

# Secondary School Students' Reading Anxiety in a Second Language

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Received: August 11, 2015 Accepted: September 16, 2015 Online Published: September 18, 2015

doi:10.5539/elt.v8n11p28

URL: <http://dx.doi.org/10.5539/elt.v8n11p28>

## Abstract

Developing an appropriate competence in reading in English as a second language is a key factor for subsequent academic success. This study investigated second language reading anxiety of secondary school students. A questionnaire was distributed to 72 female students and focus-group interviews were conducted with 19 volunteer students. Overall results reveal significant differences between the levels of reading anxiety reported by students relative to their general area of study (*viz.*, science or arts). All the recorded differences were in favor of students in the science track. Most of the sources of reading anxiety that were identified by the students were related to language proficiency, specifically knowledge of vocabulary and grammatical rules.

**Keywords:** reading anxiety, reading strategies, English language, vocabulary, learning skills, grammatical structures

## 1. Introduction

Research has already made great contributions to our understanding of the relationship between language learning and language learning anxiety. However, research in the area of foreign/second language reading anxiety is still limited and we still need to understand it in depth. The present study makes an effort to broaden our understanding about English reading anxiety as it is seen by the learners themselves. Its purpose is to highlight students' perceptions about the sources of English language reading anxiety. Anxious students are seen as those learners who demonstrate lack of learning strategies, experience, skills and confidence. Their problems may be compounded by negative feelings and reaction to the learning task. When reading in English, some may think often about the negative aspects of the task more than the positive ones. Second/foreign language classrooms should not be always thought of as ideal environments that are free of any kinds of learning anxiety. Researchers have argued that an appropriate level of a second and/or foreign language learning anxiety may help in facilitating the process of language learning. Nevertheless, many studies have reported that learning anxiety has negative effects on students' language learning experience (Liu, 2006; Sellers, 2000; Young, 1991; Jafarigohar & Behrooznia, 2012; Horwitz et al., 1986; MacIntyre & Gardner, 1989; Lien, 2011). The existence of anxiety in language learning classes is an issue that teachers and educators may try to address in order to help learners develop positive feeling toward the task of learning how to read in English. Different studies examining students' language proficiency level and teachers' roles reveal that learners with a higher language proficiency level tend to have lower language learning anxiety, and teachers' supportive intervention may assist in increasing motivation and decreasing learners' language learning anxiety (Elkhafaifi, 2005; Abu-Rabia, 2004; Ewald, 2007; Liu, 2006; Rassaei, 2015; Qashoa, 2014). In a study conducted within the context of the United Arab Emirates (UAE) with male and female students from three different universities, For example, Qashoa (2014) reported strategies that may contribute in lowering learners' anxiety. Those strategies were reported from students' and teachers' point of views such as enhancing confidence and schemata, developing positive views towards making mistakes and accepting them as an integral part of the learning process, using writing models, etc.

## 2. Literature Review

Learning anxiety is generally viewed as the manifestation of feelings of incompetence in doing any task. If this kind of feeling is recurrent, then students may routinely expect to have the same difficulty in all situations and accordingly get nervous even if the task is not very challenging. Burden (2004) argued that anxious students

have negatively self-concepts and they always underestimate their efforts when speaking or conducting any task when they are compared to other students. Anxious learners may develop more anxiety if they feel that their behavior is always scrutinized, judged and compared with other students. This type of tension might be softened by encouraging various activities such as group work and/or pair work where the students' product is viewed as the outcome of collective cooperative work. Learning anxiety is defined in different ways by different researchers. Horwitz, Horwitz and Cope (1991), for example, define it 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.31).

In recent years, some researchers have been attracted to the area of second and/or foreign language reading anxiety and they raised some concerns regarding the impact of anxiety on learners' progress in language learning development (Zoghi 2012; Saito, Horwitz, & Garza, 1999; Lien, 2011; Zhao, 2009; Zhao, Guo, & Dynia, 2013; Shi & Liu, 2006; Chen et al, 2014; Jalongo, & Hirsh, 2010). Second language reading anxiety refers to the tense or stressful feeling associated with learning or practicing reading. Second language reading anxiety is a construct which can't be completely isolated from general foreign language anxiety. However, language reading anxiety is also viewed as a distinct construct when considering its specific traits (Saito, Horwitz, & Garza, 1999; Sellers, 2000; Zhao, 2009; Javanbakht, & Hadian, 2014). Reading anxiety may play crucial positive or negative roles in developing how to read efficiently in a second language. Generally, reading anxiety might impede natural second language development as it interferes with the process of acquiring, retaining and using the newly learned reading strategies. When anxiety is limited only to reading skills, then it is referred to as specific anxiety reactions. Psychologists employ the concept of "specific anxiety reactions" in order to identify students who are only anxious when doing a specific task and differentiate them from those students who are generally anxious in different situations (Horwitz, Horwitz, & Cope, 1986). Generally, language learning anxiety has attracted researchers to look at its impact on students' performance (Lien, 2011; MacIntyre & Gardner, 1989; Ro, & Chen, 2014; Sellers, 2000, Burden 2004; Capan & Karaca, 2013).

