Investigating Academic Reading Strategies among Pharmacy College Students at Delta University

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ملخص الدراسة باللغة العربية

دراسة الاستراتيجيات القرائية لدي طلاب كلية الصيدلة بجامعة الدلتا للعلوم والتكنولوجيا

تهدف الدراسة الحالية إلي الكشف عن استراتيجيات الفهم القرائي التي يتبعها طلاب السنة الأولي بكلية الصيدلة جامعة الدلتا. وهي عبارة عن أساليب تعليمية يتبعها الطلاب من أجل التغلب علي صعوبة فهم النصوص الأكاديمية، خاصة الطبية، المتعلقة بدراستهم. يتم الكشف عن هذه الاستراتيجيات لدي الطلاب عن طريق متابعة العادات القرائية ومستوي الفهم والتركيز لديهم. شارك في الدراسة عينة بحث مكونة من ستين طالب من طلاب السنة الأولي لكلية الصيدلة بالفصل الربيعي للعام الأكاديمي ٢٠١٧\٢٠١٨. من أجل تحقيق هدف الدراسة تم استخدام نسخة معدلة من استبيان القراءة الأكاديمية Mokhtari and Sheorey (2002)، وهو استبيان يهدف لقياس استراتيجيات القراءة الأكاديمية التي يتبعها الطلاب.

توصلت الدراسة إلي أن غالبية الطلاب تستخدم استراتيجيات للفهم القرائي تمثل عادات يتبعها الطلاب من أجل فهم النصوص القرائية، وأغلبها يعتمد علي استراتيجيات القراءة الذاتية التي لا يتم فيها التواصل بين الطالب ومعلمه. وضعت الدراسة بعض التضمينات التربوية التي توصي بضرورة دراسة الاستراتيجيات القرائية المتبعة من الطلاب من أجل الإفادة منها في وضع أساليب التدريس والتقويم في الكليات الطبية التي تعتمد علي اللغة الانجليزية كلغة دراسة.

الكلمات الدالة: استراتيجيات القراءة، القراءة الأكاديمية، دراسة كيفية، طلاب التخصصات الطبية

Abstract

This study aimed at investigating Reading Comprehension Strategies that were utilized by Pharmacy College, freshmen at Delta University, when they involved in their academic tasks of medical courses. There were a set of strategies, and students were requested to assign their habits of reading, purposes, and how to concentrate during reading. The participants of the study were 60 freshmen students from pharmacy college in the academic year 2017- 2018, spring semester. The questionnaire of Reading Strategies by Mokhtari and Sheorey's (2002) was conducted for data collection. Findings showed that the majority of students frequently utilize common strategies that linked with their determined academic assignments and study practices. Moreover, there were indications of students' tendencies for avoiding the strategies that based on the contact with teachers or those that required a higher extent of language mastering. The pedagogical recommendation of the results for language learning and instruction were concluded.

Key words: *reading strategy, academic reading, qualitative investigation, medical science students,*

1. Introduction

Reading is a mental process ability in which the readers contact with a certain reading context in order to construct significant discourse. This meaning dialogue has been achieved from what is provided by the words and sentences of knowledge and ideas. There are many definitions for the reading process, such as the definition of Pikulski, (1997) that it is the approach of creating significance meaning out of the energetic contact among the reader's prior acquaintance, the provided data from the read text and the context of the reading condition.

There are many institutions nowadays that present technological and scientific programs. Generally, these programs and courses are mainly based on reading materials that are written in English. Logically, the proficiency in reading English texts becomes the crucial requirement for medical and other academic purposes. In such environments, by strengthened reading skills, ESP students will achieve better improvement in their academic fields (Ozek 2006).

Grabe (1991) reported that the essential significance of reading skills in academic discourses is the reason of remarkable investigations that tackling English reading skills, particularly, the academic texts. Levine, Ferenz and Reves (2000, p.1) stated that "the skill of reading academic texts is the most essential ability that university students of different majors need to acquire".

Because of reading academic texts is a complex and a hard task for many students, so they often tend to use several reading approaches that may make the academic reading tasks more comprehensive.

Reading strategies are any collection of learning approaches or processes, which students often employ for grasping an English academic reading material. In other words, when students face problems to interpret the reading texts, they attempt to utilize methods or approaches to beat their complexity and solve their reading problems. (Tercanlioglu2004).

