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A STUDY ON READING STRATEGIES USED BY TURKISH STUDENTS LEARNING ENGLISH FOR SPECIFIC PURPOSES[1]

İngilizceyi Özel Amaç Olarak Öğrenen Türk Öğrenciler Tarafından Kullanılan Okuma Stratejilerine İlişkin Bir Araştırma

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Abstract

The purpose of the present study was to investigate the reading strategies of Turkish ESP students when they read academic texts in English. To achieve this purpose, 286 university sophomore students studying Economics, Business Administration, Public Administration, Finance, Econometrics at the Economics and Administrative Sciences Faculty of a state university located in the West part of Turkey participated in the study. The Survey of Reading Strategies (SORS) (Mokhtari & Sheorey, 2002) was used in this study. The findings revealed that the participants were high level users of reading strategies. The findings also revealed a statistically significant relationship between individual variables such as age, gender, academic field, success and students' use of reading strategies. Lastly, some pedagogical implications were made for students, teachers and materials developers in the field of teaching/learning English for specific purposes.
Keywords: reading strategy; global reading strategies; support reading strategies; problem solving strategies, students learning English for specific purposes

Özet

Bu çalışmanın amacı, İngilizceyi Özel Amaç olarak öğrenen Türk öğrencilerin akademik metinleri İngilizce okuduklarındaki okuma stratejilerini araştırmaktır. Bu amaca ulaşmak için, Türkiye'nin batısındaki bir devlet üniversitesinin İktisadi ve İdari Bilimler Fakültesinde Ekonomi, İşletme, Kamu Yönetimi, Maliye, Ekonometri okuyan 286 üniversite öğrencisi araştırmaya katıldı. Bu çalışmada Okuma Stratejileri Anketi (SORS) (Mokhtari & Sheorey, 2002) kullanılmıştır. Bulgular, katılımcıların yüksek düzeyde okuma stratejileri kullanıcıları olduklarını ortaya koydu. Elde edilen bulgular ayrıca yaş, cinsiyet, akademik alan, başarı gibi bireysel değişkenler ve öğrencilerin okuma stratejilerini kullanması arasında istatistiksel olarak anlamlı bir ilişki ortaya koymuştur. Son olarak, İngilizceyi özel amaç olarak öğretme / öğrenme alanındaki öğrenciler, öğretmenler ve materyal geliştiriciler için bazı pedagojik sonuçlar sunulmuştur.
Anahtar Kelimeler: okuma stratejisi; evrensel okuma stratejileri; destekleyici okuma stratejileri; problem çözme stratejileri, İngilizceyi özel amaç olarak kullanan öğrenciler

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1. Introduction

It is a fact that reading is a significant factor in foreign language learning (Grabe, 2004). Since effective reading is crucial for success in learning a foreign language (Mikulecky, 2008), foreign language learners should give prominence to improving their second language (L2) / foreign language (FL) reading skills. As Goodman (1995, p.11) indicates, reading is 'a communication between the reader and the writer.' Readers employ a number of strategies to sort out the problems experienced when reading target language texts, cope with comprehension failures and hence improve their reading comprehension (Alderson, 2000; Carrell 1998; Saengpakdeejit & Intaraprasert, 2014).

Reading strategies are defined as "generally deliberate, planned activities undertaken by active learners, many times to remedy perceived cognitive failure" (Garner, 1987, p.5). O'Malley & Chamot (1990) stated that L2 reading strategies are conscious or unconscious tactics or behaviors and that readers deploy these strategies to solve problems with their comprehension and interpretation. As Akarsu & Harputlu (2014) states, every EFL learner uses reading strategies either intentionally or unintentionally when pronuncing English words, identifying words and getting their meaning and bringing meaning to a text to get meaning from it.

In our country, reading strategies used by Turkish ESP students have been disregarded by EFL teachers who teach L2 reading to these students in universities. Pressley & Afflerback (1995) state that language teachers introduce key vocabulary to students and activate students' prior knowledge in the pre-reading stage of reading lessons. In the while-reading stage of reading lessons, they teach essential content knowledge to their students. In the post-reading stage of reading lessons, language teachers teach students (a) to think about what they have read, (b) to summarize what they have read and (c) to think about how they can utilize the information in the future. However, they do not provide their students with explicit instruction as to the use of effective reading strategies before reading, during reading and after reading. This situation brings about students' experiencing problems when trying to comprehend the academic texts that they read in ESP classes.

