

An Examination of Jordanian College-Level Students' Use of Reading Strategies in Reading Arabic (L1) and English (L2)

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ABSTRACT

This study aimed at examining the extent to which Jordanian college-level students practice the reading strategies in reading Arabic (L1) and English (L2). The sample of the study consisted of (918) Yarmouk University students enrolled in the two courses of (Arabic 100 and English 100A) for the second semester of the academic year 2004/2005. To achieve the purpose of the study, the Reading Strategies Questionnaire (RSQ) was adopted by the researchers. The students' responses to the (RSQ) were analyzed to examine the extent to which they use the reading strategies, and an independent t-test was conducted to test whether there were any significant differences between their use of the strategies in reading Arabic and in reading English. The results of the study revealed that there were disparities in the students' use of the reading strategies, and that there were statistically significant differences in favor of using the whole-, pre-, and while-reading strategies in reading English, and in favor of using the post-reading strategies in reading Arabic.

Finally, implications and recommendations for educators, instructors and researchers were suggested.

Keywords: Reading Strategies, First Language (L1), Second Language (L2).

1. INTRODUCTION

Reading is one of the basic problems that is not often recognized by either students or instructors until some way into academic courses at the university level. Levine et al. (2000) pointed out that the ability to read academic texts is considered to be one of the most significant skills that university students need to attain. Reading comprehension has come to be the "essence of reading" (Durkin, 1993), critical not only to academic learning but also to life-long learning. However, many students enter higher education unprepared for the reading demands that are placed upon them; and when they read, they often employ ineffective and inefficient strategies (Saumell et al., 1999; Wood et al., 1998; Wade et al., 1990). This may be due to their low level of knowledge and use of reading strategy (Van Wyk, 2001; Dreyer, 1998). Another reason might be their inexperience in heavy reading demands at the university level. A third reason could be referred to the fact that instructors at the first

year of university level focus more on teaching students the content knowledge rather than practicing the strategy (Francine, 2002; Song, 1998).

Literature Review

Most educators would agree that students must have sufficient reading strategies in order to understand any given text and become strategic readers. Strategic reading can be defined as the reader's interaction with the text; employing a variety of appropriate strategies to construct meaning (Janzen, 2003; Paris et al., 1983). Therefore, Paris et al., (1991) stressed that strategic readers are not characterized by the number of strategies that they use, but rather by the selection of appropriate strategies that fit a particular reading task. Such strategies are actions selected deliberately by strategic readers to achieve specific goals. Accordingly, reading comprehension is a very complex process that should be approached logically through employing applicable strategies. Therefore, strategic readers approach a reading task with a plan; they don't let the text dictate how they will read it. Instead, they think about the purpose of the reading, the kind of the text to be read, and the way in which to actually do the reading (Harvey and Goudvis, 2000; Robb, 1996). To

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achieve these goals, strategic readers need to (Tierney and Readence, 2005; Janzen, 2003; Paris et al., 1991): (1) set purposes for their reading, (2) identify the text's type and form before reading, (3) make predictions about what they will read, (4) reconsider their prior knowledge and background experiences, (5) annotate on and question about the text being read, (6) regulate and direct their thinking processes while reading, (7) monitor and control their understanding, (8) review and summarize what they read and (9) evaluate what they read and reflect upon it. In sum, strategic readers know how, when, and why to use the reading strategies effectively (Tierney and Readence, 2005).

College students can become strategic readers, according to Zimmerman (2000), through three phases; first, readers analyze tasks, set goals, strategically plan, and motivate themselves to value reading; next, they monitor and adjust their strategies; and finally, they judge their success or failure, and reflect on the effectiveness of their strategic application. Pressley and Afflerbach (1995) stated that strategic readers use a finite set of cognitive processes including prediction, imaging, interpretation, comprehension monitoring, and summarizing. Moreover, they conceptualize that proficient readers are strategic and "constructively responsive" and take conscious steps to comprehend what they are reading; such steps involve a careful orchestration of the cognitive resources to ensure maximum comprehension.