Investigating the frequently used strategies of the students would build a better realization for ESP academic reading and that would contribute to valuable acquaintance for both students and teachers about the characteristics of academic reading comprehension. In addition, investigating the used strategies of students can provide the suitable indications for studying reading skills. It may also stand as a reference for teachers to select suitable materials for their students.

So, the current study attempted to explore the strategies of reading that are used by pharmacy college students when they tackled their academic texts, in order to determine the categories and classifications of certain reading strategies and to verify any variations regarding their language proficiency.

2. Literature Review

Many studies have been conducted to determine the crucial role of reading strategies in the reading understanding process. In addition, the classifications and usage frequencies of various reading strategies (Zhang & Wu, 2009). For example, the study of Saengpakdeejit and Intaraprasert (2014) investigated the procedures that were followed by EFL undergraduate students to enhance their reading understanding and to resolve the troubles that encountered while reading. The study conducted a semi-structured interview with a sample of 39 students from different universities. The results identified two basic categories of reading strategies that were frequently used by students: "1) strategies for increasing textual comprehension (SETC) with individual reading strategies; and 2) strategies for comprehending reading texts (SCT)".

In addition, the study of Akula (2014) used a training strategy to improve the academic reading skills of college stage students. They read several texts and were directed to utilize strategies with reading objectives. Their usage of strategies was estimated throughout self-reflection frameworks, which were also utilized as way for personal assessment. Their responses were obtained via instructive interviews. The results showed that students have employed different strategies such as; rereading, making inferences, listing keys, underlining and thoughts to understand contents at both accurate and predictable stages. The participant students confirmed that the performing such approaches would assist them to understand different contexts.

Moreover, Mokhtari and Sheorey (2002) identified the metacognitive reading strategies of L2 students. They submitted the Survey of Reading Strategies (SORS) which was created to assess the metacognitive reading strategies of L2 students involved in reading academic contexts. They explored the varieties in the usage of reading strategies among non-native speakers and native speakers of English. Results revealed that the ESL learners conducted a frequent usage of strategies than the native speaker ones. Moreover, students of high rating proficiency in reading abilities used a higher frequency of reading approaches than those who gave themselves a minor rating in reading proficiency.

Tercanlioglu (2004) conducted an examination to show how students moved toward the task of academic reading. The researcher made use of different tools for data collection: the Adult Survey of Reading Attitude (ASRA); a reading efficacy belief instrument; a questionnaire; interviews with seventeen students; and three passages for assessing the reading comprehension skills. The findings reported that, L1 students rated achievement on both efficacy items on the reading efficacy belief instrument higher than ESL students, furthermore, ESL students rated anxiety and complexity extremely, rather than L1 students who rated modalities on the ASRA as more significant, finally, the interviewees from both groups indicated

an evident tendencies to cognitive strategies, followed by metacognitive and support strategies.

McWhorter's study (2001) provided the crucial approaches for reading comprehension achievement, such as; note taking and active reading, providing approaches for enhancing critical and literal comprehension, improving reading flexibility and developing vocabulary skills, using approaches for learning and reading from coursework activities and for passing tests.

Several researches in second language (L2) perspectives have revealed that reading comprehension may be recognized to the range of the practical usage of reading strategies, such as Brookbank, Grover, Kullberg, and Strawser (1999). Other researches that have explored the connection between reading approaches and accomplishment in comprehension by students of different languages have provided significant findings (Ozek, 2006 &Pikulski, 1997). These researches have verified that several text kinds may call for performing several strategies of reading comprehension.

To sum up, the previous review showed that determining the usage of different reading strategies by students may reflect on many important elements. These elements are related mainly to students' preferences and habits during reading academic texts. This may guides teachers and curricula designers for selecting course materials, otherwise, in planning for teaching and assessment.

3. Importance of the Study

- It may help ESP teachers to be aware of students' reading difficulties and challenges in reading academic contexts.
- It may help medical science students to understand their academic reading prospective by recognizing their weaknesses and strengths in the reading process for academic purposes.
- Come up with suggestions that could be used in the design and assessment of instructional materials for academic reading skills.

4. Statement of the Problem

It is noticed that students who have inadequate proficiency for academic reading in English at the previous school level face complicatedness in reading academic texts at the college stage due to the specific features of the discourse, the huge amount of information and the technical terms present in the contents. So, there is need for focusing on their individual-study approaches and strategies to be addressed.

The avoidance of managing strategies by students who lack literacy skills has been the central focus of a research on the recognition of teacher behaviors that associated with students' realization, as well as on teachers' reactions to students' behaviors and on students' performance of these strategies (Brozo, 1990).