Hence, the purpose of the present study is to investigate the reading strategies of Turkish ESP students when they read academic texts in English and find out the relationship between some individual variables such as age, gender, academic field, success and students' use of reading strategies. After presenting the related literature on reading strategies, it displays the results of a research study.

2. Literature Review

During the past twenty years, research studies on L2 and FL reading have centered on the strategies that readers utilize in processing written input (Zhang & Wu, 2009). Readers utilize a number of reading strategies including skimming, scanning, paraphrasing, previewing, summarizing, predicting, guessing from context during the act of reading. As Yigiter, Saricoban & Gurses (2005) indicate, EFL learners can be good and mature readers by utilizing reading strategies. Reading strategies enable readers to analyze the text actively, to monitor their understanding, and to link what they are reading to their own knowledge and to other parts of the texts.

After realizing the basic role of reading strategies in reading comprehension, different researchers (e.g. Anderson, 1991; Poole, 2010; Rice, 2009; Sheorey & Mokhtari, 2001; Zhang, 1993) have tried to categorize reading strategies in different ways (Anderson, 1991; Block, 1986; Zhang & Wu, 2009). Anderson (1991) proposed a detailed categorization of reading strategies covering five main groups: supervising strategies,

support strategies, paraphrase strategies, coherence strategies and test-taking strategies. Sheorey and Mokhtari (2001) categorized ESL/EFL reading strategies into three categories: metacognitive, cognitive, and support. Metacognitive strategies indicate deliberately and cautiously planned techniques utilized by learners to observe or direct their reading. Cognitive strategies refer to specific tactics used by learners while working directly with the text. Support strategies indicate readers' tools to understand the text (e.g. using a dictionary).

In recent years, the relationship between various variables (e.g. age, gender, academic field, success, reading strategy instruction) and L2 reading strategies has also been the primary concern of research studies. Regarding learners' age, Baker (2008) unearthed that skilled adult readers concentrate on cognitive and metacognitive strategies more often than younger readers. Yang (2016) found that the younger students prefered using the cognitive reading strategies, while the older students preferred utilizing metacognitive and social/affective reading strategies.

Relevant to learners's gender, the literature on gender differences in the use of L2 reading strategies is limited, and its results are not consistent. In some studies, gender differences were not unearthed. Young and Oxford (1997) found no significant overall differences in the use of reading strategies between males and females. Other studies revealed that females outperformed males. Sheorey and Mokhtari (2001) found that females report significantly higher frequency of strategy use. Poole (2009) revealed that female students utilize reading strategies more than male students do.

Related to learners' academic field, Peacock (2001) unearthed that physics students use fewer cognitive strategies than mathematics and engineering students do and that mathematics students use fewer metacognitive strategies than physics and engineering students do. Zare & Maftoon (2015) revealed that power engineering, physics and communication students were more inclined to utilizing problem solving strategies than global or support strategies.

Regarding learners' success, some studies (e.g., Uzuncakmak, 2005) revealed that there were no significant differences between successful and unsuccessful readers in using reading strategies and recalling strategy instruction. However, some other studies (e.g., Dhieb-Henia, 2003; Yin and Agnes, 2001; Zhang, 2001) indicated that successful readers used metacognitive strategies as they read more than unsuccessful readers did.

In the related literature, the relationship between reading-strategy instruction and L2 learners' reading improvement was also examined by various research studies (e.g. Peacock, 2001; Zare & Maftoon, 2015). Carrell (1998) and Zhang (2008) have revealed that students can become better readers when their metacognitive knowledge about reading strategies and strategy use is enhanced. Further, Hamp-Lyons (1985) and Kern (1989) indicated that students getting strategy training did better in reading than those not getting strategy training.

