social and educational studies. The texts selected were based on the criteria of age-appropriateness, interest, content, and relevance to the cultural backgrounds of the participants. Therefore, the texts were general enough to be understood by students of all disciplines and did not require a specialist's knowledge of the topics discussed. They were suitable in terms of content and level. Each article was followed by a set of multiple-choice questions to test understanding. All the questions were conceptual, focusing on the main ideas, the purpose of the writer, the organisation of the text, and the key supporting evidence.

Interviews

Since meaning is generally gathered through silent reading and is, therefore, inaccessible to direct observation, it is now widely agreed that questionnaires are not sufficient for studying the process of reading comprehension. Therefore, we have conducted interviews to probe more deeply into the students' perceptions regarding their use of reading strategies. The interview schedule is based on the *Survey of Reading Strategies* (SORS) instrument (Mokhtari, 2000), which is intended to measure adolescent and adult L1 and ESL speakers' metacognitive awareness and perceived use of reading strategies while reading academic materials such as textbooks. The SORS instrument measures three broad categories of reading strategies: metacognitive strategies, cognitive strategies and support strategies. In order to avoid possible misunderstandings, the interviewer would reread her notes at the end of the interview. Taking part in the interview was voluntary.

Data collection procedures

The study began at the start of the academic year and lasted three months. The survey data on L2 reading strategies were collected during the last two weeks of the study. The 17 subjects were interviewed individually in their spare time. The interviews were tape-recorded. Throughout each interview, the students were encouraged to introduce any new information they felt was appropriate.

Data analysis procedures

The ASRA, the reading efficacy scale, and reading comprehension test data were analysed for mean reported frequencies in order to highlight differences. Data analysis of the interview materials followed standard qualitative research procedures. Recurring themes were identified through a constant comparison method that involved sorting, coding, prioritising and connecting pieces of data according to emerging patterns of interpretation (Bogdan and Biklen, 1998). When listening to the audio taped journals, the researcher, who was also a post-doctoral student in the department, took extensive notes. The data were transcribed and further analysed. The three categories that emerged from this analysis are discussed in the section that follows.

DISCUSSION OF FINDINGS

Second language reading of specialised academic material has begun to receive greater attention. This paper adds to the relevant literature by presenting an investigation designed to provide a more concrete picture of the reading strategies used by postgraduate students in their academic reading. As noted above, data analysis was conducted with respect to the research questions that guided this study: (a) what was the reading attitude, reading efficacy, and reading comprehension profile of postgraduate students? and, (b) were readers able to be grouped according to the reading strategy or set of strategies that dominated their approach?

The Adult Survey of Reading Attitude (ASRA)

This section sought to elicit the attitudes of the student cohort about academic reading activities. We examined students' responses in terms of the three scales (Anxiety and Difficulty; Social Reinforcement; Modalities).

Table 1 shows that the mean (M) of the ESL students for Anxiety and Difficulty level was quite high (M=4.12). This finding suggests that these students still experienced problems or confusion with reading. L1 students had a lower mean score of 2.69, on this scale.

Table 1. Participants' attitude toward academic reading activities

Scales	Groups	M	SD
1. Anxiety and Difficulty	L1	2.69	1.15
	ESL	4.12	0.85
2. Social Reinforcement	L1	3.56	0.95
	ESL	4.04	1.05
3. Modalities	L1	3.66	0.95
	ESL	4.05	0.94

The second scale was Social Reinforcement, which assessed the extent to which a person's reading activities are recognised and reinforced by others (for example, a supervisor or a colleague). ESL students rated themselves with a mean of 4.04 whereas L1 students had a mean of 3.56. This finding suggests that both groups, especially the ESL students, still felt the need for their academic reading activities to be recognised and reinforced by others.

The third scale, Modalities, measured the extent to which the individual preferred to use sources other than reading when faced with a learning task. ESL students had a mean of 4.05, whereas L1 students had a mean of 3.66.

Reading efficacy beliefs

Two items on the questionnaire aimed to explore the students' judgments relating to reading efficacy. Students were asked to rate themselves on a scale from one to three to indicate how good they thought they were at reading in English. Table 2 presents these findings.

Table 2. Students' self-reports relating to reading efficacy

Items	Groups	M	SD
1. I am average at reading and understanding research and research terminology related in my field	L1	4.12	0.85
	ESL	3.46	1.05
2. I am above average at reading and understanding research and research terminology related in my field.	L1	3.52	1.06
	ESL	2.68	1.36

Reading efficacy referred to students' perceptions of themselves as competent readers and learners. This was a perception associated with academic achievement that was vital to becoming a competent reader. ESL students, with a mean of 4.12, said that they had average reading abilities and understood research and research terminology related to their field. Interestingly, even the L1 students did not feel that they were much above average (M=3.52).

