

Anxiety and Academic Reading Performance among Malay ESL Learners

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Abstract

Research into the factors that contribute to reading performance decrement in L2 reading among ESL university students is still being extensively researched in the context of ELT. This is because successful academic performance is highly dependent on good reading ability. While it is widely accepted that poor reading performance is due to lack of linguistics knowledge, ESL students' reading performance is sometimes said to be influenced by anxiety. L2 reading research has indicated that anxiety is among one of the important factors in explaining individual differences in reading. Studies have shown that anxiety can hinder comprehension by interfering with the readers' cognitive systems which are responsible for processing the information in the reading texts. It appears that anxious readers are most likely to experience interference with their cognitive ability resulting in deficits in their comprehension performance. Hence, anxiety is seen to play a role in influencing comprehension performance among the ESL learners. This paper presents findings based on a study which investigated the relationship between reading anxiety and comprehension performance of academic texts among ESL Malay students. The findings show that the anxiety influenced the subjects' reading performance significantly.

Key Words: anxiety, academic reading, reading performance, ESL Malay learners

1 Introduction

In the teaching and learning of English as a Second Language (ESL), the acquisition of the four language skills of reading, writing, listening and speaking are considered crucial. However, reading is by far one of the most important skills for students to master (Carrell, 1998; Eskey, 1973). This is particularly true for university students because they spent a considerable amount of time reading academic materials and textbooks. Hence this has resulted in continuous effort by many second language acquisition (SLA)

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researchers to investigate factors which could contribute to individual differences among second language (L2) readers. The role of affective factors in describing differences in individual performance mainly center on the role of motivation, interest and attitude. However, anxiety is deemed to also play a significant role in influencing L2 readers' performance in reading (Oh, 1990; Saito, Garza & Horwitz, 1999; Sellers, 2000).

2 Literature Review

In Malaysia, all university students are required to attend English proficiency courses which are aimed at enhancing their English language skills. This is because Malaysian ESL learners, particularly Malay learners, are weak in English. In the university ESL courses, reading is taught and assessed as it is deemed necessary for the students to improve their reading skills at tertiary level. Most universities in Malaysia realize the importance of good reading skills for their students (Thang, 1997). This is reflected in their English proficiency course assessments which show a heavy emphasis on reading comprehension than on other language skills such as listening, speaking and writing. In some colleges the reading assessment is carried out during the final examination which makes up 50% of the total course assessment. Likewise, the Malaysian University English Test (MUET), places more weight on reading comprehension skills which accounts for 45% of the total language assessment. Realizing that good reading skills are essential for university students, studies in recognizing the reading processes of second language (L2) and foreign language (FL) readers is abundant. Though research in reading comprehension is excessive, particularly in the ESL context, its relevance is unquestionable. It is important to further help L2 researchers understand the problems faced by the university ESL learners, particularly the weaker ones because successful academic performance is predominantly determined by their ability to comprehend academic reading texts.

The ESL literature on L2 reading have established L2 readers' linguistic competence and schemata as a strong predictor of performance differences among L2 readers (Bernhart, 1991; Nassaji, 2002). This is indeed indisputable. However, it is rather puzzling when these variables are unable to explain individual differences in reading among L2 and FL learners. Literature in L2 reading suggests that psychological factors such as affective variables could be another contributing factor to individual differences in reading performance; one of them is anxiety (Downing & Leong, 1982; Saito et al., 1999; Sellers, 2000).

The influence of anxiety on reading performance has been studied across many L2 and FL languages such as Spanish (Sellers, 2000), Japanese, Russian, French (Saito et al., 1999), and English (Oh, 1990). The studies were carried out based on the assumption that anxiety is detrimental to

information and cognitive processing abilities. The samples involved in these studies (Oh, 1990; Saito et al., 1999; Sellers, 2000) comprise mostly intermediate and advanced learners of foreign languages. Although the findings from these studies indicated that the students reading performance was, to a certain extent, affected by reading anxiety, the findings could only speak for intermediate and advanced L2 and FL learners.