3. Methodology

3.1. Sample characteristics

Two hundred eighty-six Turkish ESP students from the Economics and Administrative Sciences Faculty of a state university located in the West part of Turkey participated in this study. The selection of the subjects was done in random regardless of gender and race. The students ranged in age from 18 to 25, and 129 of the 286 students were male. These two hundred eighty-six students took the course entitled *English Reading and Writing* in the undergraduate programs of five different departments (Economics, Public Administration, Business Administration, Finance and Econometrics) of the above

mentioned Faculty in the Fall Semester of 2015-2016 Academic Year. Demographic characteristics of the participants are displayed in Table 1.

Table 1. Demographic Characteristics of the Participants

		Percentage (%)	Frequency
Age	18-20	134	47
	21-23	142	50
	24-24+	10	3
Gender	Male	129	45
	Female	157	55
Department	Economics	60	21
	Public Administration	45	16
	Business Administration	66	23
	Finance	54	19
	Econometrics	61	21
Year	Junior	286	100
Total		286	100

3.2. Instrument and data collection

To investigate strategies that Turkish ESP students (i.e. students of Faculty of Economics and Administrative Sciences) use when reading academic texts and to compare the results according to the independent variables, the researchers utilized Kouider Mokhtari & Ravi Sheorey's (2002) Survey *of Reading Strategies (SORS)* consisting of 30 items presented on a five-point Likert scale, ranging from '1=I never or almost never do this', '2= I do this only occasionally', '3= I sometimes do this', '4= I usually do this' to '5= I always or almost always do this'. The students were given 10-15 minutes to complete the questionnaire and they were asked to give answer to each item of the SORS relying on their strategy use when they read the academic text. Cronbach's alpha coefficient of .93 was reported for the SORS by Mokhtari & Sheorey (2002) and the reliability of the same scale for this study was found to be .83 by the researchers.

3.3. Data analysis

Data collected were analyzed quantitatively. To identify what reading strategies Turkish ESP students utilized, SORS scores for each subscale were calculated by utilizing scoring guidelines prepared by Mokhtari and Sheorey (2002). To reveal whether there was a significant relationship (a) between age and students' use of reading strategies and (b) between academic field and students' use of reading strategies, the ANOVA tests were applied. To reveal whether there was a significant relationship (a) between gender and students' use of reading strategies and (b) between success and students' use of reading strategies, a series of independent samples t-tests were performed. The Statistical Package for Social Sciences (SPSS), version 16.0 was used to compute the analytical procedures employed to investigate the research questions.

4. Findings

4.1. Strategies Turkish ESP students utilize when reading academic texts

Of three main types of reading strategies, namely *global reading strategies*, *support reading strategies* and *problem solving strategies*, the majority of the participants indicated that they utilized problem solving strategies when reading academic texts with a mean score of 3.95 (SD=1.03). Of eight sub-categories of problem solving strategies,

reading slowly and carefully (M=4.21, SD=1.00), trying to stay focused on reading when losing concentration (M=4.13, SD=0.96) and re-reading to increase understanding (M=4.01, M=1.02) were three most frequently used reading strategies by Turkish ESP students. The following table shows the distribution of mean scores of problem solving strategies used by Turkish ESP students

Table 2. Distribution of Mean Scores of Problem Solving Strategies Used by Turkish ESP Students

Problem Solving Strategies	Mean	SD
7. Reading slowly and carefully	4.21	1.00
9. Trying to stay focused on reading when losing concentration	4.13	0.96
11. Adjusting reading speed	3.88	1.09
14. Paying closer attention to reading	3.96	0.99
16. Pausing and thinking about reading	3.68	1.08
19. Visualizing information read	4.00	1.05
25. Re-reading to increase understanding	4.01	1.02
28. Guessing the meaning of unknown words and phrases	3.70	1.06
Overal	3.95	1.03

Another significant finding in this section was that a great number of participants indicated that they used global reading strategies when reading academic texts with a mean score of 3.79 (SD=1.48). Of thirteen sub-categories of global reading strategies, using tables, figures, and pictures in text (M=4.06, SD=1.02), having a purpose in mind (M=4.05, SD=0.94) and using context clues (M=4.05, SD=0.97) were three most frequently used reading strategies by Turkish ESP students. The following table shows the distribution of mean scores of global reading strategies used by Turkish ESP students.