Reading educators and researchers suggest three stages for the implementation of reading strategies: pre-reading, during-reading, and post-reading (Harris and Storr, 2005). First, in the pre-reading stage, the goal of strategic readers is to prepare themselves for the reading task. Therefore, they set purposes for reading to make certain that they know why they are reading a text and that they are clear about what they want to get from reading it. Having decided to read a particular text, strategic readers do not only dive in and begin reading from beginning to end, but often they skim the text to determine if it is really relevant to their purposes, and they scan the text to identify sections that might be particularly pertinent. Moreover, strategic readers pay attention before reading to the text organization and its headings and they formulate a plan to carry out the reading (Janzen, 2003; Rasinski and Padak, 1996).

Second, in the while-reading stage, the basic goal of strategic readers is to construct meaning from what they are reading. Throughout the reading process, strategic

readers actively focus on information relevant to their purposes and jump back and forth to look for such information. Besides, in an attempt to relate important points in the text to one another, strategic readers activate and revise their prior knowledge, especially when ideas in the text clash with what they already know (Harris and Storr, 2005; Paris et al., 1991). Strategic readers also make anticipations about what they are reading and try to determine the meaning of unknown words encountered in the text, especially if the words seem important to the overall meaning. They underline, highlight, label, and number important information and they tend to make notes on, annotate about, and paraphrase what they are reading in an attempt to understand and remember information deemed to be significant (Janzen, 2003; Beveridge and Edmundson, 1989). As they continue to read, strategic readers are interpretive, perhaps even to the point of conducting imaginary conversations with the author. They generate questions about what they are reading and distinguish between information they already know and new information. In addition, strategic readers question themselves about the text content, visualize the presented information, and check their anticipations and questions. Finally, strategic readers extensively monitor their reading because they are consciously aware of many characteristics of the text, from the author's style to the tone of the messages presented. They are especially aware of whether they are understanding the text, and when encountered with comprehension difficulties they verify their reading strategies (Harvey and Goudvis, 2000; Pressley and Gilles, 1983).

Third, in the post-reading stage, strategic readers' goal is to integrate and consolidate the information that has been read in a text. That is, processing of a text does not conclude when the final word is read. Thus, strategic readers review sections or parts of the text that seem especially important. Then, they strive to interpret what they have read and restate important information or summarize the text to themselves to assure that the key ideas can be recalled. Also, strategic readers tend to evaluate what they have read and check if their goals for reading have been achieved, and they often continue to reflect upon the text and what it might mean after reading is concluded (Tierney and Readence, 2005; Robb, 1996).

Research studies in the field of students' use of reading strategies have focused on: (1) investigating what reading strategies students use when they read (Campbell and Malicky, 2002; Arabsolghar and Elkins, 2001;

Meyers et al., 1990), (2) showing the differences between good and poor readers' usages of reading strategies (Lau and Chan, 2003; Kletzien, 1991; Spring, 1985), (3) developing instructional procedures to teach students how to effectively use the pre-, while-, and post-reading strategies (Horner and Shwery, 2002; Dreyer, 1998; Rosenshine et al., 1996), (4) examining the effects of different instructional conditions on students' usage of reading strategies (Francine, 2002; Wood et al., 1998; Feldt et al., 1996), and (5) exploring factors that affect students' use of reading strategies (Jimenez et al., 1996; Duffy et al., 1987).

In conclusion, research conducted in the field of reading strategies use revealed that educators actually concentrated on identifying effective strategies and on teaching students how to employ such strategies in order to comprehend what they read. However, the situation in Jordan is pretty much different. In Jordanian high schools, reading comprehension instruction is limited to the assignment of a reading passage followed by a number of questions. Even at the university level, it is often assumed that students already have the strategies needed to successfully comprehend texts. Yet, there is little evidence to prove that students at any level will acquire these strategies if they have not been explicitly taught to. Instruction can be effective in providing students with a variety of strategies that promote and foster comprehension. For students to become motivated strategic readers, they need systematic instruction or training. In order to meet the reading needs of students within the twenty-first century, educators are required to: (1) know what effective reading strategies there are and to what extent their students use such strategies, and (2) develop effective instructional means for teaching students how to use and employ such strategies to enhance comprehension. So, it is the purpose of this study to address the first aspect.

Study Problem

Undoubtedly, Jordanian college-level students are always faced with the task of reading for their academic courses. However, most of these students and their instructors are not familiar with the different strategies that the task of reading requires. Therefore, the problem of this study can be represented by a two-faced situation: (1) that Jordanian college-level students are not aware of their reading strategies, and (2) that their instructors do not have clear insights about their students' use of

effective reading strategies. Therefore, it is very crucial to gain an in-depth understanding of what these strategies are and to examine their use by Jordanian students. This study is an attempt to achieve such goal through the use of the Reading Strategies Questionnaire (RSQ). Consequently, the results of the study will shed light on Jordanian students' use of reading strategies and assist Jordanian instructors to better understand their students' use of such strategies.