Lien (2011) examined the relationship between reading strategies and reading anxiety of 108 EFL college students. A survey was administered after students participated in an intensive supplementary reading course for 18 weeks. Results revealed negative correlation between reading strategies and reading anxiety. The findings recorded that students with low level of anxiety tend to employ general reading strategies, while students with high level of anxiety used basic strategies, such as translation to facilitate their understanding of the text. Generally, the results demonstrated that learners with high anxiety level used more reading strategies than the other groups whose reading anxiety level is very low. Also, female students were found to demonstrate a higher reading anxiety level than male students. In order to offer learners the right training in the use of reading strategies, Chamot (2005) and Zhang (2008) stated that it is very important to understand the types of reading strategies used by successful readers and the differences in reading strategy use between the more and the least efficient readers.

In the area of reading and testing, Tsai and Li (2012) examined if there is a relationship between test anxiety, foreign language reading anxiety and English reading proficiency. Three instruments were used for collecting data from 302 Taiwanese college students: Test Anxiety Scale, Foreign Language Reading Anxiety Scale and reading comprehension in a simulated General English Proficiency Test. Results revealed that English reading proficiency was negatively correlated with test anxiety and foreign language reading anxiety. Test anxiety was reported to have positive correlation with foreign language reading anxiety. Finally, no statistically significant differences were reported about reading proficiency between low anxiety testees and high anxiety testees; and between low anxiety readers and high anxiety readers.

Within the same line, Loghmani & Ghonsooly (2012) investigated if there is any relationship between the levels of reading anxiety of 190 EFL students and their Levels of cognitive test anxiety. The results revealed positive correlation between the two variables. In a somehow similar study, Jafarigohar & Behrooznia (2012) examined foreign language reading anxiety and reading comprehension of 112 male and female Iranian students in relation to age and gender. The researchers used a survey and a reading comprehension test for collecting data. The findings recorded a significant negative relationship between students' language reading anxiety and reading comprehension. However, it was found that correlation did not exist between language reading anxiety and students' age. Female students were found to have higher level of reading anxiety than male learners.

In their study about reading anxiety among second language learners, Rajab, Zakaria, Rahman, Hosni, and Hassani

(2012), investigated the level of reading anxiety of 91 science and non-science university students in Malaysia. A questionnaire was used to identify students with low and high reading anxiety in a second language. Results revealed that students' reading anxiety level was not at a high level. These results might indicate that those students are having very little or minimal anxiety level when they attempt to read texts in a second language. When comparing the mean scores of the two groups, the science students' reading anxiety was found to be lower than the reading anxiety of non-science students. However, when a t-test value was determined, it appeared that there was no significant differences between the two groups as the alpha value obtained (0.447) was higher than the one predetermined at the level of 0.05. This indicates that there was either a little difference in the reading anxiety of the two groups or there is no difference at all. The researchers concluded the study by stating that reading anxiety may impact not only students' academic performance in particular but it can also affect their social life in general.

In a qualitative study within the Jordanian context, Al Ashboul, Ahmed, Nordin, AdulRahman, (2013) investigated factors that may impact EFL learners' reading anxiety when they attempt to read in a foreign language. Only six students from Yarmouk University in Jordan participated in this qualitative study. A triangulation oriented approach was used for data collection (classroom observation, semi-structured interviews). The researchers reported two main factors that may impact learners' reading anxiety, namely personal and text feature factors. Three types of text feature factors were recorded: unfamiliar culture, unfamiliar topic and unfamiliar vocabulary. It was concluded that EFL learners' demonstration of high level of reading anxiety may be attributed to the increasing difficulty of the reading text.

In their study within the Iranian context, Ghonsooly and Elahi (2011) investigated if self-efficacy in reading in a second language may have an impact on EFL learners' reading anxiety and reading achievement. It also examined if students with high self-efficacy possess higher anxiety level than those learners with low self-efficacy. The participants included 150 students enrolled in English literature programs in three universities in Iran. The researcher used a reading comprehension self-efficacy scale and a reading anxiety scale for collecting data. Results revealed negative correlation between EFL learners' self-efficacy and their reading anxiety. Reading performance of students with high self-efficacy was found to be better than the performance of students in the low efficacy group.