Table 3. Distribution of Mean Scores of Global Reading Strategies Used by Turkish ESP Students

Global Reading Strategies	Mean	SD
1. Having a purpose in mind	4.05	0.94
3. Using prior knowledge	3.81	1.00
4. Taking an overall view of the text before reading it	4.04	0.97
6. Thinking about if the content of the text fits purpose	3.41	1.23
8. Reviewing the text by noting length and organization	3.39	1.23
12. Deciding what to read closely and what to ignore	3.84	3.18
15. Using tables, figures, and pictures in text	4.06	1.02
17. Using context clues	4.05	0.97
20. Using typographical features (e.g. bold face and italics)	3.53	1.29
21. Critically analyzing and evaluating the information	3.37	1.16
23. Checking understanding when coming across new information	3.93	0.95
24. Trying to guess what the content is about	4.00	2.57
27. Checking to see if guesses about the text are right or wrong	3.80	2.69

Lastly, a great number of participants indicated that they used support reading strategies when reading academic texts with a mean score of 3.67 (SD=1.17). Of nine sub-categories of support reading strategies, underlining or circling information in the text (M=4.28, SD=1.03), taking notes while reading (M=3.98, SD=1.11), paraphrasing to better understand the text (M=3.86, SD=1.10) were three most frequently used reading strategies by Turkish ESP students. The following table shows the distribution of mean scores of support reading strategies used by Turkish ESP students.

Table 4. Distribution of Mean Scores of Support Reading Strategies Used by Turkish ESP Students

Support Reading Strategies	Mean	SD
2. Taking notes while reading	3.98	1.11
5. Reading aloud when text becomes difficult	3.05	1.38
10. Underlining or circling information in the text	4.28	1.03
13. Using reference materials (e.g. a dictionary) to understand the text	3.65	1.22
18. Paraphrasing to better understand the text	3.86	1.10
22. Going back and forth in the text to find relationships among ideas	3.73	1.02
26. Asking myself questions I like to have answered in the text	3.27	1.23
29. Translating from English into Turkish when reading a text	3.80	1.20
30. Thinking in both English and Turkish when reading a text	3.46	1.28
Overal	3.67	1.17

Among the 30 strategies, 24 strategies (80%) fell into the high-usage level ($M \geq 3.5$) and 6 strategies (20%) went to the medium level ($M \geq 2.5$). No strategy was reported at the low-usage level ($M \leq 2.4$). Relevant to three main types of reading strategies, students reported that they used problem solving strategies the most (M=3.95, SD=1.03), global reading strategies the second most (M=3.79, SD=1.48) and support reading strategies the least (M=3.67, SD=1.17).

4.2. Age and students' use of reading strategies

To reveal whether there was a significant relationship between age and students' use of reading strategies, the ANOVA tests were applied. The results of the ANOVA tests indicated that there was a significant relationship between age and students' use of reading strategies with respect to strategies numbered 8 (F= 4.209, p= .016) and 29 (F= 3.318, p= .038). To illustrate, students at the age group of 18-20 (F=3.318, p= .038) translated from English into Turkish when reading a text more than students at the age group of 21-23. Similarly, they translated from English into Turkish when reading a text more than students at the age group of 24-24+. Table 5 shows the results of these tests.

Table 5. One way analysis of variance (ANOVA) for students' use of reading strategies with respect to age

Strategies	(1)18-20	(2)21-23	(3)24-24	F(ANOVA)	P
	(n=134)	(n=142)	(n=10)		
	(Mean, SD)	(Mean, SD)	(Mean, SD)		
8	3.26 (1.26)	3.56 (1.14)	2.60 (1.50)	4.209	.016*
29	3.94 (1.12)	3.73 (1.25)	3.00 (1.33)	3.318	.038*

* p< 0.05

After the ANOVA tests, a series of post hoc tests (Scheffe tests) were performed to make multiple comparisons among three groups of age. However, these post hoc tests revealed no significant relationship between age and students' using reading strategies.

