

Investigating the Use of Academic Reading Strategies by Graduate ESL Learners at Dhaka University

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Abstract

The paper reports on a study which investigated the use of strategies in reading academic materials by the graduate ESL (English as a Second Language) students at Dhaka University. The main objectives of the study were to identify the most frequently used reading strategies and any significant differences between male and female students' use of academic reading strategies. A five-point Likert Scale questionnaire based on Mokhtari & Sheorey's (2002) Survey of Reading Strategies (SORS) was used in this study for data collection. The results showed that problem solving strategies were the most frequently used strategies followed by global and support strategies. Regarding gender differences, independent-samples t test results revealed some significant differences ($p < 0.05$) between male and female graduate students' use of individual reading strategies although in overall strategy use no significant difference was reported.

Key Words: Reading strategies; ESL; Gender differences; Problem-solving reading strategies; Global reading strategies; Support reading strategies

1. Introduction

Reading seems to be the most important skill for EFL (English as a Foreign Language) and ESL students (Grabe, 1991). Reading in English helps learners attain success in their course of study (Anderson, 1999). It is more important for university students as they need academic reading skills and strategies while reading academic texts (Levine, Ferez & Reves, 2000). Although graduate EFL/ESL students are expected to be proficient in English and use reading strategies effectively, little research is done to measure their level of reading strategy use. There are still questions regarding whether graduate male and female students differ significantly in the types and frequencies of using reading strategies. Again according to Chavez (2001), understanding gender differences in reading strategies is important for a number of reasons: it can make us aware of the relation of gender and EFL reading achievement; can help teachers to find ways to minimize the differences and maximize the opportunities of L2 reading proficiency for both genders; and can encourage further research into the role of gender in EFL reading. When teachers know what strategies students are using and how they are using the strategies, they can understand better the students' sources of problems in reading strategies. Then teachers can take better decision about students' learning needs and modify their teaching accordingly (Cohen, 1998 & Macaro, 2001).

In Bangladesh, students' English reading skills are considered very important for higher education (Raquib, 1987 as cited in Rahman, 2007). Many studies (Rahman, 2008; Saha & Talukdar, 2008; Chaudhury, 2009; Rahman, 2007; Tasmin, 2001, & Haque, 2006 as cited in Rahman, 2007) show that Bangladeshi university students' English language proficiency is poor and their reading skills are either poor or average. Their poor reading skills can affect their academic success. These studies suggest that Bangladeshi university students are not good users of reading strategies as there is a relationship between L2 reading proficiency and strategy use (Sheorey &

Mokhtari, 2001; Mokhtari & Sheorey, 2002). So, it is an important area of research in context of Bangladesh to investigate university students' use of strategies in reading academic materials. Moreover, no research is available on graduate ESL students' use of academic reading strategies and gender differences. Therefore, the present study fills an important gap in the literature of reading strategy research in an ESL context. The study gives teachers important insights into graduate students' use of academic reading strategies. It also increases students' awareness of academic reading strategies. In order to fulfill its objectives, the study addresses the following research questions:

- a. What are the most frequently used reading strategies among the graduate ESL learners of Dhaka University in reading academic texts?
- b. Are there any significant differences between male and female students' reported use of academic reading strategies?

2. Literature Review

2.1 Reading strategies

Reading is generally defined as a receptive process of written communication (Goodman, 1995). But according to Grabe (1991) reading is not merely a receptive process of getting information from a text; it is an active process of comprehending. Alan & Bruton (1998) consider reading as a complex process of making meaning from a text.

In this complex process of meaning construction readers use various actions which are known as reading strategies (Garner, 1987). These strategies are defined as "the mental operations involved when readers purposefully approach a text to make sense of what they read" (Barnett, 1989: 66). Cohen (1990:83) also calls reading strategies "mental processes that readers consciously choose to use in accomplishing reading tasks". According to Sheorey & Mokhtari (2001:433) reading strategies are "deliberate, conscious procedures used by readers to enhance text comprehension". From these

definitions we find two main aspects of reading strategies: these are conscious mental processes, and these are deliberately employed for better understanding of a text.

ESL academic reading is also a complex process in which students deliberately use a number of reading strategies (Shuyun & Munby, 1996). Effective ESL/EFL readers use reading strategies frequently and know how to use various strategies appropriately; but less effective readers do not use reading strategies frequently, and often they do not apply the right strategies for the right purposes (Shang, 2011). Therefore, it is important for non-native readers to know how to use reading strategies appropriately. It can help them overcome language deficiency and obtain better reading achievement (Zhang, 2008).

2.2 Research on the use of reading strategies

Monos (2005), using Mokhtari & Sheorey's (2002) Survey of Reading Strategies (SORS) investigated Hungarian university English major students' use of academic reading strategies. The study found the students reporting to use problem solving strategies ($M= 4.55$) most frequently and the support strategies ($M= 3.41$) least frequently. The study also reported five most often used strategies employed by the participants. These are, getting an idea about the content of text, rereading for better understanding, paying careful attention to difficult texts, evaluating the text and staying focused on the text. On the other hand, skipping parts of texts, setting self-questions about texts, translating from English to Hungarian, reading aloud difficult texts and using word clues for better understanding were reported to be the five least often used strategies.