Significance of the Study

The significance of this study can be represented by the hope that it would add to the knowledge of educational research in general, and reading research in particular, in the field of students' use of reading strategies. It is hoped that the study would provide information to assist Jordanian students, instructors, educators, and researchers to better understand effective reading strategies. Also, it is expected that through the findings of this study, some new insights and perspectives about Jordanian college-level students' use of reading strategies will be gained. It is essential and practical for Jordanian instructors to know about the specific and effective reading strategies that their students use. Since the study would be exceptional in this area of research, Jordanian students and instructors are expected to profit from the findings of the study and become more aware of what necessary strategies the act of reading entails.

Purpose of the Study and Research Questions

The purpose of this study is to examine the use of reading strategies by Jordanian college-level students in reading Arabic (L1) and English (L2). To fulfill this purpose, the following research questions have been addressed:

1. To what extent do Jordanian college-level students use the reading strategies in reading Arabic?
2. To what extent do Jordanian college-level students use the reading strategies in reading English?
3. Are there any significant differences between Jordanian college-level students' use of reading strategies in reading Arabic and in reading English?

Definition of Terms

This study encompassed the following two basic terms:

1. Jordanian College-Level Students: are those students studying at Yarmouk University and enrolled in the

two courses of (Arabic 100) and (English 100A) for the second semester of the academic year 2004/2005.

2. The Use of Reading Strategies: is the strategic reader's employment of a set of pre-, while-, and post-reading actions and activities. This use will be measured by the Reading Strategies Questionnaire (RSQ).

Limitations of the Study

The results of this study are limited by the following limitations: (1) the sample which consisted only of Jordanian students studying at Yarmouk University; therefore, the results cannot be generalized for students studying at other Universities in Jordan. (2) The sample addressed the students enrolled in the two courses of (Arabic 100) and (English 100A); thus, the results cannot be generalized for students enrolled in other courses. And (3) the objectivity of the students' responses on the Reading Strategies Questionnaire (RSQ).

2. METHODOLOGY AND PROCEDURES

Population and Sample of the Study

The population of this study consisted of all Jordanian students studying at Yarmouk University and enrolled in the two courses of (Arabic 100) and (English 100A) for the second semester of the academic year 2004/2005. The total number of those students, according to the statistical records of the Department of Admission and Registration at Yarmouk University, was (2874) which include (701) students enrolled in (Arabic 100) in (8) sections, and (2173) students enrolled in (English 100A) in (61) sections. The sample of the study, which represented one third of its population, was chosen randomly and included (1000) students (500 enrolled in 6 sections of Arabic 100, and 500 enrolled in 10 sections of English 100A). Table (1) shows the distribution of the population of the study and its sample.

Table (1)
The Distribution of the Population and Sample of the Study.

Group	Arabic 100		English 100A		Total	
	Students	Sections	Students	Sections	Students	Sections
Population	701	8	2173	61	2874	69
Sample	500	6	500	10	1000	16

Instrument

To determine Jordanian college-level students' use of reading strategies in reading Arabic (L1) and English (L2), the researchers have adopted and adapted the "Reading Strategies Questionnaire" (RSQ) that was designed by Dreyer and Nel (2003) based on the work of Oxford (1990), Pressely and Afflerbach (1995), Pressely et al., (1995) and Wyatt et al., (1993). This questionnaire has, according to Dreyer and Nel, a robust internal validity and reliability to be used with college-level students. The alpha reliability coefficient for the (RSQ) was .91 (Dreyer and Nel, 2003).

The (RSQ) consists of (30) reading strategies, [5 pre-reading strategies (1, 2, 3, 4, 5), 20 while-reading strategies (6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25) and 5 post-reading strategies (26, 27, 28, 29, 30)], with a five-point Likert scale (1= never to 5 =always) for response on these strategies. Therefore, the maximum total score on the (RSQ) would be (150) and the minimum would be (30).