Within the same context, Badakhshan (2012) examined if there is a correlation between reading anxiety and locus of control among Iranian EFL learners (prospective language teachers). The data collected through the administration of two measurement scales with 170 English language prospective teachers at a private university in Iran. Gender variable was found to play no significant differences in relation to reading anxiety and the control of locus. The researcher recommended at the end of the study to conduct similar research with teachers to investigate their anxiety as their anxious feelings and/or personalities may negatively impact the behavior of learners.

Wu (2011) investigated the relationship between language anxiety and reading anxiety and also checked if students' performance level is different across various levels of language anxiety and reading anxiety. Gender and the length of language learning were also examined to see if they have any impact on both language anxiety and reading anxiety. Ninety one Taiwanese university students participated in the study. Two measures of anxiety and two reading comprehension tests were used for data collection. Results showed that correlation exists between language anxiety and reading anxiety. No significant differences were found between students' reading performance across the different levels.

### **3. Research Questions**

- 1). What are students' main sources of reading anxiety when they read in English?
- 2). How do students' reading strategies influence their reading anxiety?
- 3). How do students' vocabulary knowledge and strategies affect their reading anxiety?
- 4). How do students' structural knowledge influence their reading anxiety?
- 5). How do students' reading competencies and knowledge affect their reading anxiety?

### **4. Method**

A combination of quantitative and qualitative approaches was utilized to conduct this study. The researchers developed two major instruments for conducting this study: a questionnaire and a focus group interview technique.

#### *4.1 Questionnaire*

After surveying the literature and looking at previous research, the researcher decided to develop a questionnaire for collecting quantitative data from the participants. First, a number of items were developed and written down in the light of the study's objectives. Then, all the items were categorized and organized in accordance with the research questions. In order to establish its validity, the questionnaire was handed in to five faculty members to evaluate it and provide the researcher with feedback and comments about its suitability for the objective of the study. In addition to the written comments provided by the reviewers, the researcher met with them to discuss their feedback further. Lastly, the questionnaire was reviewed and adjusted in the light of all the feedback and suggestions provided by the reviewers. Reliability of the questionnaire was also calculated using the Cronbach-alpha. The value was found to be .91.

#### *4.2 Focus Group Interviews*

The researcher drafted a number of questions and passed them to the same educators who looked at the items of the questionnaire. They were asked to review the questions and check if they may serve the purpose of the study and generate appropriate qualitative data to support the data collected by the questionnaire. All the comments provided by the evaluators were taken into account when reviewing and producing the final draft of the focus group interview questions. The main intention of the focus group data was to be used as a secondary data for supporting the quantitative results obtained via the questionnaire. It was not intended in any way to be dealt with separately.

#### *4.3 Participants*

All participants in this study came from grade 11 in a huge public female secondary school in Al-Ain Educational Zone in the United Arab Emirates (UAE). All 72 students volunteered to take part in the study. Half of them were following their studies in the science track while the other half were studying in the art track in the school. All participants were from the UAE and were between 16 and 18 years old. They have already spent more than ten years studying English in schools. Students in the science track seem to do better than their counterparts in the art section in English exams though they almost follow the same curriculum. No standardized measure was used to identify their level of language proficiency, but generally they may be considered limited users of English when considering the position of English within the curriculum. English is only taught as a school subject inside the classroom. All the other courses are taught in the students' first language, Arabic. Students do not have any extensive contact with the target language inside the school as Arabic is the medium of instruction and communication in government secondary schools. Only 19 students volunteered to take part in the focus group interviews.

#### *4.4 Data Collection*

The quantitative and qualitative data was collected during the last semester of the academic year 2012-2013. A graduate student volunteered to help in collecting the Data. Seventy two copies of the questionnaire were distributed to four sections of 11<sup>th</sup> grade students and collected from them during English class times. All female students who were present on the day of distributing the questionnaire participated in filling in the questionnaire. The research assistant who is a teacher in the school helped in making the questionnaire items very clear to all participants. Only volunteered students were involved in the focus group interviews. A day after collecting the data, volunteered students were asked to participate in the focus group interviews. Only 19 students participated from all four sections. Each of the four focus group interviews lasted for approximately twenty minutes in each class of the participating four sections. The graduate student assists in conducting some of the interviews after receiving training and advice from the researcher.

#### *4.5 Data Analysis*

The SPSS program was used to analyze the quantitative data obtained from the questionnaire. Descriptive statistics and independent samples t-tests were obtained to answer the research questions. All the obtained statistics were collated and/or tabulated to serve the purpose and/or questions of the study. The qualitative data was put together into general themes and later it was put into charts to make it more visible when classifying it into more specific themes and/or categories. Finally, the researcher traced only recurrent patterns of students' views and put them into tables according to theme they belong to (Levin & Wadmany, 2006). Later, the qualitative data was only used in the discussion of results to support the quantitative data collected via the questionnaire. Following Creswell (2003) the interpretation of the quantitative five scale Likert questionnaire

data was supported by the qualitative data obtained by the focus group interviews.