4.3. Gender and students' use of reading strategies

To reveal whether there was a significant relationship between gender and students' use of reading strategies, a series of independent samples t-tests were performed, and male students' mean scores for reading strategies were compared with female students' mean scores for reading strategies. The results of the independent samples t-tests indicated that there were significant differences between male students' mean scores and female students' mean scores with respect to strategies numbered 2 [t (284)= -5.450, p= .000, p <0.05], 5 [t (284)= -3.793, p= .000, p <0.05], 10 [t (284)= -6.806, p= .000, p <0.05], 11 [t (284)= -3.035, p= .003, p <0.05], 13 [t (284)= -3.239, p= .001, p <0.05], 15 [t (284)= -2.934, p= .004, p <0.05], 16 [t (284)= -2.183, p= .030, p <0.05], 18 [t (284)= -2.049, p= .041, p <0.05], 19 [t (284)= -2.710, p= .007, p <0.05], 20 [t (284)= -5.240, p= .000, p <0.05]. That is to state that female students had higher level of using reading strategies than male students with respect to the above mentioned reading strategies numbered 2, 5, 10, 11, 13, 15, 16, 18, 19 and 20. To illustrate, female students (M=4.29, SD=0.90) took notes while reading more than male students (M=3.61, SD=1.22) did.

Table 6. Mean differences between male and female students' mean scores with respect to reading strategies

Strategies		Subscale	Male (n=129) (M, SD)	Female (n=157) (M, SD)	t-value	p
2	.000*	Support	3.61 (1.22)	4.29 (0.90)	-5.450	
5	.000*	Support	2.72 (1.43)	3.33 (1.28)	-3.793	
10	.000*	Support	3.86 (1.17)	4.63 (0.74)	-6.806	
11	.003*	Problem	3.66 (1.21)	4.05 (0.96)	-3.035	
13	.001*	Support	3.39 (1.33)	3.85 (1.09)	-3.239	
15	.004*	Global	3.87 (1.11)	4.22 (0.92)	-2.934	
16	.030*	Problem	3.53 (1.19)	3.81 (0.97)	-2.183	
18	.041*	Support	3.72 (1.21)	3.98 (0.98)	-2.049	
19	.007*	Problem	3.82 (1.14)	4.15 (0.95)	-2.710	
20	.000*	Global	3.11 (1.29)	3.88 (1.18)	-5.240	

* p< 0.05

4.4. Academic field and students' use of reading strategies

To reveal whether there was a significant relationship between academic field and students' use of reading strategies, the ANOVA tests were applied. The results of the ANOVA tests indicated that there was a significant relationship between department and students' use of reading strategies with respect to strategies numbered 4 (F= 2.453, p= .046), 13 (F= 2.941, p= .021), 25 (F= 3.795, p= .005), 30 (F= 4.234, p= .002). To illustrate, there was a significant relationship between department and students' using reference materials (e.g. a dictionary) to understand the text (strategy 13, F=2.941, p=.021). Table 6 shows the results of these tests.

Table 6. One way analysis of variance (ANOVA) for students' use of reading strategies with respect to department

St	(1)E (n=60) (Mean, SD)	(2)P (n=45) (Mean, SD)	(3)B (n=66) (Mean, SD)	(4)F (n=54) (Mean, SD)	(5)Ec (n=61) (Mean, SD)	F(ANOVA)	p
4	4.21(0.90)	4.33(0.79)	3.92(1.07)	3.96(0.98)	3.85(0.98)	2.453	.046*
13	3.60(1.16)	3.80(1.15)	3.30(1.28)	4.03(1.11)	3.62(1.28)	2.941	.021*
25	4.18(0.91)	4.22(0.95)	3.92(1.05)	4.20(0.89)	3.62(1.17)	3.795	.005*
30	3.56(1.19)	3.68(1.20)	3.65(1.24)	3.59(1.32)	2.88(1.27)	4.234	.002*

E=Economics, P=Public Administration, B=Business Administration, F=Finance, E=Econometrics

* p< 0.05

After the ANOVA tests, a series of post hoc tests (Scheffe tests) were performed to make multiple comparisons among five groups of departments. These post hoc tests revealed that (a) students at Finance Department (M= 4.03, S.D= 1.11) used reference materials (e.g. a dictionary) to understand the text more than students at Business Administration Department did (M= 3.30, S.D= 1.28) (strategy 13, p= .030, p <0.05), (b) students at Public Administration Department (M= 3.68, S.D= 1.20) thought in both English and Turkish when reading a text more than students at Econometrics Department did (M= 2.88, S.D= 1.27) (strategy 30, p= .002, p <0.05) and (c) students at Business Administration Department (M= 3.65, S.D= 1.24) thought in both English and Turkish when reading a text more than students at Econometrics Department did (M= 2.88, S.D= 1.27) (strategy 30, p= .020, p <0.05).