Tercanlioglu (2004) also investigated the reading strategies used by postgraduate ESL and L1 students in a UK university. The study reported that the ESL students used support strategies significantly more frequently than L1 students, whereas L1 group used metacognitive strategies significantly higher than the ESL group.

Again Hamdan et al (2010) investigated the cognitive and metacognitive reading strategies used by 57 English major Malaysian students when reading academic texts in English. The researchers found higher level use of cognitive strategies ($M=3.59$) than metacognitive strategies ($M=3.56$) among the participants. In addition, the study reported the students exploiting problem-solving strategies the most. Among the individual reading strategies guessing, contextualizing, visualizing, rereading and using dictionary were found to be the most exploited strategies. Another study by Nurazila et al (2011) conducted with ESL learners of a Malaysian university also reported that problem-solving strategies were the most prominently employed by students when reading academic materials.

2.3 Research on gender and use of reading strategies

Some studies on gender and use of reading strategies show significant differences between male and female students' use of strategies when reading academic materials. For example, Monos' (2005) SORS-based study with Hungarian university English major students reported significant differences between males and females in their use of problem solving strategies, support strategies, and overall strategies. In all these cases, females scored higher than males indicating that females used academic reading strategies more frequently than their male counterparts.

Poole's (2009) study with 352 (male=117; female=235) Colombian university students' use of reading strategies also showed similar findings. In addition, the study reported significant differences between males and females' use of 8 individual reading strategies: taking notes for better understanding; reading aloud when text becomes difficult; reading slowly and carefully for better understanding; underlining or circling information in text; using reference materials; paying close attention to reading; using typographical features; and translating to native language. In all these strategies female students scored higher than males. The study also

reported that females' level of overall strategy use was high while males' moderate.

Another study by Poole (2005a) with 328 (male=111, female=217) Chinese students about their use of reading strategies revealed significant gender differences with females scoring higher than males in all three categories of reading strategies used in SORS. At the individual strategy level, female students reported to use 18 out of 30 reading strategies more frequently than males.

On the other hand, Sheorey & Mokhtari (2001); and Weiyang (2006) reported no significant gender differences in group and overall reading strategy use among the participants in their studies. But they found a general tendency with females scoring higher than their male counterparts.

Poole's (2005b) SORS-based study with 248 ESL students (Male=110, Female=138) in US universities also reported no significant gender differences in overall and group level strategy use except in case of two individual strategies: noting text characteristics, and paying close attention to reading. While females scored higher than males in the former, males scored higher in the latter.

In general, the findings of the above studies suggest an existence of gender differences in EFL/ESL students' use of academic reading strategies with females being more frequent and more active strategy users than males. These differences need to be addressed otherwise "males could be left with fewer educational and professional opportunities than females" (Poole, 2009:33).

2.4 Research on Bangladeshi university students' reading skills

In Bangladesh, English is taught as a compulsory subject from class one up to undergraduate level. Before entering university, although students undergo twelve years of teaching-learning of English at schools, their proficiency in English remains poor. Some studies show that university students are not good readers of English.

For example, Saha & Talukdar (2008) studied a group of undergraduate ESP learners in a public university and they found none of the participants confident in using four basic skills in English. Another study by Chaudhury (2009) on the English language needs of humanities students of Dhaka University found the majority of the students as 'average' readers. Teachers also had the same opinion about the reading proficiency of their students.

Rahman (2007) also reported that university students' English reading proficiency is very poor. According to Rahman (2007: 4) "a large majority of students at the undergraduate level in our country cannot access English textbooks prescribed in their syllabus for their lack of required proficiency of reading skills in English". Students have problems in vocabulary, understanding syntax and text organization. For their lack of vocabulary students often take resort to dictionary which affects their reading. In their studies, Tasmin (2001) & Haque (2006) (cited in Rahman, 2007) showed that students' proficiency in almost all the sub-skills of reading was 'below average'.

These studies indicate that Bangladeshi university students are not proficient in English reading skills. The findings suggest that as poor readers, they may lack in using academic reading strategies effectively.

3. Theoretical Framework

The study used Mokhtari & Sheorey's (2002) Survey of Reading Strategies (SORS) as its theoretical framework. SORS was originally designed to measure adult ESL students' perceived use of strategies in reading academic materials in English.

The concept of 'reading strategy' used in this study refers to 'academic reading strategies in an ESL context'. These strategies are the deliberate actions which students consciously use for better comprehension while reading academic materials. The strategies investigated in this study were the three broad categories of reading strategies used in SORS: global reading strategies; problem-solving strategies; and support strategies. These categories were originally

based on the factor analyses and theoretical considerations of Mokhtari & Reichard's (2002) Metacognitive Awareness of Reading Strategies Inventory (MARSI).

