Text Marking Strategies of Saudi University Students

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Abstract: *The study attempted to investigate the textmarking strategies used by both male and female Saudi university students. It also aimed at finding out the textmarking strategies they used and the differences between the male and female students in the application of these strategies. The results revealed that Saudi students lacked the proper caliber of using textmarking strategies and needed some practical training. However, the female students did better in their textbooks than their male counterparts. Saudi students preferred underlining to highlighting while marking the texts but failed to distinguish between important and unimportant information. Most of them relied on their mother tongue i.e. Arabic for text comprehension. Also, they used non-generative strategies like underlining rather than generative ones like summarization and annotation*

1. Introduction

1.1 Background

The study skills in general and textmarking strategies in particular are important to help students isolate key ideas. Anderson & Armbruster (1984:661) maintain that the "*prime tasks*" of the student studying a certain textbook are to (a) "*focus attention,*" and (b) "*engage in encoding activities*" in a way that increases the probability of understanding and retrieving the high pay-off ideas and relationships. Nist and Hogrebe (1985) believe that students cannot retain everything they read. Therefore, it is a useful tool for identification and isolation of key ideas. The application of textmarking strategies motivates the student to actively interact with the text rather than just remaining engaged in passive reading. Rohwer (1984:1) maintains that the strategies we teach provide students with the "principal means of self-education."

Educators assume that high school students are able to master the complexities of strategic learning through homework, projects, and tests but in fact, when they enter college students realize that they lack many of these learning strategies. In recent years, interest has increased among university teachers to help students acquire specific and active strategies to enhance their independent learning from text (Nist & Simpson 1988; Pressley; Yokoi; Van Meter; Van Etten; & Freeburn, 1997; Zimmerman 1998). To overcome such a problem, many

universities offer some vehicle of academic assistance to help students to employ textmarking strategies such as highlighting, underlining, note taking, outlining, SQ3R (Survey, Question, Read, Recite and Review) etc., while studying their textbooks and improving comprehension (Bray 1984; Robinson; Faraone; Hittleman; & Unruh 1990; Caverly & Orlando 1991; Maxwell 1997).

The proper use of study strategies helps demonstrate the reader's ability to identify the important information. Therefore, more instructional focus is to be aimed at locating such information in a certain text because the knowledge of text structure directly affects reader's ability to comprehend and use expository text. Moreover, students need to be encouraged to use the text structure when identifying important information in a text for later review (McGee 1982; Barnett 1978; Taylor & Beach 1984; Armbruster; Anderson; & Ostertag 1987; Gordon 1990).

Text marking strategies should be flexible in order to be used in a variety of contexts and eventually be self-selected by the learners actively to interact, elaborate, and rehearse the text information to attain for future use and transfer it to other content areas (Pressley & Dennis-Rounds 1980; Nist & Simpson 1988; Nist et al. 1991). High school and college students are mostly inept at applying the underlining and highlighting strategies but quite a large number of students use these strategies on a regular basis (Adams 1969; Fowler & Barker 1974; Annis & Annis 1982; Marxen 1996). Annotation is an efficient strategy to note key ideas in the margin while reading large amounts of texts (Nist 1987; Mealey; Frazier; & Duchein 1990) as cited by college has the most appeal for transfer to other content areas. While annotation summarizes a piece of writing, it goes beyond a summary by involving a comment or reaction to that writing in the annotator's own words (Nist & Simpson 1988).

1. 2 The Problem

The purpose of teaching study skills is to help students grasp a certain text and recall it later during exam. But unfortunately, most of the Saudi University students do not have the knowledge of appropriate study skills because no course in this area is introduced at high school or college level. Hence, they have to rely on their own intelligence, intuition and experience. If any skill is discussed in classes, students are just asked to use it rather than being trained in how to use it. Thus, students generally fail to comprehend the text they read for lack of the knowledge of study skills such as textmarking. Moreover, they may rely on passive or "traditional" strategies like highlighting, re-reading and outlining instead of resorting to better strategies like annotation and

summarization that help students interact with the text while reading and thus understand it better and faster (Simpson and Nist 1990).

Therefore, bearing in mind the current situation prevailing in our institutions, the educational authorities and curriculum designers should think of taking immediate measures to add a study skill course in the area of textmarking strategies in the curricula of secondary and post-secondary levels.