So the current study attempted to trace the utilized strategies of reading comprehension by pharmacy college students to avoid misunderstanding of academic and medical texts. The aim is to be aware them in planning for teaching and assessment.

5. Research Questions

1. What are the reading strategies that are used by Pharmacy College students with academic contexts?

2. Which of these strategies are the most frequent used?

3. Do these reading strategies varied according to the students' academic proficiency?

6. Delimitations

This study is limited to the following:

- The study investigated the reading strategies of ESP medical students in academic context.
- The study was conducted in the academic year 2017- 2018, spring semester. The participants of the study were 60 students from pharmacy college freshmen students.

7. Methodology

A. Participants

They were 60 students from pharmacy college freshmen students in the academic year 2016- 20187, spring semester. They were assigned to study "'English1" as a university requirement course.

B. Instrument

The reading comprehension questionnaire was used for the process of data collection. The items of this questionnaire were established to extract participants' attitude. They reacted in the light of a 5-point Likert scale starting from 5 to 1 (5 = I strongly agree; 4 = I agree; 3 = I have no idea; 2 =I disagree; 1 = I strongly disagree). This questionnaire of Reading Strategies (SORS) was based on Mokhtari and Sheorey's (2002). The modified version was administered to measure the frequencies of reading strategies that Pharmacy College students employed through reading academic materials in English. It consisted of 30 items that were categorized into; Problem Solving Strategies, Global Reading Strategies, and Support Strategies. In the modified version of the questionnaire for this study, no division was kept among the classifications; in addition, six items were added with regards to the given materials in the university. A short background questionnaire of academic proficiency was performed along with the questionnaire.

C. Procedures and data collection

The questionnaire was conducted at the end of the spring semester (May 2017). The students were instructed and filled in the items of the questionnaire. They identified their age, and academic proficiency on the background information part that included to the questionnaire. They were offered 35-40 minutes to finish the task.

8. Data Analysis

The questionnaire aimed at finding out the reading strategies of pharmacy college students in academic reading contents and the differences regarding to academic discipline and to specify strategies with the lowest and highest records.

Data were analyzed by using (SPSS) 17 software. Significance was measured at the level of $p < 0.05$. Means for each statement, their sub-dimensions, and the descriptive statistics (descriptive, cross-tabulation, frequency, etc.) were considered. Correlation analyses among the means of the scores were also measured.

9. Results

The findings of the quantitative data collection procedure presented according to the answers of the three questions of the research.

1. What are the reading strategies of Pharmacy College in academic reading contexts?

2. Which of these strategies are the most frequently used?

According to the first two questions, the most scored and the least scored reading strategies were figured and the means of all strategies are showed in the following table.

Table 1. The Descriptive Statistics of Reading Strategies by Means and Standard Deviation

No.	Item	M.	S.D
1.	I always prepare pen and paper nearby, when I read	4.0268	1.04061
2.	Before reading, I do skimming.	3.9057	0.94716
3.	I make inference, before reading, by looking at the title.	3.8413	0.95463
4.	While reading, I do scanning.	3.6131	1.00537
5.	While reading, I do skimming.	3.5287	1.067
6.	I read too slowly When text becomes difficult.	4.1588	0.93462
7.	I attempt to get out the main ideas.	4.3076	0.789
8.	I establish an objective in my mind throughout my reading tasks.	3.8791	0.93893
9.	I start reading the introduction and conclusion first, and then read the entire task.	3.1846	1.30368

10.	I divide long texts into parts and segments.	2.8721	1.19223
11.	I write marginal remarks to guide me understanding what I am reading.	3.6806	0.97517
12.	I consider what I recognize to understand what I am reading.	4.1823	0.97047
13.	I read loudly to understand what I am reading.	2.9574	1.28498
14.	I consider whether the content of the text meets my reading aims.	4.1789	1.12274
15.	I attempt to get forward and back to trace when I misplace attentiveness.	3.9743	1.0745
16.	I focus on the text to guide me in the reading process.	4.0208	1.84216
17.	I regulate my reading process regarding what I read.	3.6944	1.37922
18.	I plan for what to read strongly and what to disregard.	4.0208	0.99013
19.	I utilize reference (dictionaries) to understand what I am reading.	4.0438	1.0902
20.	I use cards, figures, and images in text to enhance my understanding.	2.9907	0.93813
21.	I discontinue for short time and consider what I am reading.	4.1587	0.92372
22.	I utilize context clues to understand what I read.	4.0067	1.15086
23.	I rewrite thoughts on my personal words to understand what I read.	2.9872	0.99641
24.	I attempt to visualize ideas to remember what I read.	2.9372	2.01367
25.	I use features of typing such as bold face, italics to identify key ideas.	4.0849	2.10253
26.	I evaluate and analyze the presented information in the text critically.	4.1939	0.99162
27.	I go forward and back in the text to get the connections between ideas.	3.9708	1.11293
28.	I verify my understanding when I come across new data.	4.1476	1.02641
29	I reread to enhance my understanding, when the text	4.1323	1.00237