Moreover, the researchers translated the (RSQ) into

Arabic and distributed it to twenty experts in the field of language instruction to ensure the suitability and clarity of its strategies for Jordanian college-level students. The experts provided some comments that have been taken into consideration regarding modifying, deleting, adding, and merging some of the strategies. For example, the strategy of "when appropriate, I try to visualize the descriptions in the text that I am reading in order to remember the text," has been modified to be "when appropriate, I visualize the information in the text that I am reading in order to understand;" the strategy of "while I am reading, I reconsider and revise my prior questions about the text based on the text's content" has been deleted; the strategy of "as I am reading, I monitor my understanding of the subject" has been added; and the two strategies of "I usually make predictions as to what will follow next," and "I try to anticipate information in the text" have been merged to be "while reading, I try to anticipate information in the text and predict what will follow next." In general, the experts' comments indicated that the (RSQ) has an

excellent content and construct validity.

The Arabic and English versions of the (RSQ) were then administered to a sample of (200) Jordanian college-level students (100 students for each version) to ascertain their validity and reliability. After analyzing the students' responses, it was found that Chronbach's alpha reliability coefficients were (0.81) for the Arabic version and (0.85) for the English version. This indicates that the two versions of the (RSQ) are valid and reliable to be administered to the sample of the study.

Data Collection

This study targeted (1000) Jordanian students studying at Yarmouk University and enrolled in the two courses of (Arabic 100) and (English 100A) for the second semester of the academic year 2004/2005. (500) copies of each of the two versions of the (RSQ) were distributed to the students enrolled in each course by the instructors of their sections. After the students had completed the questionnaires of the (RSQ), the instructors returned them to the researchers. The total completed questionnaires returned were: (446) for the Arabic version of the (RSQ) and (472) for the English version.

Data Analysis

To answer the first research question, the (446) questionnaires of the Arabic version of the (RSQ) were analyzed using the SPSS program to compute the means and standard deviations for each of the pre-reading, while-reading, and post-reading strategies. Also, the same procedure was used with the (472) questionnaires of the English version of the (RSQ) to answer the second research question. Moreover, an independent t-test was the main statistical procedure used in this study to answer the third research question. This procedure was conducted to examine whether there were significant differences between Jordanian college-level students' use of reading strategies in reading Arabic and in reading English.

3. RESULTS

Results of the First Question

The first research question was "To what extent do Jordanian college-level students use the reading strategies

in reading Arabic?" To answer this question, the means and standard deviations of the total scores on the Reading Strategies Questionnaire (RSQ) were calculated. Table (2) shows these means and standard deviations of the use of the reading strategies by Jordanian college-level students in reading Arabic. According to the results shown in this Table, it can be inferred that: (1) the mostly used reading strategies by the students were [reviewing, underlining, numbering, focusing, making notes, and planning]; (2) the frequently used strategies were [summarizing, categorizing, distinguishing, annotating, and paying attention]; (3) the rarely used strategies were [paraphrasing, self-questioning, scanning, verifying, revising, evaluating, skimming, jumping, and determining]; and (4) the least used strategies were [monitoring, checking, labeling, visualizing, setting goals, questioning, reflecting, anticipating, interpreting and highlighting].

As for the pre-reading strategies, Table (3) manifests the ordering of the use of these strategies by the students in reading Arabic according to their descending means. It is apparent from the results that the strategy of planning was the most used pre-reading strategy (Mean = 4.67, SD = 0.85); whereas, the strategy of setting goals was the least used pre-reading strategy (Mean = 1.27, SD = 0.75).

With regard to the while-reading strategies, Table (4) reveals the use of these strategies by the students in reading Arabic according to their descending means. The results shown in this Table indicate that: (1) the most used while-reading strategy was underlining (Mean = 4.82, SD = 0.65); (2) the most frequently used while-reading strategy was categorizing (Mean = 3.89, SD = 0.59); (3) the most rarely used while-reading strategy was paraphrasing (Mean = 2.06, SD = 0.52); and (4) the least used while-reading strategy was monitoring (Mean = 1.18, SD = 0.58).

Furthermore, Table (5) displays the ordering of the use of the post-reading strategies by the students in reading Arabic according to their descending means. The results in this Table imply that the strategy of reviewing was the most used post-reading strategy (Mean = 4.84, SD = 0.57); whereas, the strategy of reflecting was the least used post-reading strategy (Mean = 1.36, SD = 0.86).

Table (2)
The Means and Standard Deviations for the Use of Reading Strategies by Jordanian College-Level Students in Reading Arabic.