Language anxiety in the L2 classrooms is highly related to negative self-perception of one's ability that it is potentially a source of performance decrement among the L2 learners. Successful performance in the language classroom demands that L2 learners be highly proficient in English. In reality, not all L2 language learners are good in the L2. Therefore, low rated-proficiency could lead to anxiety arousal among the low proficiency L2 learners who are skeptical of their ability to perform well in the language classroom (MacIntyre, 1995) because they face a dual task; they have to learn and to perform in the L2.

L2 readers might face difficulties in comprehending academic reading texts because academic texts are long and complex, and dense with information. In addition, the language found in the text is lexically complex with long sentences and technical words (Grabe & Stoller, 2003). A confrontation with such texts could render a sense of dread and uncomfortable feeling among the learners, which could stimulate anxiety reactions each time they are required to read and comprehend the academic texts. Reading anxiety, a feeling which is associated with a feeling of dread and worry when engaging in reading tasks (Oh, 1990; Saito et al., 1996; Sellers, 2000), is likely to occur in this situation and is assumed to have its influence on comprehension performance of L2 readers due to its ability to reduce concentration and increase distractibility of L2 readers (Downing and Leong, 1982).

Anxiety, characterized by worry, hinders comprehension ability which interferes with the readers' working memory, an important component in reading which is responsible for processing and storing information (Carpenter, Miyake & Just, 1995; Downing & Leong, 1982). The worrisome thoughts due to low self-perception of one's ability to perform the task causes a diversion on the attention capacity of the readers on task-irrelevant thoughts more than on task-relevant thoughts (MacIntyre, 1995) which ultimately tax the functions of the working memory. Thus, a high level of anxiety could impede readers' attention on the task because anxiety essentially contributes to narrowing of attention capacity (Eysenck, 1985; 1992). The interference on the working memory results in inability to process the information in the text and to store the information in the short-term memory. Consequently, the readers experience deficits in their performance to comprehend and to remember salient points in the text. Hence, the influence of reading anxiety on the ESL learners' comprehension performance is reflected in their reading comprehension scores and written recall scores.

2.1 Anxiety and L2/FL learning

Second language acquisition is a field that has yielded a lot of interesting findings. Learning a language is not easy particularly for second and foreign language learners. In order to be a proficient language learner, one has to be good in the four skills of listening, speaking, writing and reading. Researchers ranging from psychologists and linguists alike have carried out numerous studies to provide a better understanding and insights into the mechanisms and processes involved in L2 and FL learning.

Traditionally, successful language learning was mostly described in terms of the acquisition of rules and principles. However, acquiring the rules and principles are insufficient and there are other possible factors besides linguistic acquisition that could contribute to the success of language learning such as affective factors which some psychologists and linguists have attributed to (Schumann, 1987). It is important to consider the internal factors as part of the L2 learners' personality. Individual personality traits influences second language acquisition processes in a way that learners are constantly aware of how they feel about their capabilities in performing in the language learning situations and their perception of their abilities can facilitate or hinder learning (Stevick, 1999).

MacIntyre and Gardner (1991a) identified anxiety as one of the key factors of affective variables and though it has debilitating and facilitating effects, the primary concern of most researchers is the negative effects of anxiety on second language learners. For two decades, researchers have attempted to study the possible relationship between anxiety and its interference on second language learning and language performance (Aida, 1994; Horwitz, Horwitz, & Cope, 1986; MacIntyre and Gardner, 1989; Sellers, 2000; Scovel, 1978; Young, 1986). There is an upsurge of studies in this area though the initial studies have been found to show some inconclusive and inconsistent findings (Chastain, 1975; Scovel, 1978; Young 1991). Presently, a more reliable instrument has been developed to measure language anxiety and has produced more consistent results (Horwitz, 2001).