3.1 Global reading strategies (GLOB)

Global reading strategies are generalized strategies which aim at overall analysis of the text. These strategies are consciously used by students to set "the stage for the reading act" (Mokhtari & Reichard, 2002: 252), to monitor and manage their reading. Strategies such as, setting purpose for reading; checking if text content fits purpose; predicting content of the text are used to set the reading task. Other strategies like using prior knowledge; using clues from the context; using text structure are used for better understanding of the text. Some strategies are also used to monitor and evaluate reading which include making decisions about what to read closely and what to ignore; checking understanding of new information; verifying the guesses; and analyzing and evaluating the information critically.

Global strategies are top-down in nature. Skilled and strategic readers use these strategies in order to comprehend the text globally and develop their L2 reading proficiency.

3.2 Problem-solving strategies (PROB)

Unlike global reading strategies, problem-solving strategies are localized strategies which aim at addressing problems when texts become difficult. These strategies are used while readers work directly with the text. These are also called 'repair strategies' (Mokhtari & Reichard, 2002: 252) which are employed by readers when problems arise in comprehending the text. Problem solving strategies include reading slowly and carefully; adjusting reading speed with the content; pausing to reflect on reading; visualizing information for recollecting the content; paying closer attention to reading; rereading; and guessing meaning of unknown words and phrases.

3.3 Support strategies (SUP)

Support strategies are basically helping mechanisms which readers use to comprehend the text better. Readers use these strategies depending on their needs. Supporting strategies include highlighting important information; reading text out loud; using a dictionary; paraphrasing difficult ideas or expressions; revisiting previously read information; and asking self-questions. ESL students sometimes use other support strategies such as, thinking about information in their L1; and translating from English into L1.

These three types of reading strategies are commonly used by ESL/EFL students when reading academic materials. These strategies have strong influence on better text comprehension (Mokhtari & Reichard, 2002).

4. Methodology

The study was based on quantitative approach. Data were collected through a questionnaire survey. Questionnaire was used in this study because it is commonly used in reading strategy research. Besides, questionnaire is an easy way to collect a wide range of data from a large sample within a short time.

4.1 Subjects

The participants in this study were 44 Masters students majoring in Applied Linguistics & ELT at the University of Dhaka in Bangladesh. Of the total participants, 16 were males (36.3%) and 28 females (63.7%). The participants belonged to the same group of age ranging from 23 to 29. Both the mean and median age was 24. All the participants completed a three-year Bachelor degree in English. Purposive sampling method was used to select the subjects in this study.

4.2 Instrument

The instrument used for data collection is a quantitative questionnaire based on Mokhtari & Sheorey's (2002) Survey of Reading Strategies (SORS). The questionnaire (see appendix) consisted of two sections.

Section one contained some demographic items on the general background of the participants including gender, age, and academic session. Section two contained 30 reading strategy items designed on a five-point Likert Scale ranging from 1 to 5. The items were divided into three broad categories: global reading strategies (GLOB), problem-solving strategies (PROB), and support strategies (SUP) (Mokhtari & Sheorey, 2002). GLOB categories contained 13 items while PROB and SUP contained 9 and 8 items respectively. Students were asked to read each statement and indicate how often they used the strategy implied in the statement by using the five-point Likert Scale given after each statement. The responses were rated as *always=5, usually=4, sometimes=3, occasionally=2, and never=1*.

4.3 Procedures of data collection and data analysis

Data were collected through a questionnaire survey conducted in one of their regular classes of the participants. The purposes of the survey were explained to them before they filled in the questionnaire and returned it at the end of the class.

The data were analyzed using the Statistical Package for Social Sciences (SPSS version 16.0). Descriptive statistics (frequencies, means and standard deviations) were calculated for responses of each variable in order to find out the reading strategies most frequently used by the participants.

Independent-samples *t* tests were employed to identify any significant differences ($p < 0.05$) between male and female participants in their responses for individual reading strategy items. Independent-samples *t* tests were also done for each of the three categories and overall reading strategies to determine significant gender differences at the category level and overall use of reading strategies.

In order to describe the reading strategy use as reported in the questionnaire, three levels of reading strategy usage were identified: Low (Mean of 2.4 or lower), Moderate (Mean of 2.5 to 3.4) and High (Mean of 3.5 or above) following Oxford & Burry-Stock's (1995) suggestion for strategy use in language learning. The means of

students' response scores for individual items were used to indicate the frequencies of perceived use of the strategies when reading academic materials (Mokhtari & Sheorey, 2002).

5. Results and Discussion of Findings

5.1 Research question 1: What are the most frequently used reading strategies among the graduate ESL learners of Dhaka University in reading academic texts?

5.1.1 Use of global reading strategies

The results as presented in Table 1 show that the means of the individual items range from moderate 3.27 (item 7) to high 4.64 (item 11). The results indicate that 12 out of 13 global strategies had high frequency of usage (Mean of 3.5 and above) as reported by the respondents. Only one strategy (i.e. using tables, figures and pictures in the text, item-7) had moderate level of usage (Mean of 2.5 to 3.49).