1. 3 Purpose of the study

The study aims at identifying the following through a checklist prepared by the researcher himself: (a) the textmarking strategies Saudi male students usually apply; (b) the textmarking strategies Saudi female students usually apply; and (c) the differences in the application of textmarking strategies by male and female Saudi university students.

1.4 Research hypotheses

To achieve the above mentioned goals of the present study, the researcher formulated the following three hypotheses:

a. There are statistically significant differences in the use of eight strategies by male Saudi students.
b. There are statistically significant differences in the use of eight strategies by female Saudi students.
c. There are statistically significant differences in the skill of writing in the margin by male and female Saudi students.

1.5 Limitation of the study

The study was limited to determining the textmarking strategies used by the third year Saudi university English majors in a chapter of their textbook entitled *Islam in Focus* prescribed for "Readings in Islamic Civilization" course. The subjects were male and female English majors enrolled in the Department of Languages and Translation, in the Faculty of Education and Humanities at Taibah University in Madinah Munawwarah, Saudi Arabia. Therefore, it will be wrong to generalize the results to all the texts taught at this level. Of course, its impact will be limited to the level and the text under experimentation. Actually, it was not possible to extend its scope to other content areas and a variety of material despite its vital importance.

1. 6 Significance of the study

Background knowledge of study skills in general and textmarking strategies in particular is of vital importance for text comprehension. But Saudi students at secondary and post-secondary levels find it difficult to use these strategies. They also fail to differentiate between the important and unimportant information in a certain text and do not

know how to transfer any strategy they use in one content area to another. Hence, the study is significant. It is also significant because to the best of researcher's knowledge, it is the first research on study skills in this country that aimed at identifying the causes behind our students' failure to make good use of these strategies. The researcher focused his attention on the identification of such reasons and made appropriate recommendations and suggestions to help curriculum planners, educators, educational leaders and administrators to meet this serious challenge in an appropriate way. The study also encourages EFL researchers to review various textmarking strategies through similar studies and suggest the ones suitable for our secondary and postsecondary EFL learners.

2. Review of Literature

The concept of textmarking is very extensive. It comprises a number of strategies used by university students to comprehend the text contents. The present study reviews literature dealing with textmarking strategies, such as underlining, highlighting, note taking, summary writing, glossing, self questioning and annotation. This review focuses attention on the observations of authors, theorists, practitioners and researchers about the pros and cons of various textmarking strategies in EFL learning.

Research shows that strategies that assist students in scaffolding information and moving beyond text book dependency are not commonly used in the classroom (Goodlad 1984). As for second-language learning, students do not receive the necessary comprehensible input to learn English/reading skills. Many researchers have devised different strategic methods to improve language learning. For example, Schumm & Mangrum (1991) suggested the FLIP model (friendliness, language, interest, prior knowledge), which requires the reader to evaluate text-based factors such as friendliness and language and reader-based factors of prior knowledge and interest. Stewart and Cross (1991) employed "glossing" as a learning strategy. Likewise, Archambeault (1992) developed a way for secondary school students to personalize study skills; students reflect on personal preferences for study skills they might have been exposed to in the past. Similarly, McConnell (1993) developed a strategic method called "talking drawings" that helps readers bring visual images they have created in their heads to life in their drawings. Students felt confident in their reading and learning while using these strategies (Nolan 1991). It is essential that students are actively trained how to apply any strategy to interact and process the information.

The effectiveness of textmarking decreases as a result of factors other than reader characteristics: a) if the text is difficult for the reader (Fass & Schumacher 1978; Spyridakis & Standal 1987); and b) when the text is marked unduly (Lorch, Pugzles-Lorch & Klusewitz 1995). Therefore, to make textmarking effective, it should be applied carefully and selectively (Snowman 1986). However, it has been identified that (a) if the delineated material receives emphasis apart from the text, it is more likely to be learned and remembered (Wallace 1965), (b) students below grade seven are not efficient at selecting important information to be underlined (Brown & Simley 1978; Hartley; Bartlett & Branthwaite 1980); (c) when underlined information of high importance is retained better than information of low importance (Rickards & August 1975; Nist & Hogrebe 1987); and (d) although college students prefer textmarking, they often demonstrate inefficient and random marking patterns (Nist & Kirby 1989).