## 5. Results and Discussion

The mean scores of research question 1 (What are students' main sources of reading anxiety when they read in English?) are ranging between 4.63 and 2.32 (see Table 1). Only four items out of the 37 variables of the questionnaire have mean scores more than 4.0 but the rest 33 items have mean scores less than 4.0. Three of the four items fall under the category of vocabulary and the fourth one belongs to the grammar category. The item with the highest mean score ( $M= 4.63$  &  $SD= .73996$ ) demonstrates students' concerns about the number of unfamiliar words in the text (It bothers me when many unfamiliar words are used in the reading passage). This result indicates that limited vocabulary knowledge represents a major source of reading anxiety in English. The second highest mean score ( $M= 4.22$  &  $SD= .85945$ ) reveals students' anxiety about unfamiliar grammatical structure in the text (I get upset whenever I encounter an unknown grammatical point in the passage.). Limited Knowledge of the structural and/or grammatical rules used in the text can represent a major source for students' reading anxiety. About seven students in the focus group interviews agreed that grammar represents one of the sources of their anxiety when they read in English. One of them, for example, said: "*grammar isn't very difficult for me but sometimes I don't understand the rule when I read*". Two other students referred to grammar difficulty by saying: "*I read and understand all the passage when the sentences are easy. If the verbs are easy, I can read and answer all the questions*".

The next two highest mean scores (4.21 & 4.01) indicate students' anxiety about their inefficient vocabulary learning strategies. These two results clearly show that unsuccessful use of vocabulary learning strategies such as guessing can be a major source of getting anxious when reading in English. This result may be attributed to students' past reading training and/or instruction. It is obvious that students believe that they need to know the meanings of words in the text in order to understand ideas expressed in the text. Their reading proficiency in their first language may contribute to this view. Students may also do not know how to use the strategy of guessing efficiently when reading in their first language. Similar results were found in the literature, such as the ones reported by Al Ashboul, Ahmed, Nordin, AdulRahman, (2013) about factors that may impact EFL learners' reading anxiety when they attempt to read in a foreign language. Three types of text feature factors were recorded: unfamiliar culture, unfamiliar topic and unfamiliar vocabulary. It was concluded that EFL learners' demonstration of high level of reading anxiety may be attributed to the increasing difficulty of the reading text. In the focus group interviews, almost half of the interviewed students expressed that they consider vocabulary knowledge as one of the main sources of their reading anxiety. A student stated: "*I love reading but if there are difficult words I become nervous*". Another student continued to say: "*New words are my problem when reading in English*". In brief, the major source of reading anxiety from students' view point is primarily due to lack of knowledge in grammar and vocabulary. Learners' Language proficiency level may play crucial role in increasing or decreasing reading anxiety and reading comprehension. In a study about this issue, Wu's (2011) findings revealed that correlation exists between language anxiety and reading anxiety. No significant differences were found between students' reading performance across the different levels.

The least mean score ( $M= 2.32$  &  $SD= 1.130898$ ) demonstrates students' positive views about their involvement in English reading classes (It embarrasses me to volunteer answers in my reading class.). Volunteering to take active parts in the class does not represent any source of reading anxiety for many students. The second in a row low mean score ( $M= 3.10$  &  $SD= 1.61123$ ) reveals students' views about their confidence of their reading ability (I keep thinking that the other students are better at reading than I am.). It seems that a considerable number of students are aware of their reading improvement needs and they always think about advancing those skills without paying attention to what other students can do. The next two low results have the same mean scores (3.33). These results show that a considerable number of students think that failing to do the task or using some supporting clues such as tables are not major sources for their reading anxiety. This indicates that students' affective filter is not very high when it comes to accomplishing a reading task successfully. Krashen (1981) argued that affective variables, such as motivation, self-confidence and anxiety may play a facilitative, but non-causal role in second language acquisition. In Krashen's view, language learners with self-confidence, high motivation, a good self-image, and a low level of anxiety may be in a good position to acquire the second language. However, Low motivation, low self-esteem, and debilitating anxiety may raise the affective filter and slow or hinder successful second language acquisition. Jalongo & Hirsh (2010) argued that it is vital to facilitate a learning environment that supports the healthy development of emotion in children, since emotion play an important role in the process of learning to read.