4.5. Success and students' use of reading strategies

To reveal whether there was a significant relationship between successful and unsuccessful students' use of reading strategies, a series of independent samples t-tests were performed, and successful students' mean scores for reading strategies were compared with unsuccessful students' mean scores for reading strategies. The results of the independent samples t-tests indicated that there were significant differences between successful students' mean scores and unsuccessful students' mean scores with respect to strategies numbered 11 [t (284)= -2.554, p= .011, p <0.05], 12 [t (284)= -2.766, p= .006, p <0.05] and 24 [t (284)= -2.130, p= .034, p <0.05]. However, as opposed to our expectations, unsuccessful students were found to have higher level of using reading strategies than successful students with respect to the above mentioned subscales numbered 11, 12 and 24. To illustrate, it was revealed in this study that unsuccessful students (M=4.19, SD=0.89) adjusted reading speed more than successful students (M=3.79, SD=1.13) did when reading academic texts [subscale 11, t (284)= -2.554, p= .011, p <0.05].

Table 7. Mean differences between successful and unsuccessful students' mean scores with respect to reading strategies

Strategies		Subscale	Successful (n= (M, SD)	Unsuccessful (M, SD)	t-value	p
11	.011	Problem	3.79 (1.13)	4.19 (0.89)	-2.554	
12	.006	Global	3.57 (1.17)	4.83 (6.47)	-2.766	
24	.034	Global	3.83 (1.01)	4.62 (5.21)	-2.130	

5. Discussion and Conclusion

The findings of this study revealed that Turkish ESP students were high level strategy users (M=3.80, SD=1.23), which provided evidence in support of some of the earlier research studies conducted in various EFL/ESL/ESP learning contexts (e.g. Chen & Chen, 2015; Gonen, 2015; Malcolm, 2009; Park, 2010). However, some previous studies, including Jafari & Shokrpour (2012) and Hsu (2010) unearthed dissimilar findings to the current study. For instance, Jafari & Shokrpour (2012) investigated 81 Iranian ESP students' use of reading strategies and reported moderate usage of the reading strategies (M=3.36). Hsu (2010) studied Taiwanian technical college students' use of reading strategies and found moderate usage of the reading strategies (M=3.16).

Regarding the relationship between learners' age and their use of reading strategies, this study found that there was a significant relationship between age and students' use of reading strategies. In this study, it was found that younger students used support reading strategies (e.g. translating from English into Turkish when reading a text) more than older students. This finding is contrary to the finding of Baker (2008) who revealed that skilled adult readers concentrate on reading strategies more than younger readers do.

With respect to the relationship between learners' gender and their use of reading strategies, this study found that there was a significant relationship between gender and students' use of reading strategies. To be more specific, female students employed reading strategies more than male students did. These findings are consistent with those of studies done by Poole (2009) and Sheorey and Mokhtari (2001). For instance, Poole (2009) reported that female students outperformed male students in terms of using reading strategies. However, these findings are contrary to those of studies conducted by some other researchers (e.g. Young & Oxford, 1997) who revealed that there were no statistically significant differences between males and females with respect to using reading strategies.

Relevant to the relationship between learners' academic field and their use of reading strategies, this study revealed that there was a significant relationship between academic field and students' use of reading strategies. More specifically, students at Finance Department reported using support reading strategies (e.g. using reference materials) more than students at Business Administration Department did. Students at Public Administration Department reported using support reading strategies (e.g. thinking in both English and Turkish when reading an academic text) more than students at Econometrics Department did. Students at Business Administration Department reported using the same support reading strategies (e.g. thinking in both English and Turkish when reading an academic text) more than students at Econometrics Department did. In

the literature, we found no research study related to Faculty of Economics and Administrative Sciences students' use of reading strategies when reading academic texts. In this vein, the findings of the present study contributes to the related field.