Research has shown that high-skill readers identified the most relevant information than low-skill readers. The reason behind this generalization may be that college textbooks tend to have longer and more difficult sentences; thus reading them tends to demand a great deal of concentration from students to fully comprehend the content. Moreover, low-skill readers fail to concentrate while reading (Smiley et al. 1977; Daneman & Carpenter 1980; Grabe 1980; Winograd 1984; Wade & Trathen 1989; Bell 2002; Kenneth 2002). Researchers believe that low-skill readers lack immediate memory skills required for the task of integrating concepts and relations from the preceding parts of the text with the current representation and while reading denser, expository texts. This deficiency can be even more pronounced (Daneman & Carpenter 1980). Therefore, if the low-skill readers are instructed how to underline, no differences are found between the low- and high-skill readers in a recall task (Paris & Myers 1981).

Researchers find inconsistent results obtained in textmarking as the outcome of methodological shortcomings stemming from highly controlled laboratory studies. These methodological conditions are (1) forcing students in the experimental setting to adopt a singular strategy at the expense of spontaneously adopted strategies, and (2) forcing students to study under imposed time constraints. Both these methodological situations leave negative impact on the performance of all types of readers in an experimental task (Hartley; Barlett; & Branthwaite 1980; Wade & Trathen 1989).

Students used memorizing, re-reading, and "look over" strategies to read and study text (Doyle 1983; Anderson and Armbruster 1984; Simpson & Nist 1990). However, the most popular learning strategy that students employed was underlining, although there was little

evidence to support its effectiveness (Anderson & Armbruster 1984; Nist & Hogrebe 1987; Nist & Kirby 1989).

Underlining has been found an effective and successful strategy because it helps students become actively absorbed in the text. While they read and mark, students isolate the information at the time of reading, engaging themselves in a deeper processing of the material (Fowler & Barker 1974; Annis & Davis 1978; Davis & Annis 1979; Glynn & DiVesta 1979; Hartley; Bartlett; & Branthwaithe 1980). Some others believe that underlining works well because students tend to focus on the marked information at a later stage. However, it may not be the initial marking that leads to better performance, but it is studying the isolated material as method of test preparation that leads to a deeper processing and better performance (Cashen & Leicht 1970; Anderson & Armbruster 1984; Nist & Hogrebe 1987).

The research that compared subject-generated underlining with research-generated underlining suggest that students who generated their own underlining increased recall over those who interacted with experimenter-generated underlining (Stordahl & Christensen 1956; Bobrow & Bower 1963; Cashen & Leicht 1970; Idstein & Jenkins 1972; Fowler & Barker 1974; Hoon 1974; Kulhavy; Dyer; & Silver 1975; Rickards & August 1975; Schnell & Rocchio 1975; Johnson & Wen, 1976; Glynn & Divesta 1979; Hartley et al. 1980). Also, student-generated underlining was found more effective in terms of learning than teacher-generated underlining (Bobrow & Bower 1963; Rickards & August 1975). Greater recall for student-generated underlining is generally attributed to the levels of processing theory (Craik & Tulving 1975) which states that information which is processed at deeper levels through elaboration is ultimately remembered better at later stage.

Students identify the use of underlining and writing notes as their preferred study methods. Since underlining and writing notes are the methods of choice, the focus of instruction should be on how to make the preferred methods more efficient (Nist & Kirby 1989). As stated by Harris (1990), it is a more effective study technique for short-term learning than the annotation method, at least for science studies. It is more effective for retention. Moreover, a reading/writing connection may be a useful learning strategy when retention is a specific goal (Harris 1990).

However, researchers obtained inconclusive results of this strategy (Anderson & Armbruster 1984). Some studies found underlining to be more effective compared to other textmarking techniques such as stating key ideas or bracketing important concepts (Rickards & Girald 1975), and when the text to be marked is explicit (Caverly & Orlando, 1991; Devine 1991). Peterson (1992) asserts that the employment of self-generating underlining can lead to decreased comprehension. Hence, the

use of underlining in order to isolate information for review purposes could be counterproductive to learning. Underlining is perhaps the most widely used of all the study strategies but has not been researched extensively as it is complex and convoluted, and hence difficult to explore (Anderson & Armbruster, 1984; Nist & Hogrebe 1987; Kenneth 2002). Some researchers have found no difference when comparing underlining with other strategies (Stordhal & Christensen 1956; Hoon 1974), whereas others have found underlining less effective than other strategies such as note-taking (Kulhavy et al. 1975). In spite of inconsistent results drawn about the effect of these strategies, one can say that underlining and highlighting are probably the most popular study strategies used by college students (Caverly & Orlando 1991), and that the ability to select appropriate information improves with age (Caverly & Orlando 1991; Devine 1991).