Language anxiety is a complex psychological construct and it is seen as a prevalent phenomenon in second language learning (MacIntyre & Gardner, 1994; Young, 1992). Horwitz et al. (1986) defined language anxiety as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 126). It is a feeling of tension and apprehension in a second language setting (MacIntyre & Gardner, 1994b) which directly signifies that language anxiety is specifically referred to anxiety aroused in second language contexts.

Anxiety can be task-specific or subject matter specific and the effects of it would depend on how a person copes with the debilitating anxiety. MacIntyre and Gardner (1989) identified three general approaches of anxiety

in language learning: trait anxiety, state anxiety and situation-specific anxiety. Trait anxiety refers to the likelihood of an individual to become anxious in any situation. State anxiety is a feeling of anxiety experienced in the current situation such as an anxious feeling experienced before taking an examination. Situation-specific is a type of anxiety that is specifically applicable to a given context and a well-defined situation such as public speaking and writing examination. When language learner students experience state anxiety repeatedly within language learning contexts, it will eventually progress into a situation-specific anxiety.

According to Phillips (1992), “state anxiety is a situation-specific trait anxiety; that is, an individual suffering from state anxiety will manifest a stable tendency to exhibit anxiety, but only in certain situations” (p. 14). When anxiety is confined to a language learning context, it falls into specific anxiety reactions due to its nature which exists in a language learning context (Horwitz et al., 1986; MacIntyre & Gardner, 1994b; Rodriguez & Abreu, 2003; Young, 1986). Situation-specific anxiety is assumed to be more reliable in yielding consistent results in studies pertaining to language anxiety and by far has provided the best approach to carrying out this type of research (Horwitz, 2001). Studies that adopt situation-specific anxiety to carry out research in the language learning contexts have rendered consistent results that show negative correlation between anxiety and language performance though the relationship is found to be relatively modest (Horwitz et al., 1986; Horwitz, 2001; MacIntyre & Gardner, 1989; 1991b; Young, 1986).

It has been proposed that language anxiety is generally associated with consistent negative experience in the language classrooms (Young, 1986; 1992). Anxious individuals are those who feel tense in language classes and perceive language learning as an uncomfortable experience. Thus, based on this, some language researchers believe that for some learners, the language classroom is an anxiety-provoking situation. The language learners, teachers and testing methods of the language classroom are the potential sources of language anxiety (Young, 1991).

L2 anxious learners are normally characterized by the feelings of apprehension, worry, dread, and difficulty in concentrating (Chastain, 1975; Horwitz et al., 1986). Other manifestations of anxiety are characterized by distortion of sounds, inability to reproduce the intonation and forgetting words or phrases. Besides that, anxiety may also affect the behavior by cutting class, avoiding participation in classroom activities and coming to class unprepared (Horwitz et al., 1986; Young, 1992).

Eysenck (1979) points out that the effects of language anxiety can be experienced with respect to the cognitive consequences of anxiety arousal. When anxious learners develop a negative self-related cognition such as thought of failure (e.g., “I will never be able to finish this”) consequently, these negative feelings will add difficulties in their cognitive processing due to the restrictions on the available resources as these negative cognitions will

consume more resources in their cognitive systems (MacIntyre & Gardner, 1994b).

In light of this situation, Horwitz et al. (1986) have contributed significantly to the body of research of anxiety-related phenomena by designing an instrument to measure the negative effects of anxiety on the learners in a FL classroom - Foreign Language Classroom Anxiety Scale (FLCAS). It has been used repeatedly to investigate the effects of anxiety on speaking activities and the findings have significantly spurred other researchers to further investigate the potential role of anxiety in the language learning contexts.