No.	Strategy	M	SD	No.	Strategy	M	SD
1	Paying Attention	3.03	0.59	16	Numbering	4.78	0.66
2	Skimming	2.95	0.53	17	Visualizing	1.22	0.75
3	Setting Goals	1.27	0.75	18	Focusing	4.77	0.69
4	Scanning	2.10	0.58	19	Labeling	1.21	0.65
5	Planning	4.67	0.85	20	Annotating	3.06	0.54
6	Making Notes	4.75	0.68	21	Self-Questioning	2.08	0.56
7	Revising	2.79	0.65	22	Categorizing	3.89	0.59
8	Distinguishing	3.79	0.71	23	Monitoring	1.18	0.58
9	Questioning	1.34	0.81	24	Underlining	4.82	0.65
10	Paraphrasing	2.06	0.52	25	Jumping	2.97	0.50
11	Determining	2.99	0.48	26	Reflecting	1.36	0.86
12	Checking	1.19	0.61	27	Summarizing	3.91	0.61
13	Highlighting	1.99	0.47	28	Interpreting	1.95	0.54
14	Anticipating	1.39	0.85	29	Evaluating	2.91	0.54
15	Verifying	2.76	0.65	30	Reviewing	4.84	0.57

Table (3)
The Ordering of the Use of Pre-Reading Strategies by Jordanian College-Level Students in Reading Arabic According to their Descending Means.

No.	Strategy	Mean	Std. D.
5	Planning	4.67	0.85
1	Paying Attention	3.03	0.59
2	Skimming	2.95	0.53
4	Scanning	2.10	0.58
3	Setting Goals	1.27	0.75

Table (4)
The Ordering of the Use of While-Reading Strategies by Jordanian College-Level Students in Reading Arabic According to their Descending Means.

No.	Strategy	M	SD	No.	Strategy	M	SD
24	Underlining	4.82	0.65	15	Verifying	2.76	0.65
16	Numbering	4.78	0.66	21	Self-Questioning	2.09	0.57
18	Focusing	4.77	0.69	10	Paraphrasing	2.06	0.52
6	Making Notes	4.75	0.68	13	Highlighting	1.99	0.47
22	Categorizing	3.89	0.59	14	Anticipating	1.39	0.85
8	Distinguishing	3.79	0.71	9	Questioning	1.34	0.81
20	Annotating	3.06	0.54	17	Visualizing	1.22	0.75
11	Determining	2.99	0.48	19	Labeling	1.21	0.65
25	Jumping	2.97	0.50	12	Checking	1.19	0.61
7	Revising	2.79	0.65	23	Monitoring	1.18	0.58

Table (5)
The Ordering of the Use of Post-Reading Strategies by Jordanian College-Level Students in Reading Arabic According to their Descending Means.

No.	Strategy	Mean	Std. D.
30	Reviewing	4.84	0.57
27	Summarizing	3.91	0.61
29	Evaluating	2.91	0.54
28	Interpreting	1.95	0.54
26	Reflecting	1.36	0.86

Results of the Second Question

The second research question was “To what extent do Jordanian college-level students use the reading strategies in reading English?” To answer this question, the means and standard deviations for the total scores of the Reading Strategies Questionnaire (RSQ) were calculated. Table (6) presents these means and standard deviations of the use of the reading strategies by Jordanian college-level students in reading English. It can be seen from the results in this Table that: (1) the mostly used reading strategies by the students were [underlining, determining, numbering, setting goals, revising, reviewing, and verifying]; (2) the frequently used strategies were [jumping, skimming, focusing, and distinguishing]; (3) the rarely used strategies were [monitoring, checking, evaluating, summarizing, scanning, making notes, questioning, self-questioning, paraphrasing, categorizing, annotating, anticipating, interpreting, highlighting, and paying attention]; and (4) the least used strategies were [reflecting, visualizing, planning, and labeling].

As for Pre-reading strategies, Table (7) manifests the ordering of the use of these strategies by the college level

students in reading English according to their descending means. It is obvious from the results that the strategy of setting goals was the most used pre-reading strategy (Mean= 4.76, SD= 0.70); whereas, the strategy of planning was the least used pre-reading strategy (Mean=1.26, SD= 0.75).