Oxford and Shearin (1994, p.21) commented that "...many L2 students do not have an initial belief in their own self-efficacy." Analysis of the scores indicated that the ESL students in this study had lower efficacy beliefs about their reading. This was a major cause for concern, especially when one considered that students needed to read and comprehend a large number of academic texts.

Reading comprehension

The results were analysed to measure academic reading comprehension and differential achievement in the ESL and L1 groups. Table 3 shows the score differences on the three tests for the two contrastive groups. As the results show, scores in the two groups were similar.

Table 3. Comparison of reading comprehension test scores between L1 and ESL participants

	L1 (N=6)			ESL (N=11)		
	Test 1	Test 2	Test 3	Test 1	Test 2	Test 3
M	72.3	85.2	72.1	71.8	77.7	71.3
SD	1.68	1.35	1.94	1.15	1.43	0.99

The results showed that there was little evidence that ESL and L1 students had noticeably different English language ability when undertaking academic reading.

Interview data

The students' responses were examined in terms of the three broad categories of reading strategies: metacognitive strategies, cognitive strategies, and support strategies. Students responded to the questions twice: once indicating their reading strategies in their first language (L1) and once indicating their reading strategies in their second language (ESL).

We analysed the data according to the three SORS scales. In accordance with other research (for example, Sheorey and Mokhtari, 2001; Mokhtari and Sheorey, 2002), both ESL and L1 groups showed a clear preference for cognitive strategies. Furthermore, the L1 students also reported using cognitive reading strategies more frequently than students of other nationalities.

Flavell (1979) has stated that reading is a "cognitive enterprise", which occurs, in part, as a result of the interaction between the reader, the text, and the context in which the reading took place. Cognitive strategies enabled the learner to manipulate the language material in direct ways, by reasoning, analysis, note taking, and synthesising. Examples of cognitive strategies included adjusting one's speed of reading when the material became more difficult or easier, guessing the meaning of unknown words, and re-reading the text for improved comprehension.

Cognitive strategies were followed by metacognitive strategies and support strategies respectively. The L1 students reported higher and more frequent use of metacognitive strategies. Special attention was given by L1 students to the use of metacognitive strategies.

Metacognitive strategies are those intentional, carefully planned techniques by which learners monitor or manage their reading. Such strategies included having a purpose in mind, previewing the text as to its length and organisation, or using typographical aids, tables and figures. These strategies have been considered to be vital for successful learning in a second language (SL) literature (O'Malley and Chamot, 1990). Certain studies in L1 and L2 contexts showed that potentially useful strategies for effective reading are attributed to the level of the metacognitive awareness of the students. Carrell, (1998) argued that successful reading strategy use was dependent on whether a strategy was employed metacognitively. This may account for the fact that poor readers often did not lack cognitive strategies but failed to access them metacognitively. Carrell, Pharis and Liberto (1989) also suggested that successful use of reading strategies was, largely dependent on an awareness of, and flexibility in, the use of these strategies according to the purpose of the task or the problem to be solved.

Support strategies are basically support mechanisms intended to aid the reader in comprehending the text. Indeed, the general consensus is that using a dictionary, taking notes, or underlining or highlighting the text to better comprehend it are critically important aspects of skilled reading. Both groups seem to consider support reading strategies relatively valuable, but ESL readers report using support mechanisms (using a dictionary, taking notes, or underlining textual information) significantly more than L1 readers.

CONCLUSIONS

Reading comprehension is essential to academic learning in all subject areas. It is an especially vital skill for postgraduate researchers since a great proportion of science-related research papers are written in English. In order to operate effectively in the academic world, postgraduate students must read English. However, many students enter higher education under prepared for the reading demands that are placed upon them. They experience difficulty. This difficulty is often due to their low level of reading strategy knowledge. As stated by Saumell, Hughes and Lopate (1999), students when pressed to read, often select ineffective and inefficient strategies with little strategic intent.

The results in this study were analysed to ascertain academic reading comprehension and differential achievement between L1 and ESL groups. Little evidence was found that ESL and L1 speaking students had different reading comprehension in their academic reading.

In this article we have also reported students' attitudes to reading in L1 and ESL in the context of a British university. The results we obtained, though based on a small sample, accorded with expected reading comprehension results. ESL students rated higher on the Anxiety and Difficulty scale while L1 students rated higher on the Modalities scale on the ASRA.

Results of the study revealed that both groups showed a clear preference for cognitive strategies, followed by metacognitive strategies and support strategies. What this study also confirmed was that while the L1 students reported frequent use of metacognitive reading strategies, the ESL

students reported more frequent use of reading support strategies. L1 students produced higher scores on both efficacy items on the reading efficacy belief instrument.

The present study has served to deepen our understanding of the issues associated with reading comprehension in both L1 and ESL postgraduate students and has shown that very little may be assumed in cross-cultural research.

Acknowledgements

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