Table 1. Students' main sources of reading anxiety

<i>Variables</i>	<i>Mean</i>	<i>Standard Deviation</i>
1. I get worried if I can't paraphrase what I have read in my own words.	3.42	1.36
2. I get nervous when I can't get back on track when I lose concentration.	3.57	1.25
3. It bothers me if I can't express my opinions or feelings about the text.	3.46	1.31
4. I get worried if I fail to critically analyze and evaluate the information presented in the passage.	3.78	1.19
5. I worry when I can't get the main idea of the passage after reading.	3.57	1.28
6. I worry if I can't recognize minor ideas or details of the passage.	3.54	1.26
7. I become nervous if I can't use tables, figures, and pictures in the passage to increase my understanding.	3.33	1.31
8. I become nervous if I can't use context clues to help me better understand what I am reading.	3.42	1.11
9. I become nervous when I fail to use typographical features like bold face and italics to identify key information.	3.38	1.25
10. It bothers me when many unfamiliar words are used in the reading passage.	4.63	0.74
11. I become nervous if I fail to translate the words from English into Arabic.	3.89	1.11
12. I become upset if I can't guess the meaning of a difficult word while reading.	4.01	1.04
13. I get upset when I cannot figure out the meaning of a word that I feel I have seen before.	4.21	1.11
14. I get nervous and confused if I don't understand every word in the passage.	3.93	1.21
15. It bothers me when I feel unable to look up a word in a dictionary.	3.65	1.29
16. I get confused when the word that I know has a different meaning in a sentence.	3.92	1.15
17. It bothers me if the new words are difficult to pronounce while reading in English.	3.71	1.24
18. I get nervous and feel like stop reading when a passage becomes difficult while reading.	3.79	1.29
19. It bothers me when an unfamiliar expression is used in a sentence.	3.96	1.04
20. I become nervous when I find a long sentence with a complex structure.	3.93	1.15
21. I get upset whenever I encounter an unknown grammatical point in the passage.	4.22	0.86
22. It bothers me if I fail to recognize the different parts of speech such as nouns, adjectives, adverbs, or other words.	3.89	1.08
23. I become anxious if I can't understand the grammatical structure of a sentence.	3.61	1.06
24. I keep thinking that the other students are better at reading than I am.	3.10	1.61
25. I become worried about getting left behind if the reading class is moving quickly.	3.38	1.41
26. I worry about the consequences of failing to do my reading tasks.	3.33	1.32
27. In a reading class, I can get so nervous if I forget things I know.	3.99	1.20
28. It embarrasses me to volunteer answers in my reading class.	2.32	1.31

<i>Variables</i>	<i>Mean</i>	<i>Standard Deviation</i>
29. I get upset when I don't understand what the teacher is correcting.	3.28	1.20
30. I become upset if I have to read uninteresting texts in class.	3.76	1.38
31. I get worried if I can't develop an overall view of the text to see what it is about before reading it.	3.56	1.19
32. I get afraid if I fail to guess what the content of the text is about while reading.	3.60	1.25
33. I become nervous if I have to read a passage in English with an unfamiliar topic.	3.64	1.21
34. I fear having to read in English a difficult text in the class.	3.38	1.30
35. It bothers me when the ideas expressed in the text are culturally unclear.	3.85	1.00
36. I get upset if I do not have any knowledge about the ideas expressed in the text.	3.93	1.05
37. I get upset when I'm not sure if I have understood what I am reading in English.	3.81	1.17

Table 2 demonstrates results for research question 2 (How do students' reading strategies influence their reading anxiety?) about the roles of students' reading strategies in increasing or decreasing anxiety when reading in English. The mean scores for all results for the science track students ranged between 4.10 and 3.67 while for art track students, they ranged between 3.61 and 2.89. More than half of the results in Table 2 reveal statistically significant differences between the mean scores of the two groups of students (science & art) in favor of the science track students. Those results clearly highlight how the inefficient knowledge and/or use of reading strategies may cause problems for many students in the art track. One of the things some students mentioned during focus group interview is their background knowledge about reading. One of the students mentioned: "*I don't have good foundation in reading. I want to learn reading*".

One of the students' major sources of reading anxiety is how to keep focusing on the reading text when problems emerge from either the language or the concepts used in the text. The mean score for the science students for this variable is the highest of all mean scores for both groups (4.0833). This result might be attributed to the students' previous language instruction or their level of language proficiency. Generally, this result and others indicate that science students possess better reading skills and a low anxiety filter when it comes to using reading strategies during English classes. Within the culture of secondary education in the region, there is an assumption that science students tend to do better in schools and in different achievement exams. The results recorded above are in accordance with findings reported by Lien (2011) about the relationship between reading strategies and reading anxiety. Lien reported that students with low level of anxiety tend to employ general reading strategies, while students with high level of anxiety used basic strategies, such as translation to facilitate their understanding of the text. Generally, the results demonstrated that learners with high anxiety level used more reading strategies than the other groups whose reading anxiety level is relatively low. During the focus group sessions students mentioned that the following reasons are responsible for their inefficient strategies: "*...weak teacher's role, unfamiliar topic, evaluation system, classroom tasks, shy to participate to avoid mistake...*". Naseri & Zaferanieh (2012) reported that there is a positive relationship between self-efficacy and reading strategies. Students' frequent and successful uses of strategies in their English reading can assist in developing confidence and providing a sense of control over their own reading skills and practice. Ko (2002) stated that teachers should raise students' strategic awareness by allowing them to become more aware of the strategies they use while reading in order to become more strategic readers.