The results also show that 'guessing the text content' (item-11) was the most frequently used global reading strategy followed by the strategy of 'using prior knowledge' (item-6). A good majority (70.5%) of the respondents reported to 'always' use the former while 72.7% of the respondents 'always' used the latter when reading academic texts.

The results suggest that generally the respondents are high users of global reading strategies. But they seem to lack skills in analyzing or evaluating the text critically as a huge majority (81.9%) of the respondents did not 'always' use this strategy (item-13). A possible reason for this may be that they were not taught how to appraise their reading critically.

Table 1: Reported use of global reading strategies. (Responses are shown in percentage and Means are in descending order)

Item No	Global reading strategy items	5	4	3	2	1	M
11	Guessing the content of the text	70.5	22.7	6.8	0	0	4.64
6	Using prior knowledge for better understanding	72.7	15.9	6.8	4.5	0	4.57
10	Checking new information	45.5	36.4	11.4	4.5	2.3	4.18
1	Having a purpose for reading	29.5	56.8	11.4	2.3	0	4.14
3	Previewing text before reading	40.9	34.1	20.5	2.3	2.3	4.09
8	Using context clues	38.6	29.5	22.7	9.1	0	3.98
12	Checking one's guesses about the text are right or wrong	38.6	31.8	20.5	6.8	2.3	3.98
5	Deciding what to read closely and what to ignore when reading	36.4	27.3	27.3	4.5	4.5	3.86
2	Thinking about how the text content fits reading purpose	27.3	31.8	36.4	2.3	2.3	3.80
9	Using typographical features e.g. bold font and <i>italics</i>	36.4	31.8	11.4	13.6	6.8	3.77
13	Analyzing and evaluating text information critically	18.2	43.2	25	13.6	0	3.66
4	Reviewing text characteristics e.g. length and organization	22.7	29.5	27.3	15.9	4.5	3.50
7	Using text features like tables and figures for better understanding	20.5	29.5	20.5	15.9	13.6	3.27

5=always, 4= usually, 3= sometimes, 2=occasionally, 1= never, M= means

5.1.2 Use of problem-solving strategies

The results as in Table 2 demonstrate that the means of the individual items range from 3.52 to 4.55, which indicate that all strategies were used with high level of frequency (Mean of 3.5 and above). The results also show that 'rereading the text when it becomes difficult' (item-19) was the most frequently used problem-solving strategy followed by the strategy 'paying closer attention to text when it becomes difficult' (item-18). A good majority (65.9%) of the respondents reported that they 'always' reread the difficult texts (item

19) while 59.1% of the respondents reported to 'always' pay closer attention to difficult texts for better understanding.

The third most frequently used strategy was 'reading slowly and carefully for better understanding' (item-14). It is interesting to note that although half of the respondents 'usually' employed this strategy, only one-fourth of the respondents 'usually' stopped to reflect on their reading (item-16). The findings indicate that generally the respondents were high level users of problem-solving strategies while reading academic materials.

Table 2: Reported use of problem-solving strategies. (Responses are shown in percentage and Means in descending order)

Item No	Problem-solving reading strategy items	5	4	3	2	1	M
19	Rereading text for better understanding	65.9	22.7	11.4	0	0	4.55
18	Paying closer attention to the text	59.1	25	11.4	4.5	0	4.39
14	Reading slowly and carefully when text becomes difficult	38.6	50	11.4	0	0	4.27
21	Trying to get back on track	43.2	43.2	11.4	2.3	0	4.25
20	Guessing meaning of unknown words or phrases	47.7	29.5	20.5	2.3	0	4.23
15	Adjusting reading speed to the difficulty level of text	34.1	36.4	15.9	9.1	4.5	3.86
17	Visualizing information to help remember text	27.3	40.9	20.5	11.4	0	3.84
22	Taking notes of the key expressions and ideas while reading	22.7	29.5	31.8	13.6	2.3	3.57
16	Pausing and thinking about the text	20.5	25	43.2	9.1	2.3	3.52

5=always, 4= usually, 3= sometimes, 2=occasionally, 1= never, M= means

5.1.3 Use of support strategies

The results as presented in Table 3 show that the means of the individual items range from moderate 2.98 (item 28) to high 4.5 (item 23). It is surprising to note that five out of eight strategies were reported to be used with moderate frequency level (Mean of 2.5 to 3.49) while the rest with high frequency level (Mean of 3.5 and above). The results also reveal that 'underlining text information' (item- 23) was the most frequently used support strategy followed by the strategy of 'using reference materials like dictionary' (item-25). The results indicate that the participants in this study did not use support strategies as frequently as they used global and problem-solving strategies while reading academic materials. They were rather moderate users of support strategies unlike in case of the global and problem-solving strategies which they reported to use with high frequencies.