Language anxieties have also been found to influence academic achievements in a language classroom. Aida (1994) studied the relationship between language anxiety and academic achievement among 96 American second-year students taking Japanese as a second language. The findings showed that there was a moderate significant negative correlation, which indicated that the higher level of anxiety experienced by the students, the lower their grades. An equally interesting result gained from this study is that the required group, which consists of students who took Japanese classes to satisfy the university's language requirement, showed a higher level of anxiety than those who joined the class for personal interest or enjoyment.

The findings seem to strengthen the assumption that language anxiety is a distinct set of beliefs and perception in response to FL learning and not a composite of other anxieties. They suggest that anxious students are having difficulties in dealing with some tasks in the FL classrooms. This study has significantly indicated that L2 learners suffer from language anxiety. Anxiety, then, could be one of the reasons that could explain the difficulties faced by the L2 and FL learners in learning the target language other than other established affective factors such as motivation and attitude.

Language anxiety, thus, can render a significant problem to any language learner because language learning requires a relatively intense cognitive activity. Therefore, language anxiety can impair performance in language learning or in academic contexts and that language learners and teachers alike attest to its detrimental effects on language learning and performance.

3 Purpose of the Study

This paper reports the findings of a study which investigated the influence of reading anxiety on comprehension performance among low proficiency Malay ESL learners. In this study, it was predicted that the influence of the debilitating anxiety would be higher among low proficiency Malay ESL learners due to their lack of linguistic knowledge which may trigger high level of skepticism of their own ability that will invoke anxiety reactions when engaging in reading tasks. Thus the study sought to investigate (a) the

extent to which low proficiency learners experience anxiety when reading L2 text (b) the relationship between the low proficiency ESL readers' anxiety level and their cognitive interference level, and (c) the relationship between low proficiency ESL readers' anxiety level and text comprehension.

4 Methodology

This study utilized the quantitative method of data collection. That is, questionnaires and a reading comprehension test (RCT). In addition, a written recall task (WRT) was also administered to investigate the relationship between anxiety and reading performance. The data were all scored quantitatively.

4.1 Subjects

A total of 218 first-year low proficiency ESL learners participated in this study. They were the first year diploma students from a Malaysian university. Their age ranged from 17 to 18 years old. They were selected through stratified sampling procedures. The subjects were from a homogenous group of Malay students. This gave an equal opportunity for all low proficiency Malay ESL learners to be selected as they are from different courses.

4.2 Instruments

Two survey questionnaires were developed to measure the anxiety level of the ESL readers and the interference in their cognitive systems. The first survey questionnaire was the Foreign Language Reading Anxiety Scale (FLRAS) developed by Saito, Garza, and Horwitz (1999), which was used to measure the level of reading anxiety experienced by the L2 learners during the reading activity. It was a 20-item scale and the students rated their responses on a 5-point scale ranging from 'strongly agree' to 'strongly disagree'. The questionnaire measured students' self-reports of anxiety over various aspects of reading. It also elicited students' perceptions of reading difficulties in the target language and their perceptions of the relative difficulty of reading compared to the difficulty of other language skills.

The second questionnaire used in the study was the Cognitive Interference Questionnaire (CIQ) developed by Sarason, Sarason, Keefe, Hayes and Shearin (1986). The CIQ was designed to measure the degree to which the anxious individuals experienced task-irrelevant thoughts when performing a task at hand. It also measured the interference on the problem solving efforts in test anxious individuals. It was a 22-item instrument which the subjects rated on a 5-point scale from 1 (never) to 5 (very often). The CIQ is able to differentiate the cognitive processes of the test anxious individuals in evaluative settings. In addition, two academic reading texts were also used to measure the readers' comprehension performance RCT and WRT.

4.3 Procedure and data analysis

The FLRAS was used to measure the subjects' anxiety level while the CIQ was utilized to measure the interference level in the subjects' cognitive systems caused by anxiety level during their engagement in the reading tasks.

The data were collected during their normal English classes and it took approximately 1 hour and 20mins. The RCT was scored according to the marking scheme provided by the Department of English language of the university where this study was carried out. The WRT was scored based on the idea unit identified by using Johnson's (1970) pausal unit.