.	seems difficult.		
30.	I ask intense questions that I suppose to find answers in the text.	3.3452	0.91882
31.	I prove if my inferences about the text are true or incorrect.	3.8691	1.01329
32.	I deduce the meaning of unknown sentences or words.	3.9277	1.07489
33.	I translate from English into Arabic to understand the texts.	4.0972	1.09463
34.	I consider about the information in both English and Arabic.	3.7631	1.13269
35.	I often read for enjoyment to develop my reading skills.	3.5389	1.1854
36.	I perform some unique approaches like (predicting, clarifying and summarizing).	3.4159	1.16187

Table 1 revealed that the majority of pharmacy college students attempt to find out the central topic and main ideas in academic reading contents. On the other hand, the upper most and minor scored reading strategies are the sixth ("I read too slowly When text seems to be complex") and the thirteenth ("I read loudly to understand what I am reading") statements, in that order. The mean score for the sixth statement is 4.15 and for the thirteenth one is 2.9. The mean score of the sixth item reveals that the students have a preference to read slowly when the text seems complex. As the majority of the academic contexts present several scientific data, they have to read more cautiously than other kinds of passages. As for the thirteenth item, students have the desire for silent over out-loud reading.

Regarding these results, students reported that they perform the majority of the reading strategies that were included in the questionnaire. Effective reading is crucial for medical science students in their fields of study, as various academic materials throughout the world are given in English. Briefly, all students were noticed to perform different approaches and strategies regarding their needs and perceptions. Some strategies were utilized frequently and others less.

Regarding the third question of the study "Do these reading strategies varied according to the students' academic proficiency?" A Chi-Square Test was performed for the statistical calculations in the analysis of the data collected to answer this question. The data collected through the questionnaire revealed that the students performed reading strategies with connection to their prior knowledge, which indicated the differences of their academic proficiencies.

Table 2. The Chi-square Analysis on the Items of the Questionnaire by Students' Proficiency

Level		SD	D	NI	A	SA	Total
				S14			Total
High	Count	7	10	11	35	8	69
	%	8.7%	14.5%	15.9%	50.7%	10.1%	100.0%
Low	Count	7	5	27	24	12	75
	%	9.3%	6.7%	36.0%	32.0%	16.0%	100.0%
Total	Count	13	15	38	59	19	144
	%						100.0%

D.f.= 4 $x^2=11.716$ p=.021

As table 2 showed, four items revealed variations with the significance level of $p < 0.05$. This indicated that students' responses varied with regard to their proficiency and background. According to the attained data from SPSS for the second item "I do skimming, prior starting reading," students, who spent more years in learning English, skim the text prior the process of reading more than the other ones. As for the fourth item, "I do scanning during the reading process" they also inspect the text during reading more than the others. For the ninth item, "I start reading the introduction and conclusion first, and then read the entire task" the proficient students start by reading the introduction and conclusion before going back to read the entire text much more than inadequate proficiency students. Moreover, they consider whether the content of the text meets their aims than the other students. In addition, regarding to their responses, they attempt to portray or visualize the given information to guide them to keep in mind what they read to a greater degree than students from other levels of proficiency.

Briefly, all medical science students used one of the reading strategies at least frequently in their academic reading tasks. The study identified variations among the students' expectations and perceptions toward practical reading strategies regarding their academic efficiency.

According to the mentioned results, the chief scored reading strategy was reflected in the seventh item "I attempt to get out the main ideas," while the minor scored item was the tenth "I divide long texts into parts and portions." The means for the seventh and tenth items were 4.03 and 2.87 in that order.