Table 3: Reported use of support strategies. (Responses are shown in percentage and Means in descending order)

Item No	Reading strategy items	5	4	3	2	1	M
23	Underlining or circling information to help remember text	61.4	29.5	6.8	2.3	0	4.50
25	Using reference materials (e.g. dictionaries)	29.5	31.8	31.8	6.8	0	3.84
30	Thinking about information in both English and Bangla	25	36.4	29.5	9.1	0	3.77
27	Going back and forth in the text	13.6	34.1	40.9	9.1	2.3	3.48
26	Paraphrasing for better understanding	13.6	29.5	45.5	9.1	2.3	3.43
29	Translating from English into Bangla	18.2	25	27.3	25	4.5	3.27
24	Reading aloud when text becomes difficult	22.7	18.2	29.5	15.9	13.6	3.20
28	Asking oneself questions about the text and try to answer them	6.8	18.2	43.2	25	6.8	2.93

5=always, 4= usually, 3= sometimes, 2=occasionally, 1= never, M= means

5.1.4 Use of group and overall reading strategies

The results as in Figure 1 show that the ‘problem-solving’ (PROB) reading strategy category has the highest means ($M= 4.05$) followed by ‘global’ (GLOB) ($M=3.95$) and ‘support’ (SUP) ($M= 3.55$) strategy categories. The figure shows that all categories of strategies have high frequency level of use (Mean of 3.5 and above). The results suggest that the participants were high level strategy users who were proficient in English reading skills. The finding contradicts with the findings of the studies (e.g. Rahman, 2007; Saha & Talukdar, 2008, & Chaudhury, 2009) which reported Bangladeshi university students’ poor reading skills in English. A possible reason for this contradiction of results may be due to the fact that the subjects in this study were graduate English major students who had more English learning experiences than the subjects in those studies.

The results also indicate that the participants used problem-solving strategies more frequently than global and support reading strategies. The finding is supported by Monos (2005); Hamdan et al (2010); and Nurazila et al (2011). But it contradicts with Tercanlioglu’s (2004) study which reported postgraduate ESL students’ more frequent use of support strategies.

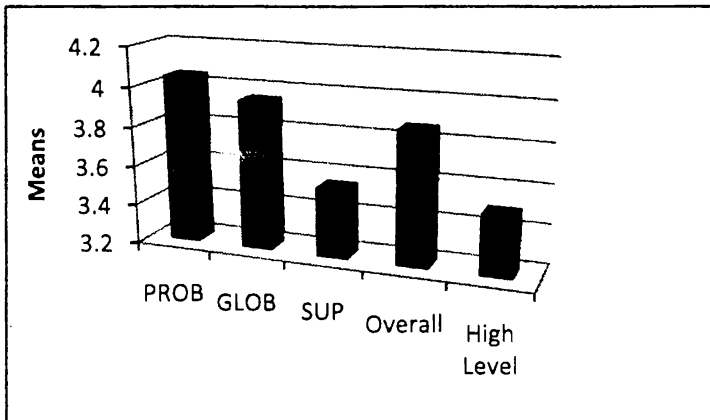


Fig. 1: Means and level of group and overall reading strategy use

5.1.5 Most frequently and least frequently used reading strategies

The results as in Table 4 present five most frequently and five least frequently used academic reading strategies by the participants of this study. The results show that 'guessing the content of the text' was the most frequently used reading strategy with the highest mean ($M=4.64$) followed by the strategies of using prior knowledge ($M=4.57$), rereading the text ($M= 4.55$), underlining information in the text ($M= 4.50$), and paying closer attention to difficult texts ($M= 4.39$).

On the other hand, the results also show that 'asking self questions' was the least frequently used strategy with the lowest means ($M=2.93$) followed by the strategies of reading aloud ($M= 3.20$), using figures and pictures in the text ($M= 3.27$), translating from English into Bangla ($M= 3.27$), and paraphrasing ideas in own words ($M= 3.43$). It is interesting to note that of the five most frequently used strategies, there was only one support strategy although four of the five least frequently strategies belonged to support strategy category. The findings may suggest that the participants in this study used global and problem-solving strategies more frequently than the support strategies while reading academic materials.

The findings are supported by Monos (2005), and Hamdan et al (2010) who also reported similar strategies, e.g. guessing the content of texts, rereading, and paying closer attention to texts to be exploited most frequently by undergraduate English major students. Their studies also reported similar supporting strategies (e.g. self-questioning strategy, translation from English into the students' L1, and reading aloud) among the least frequently used reading strategies.

Table 4: Types and Means of five most frequently and five least frequently used reading strategies

Five most frequently used reading strategies			Five least frequently used reading strategies		
Type/ No	Strategies	Means	Type/ No	Strategies	Means
GLOB 11	Guessing the content of the text	4.64	SUP 28	Asking self questions	2.93
GLOB 6	Using prior knowledge	4.57	SUP 24	Reading the difficult text aloud	3.20
PROB 19	Rereading the difficult text	4.55	GLOB 7	Using tables and figures in the text	3.27
SUP 23	Underlining information in the text	4.50	SUP 29	Translating from English into Bangla	3.27
PROB 18	Paying closer attention to reading	4.39	SUP 26	Paraphrasing ideas in own words	3.43

5.2 Research Question 2: Are there any significant differences between male and female graduate ESL learners' use of strategies in reading academic texts?