Highlighting has been found beneficial for students because the subjects who were free to highlight material of their own choice would identify the most important information properly (Rickards & Girald 1975; Annis & Davis 1978; Annis & Annis 1982; Nist & Hogrebe 1987). Also, it is a strategy that students spontaneously select and thus, is one that they will be likely to transfer to other learning situations (Caverly & Orlando 1991). Its drawbacks are in fact similar to underlining, for while highlighting students are not actively engaged in selecting the key ideas. So, one can safely say that it is a passive strategy. Students often highlight the text that appears to be important but may not be so (Nist & Kirbey 1989). In inappropriate-highlighting conditions students performed more poorly than those who did in the appropriate-highlighting and control group conditions (Fowler and Barker 1974; Silver and Kreiner 1997).

Note-taking is used in the form of outlining, mapping, summarizing and paraphrasing. Studies on this strategy have produced mixed results (Caverly & Orlando 1991; Devine 1991). It is presumed that note-taking is better than any other study strategy but no clear advantage has been found for it over other study strategies (Anderson & Armbruster 1984). On the other hand, some researchers (Kulhavy; Dyer; & Silver 1975; Bretzing & Kulhavy 1979; 1981) have found this strategy effective and important in the area of textmarking. Some studies conducted in the past (Arnold 1942; Todd & Kessler 1971; Howe & Singer 1975) concluded that (a) study subjects may not be processing the right information; (b) they may be taking wrong kind of notes (i.e., verbatim rather than paraphrased); or (c) the activity may not be related to the criterion task (e.g., a test) (Anderson & Armbruster 1984). Shrager & Mayer (1989) maintain that when the lecture adds little to the existing knowledge base, note-taking appears to be redundant.

Studies on the application of self-questioning and paraphrasing techniques found them useful for text comprehension (Clark et al. 1984; Schumaker; Denton; & Deshler 1984).

Studies conducted by (Simpson; Stahl; & Hayes 1989) found the PORPE (predict, organize, rehearse, practice, evaluate) method more effective than the question-answer study strategy. Mealey and Higginson (1992) concluded that students who evaluated their essays by themselves wrote significantly better essays than those who did not.

According to many researchers summarization of the text in students' own words has been found to have positive effects on reading comprehension as it requires heightened attention and deeper processing (Craik & Lockhart 1972; Doctorow; McNeil & Donant 1982; D'Angelo 1983; Bean & Steenwyk 1984). Other researchers (Hynd; Simpson; & Chase 1990; Walters & Strode 1991) uphold that it seems reasonable that annotations that paraphrase important ideas or make inferences and draw conclusions about texts would be evidence of greater degrees of semantic analysis than paying attention to only the surface features of a text.

To some researchers, annotation writing appears to be an additional aid to comprehension and retention since it better organizes thought (Eanet & Manzo 1976; Hayes 1987). It has also been reported in previous studies that this strategy has a cost/benefit to students. Those who used this strategy benefited both in terms of better performance along with significantly decreased study time (Nist & Simpson 1988; Nist & Kirby 1989).

As stated by several scholars (Davis 1984; Jacob & Dufon 1990; Luo 1993) annotations are similar to and serve the same purposes as marginal glosses, and the use of marginal glosses in an authentic literary text enhanced students' comprehension of the passage that contained a large amount of unknown vocabulary. According to others (Anderson & Armbruster 1984) annotation has great support in theory, but less support in practice. Its usefulness would seem to depend on the depth of processing. Guido and Colwell (1987:91) believe that "there needs to be the element of active involvement and restructuring of the text" for learning to be most effective.

As concluded by Nist and Hogrebe (1987) and Cynthia and Michelle (1990), annotation is more effective for objective test items rather than writing essays. Writing inferential annotations appeared to be correlated with answering inferential questions correctly. According to them, this strategy is attractive to students because it serves a dual function—they can isolate key ideas at the time of the initial reading and then study those ideas later as they prepare for tests. But according to Anderson and Armbruster (1984), and Brown (2003) annotation does have some drawbacks. If students are copying the text verbatim, there is

little benefit in terms of any achievement. For deeper processing and comprehension**,** students must annotate in their own words (Nist & Simpson 1988; Strode 1990).