Table 2. The impact of students' reading strategies on their reading anxiety

Variables	Overall Mean	Means		T-Test	Sig (2tailed)
		Science	Art		
1 I get worried if I can't paraphrase what I have read in my own words.	3.42	3.83	3.00	2.712	.008
2 I get nervous when I can't get back on track when I lose concentration.	3.57	4.08	3.06	3.790	.000
3 It bothers me if I can't express my opinions or feelings about the text.	3.46	3.72	3.19	1.733	.087
4 I get worried if I fail to critically analyze and evaluate the information presented in the passage.	3.78	3.94	3.61	1.193	.237
5 I worry when I can't get the main idea of the passage after reading.	3.57	3.72	3.42	1.016	.313
6 I worry if I can't recognize minor ideas or details of the passage.	3.54	3.97	3.11	3.079	.003
7 I become nervous if I can't use tables, figures, and pictures in the passage to increase my understanding.	3.33	3.78	2.89	3.039	.003
8 I become nervous if I can't use context clues to help me better understand what I am reading.	3.42	3.67	3.17	1.948	.056
9 I become nervous when I fail to use typographical features like bold face and italics to identify key information.	3.38	3.78	2.97	2.871	.005

Note.  $P < 0.05$ .

Research question 3 (How do students' vocabulary knowledge and strategies affect their reading anxiety?) investigated how students' vocabulary knowledge and strategies may lower or increase students' anxiety when reading in English. With one exception, all the results in table 3 demonstrate statistically significant differences between the mean scores of the science and the art track students in favor of the science students. Almost all the mean scores for the science track students are more than 4.0 and they ranged between 4.81 and 4.02. However, the mean scores for most results of the art track students are less than 4.0 and they ranged between 4.4 and 3.28. Generally, the results of almost all variables indicate that science students' vocabulary knowledge and vocabulary learning strategies are better than their counterparts in the art group. Previous studies such as the one conducted by Loghmani and Ghonsooly (2012) reported results in the same direction. Loghmani & Ghonsooly found that there is a relationship between learners' reading anxiety and their reading comprehension. In addition to Students' reading anxiety, language proficiency may also impact students' reading comprehension. A number of students agreed that vocabulary is one of the main sources for their reading anxiety in English. A student stated: *"I love reading but if there are difficult words I become nervous"*. Another student continued to say: *"New words are my problem when reading in English"*. Shen (2013) reported almost identical results about the difficulties students face when reading in a second language. Results from the interview qualitative data reveal that most participants' reading difficulties may generally be attributed to their inadequate language proficiency. Students reported Vocabulary as the primary challenge when reading content-area textbooks.

One of the important results highlights students' concerns about translating words into their first language. This reading practice of those students may be attributed to various factors such as previous instruction, language proficiency level, reading proficiency in first and second language, etc. Students' concerns about understanding the literal meaning of each words in their first language might be due to the procedures that they use for



processing information inside their head (I become nervous if I fail to translate the words from English into Arabic). This indicates that students are thinking first in their first language when they read English texts. About three students indicated that they read in English like reading in Arabic. They refer to this issue by saying: *“We read in Arabic and then we read in English like that. We want to understand the meaning in Arabic”*.

Another interesting result shows that art students are more anxious than science students to grasp each word in the text (I get nervous and confused if I don't understand every word in the passage). This belief might be due to the lack of knowledge and/or awareness of efficient reading strategies. Generally, the significant differences demonstrated by the results in table 3 might be attributed to both limited language proficiency level and the lack of knowledge of efficient vocabulary learning strategies. The results discussed above are similar to findings reported by Rajab, Zakaria, Rahman, Hosni, & Hassani (2012) about science and non-science students. They found that science students' reading anxiety is lower than the reading anxiety of non-science students. Only two students indicated that they want to know the meaning of new words in order to understand the text. One of them said: *“I always don't understand if I don't know the meanings of new words”*.