5 Results and discussions

The findings indicate that the students did suffer from reading anxiety. As shown in Table 1, the range of the scores is from a minimum of 1 to a maximum of 5. The mean score for the reading anxiety is $M=3.45$ and the standard deviation is $SD=1.05$. The mean score of the FLRAS demonstrates that the students were anxious when reading English academic texts though the level of reading anxiety suggests that the anxiety level is only moderate. Interestingly, it shows that the result does not meet the assumption that the low proficiency students are the ones who are more susceptible to high level of reading anxiety. The finding is consistent with that of Oh's (1990). It was reported that the Korean ESL learners also experienced a moderate anxiety level with a mean score of $M=2.39$ when reading English texts. Likewise, Sellers (2000) reported a mean score of $M=2.63$ which indicated that the subjects in her study, who were FL learners of Spanish, experienced a moderate level of anxiety as well. Although the level of anxiety experienced by the subjects in this study corresponds with other studies, the mean score is higher than the mean score reported in Oh (1990) and Sellers (2000) which suggests that they evidently experienced a higher level of anxiety than the subjects in Oh's (1990) and Sellers' (2000). This is probably because the subjects in this study were low proficiency English learners.

Table 1. Descriptive statistic of the FLRAS

| | Min | Max | Mean | SD |
|-------|-----|-----|------|------|
| FLRAS | 1 | 5 | 3.43 | 1.05 |

n=218

The mean score of the FLRAS demonstrates that the students were anxious when reading English academic texts though the level of reading anxiety suggests that the anxiety level is only moderate. Interestingly, it shows that the result does not meet the assumption that the low proficiency students are the ones who are more susceptible to high level of reading anxiety.

Based on the minimum and maximum scores of the FLRAS, further analysis was conducted to find out which anxiety groups the students belong to. Table 2 indicates the division of the students into the three reading anxiety groups:

Table 2. The Anxiety Groups

| Anxiety group | | % |
|---------------|-----------|----|
| low | 1.00-2.33 | - |
| mid | 2.34-3.66 | 74 |
| high | 3.67-5.00 | 26 |

n=218

Based on Table 2, 74% of the students are in the moderate anxiety (MA) group while only 26% of them fall into the high anxiety (HA) group. The findings indicate that the range of anxiety level experienced by the subjects is from moderate to high level only. Interestingly, none of the students fall into the low reading anxiety (LA) group. This is probably because the subjects were low proficiency ESL students. Therefore, it is predictable that they would experience a higher level of anxiety because they are more likely to be skeptical of their ability to perform successfully and confidently on the reading tasks. The results of the FLRAS correspond to the results found in Sellers (2000) which reported that 65% of the subjects were in the moderate anxiety group. Only 18% of the students were in the high anxiety group while another 17% were in the low anxiety group. However, based on the same assumption, it is rather unexpected to find that the majority of the subjects are in the MA group as it was predicted that due to their poor linguistic knowledge of English, most of them would experience a higher level of reading anxiety. Thus, the data indicate that the finding does not meet such assumptions.

5.1 The cognitive interference level

The raw scores of the 21 items in the CIQ were subjected to descriptive analysis and the scores were examined in terms of range, mean, and standard deviation. The results are shown in Table 3.