Dansereau et al. (1979) maintains that training undergraduates how to use reading strategies involving paraphrasing, constructing idea networks, and defining and relating main ideas improves their performance on short-answer and multiple-choice tests. Training students in the effective use of textmarking is beneficial (Nist & Simpson 1988). It might be more useful for the low-skilled readers. In such training readers should be instructed on how to identify the important elements in a text. Consistent with this idea (Lorch et al. 1995) argue that readers must be made aware of the need to construct an efficient representation of topic structure in the course of text processing. Simpson & Hynd (1988) concludes that after training in textmarking, the subjects not only perform better on the dependent measures, but also need about half the study time as compared to those who have had received no training. Training in textmarking strategies should be addressed at an early stage of students. The older readers may be less successful because the readers at the college level have likely developed their own procedures for remembering complex information, and once these procedures have been developed they are extremely difficult to change. Particularly, training the low-skilled college level students in the effective use of textmarking strategies may be even more difficult (Thornton; Bohlmeyer; Dickson; & Kulhavy 1990).

Recent studies focus on student training in the use of study strategies before their performance is measured because research has shown that students can transfer the skills provided they are explicitly trained therein (Lawson & Fuelope 1980; Pressley; Gaskins; Cunicelli; Burdick; Schaub-Matt; Lee; & Powell 1991). Caverly and Orlando (1991) reviewed over 500 studies on study skills but few studies have used narrative texts such as short stories and novels as training and criterion materials with annotation (Simpson & Hynd 1988; Hynd; Simpson; & Chase 1990). McAndrew (1993) suggests that for underlining to be effective, students should be taught which material to underline. Specific training in underlining should stress marking of only more important and higher level sentences. Training in annotation writing does improve students' summary writing abilities (Strode, 1990).

In their research, Lysynchuk, Pressley, D'ailly, Smith and Cake (1989) discovered that only three of the thirty-seven studies assessed transfer of newly learned strategies to school subjects/materials other than those encountered during training. Strategy transfer from experimental settings into natural settings has been investigated very

little. Studies show that, given student training, annotation positively affects test performance (Nist & Simpson 1988); and learning strategy students note annotation as a favorite strategy to transfer to other content areas (Nist 1987; Mealey et al. 1990).

3. Methodology

3.1 The Design

The research, experimental in nature, includes a "Textmarking Checklist" developed by the researcher to evaluate students' marking strategies. The checklist comprises eight textmarking strategies to determine Saudi students' choices of marking in their textbooks. After developing the checklist, it was presented to three language experts at the Faculty of Education & Humanities, at Taibah University in Madinah Munawwarah, Saudi Arabia, to solicit their opinion about its validity, and necessary modifications were made in the light of their suggestions.

3.2 Research Instruments

The researcher used the textbook entitled *Islam in Focus* prescribed for the course "Readings in Islamic Civilization" as a research instrument. The researcher developed a "*Textmarking Checklist*" to evaluate students' choice of using textmarking strategies. The checklist comprises the following eight textmarking strategies: 1) Underlining; 2) Highlighting; 3) Circling; 4) Glossing meanings of words; 5) Noting the areas of difficulty; 6) Noting examples by writing (ex) in the margin; 7) Writing possible test questions in the margin; and 8) Summary writing.

3.3 The Procedure

The study was conducted at the Department of Languages & Translation, Faculty of Education & Humanities, Taibah University, Madinah Munawwarah, Saudi Arabia. Male and Female English majors studying in their fifth term at the college registered to take the course entitled "Readings in Islamic Civilization" served as study sample whereas, the textbook used for this course, *Islam in Focus* provided the required data for this study. Students were neither told about the nature of the study nor taught any of the textmarking strategies.

4. Analysis & Findings

At the end of the term, forty-five textbooks from male and forty from female students were collected. The researcher reviewed the collected textbooks and those which were marked in a hodge-podge manner and

were not clear enough were excluded. Similarly, the unmarked books were left out. The number of excluded textbooks with the volume of marking is given below:

Marking	**Male**	**Female**
Unmarked	12	5
Ambiguously marked	3	5
Total	15	10

Finally, sixty textbooks, thirty from male and an equal number from female students were used for data analysis. The textbooks of both groups were numbered as M (male) or F (female) for classification.

The researcher himself reviewed all the textbooks to determine which of the eight textmarking strategies were used by the sample while marking their textbooks. The research data was then statistically analyzed to verify the hypotheses as stated earlier.