Regarding the while-reading strategies, Table (8) shows the use of these strategies by the students in reading English according to their descending means. The results in this Table indicate that: (1) underlining was the most used while-reading strategy (Mean=4.85, SD=0.54); (2) jumping was the most frequently used while-reading strategy (Mean = 3.93, SD =0.67); (3) monitoring was the most rarely used while-reading strategy (Mean=2.00, SD =0.47); and (4) visualizing was the least used while-reading strategy (Mean=1.24, SD =0.77).

Moreover, Table (9) reveals the ordering of the use of the post-reading strategies by the students in reading English according to their descending means. The results in this Table entails that reviewing was the most used post-reading strategy (Mean=4.69, SD =0.85); whereas, reflecting was the least used post-reading strategy (Mean = 1.19, SD =0.73).

Table (6)
The Means and Standard Deviations for the Use of Reading Strategies by Jordanian College-Level Students in Reading English.

No.	Strategy	M	SD	No.	Strategy	M	SD
1	Paying Attention	2.99	0.50	16	Numbering	4.81	0.62
2	Skimming	3.81	0.68	17	Visualizing	1.24	0.77
3	Setting Goals	4.76	0.70	18	Focusing	3.80	0.65
4	Scanning	2.08	0.43	19	Labeling	1.98	0.47
5	Planning	1.25	0.75	20	Annotating	2.73	0.75
6	Making Notes	2.09	0.45	21	Self-Questioning	2.25	0.83
7	Revising	4.74	0.74	22	Categorizing	2.71	0.96
8	Distinguishing	3.74	0.73	23	Monitoring	2.00	0.47
9	Questioning	2.14	0.56	24	Underlining	4.85	0.54
10	Paraphrasing	2.62	0.95	25	Jumping	3.93	0.67
11	Determining	4.83	0.55	26	Reflecting	1.19	0.73
12	Checking	2.02	0.42	27	Summarizing	2.06	0.57

No.	Strategy	M	SD	No.	Strategy	M	SD
13	Highlighting	2.98	0.67	28	Interpreting	2.88	0.61
14	Anticipating	2.76	0.97	29	Evaluating	2.04	0.53
15	Verifying	4.60	0.91	30	Reviewing	4.69	.85

Table (7)

The Ordering of the Use of Pre-Reading Strategies by Jordanian College-Level Students in Reading English According to their Descending Means.

No.	Strategy	Mean	Std. D.
3	Setting Goals	4.76	0.70
2	Skimming	3.81	0.68
1	Paying Attention	2.99	0.50
4	Scanning	2.08	0.43
5	Planning	1.26	0.75

Table (8)

The Ordering of the Use of While-Reading Strategies by Jordanian College-Level Students in Reading English According to their Descending Means.

No.	Strategy	M	SD	No.	Strategy	M	SD
24	Underlining	4.85	0.54	20	Annotating	2.73	0.75
11	Determining	4.83	0.55	22	Categorizing	2.71	0.96
16	Numbering	4.81	0.62	10	Paraphrasing	2.62	0.94
7	Revising	4.74	0.74	21	Self-Questioning	2.25	0.83
15	Verifying	4.60	0.91	9	Questioning	2.14	0.56
25	Jumping	3.93	0.67	6	Making Notes	2.09	0.45
18	Focusing	3.80	0.65	12	Checking	2.02	0.42
8	Distinguishing	3.74	0.73	23	Monitoring	2.00	0.47
13	Highlighting	2.98	0.67	19	Labeling	1.98	0.47
14	Anticipating	2.76	0.97	17	Visualizing	1.24	0.77

Table (9)

The Ordering of the Use of Post-Reading Strategies by Jordanian College-Level Students in Reading English According to their Descending Means.

No.	Strategy	Mean	Std. D.
30	Reviewing	4.69	0.85
28	Interpreting	2.88	0.61
27	Summarizing	2.06	0.57
29	Evaluating	2.04	0.53
26	Reflecting	1.19	0.73

Table (10)

Independent t-test for the Equality of Means between the Use of Reading Strategies in Reading Arabic and English.

Group	N	Mean	Std. D.	Mean Difference	T	Df	Sig.
Arabic	446	84.06	4.26	- 6.58	-11.21	916	0.000
English	472	90.64	7.72				

Results of the Third Question

The third research question was “Are there any significant differences between Jordanian college-level students’ use of reading strategies in reading Arabic on the one hand and in reading English on the other?” To answer this question, independent t-tests were conducted to examine the equality of means between the use of reading strategies; pre-reading strategies, while-reading strategies, and post-reading strategies in reading Arabic and English on the (RSQ) scores.