Table 3. Descriptive Analysis of the CIQ

| m | n | Min | Max | Mean | Std. deviation |
|-----------|-----|-----|-----|------|----------------|
| CIQ | 218 | 1 | 5 | 3.4 | 1.05 |
| Item 1-21 | | | | | |
| CIQ | 218 | 1 | 7 | 4.27 | 1.28 |
| Item 22 | | | | | |

As shown in Table 3, the range of the scores is from a minimum of 1 to a maximum of 5. The mean score for the CIQ is $M=3.40$ and the standard deviation is $SD=1.05$. The second part of the CIQ is a 7-point likert scale which the students rated on the overall degree of interfering thoughts which were not related to the tasks that they engaged in. The scale ranges from 1 (no interference) to 7 (highly interfered). The mean score of the CIQ is $M=4.27$ and the standard deviation is $SD=1.28$. The CIQ measures the degree of interference of irrelevant thoughts in the subjects' cognitive systems when engaging in the task given. Evidently, the data from the first part of the CIQ indicate that the subjects' cognitive systems experienced interference a few times during their engagement in the reading tasks and the mean score of the second part of the CIQ demonstrates that the degree of interference is only moderate. The findings correspond with the earlier results found in the FLRAS which showed that most of the low proficiency ESL students experience a moderate level of reading anxiety, thus, resulting in a moderate level of cognitive interference during the reading tasks.

5.2 The relationship between anxiety level and interference on cognition

The relationship between reading anxiety and the level of cognitive interference was investigated and the results are shown in Table 4.

Table 4. Correlation between the FLRAS and CIQ

| Dependent variable CIQ | | | |
|------------------------|----------|----------|----------|
| Independent variable | <i>r</i> | <i>p</i> | <i>n</i> |
| FLRAS | .267** | 0.000 | 218 |

** correlation is significant at .01 level (2-tailed)

As shown in Table 4, the correlation co-efficient between the FLRAS and CIQ is $r= .267$, $p< .01$. The coefficient r indicates that there is a significant low positive relationship between the subjects' reading anxiety and their cognitive interference level. This low positive correlation between reading anxiety and the cognitive interference demonstrates that when anxiety level is low, the level of cognitive interference is also low. This strengthens the notion that whenever anxiety was evoked, the anxious individuals are likely to experience intrusion in their cognitive system of self-preoccupation and irrelevant thoughts (Sarason, 1975; 1988). Reading anxiety level, therefore, can be associated with the level of interference in the subjects' cognitive systems when they were performing in the reading comprehension tasks. Due to the anxiety reactions, the subjects evidently experienced intrusion in their mind which diverted their attention to some other thoughts unrelated to the tasks they were performing.

Apart from that, the association also demonstrates that they were worried over their capability in performing the tasks and were slightly interrupted by other irrelevant thoughts which could have caused diversion from their focus; their mind wandered on their family, what had happened and what will be happening in the future. All these self-related preoccupation and irrelevant thoughts are found to have an association with reading anxiety level. The following section will discuss the correlation between reading anxiety and reading comprehension performance among the low proficiency ESL learners.

5.3 The relationship between reading anxiety level and reading performance

Further analysis was conducted to examine the relationship between reading anxiety and both comprehension measures: the reading comprehension test and written recall task. The results are shown in Table 5.

Table 5. Correlation between FLRAS and Reading Comprehension Measures

| Independent variable: FLRAS | | | |
|--------------------------------|----------|----------|----------|
| Independent variable: | | | |
| Reading comprehension measures | <i>r</i> | <i>p</i> | <i>n</i> |
| 1. reading comprehension test | -0.478 | 0.000 | 218 |
| 2. written recall task | .293** | 0.000 | 218 |

** correlation is significant at .01 level

The findings in Table 5 indicates that the correlation between the reading anxiety and the reading comprehension test and written recall task is $r = -.478^{**}$, $p < .01$ and $r = -.293^{**}$, $p < .01$ respectively. The correlation coefficient shows a significant moderate inverse relationship between the variables which suggest that when the anxiety level increases, the level of reading performance decreases for both reading tasks. This shows that the low proficiency ESL learners' comprehension performance is related to the level of reading anxiety reactions that they experienced. Earlier findings on the subjects' comprehension performance indicated that they did poorly on both the reading comprehension tasks. Thus, the observed inverse relationship across all comprehension measures suggests that reading anxiety is indeed a factor which could influence the subjects' ability in comprehending the academic reading text.