To verify the first and second hypotheses, the researcher applied the T-test (One-Sample Statistics) and (One Sample Test) respectively to analyze the research data regarding the choice of using the textmarking strategies by male and female study subjects separately. However, the T-Test (Group statistics) was applied to accept or reject the third hypothesis comparing the volume of writing in the margin by the male and female research subjects. Moreover, under Independent Samples Test, Levene's and the T-tests were applied to determine the Equality of Variance and Means respectively. The data was collected by means of a Checklist (Appendix I) that comprises eight basic textmarking strategies.

Hypothesis 1: Table 1 presents the data collected from the male students to test the first statistical hypothesis: "*There are statistically significant differences in the use of eight strategies by male Saudi students.*" The researcher applied the *One-Sample Statistics* and the following results were obtained.

Table I: One-sample statistics showing the differences in male Saudi students' application of eight strategies

Strategies	Mean	Std. Deviation
1. Underlining	3.6000	1.7927
2. Highlighting	.5000	1.0086
3. Circling	.3000	.9154
4. Glossing meanings of words	4.4000	1.7140
5. Noting the areas of difficulty	.0000	.0000[a]

6. Noting examples by writing (ex) in the margin	0.06667	.3651
7. Writing possible test questions in the margin	1.20000	.4068
8. Summary writing	12.0333	4.4682

a. T cannot be computed because the standard deviation is 0.

From a review of the above results, it becomes evident that statistically there are significant differences in the use of the eight textmarking strategies by male study subjects. The application of these strategies from the highest to the lowest order of significance could be written as follows: 1) Summary writing; 2) Glossing meanings; 3) Underlining; 4) Writing possible test questions; 5) Highlighting; 6) Circling; 7) Noting examples; and 8) Noting areas of reading difficulty.

Table 2 includes the data showing the amount of T-values of male students' application of the eight strategies while marking their textbooks for text comprehension.

Table 2: One-sample test showing the significance in the T-values of male Saudi students' application of eight strategies

Test Value =0				
Strategies	T	df	Sig. (2-tailed)	Mean Difference
1. Underlining	10.999	29	.000	3.6000
2. Highlighting	2.715	29	.011	.5000
3. Circling	1.795	29	.083	.3000
4. Glossing meanings of words	14.060	29	.000	4.4000
6. Noting examples by writing(ex) in the margin	1.000	29	.326	0.06667
7. Writing possible test questions in the margin	16.155	29	.000	1.2000
8. Summary writing	14.751	29	.000	12.0333

$p<0.05$

The computed t-test values reveal that:

1. Six out of eight strategies were significant for male students because statistically their T-values were higher at $p<0.05$ level of significance. However, their scores in the use of "third (T-value:1.795) and sixth (T-value:1.000)" strategies were insignificant in terms of T-values.
2. The first hypothesis is partially accepted because of obvious statistical differences in the application of eight textmarking strategies by male Saudi students. They applied very poorly the two strategies, (*Circling* and *Noting examples in the margin)* while marking their textbooks.

Hypothesis 2: Table 3 displays the data collected from the female students to test the second statistical hypothesis: "*There are statistically significant differences in the use of eight strategies by the female Saudi students*". The researcher applied the *One-Sample Statistics* and the following results were obtained.

Table 3: One-Sample statistics showing the differences in female Saudi students' application of eight strategies

Strategies	Mean	Std. Deviation
1. Underlining	3.9667	1.7927
2. Highlighting	.0000	.0000[a]
3. Circling	.2000	.6103
4. Glossing meanings of words	3.2000	1.5844
5. Noting the areas of difficulty	.2000	.6103
6. Noting examples by writing (ex) in the margin	0.06667	.3651
7. Writing possible test questions in the margin	.6000	.9322
8. Summary writing	1.6000	1.5222

a. T cannot be computed because the standard deviation is 0.

The results indicate that statistically there are significant differences in the use of eight textmarking strategies by female Saudi students. Hence, the hypothesis is accepted. Their application of these strategies from the highest to the lowest order of significance is written as follows: 1) Underlining; 2) Glossing meanings; 3) Summary writing; 4) Writing possible test questions; 5) Circling; 6) Noting areas of reading difficulty; 7) Noting examples; and 8) Highlighting.

Table 4 presents the data showing the amount of T-values of female students' application of the eight strategies while marking their textbooks for text comprehension.