5.2.1 Significant differences in reading strategy use by gender

The descriptive statistics of male and female responses for individual reading strategy use reveal that the means of their responses were different in case of 29 out of 30 reading strategies investigated in this study and the females scored higher in majority of the strategy items than their male counterparts did. But in order to identify statistically significant differences between male and female responses, independent-samples *t* tests were employed for individual reading strategy items. The results as presented in Table 5 show only three statistically significant differences ($p < 0.05$) in case of reading strategy item 2, 5, and 22. Of these three strategies, two belong to global reading strategy category and the rest to problem-solving reading strategy category. No significant difference was found in case of support reading strategy use.

The results show that in item 2, the significant difference was males ($M = 3.44$, $SD = 1.094$), and females ($M = 4.00$, $SD = .816$); $t(42) = -1.940$; $p = .05$. Statistical analysis indicates that mean of female responses was significantly higher than males'. Therefore, it seems that females were likely to use the strategy in item-2 ('thinking about

how the text content fits reading purpose') more frequently than their male counterparts. In item 5, the significant difference was males ($M=3.38$, $SD= 1.204$), and females ($M= 4.14$, $SD= .970$); $t(42) = -2.312$; $p= .02$. Statistical analysis reveals that the mean of females was significantly higher than males'. The results suggest that females were likely to use the strategy in item 5 ('deciding what to read closely and what to ignore when reading') more frequently than their male counterparts. The results contradict with the findings of the studies reviewed above (e.g. Monos, 2005; Poole, 2005a, 2005b, 2009) which reported no significant differences in these two strategies.

On the other hand, the independent-samples t test results reveal only one statistically significant difference ($p<0.05$) in relation to item 22 which belongs to problem-solving strategy category. The significant difference was males ($M=4.00$, $SD= .966$), and females ($M= 3.32$, $SD= 1.056$); $t(42) = 2.113$; $p= .04$. Statistical analysis showed that the mean of males was significantly higher than that of females. Therefore it seems that males were likely to use the strategy in item-22 ('taking notes of the main ideas while reading for better understanding') more frequently than their female counterparts. This finding is consistent with that in Poole (2009).

In case of support reading strategy use, independent-samples t test results indicate no statistically significant differences though the means of male and female responses were different in all items, with the females scoring higher than males in five out of eight support strategies. The results suggest that male and female students use support strategies with similar frequency while reading academic texts. The finding is supported by Sheorey & Mokhtari (2001); Weiyng (2006); and Poole (2005b) who also reported no significant gender differences in support strategy use along with other categories and overall strategy use.

Table 5: Significant gender differences in reported use of individual reading strategies

Type	Reading strategy items	Males		Females		t value	P
		M	SD	M	SD		
GLOB 2	Thinking about how the text content fits reading purpose	3.44	1.094	4.00	.816	-1.940	.05
GLOB 5	Deciding what to read closely and what to ignore when reading	3.38	1.204	4.14	.970	-2.312	.02
PROB 22	Taking notes of the key expressions and ideas while reading	4.00	.966	3.32	1.056	2.113	.04

5.2.2 Differences in group and overall reading strategy use by gender

The results in Figure 2 show that the means of male and female responses were the same ($M=4.05$) in problem-solving category. But females had higher means ($M= 4.02$) than males' ($M= 3.84$) in global reading strategy category and slightly higher (Females $M= 3.56$; Males $M= 3.54$) in support strategy category. Besides, in case of overall strategy use females had higher means ($M=3.90$) than males' ($M= 3.82$). So, we see that males and females differed in global and support group strategies and overall strategy use. But these differences do not determine whether these are statistically significant or not. Therefore, independent-samples t tests were calculated. The results as presented in Table 6 reveal no significant differences ($p<0.05$) between males and females' reported use of group and overall academic reading strategies. In all cases p value is higher than (.05) and so the differences are not significant.

The results suggest that both male and female students used the academic reading strategies investigated in this study with more or less similar frequencies. The results of this study are in line with some studies reviewed above (e.g. Sheorey & Mokhtari, 2001; Weiyang, 2006; & Poole, 2005b) who did not report significant differences between males and females' use of overall and group level reading strategies. On the other hand, this finding contradicts

with the findings of some other studies (e.g. Monos, 2005; Poole, 2005b; & Poole, 2009) who reported significant gender differences in the use of overall reading strategies along with global, problem-solving and support reading strategies.