Related to the relationship between learners' success and their use of reading strategies, this study found that there was a significant relationship between success and students' use of reading strategies. However, contrary to what is expected, unsuccessful students reported using problem solving (cognitive) reading strategies (e.g. Adjusting reading speed) and global (metacognitive) reading strategies (e.g. Deciding what to read closely and what to ignore) more than successful students did. These findings are contrary to the findings of the studies done by some other researchers (e.g. Dhieb-Henia, 2003; Yin & Agnes, 2001; Zhang, 2001) who revealed that successful readers' deploy global (metacognitive) reading strategies more than unsuccessful readers do.

Finally, the findings of this study have some implications for ESP students, teachers and materials designers. Now, ESP teachers can better understand which reading strategies (global reading strategies, support reading strategies and problem solving strategies) are utilized by Turkish ESP students. They can evaluate their current teaching method, materials and assessment tools and they can develop them by infusing reading strategies into their teaching. They can give give students a variety of reading tasks both within and beyond the classroom context so that students can find the chance to practice reading strategies and discuss them with their peers. As for EFL/ESL reading materials designers, they can develop suitable and well-qualified reading books for EFL learners by integrating reading strategies into their content (Demiroz, 2010; Ghafoori, Eslami & Bagheri, 2016; Jafari & Shokrpour, 2014; Qanwal & Karim, 2014).

References

Akarsu, O. & Harputlu, L. (2014). Perceptions of EFL students toward academic reading. *The Reading Matrix,* 14 (1), 61-75.

Alderson, J. C. (2000). *Assessing reading*. Cambridge: Cambridge University Press.

Anderson, N. J. (1991). Individual differences in strategy use in second language reading and testing. *The Modern Language Journal*, 75 (4), 460-472.

Baker, L. (2008). Metacognitive development in reading: Contributors and consequences. In K. Mokhtari & R. Sheorey (Eds.), *Reading strategies of first and second – language learners: See how they read* (pp. 25-42). Norwood, MA: Christopher-Gordon.

Block, E. (1986). The comprehension strategies of second language readers. *TESOL Quarterly,* 20 (3), 463-494.

Carrell, P. L. (1998). Can reading strategies be successfully taught? Retrieved from http://www.jalt-publications.org/tlt/files /98/mar/carrell.html.

Chen, K. T. C. & Chen, S. C. (2015). The use of EFL reading strategies among high school students in Taiwan. *The Reading Matrix,* 15(2), 156-166.

Demiroz, H. (2010). Reading strategies employed by ESL/EFL learners. *Cumhuriyet University Social Sciences Journal*, 34 (2), 81-86.

Dhieb-Henia, N. (2003). Evaluating the effectiveness of metacognitive strategy training for reading research articles in an ESP context. *English for Specific Purposes, 22* (4), 387-417.

Garner, R. (1987). *Metacognition and reading comprehension*. Norwood, NJ: Ablex.

Ghafoori, N., Eslami, H. & Bagheri, L. (2016). The effect of strategy instruction on the frequency of reading strategy use by Iranian EFL learners. *International Journal of English Language Teaching*, 3 (2), 37-45.

Gonen, I. K. (2015). The relationship between FL reading strategies and FL reading proficiency: A study on Turkish EFL learners. *Educational Research and Reviews,* 10 (24), 2924-2936.

Goodman, K. (1995). The Reading Processes. In L. Carrell & D. Eskey (Eds.), *Interactive approaches to second language reading* (pp.11-12). Cambridge: Cambridge University Press.

Grabe, W. (2004). Research on teaching reading. *Annual Review of Applied Linguistics*, *24*, 44–69.

Hamp-Lyons, L. (1985). Two approaches to teaching reading: A classroom-based study. *Reading in a Foreign Language, 3*, 363-373.

Hsu, Ch.Y. (2010). *The effects of collaborative strategic reading on EFL students' reading comprehension and learning interest.* Unpublished M.A Thesis. National Yunlin University, Daulin, Ynlin, Taiwan.