Anxiety reactions, characterized by worrisome thoughts about the impending reading tests, will most likely lead to the occurrence of self-preoccupation and other task irrelevant thoughts which interfere with their

cognitive systems required for processing the information in the text. Anxious individuals usually experience division in their attention between the demand of the task and the pre-occupation of negative thoughts (Tobias, 1979). Hence, comprehension performance is likely to suffer whenever the subjects' attention interferes with the reading anxiety reactions which in turn tax the functions of the working memory (Downing and Leong, 1982). Text level processes make a greater demand on these two component i.e. attention and working memory (Haberlandt and Graesser, 1985). Any interference among these components may hinder the readers from processing and retrieving the information in the text (Bell and Perfetti, 1994; Just and Carpenter, 1992).

The observed inverse relationship found in this study is consistent with the theory in anxiety research, as well as in the language anxiety research which hypothesizes that anxiety has the ability to influence the performance of anxious individuals (Eynseck, 1985; Eysenck and Calvo, 1992; Tobias, 1979) particularly in evaluative setting (Sarason, Pierce, & Sarason, 1996). This is because evaluative settings can be stressful and challenging to anxious individuals who have low self-confidence in their ability to perform in the task given.

6 Conclusion and implications

Thus, to what extent were the low proficiency ESL learners anxious when reading the academic texts? This study utilized academic reading texts and the findings obtained from the FLRAS indicated that the majority of the low proficiency Malay ESL learners experienced a moderate level of reading anxiety. Therefore, contrary to the belief that reading is least susceptible to anxiety feelings due to its nature as a private activity, the findings evidently showed that the influence of anxiety is also observable during reading tasks. However, it should be noted that manifestation of reading anxiety might not be apparent. Unlike oral tasks, anxiety reactions may be observable through stammering, lost of words or body language. This is the reason why Matsuda and Gobel (2001) aptly call this type of anxiety as 'quiet apprehension'.

The findings showed that the level of reading anxiety ranged from low to moderate with a higher percentage of the subjects falling into the moderate anxiety group. It can be concluded that only a small number of the low proficiency ESL learners were highly anxious, though the L2 or FL students who start out perceiving themselves as being poor language learners are assumed to be highly susceptible to high anxiety level (Young, 1986). Therefore, the variables which are assumed to elicit high level of anxiety: poor knowledge in English, the academic reading texts and evaluative settings are not strong enough in invoking high level of reading anxiety in the subjects of this study. Anxiety in L2 hypothesizes that L2 learners are more likely to suffer from high anxiety when they have low self-perception of their

ability in performing in the language tasks. Though it is not stated that the low self-perception is due to poor knowledge in the L2, it is assumed that their poor proficiency level will invoke skepticism in their ability to perform in the reading tasks particularly when they were assessed on their comprehension performance. The present study utilized academic reading texts which assessed the students' inference, synthesis, vocabulary and analytical skills; they represent higher levels of reading skills. The texts were deemed difficult for the students as their language proficiency did not match the level of the language used in the texts. They, however, only experienced low to moderate level of reading anxiety although all the factors, which are considered as good predictors in invoking high level of anxiety, have been taken into account.

It can also be concluded that the anxious subjects' performance deficits are partially explained by the interference on their cognitive systems. Furthermore, when the L2 readers experience anxiety, they are likely to experience intervention in their cognitive systems which can lead to preoccupation of intrusive task-irrelevant thoughts during their engagement in the task at hand. Anxiety interferes with the subjects' cognitive systems in focusing on the text he/she is reading by causing the anxious individuals to be attending to thoughts which are not related to the tasks (Sarason et al., 1996). The findings demonstrated that the subjects experienced a moderate level of interference during their engagement in the reading tasks. This shows that their attention is divided between the tasks and other unrelated matter. This is reflected in the findings which indicated that their mind wandered while reading the texts. They were concern about their performance ability of whether they were able to perform in the reading tasks. This shows that they were consumed with self-preoccupation thoughts. Furthermore, they were also occupied with other irrelevant thoughts when the findings showed that they often thought about their family and friends while performing the tasks. Evidently, this demonstrates that anxiety and cognition is related to each other. This explains the manner in which cognitive performance of an anxious individual is affected resulting in performance deficits.