Table 3. Effect of students' vocabulary knowledge and strategies on their reading anxiety

Variables	Overall Mean	Means		T-Test	Sig (2tailed)	
		Science	Arts			
10	It bothers me when many unfamiliar words are used in the reading passage.	4.63	4.81	4.44	2.121	.039
11	I become nervous if I fail to translate the words from English into Arabic.	3.89	4.22	3.56	2.661	.010
12	I become upset if I can't guess the meaning of a difficult word while reading.	4.01	4.31	3.72	2.460	.016
13	I get upset when I cannot figure out the meaning of a word that I feel I have seen before.	4.21	4.36	4.06	1.168	.247
14	I get nervous and confused if I don't understand every word in the passage.	3.93	4.47	3.39	4.208	.000
15	It bothers me when I feel unable to look up a word in a dictionary.	3.65	3.97	3.33	2.153	.023
16	I get confused when the word that I know has a different meaning in a sentence.	3.92	4.33	3.50	3.287	.002
17	It bothers me if the new words are difficult to pronounce while reading in English.	3.71	4.14	3.28	3.127	.003

Question 4 (How do students' structural knowledge influence their reading anxiety?) dealt with the students' views about the effect of grammatical knowledge on their anxiety when they read in English. The overall mean scores demonstrated in table 4 ranged from 4.22 to 3.61. There is only one high over all result above four (I get upset whenever I encounter an unknown grammatical point in the passage). This result reveals students' confidence when they deal with grammatical structures of reading texts. With the exception of one result, all the mean scores of the science track students are above 4.0 and they ranged between 4.361 and 4.194. The mean scores of their counterparts in the art track ranged from 3.89 to 3.22. Most of the results demonstrate significance differences between the mean scores of the two groups in favor of the science track students. It seems from those results that art students are having more language problems that push their affective reading filter to be higher. Rajab, Zakaria, Rahman, Hosni, & Hassani (2012) reported that science students demonstrated lower level of reading anxiety than their counterpart in the non-science group.

Students in the art track perceive grammar used in the text as one of the main sources that may increase their anxiety while reading in English. Again, this might be interpreted in the light of students' previous reading

experience and their language proficiency level in general. Students might not be competent enough in dealing with the grammatical structures of the reading text. The grammar of their first language (Arabic) is very different from the target language, so that they can't use their knowledge about the structure of their mother tongue to interpret and make sense of texts written in English. Lack of training for applying efficient reading strategies to decode meanings of language chunks written in different language structures might represent one of the key factors for the increase in their reading anxiety. Lien (2011) reported results within the same direction. Lien's findings demonstrated that students with low level of anxiety tend to employ general reading strategies, while students with high level of anxiety used basic strategies, such as translation to facilitate their understanding of the text. Generally, the results demonstrated that learners with high anxiety level used more reading strategies than the other groups whose reading anxiety level is low. About seven students in the focus group interviews agreed that grammar represents one of the sources of their anxiety when they read in English. One of them, for example, said: *"grammar isn't very difficult for me but sometimes I don't understand the rule when I read"*. Two other students referred to grammar difficulty by saying: *"I read and understand all the passage when the sentences are easy. If the verbs are easy, I can read and answer all the questions"*.

Table 4. Impact of students' structural knowledge on their reading anxiety

Impact of grade 11 students' structural knowledge on their reading anxiety	Overall Mean	Means		T-Test	Sig (2tailed)
		Science	Arts		
18 I get nervous and feel like stop reading when a passage becomes difficult while reading.	3.79	4.36	3.22	4.158	.000
19 It bothers me when an unfamiliar expression is used in a sentence.	3.96	4.22	3.69	2.210	.030
20 I become nervous when I find a long sentence with a complex structure.	3.93	4.19	3.67	1.972	.052
21 I get upset whenever I encounter an unknown grammatical point in the passage.	4.22	4.56	3.89	3.550	.001
22 It bothers me if I fail to recognize the different parts of speech such as nouns adjectives, adverbs, or other words.	3.89	4.22	3.56	2.730	.008
23 I become anxious if I can't understand the grammatical structure of a sentence.	3.61	3.83	3.39	1.815	.074