This indicated that students have the desire to read the entire material rather than dividing it into small segments, despite the length. They may worry about losing their attention if they take breaks, and it may obligate them to read the previous parts over again. The closest top and lowest scored strategies are the sixth item ("I read too slowly When text becomes difficult.") and the thirteenth item ("I read loudly to understand what I am reading."), with means of 4.16 and 2.96, in that order. Regarding these results, students have a preference to read slowly when the text seems complex. As the majority of academic contents are full of scientific information, reading should be practiced more cautiously. Furthermore, many students write marginal remarks during the reading process to help understanding the texts. The eleventh statement, "I write marginal remarks to guide me understanding what I am reading," showed a mean of 3.68.

Finally, regarding the collected data through this study, certain strategies appear as more frequent than others, such as "I attempt to get out the central ideas." and "I ask intense questions that I suppose to find answers in the text." Yet, the findings also confirmed the thought that pharmacy college students perform several reading strategies to better benefit from reading time and achieve proper understanding of the academic contents.

10.Discussion and Conclusion

The current study aimed at investigating Pharmacy College students' behaviors and perceptions towards several types of reading strategies, and determining if the academic proficiency has impacts on students' usage of these strategies. The reading strategies questionnaire was administered for data collection by 60 students from Pharmacy College at Delta University. A significant number of researches have been conducted to explore the elements and factors that affect reading comprehension. Researchers paid more attention to all features of reading process like reading anxiety, reading challenges, reading comprehension, reading strategies, and etc.

Reading in academic and specific education is considered as the essential required skill for ESP students as their deficiencies to read printed English texts may obstruct professional and academic improvement of those whose academic systems and programs require information from the target language (Alderson, 1984).

With regard to the first research question "What are the utilized reading strategies of college stage students (pharmacy college) while reading academic materials? The collected data from this study revealed that students have acquaintance of several reading strategies that were assigned in the questionnaire. As the results indicated, some of these reading strategies were performed more frequently than others, though these reading strategies sometimes differ from one

student to another. These results are agreed with (Levine, Ferenz and Reves, 2000; Ozek, 2006; Akula, 2014).

Regarding the second question of the study, "Which strategies are the most significant and the least for students?" the analyses revealed strategies their scored higher and lower, suggesting information about students' expectations and perceptions towards effective academic reading. They have tendencies to be energetic with using certain reading strategy, such as keeping a paper and a pen closely during their reading. The data indicated that they remark certain reading strategies more practically than the others, representing their individual choices.

With regard to the third question "Do these reading strategies differed according to the students' academic proficiency?" the obtained data from the questionnaire indicated that students perform reading strategies regarding their prior knowledge, and their background with learning English language.

At last, it is concluded that all of the students demonstrated certain reading strategies as more significant than others in academic reading and that there are some variances among their insights towards effective reading strategies.

11. Implications and Recommendations

The current study may state the following pedagogical implications for teaching reading skills in medical science colleges. Firstly, these results may support teachers to assist students for selecting the reading strategies that suit them independently. These also indicated that medical science students have several approaches for reading academic texts, but they just perform the ones they think more effective for them. Not only this, but also that reading strategies varied from a student to the other. Teachers should pay attention for the students' personal experiences and approaches while teaching reading.

Secondly, the implications of this study may be valuable for students who are in need for enhancing their awareness of reading strategies usage. Furthermore, the results pointed out changes among reading strategy choices regarding prior knowledge and academic efficiency. In other words, students' prior knowledge may portray their recognitions of effective reading strategies. In this study, the factors that are related to the field of the study are essential, as the students are all of a medical college, and thus must read for academic purposes (medical in particular). In conclusion, it would be valuable for ESP students, to be aware of the strategies that should be performed while treating the academic texts to achieve adequate understanding and face the challenges of studying difficult and unknown words and phrases.

12. Limitations

The current study highlighted the common categories of reading strategies that ESP students should perform when treating academic texts. It gives

perceptions for educators regarding how varied groups of students recognize practical reading strategies and how they approach academic reading independently. In the other side, there are certain limitations related to the amount of population, data collection procedures, research design and instruments. As for the data collection, a questionnaire was administered in this study; it is believed that more instruments are in need to achieve the accurate vision of this issue. There is also a need for exploring students' attitudes towards practical reading strategies through several research designs and data collection procedures and instruments, and with a large number of students.

13. Recommendation for further Research

- It is suggested that extra studies be conducted to examine students' attitude and expectations towards effective reading strategies.
- Further variables could be examined according to the choices of reading strategies.
- Further studies should test the features and aspects of reading instruction.
- Several factors such as; age, gender and academic majors should be examined to identify the methods in which students perform to learn language skills.
- The students' inadequate of knowledge towards reading strategies could be the topic of additional investigations.

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