Table 4: One-Sample Test showing the significance in T-values of female Saudi students' application of eight strategies

T-Value=0				
Strategies	t	df	Sig. (2-tailed)	Mean Difference
1. Underling	11.008	29	.000	3.9667
3. Circling	1.795	29	.083	.2000
4. Glossing meanings of words	11.062	29	.000	3.2000
5. Noting the areas of difficulty	1.795	29	.083	.2000

6. Noting examples by writing (ex) in the margin	1.000	29	.326	0.06667
7. Writing possible test questions in the margin	3.525	29	.001	.6000
8. Summary writing	5.757	29	.000	1.6000

P<0.05

The computed t-test values show that:

1. *Five* out of *eight* strategies were significant for female students. Statistically, their T-values remained higher at p<0.05 level of significance. However, their Means in the application of the third (T-value:1.795), fifth (T-value:1.795) and sixth (T-value:1.000)" strategies remained very poor.
2. On the basis of the T-value results, the second hypothesis is *partially* accepted because obviously, there were statistically significant differences in the application of the textmarking strategies by female students. While marking their textbooks, they showed very poor interest in the use of three strategies (*Circling, Noting the areas of reading difficulty and Noting examples).*

Hypothesis 3: In order to accept or reject the third hypothesis: "*There are statistically significant differences in the skill of writing in the margin by the male and female Saudi students,*" the research data were analyzed using group statistics and the following results were obtained in terms of Mean Scores and Standard Deviation.

Table 5: Group statistics showing the difference in Means and Standard Deviation of male and female Saudi students' application of eight strategies

LEVEL	Sex	Mean	Std. Deviation
VER 1.00	M	11.8667	5.2043
2.00	F	9.8333	3.7700

The results indicate that the average use of all strategies by the male students was higher than their female counterparts. The Mean and Standard Deviation of the use of all strategies by male students remained about 11.9 and 5.2 respectively as compared to the Mean and Standard Deviation of female students which were about 9.8 and 3.8 respectively.

However, to confirm the accuracy of the above results, the researcher computed the coefficient variance. The researcher found a great degree of dispersion especially on the part of male students which was as follows:

$$C.V = \frac{\sigma}{X} * 100$$

$$C.V_m = \frac{5.2}{11.9} * 100$$

$$= 43.7\%$$

$$C.V_F = \frac{3.8}{9.8} * 100$$

$$= 38.8\%$$

From the above results, it becomes evident that the coefficient variance of female students was lower than their male counterparts. Therefore, it can be said that the collective use of these strategies by the female students was better than their male counterparts and vice versa.

Table 6 presents two tests (a) Levene's Test for Equality of Variance and (b) t-test for Equality of Means.

Table 6: Independent samples test showing the difference in F and T values of male and female Saudi students' skill of writing in the margin

	Levene's Test for Equality of Variance			t-test for Equality of Means		
	F	Sig.	T	df	Sig. (2-taield)	Mean Difference
VER Equal Variance assumed	3.123	.082	1.733	58	.088	2.0333
Equal variance not assumed			1.733	52.864	.089	2.0333

$p<0.05$

From another angle, it is clear that the significance of the 'F' value was higher at a $p<0.05$ level of significance which indicates the acceptance of the hypothesis: "*There are statistically significant differences in the skill of writing in the margin between the male and female students.*" This difference was in favour of the female students since their coefficient variance was 38.8% as compared to their male counterparts which was around 43%. However, the Mean of both groups remained equal.

5. Conclusions and Recommendations

5.1. Conclusions

In light of the statistical analysis of the research data followed by discussion thereon, the following conclusions are drawn:

1. Overall, the male and female study subjects showed statistically significant performance in applying most of the textmarking strategies.
2. The male subjects applied very poorly two strategies (*Circling* and *Noting Examples*). Their T-values at $p<0.05$ remained (1.795) and (1.000) respectively.
3. Whereas, the female subjects displayed very poor performance in the application of three strategies (*Circling, Noting the areas of reading difficulty* and *Noting examples*). Their T-values at $p<0.05$ were (1.795); (1.795) and (1.000) respectively.
4. The obtained results reveal that both the male and female subjects failed to apply the "*Circling*" and "*Nothing examples*" strategies satisfactorily.
5. "*Summary writing*" was the favorite strategy for the male subjects because they achieved higher scores in its application whereas the first choice of marking for their female counterparts was the "*Underlining*" strategy.
6. "*Glossing meanings*" was the second choice of both groups.
7. "*Highlighting*" was the fourth choice for male students and last choice for female students.
8. The mean values of male and female students were 11.8667 and 9.8333 respectively. This shows that the use of all strategies by the males was higher than the females. The standard deviation of both groups remained as 5.2 and 3.7 respectively.
9. Computation of the coefficient variance reveals that there was a great degree of dispersion on the part of the male students. This fact shows that the collective application of these strategies by the female students was better than the male students.
10. The significance of "F" value computed using Levene's Test for Equality of Variance at $p<0.05$ denotes the rejection of the null hypothesis: "There are statistically no significant differences in the skill of writing in the margin between the male and the female students" and acceptance of the alternative positive hypothesis. This difference is in favour of the female students since their coefficient variance was 38.8% compared to the male students which remained around 43%.
11. The mean and the T-values of both groups computed through "Independent Samples Test" remained equal which shows no difference.