According to the total scores of Jordanian college-level students’ use of reading strategies, Table (10) shows that

the mean of the scores in reading Arabic was (84.06) with a standard deviation of (4.26); whereas, the mean of the scores in reading English was (90.64) with a standard deviation of (7.72). That is, there were differences between the two means of the students’ use of reading strategies in reading Arabic and English. Therefore, an independent t-test was performed to examine the significance of the mean difference. The t-value [$t(916) = -11.21$], according to the results of this test as shown in Table (10), indicates that there were statistically significant differences between the two means at ($\alpha=0.05$) in favor of using the reading strategies by the students in reading English.

Table (11)
Independent t-test for the Equality of Means between the Use of Pre-Reading Strategies in Reading Arabic and English.

Group	N	Mean	Std. D.	Mean Difference	T	DF	Sig.
Arabic	446	14.04	1.44	- 0.84	- 6.44	916	0.000
English	472	14.88	1.38				

Regarding the use of pre-reading strategies scores of Jordanian college-level students, Table (11) reveals that the mean of the scores in reading Arabic was (14.04) with a standard deviation of (1.44); whereas, the mean of the scores in reading English was (14.88) with a standard deviation of (1.38). This implies that there were differences between the two means of the students’ use of pre-reading strategies in reading Arabic and English. Consequently, an independent t-test was carried out to examine the significance of the mean difference. The t-value [$t(916) = -6.44$] according to the results of this test shown in Table (11) indicates that there were statistically significant differences between the two means at ($\alpha=0.05$) in favor of using the pre-reading strategies by the students in reading English.

With respect to the use of the while-reading strategies scores of Jordanian college-level students, Table (12) shows that the mean of the scores in reading Arabic was (55.07) with a standard deviation of (2.93); whereas, the mean of the scores in reading English was (62.85) with a standard deviation of (5.71). This indicates that there were differences between the two means of the students’ use of the while-reading

strategies in reading Arabic and English. Thus, an independent t-test was employed to examine the significance of the mean difference. The t-value [$t(916) = -18.19$], according to the results of this test presented in Table (12), indicates that there were statistically significant differences between the two means at ($\alpha=0.05$) in favor of using the while-reading strategies by the students in reading English.

Finally, as for using the post-reading strategies by Jordanian college-level students, Table (13) shows that the mean of the scores in reading Arabic was (14.96) with a standard deviation of (1.15); whereas, the mean of the scores in reading English was (12.91) with a standard deviation of (1.66). This means that there were differences between the two means of the students’ use of the post-reading strategies in reading Arabic and English. Therefore, an independent t-test was utilized to examine the significance of the mean difference. The t-value [$t(916) = 15.31$], according to the results of this test disclosed in Table (13), indicates that there were statistically significant differences between the two means at ($\alpha=0.05$) in favor of using the post-reading strategies by the students in reading Arabic.

Table (12)
Independent t-test for the Equality of Means between the Use of While-Reading Strategies in Reading Arabic and English.

Group	N	Mean	Std. D.	Mean Difference	T	DF	Sig.
Arabic	446	55.07	2.93	- 7.78	- 18.19	916	0.000
English	472	62.85	5.71				

Table (13)
Independent t-test for the Equality of Means between the Use of Post-Reading Strategies
in Reading Arabic and English.

Group	N	Mean	Std. D.	Mean Difference	T	DF	Sig.
Arabic	446	14.96	1.15	2.05	15.31	916	0.000
English	472	12.91	1.66				

4. DISCUSSION

The results of this study revealed that there were disparities in the use of reading strategies, pre-reading strategies, while-reading strategies, and post-reading strategies by Jordanian college-level students in reading Arabic and English. Also, there were statistically significant differences in the use of these strategies by the students in favor of using the whole reading strategies, the pre-reading strategies, and the while-reading strategies in reading English, and in favor of using the post-reading strategies in reading Arabic.

The disparities in the use of reading strategies by Jordanian college-level students in reading Arabic and English might be attributed to the fact that the act of reading prioritizes the use of some reading strategies over others when reading in either Arabic (L1) or English (L2). For example, among the mostly used strategies, it was found that the students tended to use the strategies of "focusing, making notes, and planning" in reading Arabic; whereas, in reading English, the students tended to use the strategies of "determining, setting goals, revising, and verifying." Also, the students were found to use frequently the strategies of "summarizing, categorizing, annotating, and paying attention" in reading Arabic; whereas, in reading English, the students were found to use frequently the strategies of "jumping, skimming, and focusing."