Question 5 (How do students' reading competencies and knowledge affect their reading anxiety?) investigated students' perceptions about the influence of their reading competencies and knowledge on their anxiety when they read in English. The overall mean scores for all variables are less than 4.0 with the exception of one result (In a reading class, I can get so nervous if I forget things I know,  $M=4.0$ ). The range between the highest overall mean score (4.0) and the lowest one (2.32) is considerably very big. Similarly, the gap between the highest mean scores (4.39) and the lowest mean score (1.89) of the science track students is extremely large. However, the mean scores of the art track students ranged between 3.58 and 2.78. Table 5 demonstrates some statistically significant differences between the mean scores of results of the science track students and their counterpart in the art section in favor of the science section with the exception of only one result in favor of the art section. The result with a significant difference in favor of the art track is a surprising one as it is the only result not in favor of the science track students. It is also a surprising result because it is related to classroom voluntary involvement (It embarrasses me to volunteer answers in my reading class). It seems that students might not be willing to volunteer answers. Their perceptions of voluntary involvement in the reading class might be due to their personalities, previous educational environment, social experience, teacher's reaction, etc. It might also be attributed to their beliefs that they should volunteer to take part in the class if they are very sure of their answers in order to avoid embarrassment. Hence, self-efficacy may contribute either negatively or positively to students' reading anxiety. Ghonsooly and Elahi (2011) examined if self-efficacy in reading in a second language may have an impact on EFL learners' reading anxiety and reading achievement. The findings of their study revealed

negative correlation between EFL learners' self-efficacy and their reading anxiety. Reading performance of students with high self-efficacy was found to be better than the performance of students in the low efficacy group.

When comparing both groups' results, it becomes obvious that the science track students have more positive views about their reading knowledge and competencies. An interesting result recorded significant differences between both groups' perceptions regarding the familiarity of the reading topic (I become nervous if I have to read a passage in English with an unfamiliar topic) in favor of the science students. Students of the art track seem to develop more anxiety when they read a text with an unfamiliar topic. In the literature there is evidence to support this result about the level of reading anxiety of science and non-science students (Ro, & Chen, 2014; Rajab, Zakaria, Rahman, Hosni, & Hassani, 2012).

Table 5. Impact of students' reading competencies and knowledge on their reading anxiety

Variables	Overall Mean	Means		T-Test	Sig (2tailed)
		Science	Arts		
24 I keep thinking that the other students are better at reading than I am.	3.10	3.42	2.78	1.705	.093
25 I become worried about getting left behind if the reading class is moving quickly.	3.38	3.69	3.06	1.963	.054
26 I worry about the consequences of failing to do my reading tasks.	3.33	3.67	3.00	2.197	.031
27 In a reading class, I can get so nervous if I forget things I know.	3.99	4.39	3.58	2.992	.004
28 It embarrasses me to volunteer answers in my reading class.	2.32	1.89	2.75	2.937	.004
29 I get upset when I don't understand what the teacher is correcting.	3.28	3.44	3.11	1.181	.242
30 I become upset if I have to read uninteresting texts in class.	3.76	3.94	3.58	1.113	.270
31 I get worried if I can't develop an overall view of the text to see what it is about before reading it.	3.56	3.72	3.39	1.197	.236
32 I get afraid if I fail to guess what the content of the text is about while reading.	3.60	3.89	3.31	2.019	.047
33 I become nervous if I have to read a passage in English with an unfamiliar topic.	3.64	4.06	3.22	3.082	.003
34 I fear having to read in English a difficult text in the class.	3.38	3.56	3.19	1.177	.243
35 It bothers me when the ideas expressed in the text are culturally unclear.	3.85	3.94	3.75	.882	.414
36 I get upset if I do not have any knowledge about the ideas expressed in the text.	3.93	4.31	3.56	3.216	.002
37 I get upset when I'm not sure if I have understood what I am reading in English.	3.81	4.11	3.50	2.280	.026

## 6. Conclusion and Recommendations

This study uncovered interesting results related to students' perceptions about the sources of their reading

anxiety when they read in English. A mixed quantitative and qualitative approach was used for conducting this research paper. Generally, the results of the study reported that students' major sources of anxiety are related to both strategies and language problems, such as the lack of vocabulary and grammar background knowledge. The majority of findings revealed statistically significant differences between students in the science and art tracks in favor of science students. Both quantitative and qualitative Results showed that students in the science track possess lower reading anxiety level than their counterparts in the art track. Science students also appeared to have more positive feeling about their reading skills and language proficiency. The results of this study might have valuable implications for teacher training, language improvement, enhancing reading strategies and individualized learning. Results may help decision makers in taking appropriate decision to advance the teaching of English in general and reading instruction in particular. Teacher trainers and/or educators may use results from this study in guiding them to prepare and deliver effective teacher training programs for different teachers who are teaching students with multiple needs, intelligence and backgrounds. Curriculum designers and materials developers may look at those results to guide them when choosing and/or developing materials for classroom use. Most importantly, they have great benefits for classroom teachers to better understand their students' needs and feelings, produce effective lesson plan, use interactive and encouraging instructional approaches and improve students' learning outcomes. In spite of the contributions of this research project, more studies need to be conducted to look at reading anxiety within its general context of second/foreign language teaching and learning. Future research may focus on effective activities that may provide a source of help to facilitate effective reading classes and reduce the amount of reading anxiety among second/foreign language learners.

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