Most importantly, in the correlation analysis, the observed significant negative correlation between reading anxiety and both reading comprehension measures lends support to the premise that reading anxiety influences the low proficiency L2 readers' comprehension performance. Although the present study is unable to support the conclusion that reading anxiety causes poor performance, the data, nevertheless, demonstrate that, to a certain extent, anxiety plays a significant role in describing how well the L2 readers performed in the reading tasks.

The consistent moderate negative relationship found in this study correlates is consistent with most studies in language anxiety research. Numerous studies have consistently yielded a moderate negative relationship between language anxiety and L2/FL learners' performance in language

classrooms (see Horwitz, 2001; MacIntyre and Gardner, 1991a; Young, 1991), though in some studies, the relationship is only low (Horwitz, 2001; Phillips, 1992). In the reading context, a low to moderate relationship between anxiety and reading comprehension among the ESL learners was also found in Oh's (1990) study. This suggests that anxiety is one of the many factors which could influence reading among L2 readers. Thus, this study, together with other studies in reading anxiety (Matsuda and Gobel, 2001; Oh, 1990; Saito et al., 1999; Sellers, 2000), provides additional evidence to support the existence of reading anxiety among the L2 and FL learners. Most importantly, it shows that it influences reading performance negatively. This is important as this will further strengthen the findings in anxiety research that prove the existence of anxiety in language learning context particularly in reading skills.

The findings also lend support to some claims that linguistic knowledge is inadequate to explain the performance differences in L2 reading as the relationship further explicates the role played by anxiety as one of the factors that could influence comprehension performance in L2 reading. As reading is seen as complex cognitive skills because it draws on various processes and resources such as attention, working memory and inference skills, anxiety has the potential to be another source of individual differences in reading performance among the L2 learners.

The observed and reported findings in this study have both theoretical and pedagogical implications. The current affective reading model only includes motivation, attitude, interest and self-esteem as the main factors in influencing reading. Based on the findings which have consistently demonstrated that anxiety correlates negatively with reading performance, the role of anxiety in reading should be as important as motivation, interest and attitude in reading. The existing affective reading model suggests that affective factors play a significant role in determining the readers' behavior in reading; they determine whether a reader will continue reading or will show a reversed behavior. However, the findings from this study provide the evidence that the influence of affective factors especially anxiety in academic settings is not confined to influencing the readers' behavior in reading, but also in influencing their ability to perform successfully in academic reading activities. Therefore, the manner in which anxiety influence reading needs to be discussed in the model to make it more comprehensive and complete by considering the influence of affective factors in academic settings.

Pedagogically, since anxiety is found to influence L2 readers' ability to perform successfully in reading tasks, there is a need for L2 language teachers and instructors to ensure that reading activities or tasks in language classrooms are not anxiety-provoking situations for them. Although the findings demonstrate that the strength of the relationship ranges from low to moderate, anxiety has been consistently found to influence the L2 readers' performance negatively in reading. Therefore, there is a need for some

changes in ESL teaching methodology. Language instructors need to reflect on approaches in conducting reading classes. Some language instructors fail to realize that their approach in the language classrooms is the source of anxiety (Horwitz et al., 1986; Young, 1991). Their role is important in determining the social settings of the L2 classrooms. L2 instructors need to ensure a relaxing and conducive learning atmosphere in L2 reading classes. This will assist them in coping with any anxiety-provoking situation in order to compensate for their poor linguistic knowledge which could be the source of their anxiety reactions.

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