Moreover, the pre-reading strategy of "planning" was found to be the most used strategy by the students when reading in Arabic and it was the least used strategy by the students when reading in English; whereas, the pre-reading strategy of "setting goals" was found to be the least used strategy by the students when reading in Arabic and it was the most used strategy by the students when reading in English. Besides, it was found that the while-reading strategy of "categorizing" was the most frequently used strategy by the students in reading Arabic; whereas, the while-reading strategy of "jumping" was the most frequently used strategy by the students in reading English.

The statistically significant differences in the use of

the reading strategies by the students in favor of using the whole-reading strategies, the pre-reading strategies, and the while-reading strategies in reading English might indicate that English reading instruction is strategy-oriented; whereas, Arabic reading instruction is content-oriented. That is to say, English instructors concentrate on teaching students the strategies by which they can tackle the reading text more than teaching them the content of the text; whereas, Arabic instructors are more interested in teaching the students the content of the reading text more than teaching them the strategies by which they can deal with the text.

The statistically significant differences in favor of using the post-reading strategies by Jordanian college-level students in reading Arabic might be interpreted by the fact that the post-reading strategies of "summarizing, evaluating, and interpreting" were easier to be employed by the students in reading Arabic than in reading English because of the strategy demands. For example, it was easier for the students to accomplish the specific skills required by the post-reading strategy of "summarizing" in Arabic when reading Arabic texts than to accomplish these skills in English when reading English texts; this was due to the students' language proficiency. Also, it was easier for the students to employ the post-reading strategy of "evaluating" when reading in Arabic than to employ it when reading in English because of the students' Arabic language proficiency that made it easier for them to understand the reading text before employing this strategy.

Furthermore, the results of this study indicated that there were some strategies that were easy and others that were difficult to be employed by the students regardless of the language being read because of the strategy demands. For instance, the while-reading strategy of "underlining" and the post-reading strategy of "reviewing" were found to be easily employed by the student in reading both Arabic and English. Also, the pre-reading strategy of "scanning" and the post-reading strategy of "reflecting" were found to be hardly employed by the students in reading both Arabic and English.

Finally, the results of the study revealed that there

were some strategies that were rarely used by the students in reading Arabic such as “paraphrasing, self-questioning,...” and in reading English such as “making notes, checking,...” Moreover, the same results showed that there were some strategies that were least used by the students in reading Arabic such as “monitoring, checking,...” and in reading English such as “reflecting, visualizing,...” These final results can be attributed to the difficulty of using these strategies when reading either in Arabic or English due to their sophisticated skills and high demands.

5. CONCLUSIONS AND RECOMMENDATIONS

This study was carried out to examine Jordanian college-level students’ use of reading strategies in reading Arabic (L1) and English (L2). The results of the study revealed that there were disparities in the use of these strategies by the students and that there were statistically significant differences: (1) in favor of using the whole-reading strategies, the pre-reading strategies and the while-reading strategies in reading English; and (2) in favor of using the post-reading strategies in reading Arabic. Moreover, the results showed that there was a large number of reading strategies that were rarely and least used by the students.

In light of these results, the following implications

and recommendations for Jordanian educators, instructors, and researchers might be suggested:

1. Employing the Reading Strategies Questionnaire (RSQ) by Jordanian Arabic and English instructors to gain in-depth understanding about their students’ use of reading strategies.
2. Holding seminars and workshops by both Arabic and English reading instructors to familiarize their students with effective reading strategies and train them on how, when, and why to use such strategies while reading.
3. Concentrating on teaching the students the rarely and least used reading strategies and fostering the reading instructional practices to be more strategy-oriented, especially in the field of Arabic language instruction.
4. Expanding the students’ use of post-reading strategies in reading English by teaching them how to accomplish the specific skills required for employing such strategies.
5. Conducting more research to explore how the pre-reading, while-reading and post-reading strategies can be adapted to meet the variety of the reading task demands and to determine how to develop students’ belief structure for using such strategies.
6. Implementing other research tools to examine how effectively students use the reading strategies in reading Arabic (L1) and English (L2).

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