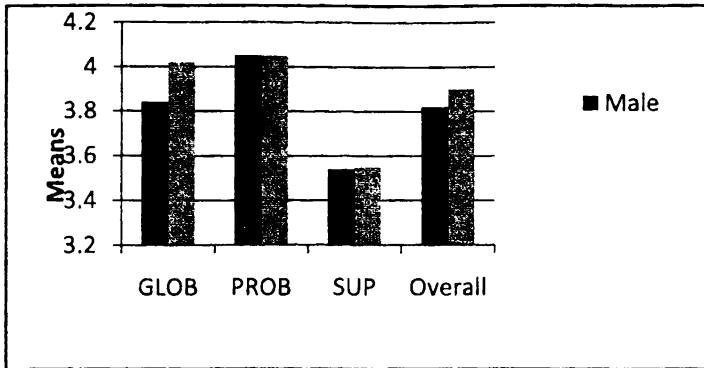


Fig. 2 Means of group and overall reading strategy use by gender

Table 6: T-test results of group and overall strategy use

Type	Reading strategy items	Males		Females		t value	P
		M	SD	M	SD		
GLOB 2	Thinking about how the text content fits reading purpose	3.44	1.094	4.00	.816	-1.940	.05
GLOB 5	Deciding what to read closely and what to ignore when reading	3.38	1.204	4.14	.970	-2.312	.02
PROB 22	Taking notes of the key expressions and ideas while reading	4.00	.966	3.32	1.056	2.113	.04

5.2.3 Most frequently used strategies by gender

Table 7 presents top five reading strategies used by male and female participants separately. Results show that three strategies are common for both genders with the second top strategy (i.e. guessing the text content) being the same for each group. Even the categories of the five strategies are same (2 global and 3 problem solving) for both males and females. The results suggest that both males and females use similar types of reading strategies most frequently. But a closer

look into the use of individual strategies reveals an interesting finding, that is, females' approach to reading seems to be more global and top-down whereas males' more text focused and bottom up.

Table 7: Five most frequently used strategies by males and females

Males			Females		
Rank	Type/No	Strategies	Rank	Type/No	Strategies
1	PROB 19	Rereading text for better understanding	1	GLOB 6	Using prior knowledge for better understanding
2	GLOB 11	Guessing the content of the text	2	GLOB 11	Guessing the content of the text
3	GLOB 6	Using prior knowledge for better understanding	3	PROB 23	Underlining information in the text
4	PROB 14	Reading slowly and carefully when text becomes difficult	4	PROB 18	Paying closer attention to reading
5	PROB 21	Trying to get back on track	5	PROB 19	Rereading the text for better understanding.

5.2.4 Least frequently used strategies by gender

Table 8 presents the bottom five reading strategies used by male and female participants separately. Results show four strategies as common for both groups though no strategy had the same rank. Of these strategies, three belonged to support strategy category including the strategy least frequently used by both genders. The results suggest that both males and females used the similar type of strategies (i.e. support strategies) least frequently. The finding is consistent with that of Poole (2005b) who reported that three out five bottom strategies used by both males and females were the same and they belonged to support strategy category.

Table 8: Five least frequently used strategies by males and females

Males			Females		
Rank	Type/No	Strategies	Rank	Type/No	Strategies
30	SUP 24	Reading difficult text aloud	30	SUP 28	Asking self questions
29	SUP 28	Asking self questions	29	GLOB 7	Using tables and figures for better understanding
28	GLOB 7	Using tables and figures for better understanding	28	SUP 29	Translating from English into Bangla
27	GLOB 5	Deciding what to read closely and what to ignore	27	SUP 24	Reading difficult text aloud
26	SUP 29	Translating from English into Bangla	26	PROB 22	Taking notes of key ideas for better understanding

6. Implications of the Findings

The findings of the study have important implications for all parties including teachers, students, curriculum designers, materials developers and policy makers involved in the pedagogy of English. The study provides teachers with important insights into graduate ESL learners' perceived use of strategies in reading academic texts. The study will help teachers develop a better understanding of the gender differences between male and female students' use of academic reading strategies. Teachers can see the findings as an important guideline to help ESL students enhance their awareness of reading strategies and "become thoughtful, constructively responsive, and strategic readers while reading academic materials" (Mokhtari & Sheorey, 2002: 2). Teachers can plan better strategy instructions and teach the strategies which have relatively low scores to the students who may consider using those strategies while reading academic texts. Though the findings generally show similarities between males and females' use of strategies, still females' scores are found to be higher than males' in many reading strategies. Therefore, to minimize

these differences, teachers can provide required opportunities so that both groups can develop expertise in using reading strategies and comprehending a text (Yigiter, Saricoban & Gurses, 2005).

On the other hand, the study can help students enhance their awareness of reading strategies and improve reading comprehension skills. Students can develop an understanding of the reading process and become more confident readers. Because of increased awareness of reading strategies, students can apply strategies skillfully while reading academic materials and develop their reading skills and academic achievement as well (Mokhtari & Sheorey, 2002). Again a good number of students of English join teaching profession after graduation. Their increased awareness of academic reading strategies can also contribute to their future teaching endeavours.

The study would also provide a good insight for curriculum designers and materials developers. They need to be aware of gender differences in using reading strategies and ensure equal gender representation while designing curriculum and developing reading materials and textbooks for teaching and learning English. In addition, policy makers can introduce different reading programmes including strategic reading instructions in order to help learners develop as strategic and independent readers of English.