Jafari, S. M. & Shokrpour, N. (2012). The reading strategies used by Iranian ESP students to comprehend authentic expository texts in English. *International Journal of Applied Linguistics & English Literature*, 1 (4), 102-113.

Kern, R. G. (1989). Second language reading instruction: Its effects on comprehension and word inference ability. *Modern Language Journal, 73*, 135-149.

Malcolm, D. (2009). Reading strategy awareness of Arabic-speaking medical students studying in English. *System*, 37, 640-651.

Mikulecky, B. (2008). Teaching reading in a second language. Retrieved from http://www.longmanhomeusa.com/content/FINAL-LO%20RES-Mikulecky.

Mokhtari, K., & Sheorey, R. (2002). Measuring ESL Students' awareness of reading strategies. *Journal of Developmental Education, 25* (3), 2-10.

O´Malley, J. M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.

Park, Y.H. (2010). *Korean EFL college students' reading strategy use to comprehend authentic expository/technical texts in English.* Unpublished Doctoral Dissertation. Department of Curriculum and Teaching, University of Kansas, Kansas, USA.

Peacock, M. (2001). Language learning strategies and EAP proficiency: Teacher views, student views, and test results. In J. Flowerdew & M. Peacock (Eds.), *Research Perspectives on English for Academic Purposes* (pp. 268–285). Cambridge: Cambridge University Press.

Poole, A. (2009). The reading strategies used by male and female Colombian university students. *Issues in Teachers' Professional Development*, 11 (1), 29-40.

Poole, A. (2010). The reading strategies used by male and female English language learners: A study of Colombian high school students. *New England Reading Association Journal, 46* (1), 55-63.

Pressley, M., & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading*. Hillsdale, NJ: Erlbaum.

Qanwal, S. & Karim, S. (2014). Identifying correlation between reading strategies instruction and L2 text comprehension. *Journal of Language Teaching and Research*, 5 (5), 1019-1032.

Rice, M. (2009). Research-Based Reading Instruction: Reading Comprehension Skills and Strategies. Florida Center for Reading Research: Making Connections. Educators Publishing Service. Retrieved from http://www.fcrr.org/FCRRREPORTS.

Saengpakdeejit, R. & Intaraprasert, C. (2014). Reading Strategies in Foreign Language Academic Reading: A Qualitative Investigation. *Theory and Practice in Language Studies*, 4 (12), 2599-2608.

Sheorey, R. & Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native readers. *System,* 29 (4), 431-449.

Uzuncakmak, P. (2005). *Successful and unsuccessful readers' use of reading strategies.* Unpublished M. A Thesis. Department of Teaching English as a Foreign Language, Bilkent University, Ankara, Turkey.

Yang, Y. (2016). A research on reading strategies among non-English major postgraduates. *English Language Teaching,* 9 (8), 204-212.

Yigiter, K., Sarıcoban, A., & Gurses, T. (2005). Reading strategies employed by ELT learners at the advanced level. *The Reading Matrix*, 5 (1), 124-139.

Yin, W. M., & Agnes, C. S. C. (2001). Knowledge and use of metacognitive strategies. Retrieved from http://www.aare.edu.au/01pap/won01419.htm.

Young, D. J., & Oxford, R. (1997). A gender-related analysis of strategies used to process written input in the native language and a foreign language. *Applied Language Learning*, 8, 43–73.

Zhang, L. J. (2001). Awareness in reading: EFL students' metacognitive knowledge of reading strategies in an acquisition-poor environment. *Language Awareness, 10*, 268–288.

Zhang, L. J. (2008). Constructivist pedagogy in strategic reading instruction: Exploring pathways to learner development in the English as a second language (ESL) classroom. *Instructional Science, 36* (2), 89-116.

Zare, J. & Maftoon, P. (2015). Reading strategy use and field of study: A mixed-method study. *Iranian Journal of Applied Language Studies,* 7 (1), 171-196.

Zhang, L. J., & Wu, A. (2009). Chinese senior high school EFL students' metacognitive awareness and reading-strategy use. *Reading in a Foreign Language*, *21*, 37–59.

Zhang, Z. (1993). *Literature Review on Reading Strategy Research.* Paper presented at the Annual Meeting of the Mid-South Educational Research Association, New Orleans, LA.