5. 2 Recommendations

1. A course in study skills with a special focus on textmarking should be introduced in the high school and university curricula. As a matter of fact, textmarking is generally ignored by high school and college students because they lack training on how to mark their books. However, it is presumed that college freshmen should be able to make the transition to textmarking by the sheer fact that they are college students and are mature enough. Moreover, the volume of their daily reading assignments necessitates it. They need to possess a repertoire of various strategies from which they can select the one appropriate to any situation or content area. They also need to have the will to make choices about which strategies to use while they learn, study, and prepare for exams.

For better understanding of the processes that underlie effective strategy use, it is important for instructors to explain these processes to students so that they are able to decide which strategies meet their needs. Rather than just teaching specific strategies, teaching students about the processes that underlie strategy use is more worthwhile. Students must possess not only the skill, but also the will to use that skill.

2. As is mentioned in the introduction of this study, no course on study skills has been introduced at high school level. Our high school students find it difficult to identify the important information in the course contents and hence their performance in the exams remains unsatisfactory. Even at college level the situation is similar. Under the circumstances, it is imperative that the Ministry of Education, curriculum planners and educators at large should visualize the situation and introduce study skills courses both at secondary school and college levels to overcome this problem of our educational institutions as well as get in line with modern trends in education.

3**.** In view of the importance of textmarking strategies and to achieve better results at secondary and postsecondary levels, it is essential that training programs for school teachers in study skills are introduced at faculties of education throughout the Kingdom. In the proposed programs, the teachers should be taught the importance and use of various study skills. They should also be briefed how to provide the necessary feedback to their students while teaching different content areas.

4. For future research, it would be interesting to explore which elements of the annotate/underline system cause it to be effective and efficient, and also to explore similar strategies to see if like results are obtained. It is important that future research continue to examine the value of study skills. In doing this, we can hopefully know more about what strategies are helpful for college students to comprehend course content.

Hopefully, the use of various strategies in different content areas will have positive effects on students' progress. Future research should also compare the effects of teacher-directed strategies with those of self-directed methods on students' achievement. Efforts should also be made to evaluate the extent to which background knowledge proves helpful in increasing students' knowledge attainment. Bearing in mind the present situation of our educational institutions, it is imperative that our educators and researchers make all out efforts through research studies to identify the most effective and efficient textmarking strategies for our high school and college students to obtain encouraging results.

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Appendix A

I. Underlining
Student underlines
□ Terms □ Phrases □ Whole sentences
Overall quality of underlining
□ Excellent □ V. Good □ Good □ Fair □ Poor
Overall quantity of Underlining
□ Too much □ too little □ average
II. Highlighting
Student highlights
□ Terms □ Phrases □ Whole sentences
Overall quality of highlighting
□ Excellent □ V. Good □ Good □ Fair □ Poor
Overall quantity of highlighting
□ Too much □ too little □ average
III. Circling
Student circled □ important words □ unimportant words
Student circled □ important phrases □ unimportant phrases □ none
IV. Glossing meanings of words in the margin or any other place in text
Using □ pen □ pencil □ both
□ in Arabic □ in English
Overall quality of glossing
□ Excellent □ V. Good □ Good □ Fair □ Poor
Overall quantity of glossing
□ Too much □ too little □ average
Student translates meaning of sentences into Arabic in the margin or in the body of text
□ yes □ no
V. Areas of reading difficulty are noted by
□ a question mark □ any other symbol ____ □ none
VI. Noting examples in the margin by writing or drawing
□ ex □ any other symbol ____ □ none
VII. Writing possible test questions □ yes □ no
VIII. Summary Writing
□ in Arabic □ in English □ author's words
□ student's words □ none
Overall quality of summary
□ Excellent □ V. Good □ Good □ Fair □ Poor
ix. Other textmarking strategies