7. Conclusion and Limitations

The study investigated graduate ESL learners' use of academic reading strategies. The main aims of the study were to identify the most frequently used reading strategies among Dhaka University graduate ESL learners, and any significant differences between males and females in their reading strategy use. The results revealed that problem solving strategies were the most frequently used strategies followed by global and support strategies. Regarding gender differences, the results showed that males and females differ significantly in the use of three individual strategies. Females seem to use two global reading strategies ('thinking about whether text content fits reading purpose', and 'deciding what to read and what to ignore while reading') significantly more frequently than males. On the other hand, males are likely to use a problem-solving strategy

(‘taking notes of main ideas while reading for better understanding’) significantly more than their female counterparts. In relation to other strategies, although no significant differences were found, females scored more than males on 17 items whereas males scored more than females on 12 items and both scored same on one item. The results also showed no significant differences in any of the three categories (global, problem-solving, and support strategies) and overall reading strategy use between males and females. As mentioned before, both groups scored same ($M=4.05$) on problem-solving category and slightly different ($M= 3.54$, Males; $M= 3.55$, Females) in support strategy category.

In general, the results of the study suggest that both male and female Bangladeshi graduate ESL learners are high level strategy users. They have similarities in employing academic reading strategies despite some differences with females scoring higher than males on individual strategy use. The findings are not surprising because postgraduate ESL learners are thought to be proficient in the target language.

But the findings cannot be generalized because of some limitations of this study. The sample size was small; only 44 (16 male and 28 female) postgraduate ESL students participated in the study. Another limitation was the use of only questionnaire as a data collection tool. Using questionnaires is often criticized as questionnaires may restrict respondents’ choices without allowing respondents an opportunity to elaborate or explain their choices (Baker & Boonkit, 2004). Furthermore, this study used a self-reporting questionnaire based on SORS to collect data. The results showed the students’ perceived use of academic reading strategies mentioned in the questionnaire. Therefore, on the basis of these results it cannot be concluded that the students actually use these strategies while reading academic materials because self-report surveys do not report what students actually do, rather, what they claim to do (Mokhtari & Sheorey, 2002). In order to know actual use of strategies, observation and interviews could be used which would allow us to compare these self reported data with their actual use of reading strategies. So, further research is needed involving a large sample and following a mixed

method approach for a better understanding of any gender differences between male and female students' use of reading strategies in an ESL context.

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Appendix: The Questionnaire

Section – I

Personal information:

Gender: (please tick)	<input type="checkbox"/> Male	<input type="checkbox"/> Female
Age: (please write)	Year:	Month:
Academic Session: (please write)		

Section – II

Instructions:

Please read the following statements about your reading of academic materials (such as textbooks, not newspapers or magazines). Put a tick (✓) mark in *one box* only for your answer of each statement. While answering keep these in mind:

'Always' means that '*I always or almost always do this.*'

'Usually' means that '*I usually do this.*'

'Sometimes' means that '*I sometimes do this.*'

'Occasionally' means that '*I do this only occasionally.*'

'Never' means that '*I never or almost never do this.*'

Remember, this is not a test and there are no right or wrong answers. Answer according to what you think and believe you do while reading academic materials in English.

believe you do while reading academic materials in English.

S/L No	Statements	Always	Usually	Sometimes	Occasionally	Never
1	I have a purpose in mind when I read.					
2	I think about whether the content of the text fits my reading purpose.					
3	I take an overall view of the text to see what it is about before reading it.					
4	I review the text first by noting its characteristics like length and organization.					
5	When reading, I decide what to read closely and what to ignore.					
6	I use my prior knowledge (e.g., knowledge about the theme of the text, or					

	grammar knowledge) to help me understand what I read.					
7	I use tables, figures, and pictures in text to increase my understanding.					
8	I use context clues to help me better understand what I am reading.					
9	I use typographical features like bold font and <i>italics</i> to identify key information.					
10	I check my understanding when I come across new information.					
11	I try to guess what the content of the text is about when I read.					
12	I check to see if my guesses about the text are right or wrong.					
13	I critically analyze and evaluate the information presented in the text rather than passively accept everything.					
14	I read slowly and carefully to make sure I understand what I read.					
15	I adjust my reading speed according to what I am reading.					
16	I stop from time to time and think about what I am reading.					
17	I try to picture or visualize information to help remember what I read.					

18	When text becomes difficult, I pay closer attention to what I am reading.				
19	When text becomes difficult, I read it again to increase my understanding.				
20	When I read, I guess the meaning of unknown words or phrases.				
21	I try to get back on track when I lose concentration.				
22	I take notes of the key expressions and ideas while reading to help me understand what I read.				
23	I underline or circle information in the text to help me remember it.				
24	When text becomes difficult, I read aloud to help me understand what I read.				
25	I use reference materials (e.g., a dictionary) to help me understand what I read.				
26	I paraphrase (restate ideas in my own words) to better understand what I read.				
27	I go back and forth in the text to find relationships among ideas in it.				
28	I ask myself questions I like to have answered in the text.				
29	When reading, I translate from English into Bangla for better understanding.				