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# The Effect of Using Critical Reading Strategies on Developing University Students' Critical Thinking Skills

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***Abstract**: This study aimed at identifying the degree of undergraduate students' practicing critical thinking skills through using the strategies of critical reading. These strategies include the students' ability to identify, summarize, analyze, hypothesize, and evaluate any text. It also aimed at recognizing the effect of being motivated to read on the degree of applying critical thinking skills. To achieve these two goals a questionnaire of 56 items was developed. The validity of this instrument has been ascertained through submitting it to a qualified jury; and its reliability has been established by conducting a test-re-test. The coefficient of reliability was 0.81 and 0.89 respectively. Wigfield and Guthrie's (1995) Motivation for Reading Questionnaire (MRQ) was also used to measure the effect of students' motivation for reading on developing their critical thinking skills. The population of the study consisted of all 414 students specialized in English Language Classroom Teacher major at Al-al-Bayt University during the second semester of 2005-2006. The target sample of the study was restricted to the senior students. The results indicated that there were statistically significant differences at $\alpha$= 0.05 due to using critical reading strategies of identifying, analyzing, hypothesizing and evaluating in favor of the experimental group except for summary which was in favor of the control group. The findings also showed that there were statistically significant differences at $\alpha$= 0.05 only in the domains of analysis and evaluation due to the reading motivational variable in favor of the motivated readers. However, by using MANCOVA, it was revealed that there were no significant differences at $\alpha$= 0.05 due to the interaction between the strategies of teaching reading and reading motivation variables. It is recommended that teaching should focus on practicing critical reading strategies that have effect on developing the students' critical thinking skills. Similar studies should be conducted to measure the effect of the other critical reading strategies on developing students' skills of critical thinking. (**Keywords**: Critical reading strategies, Critical thinking skills, Reading motivation).*

**أثر استخدام استراتيجيات القراءة الناقدة في تنمية مهارات التفكير الناقد لدى الطلبة الجامعيين**

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**ملخص**: هدفت هذه الدراسة إلى التعرف على درجة ممارسة مهارات التفكير الناقد لدى طلبة الجامعة من خلال استخدام استراتيجيات القراءة الناقدة. وتشتمل هذه الاستراتيجيات على قدرة أولئك الطلبة على تحديد وتلخيص وتحليل وافتراض وتقييم أي نص. كما هدفت أيضاً إلى التعرف على أثر الدافعية للقراءة في درجة ممارسة مهارات التفكير الناقد. ولتحقيق هذين الهدفين تم تطوير استبانة تكونت من 56 فقرة، تم التحقق من صدقها من خلال عرضها على مجموعة من المحكّمين المؤهّلين، وتم التحقق من ثباتها بطريقة الاختبار وإعادة الاختبار. وكان معامل الثبات لهذه الأداة 0.81 و0.89 على التوالي كما استخدمت استبانة الدافعية للقراءة لتحقيق الهدف الثاني. وتكوّن مجتمع الدراسة من جميع طلبة تخصص معلم صف لغة انكليزية في جامعة آل البيت والذي بلغ عددهم 414 طالباً وطالبة خلال الفصل الدراسي الثاني 2005- 2006. أما عيِّنة الدراسة فقد اقتصرت على طلبة مستوى السنة الرابعة. وأشارت النتائج إلى أن استخدام استراتيجيات القراءة الناقدة من تحديد وتحليل و افتراض وتقييم له أثر ايجابي في تطوير مهارات التفكير الناقد لدى الطلبة على مستوى الدلالة الإحصائية $\alpha$= 0.05 لصالح المجموعة التجريبية، ما عدا إستراتيجية التلخيص، إذ أظهرت النتائج عكس ذلك وكانت لصالح المجموعة الضابطة. كما أظهرت النتائج أن هناك اختلافات ذات دلالة إحصائية تعزى إلى متغير الدافعية في مجالين فقط هما: التحليل والتقييم. لكن لم تظهر النتائج أنَ هناك أثراً للتفاعل بين استراتيجيات تدريس القراءة الخمس ومتغير الدافعية للقراءة. توصي الدراسة بضرورة تركيز التدريس على استخدام استراتيجيات القراءة الناقدة التي تنمي التفكير الناقد. وينبغي إجراء دراسات مماثلة لقياس أثر استراتيجيات القراءة الناقدة الأخرى في تطوير مهارات التفكير الناقد لدى الطلبة. (**الكلمات المفتاحية**: استراتيجيات القراءة الناقدة، والتفكير الناقد، ومهارات القراءة ودوافع القراءة).

## Introduction

For a long time now the absence of critical thinking strategies from teaching has been criticized. Several reports of the National Assessment of Educational Progress have indicated that students' weakness in writing occurs in the progression from narrative and descriptive modes to the modes that directly require critical thinking- analysis, synthesis, argumentation and evaluation.

As learners lack the ability to reflect on their own thinking, they should learn how to gather information, evaluate, classify, justify, identify problems, propose, recognize, create solutions, uncover assumptions, compare, deduce and induce, forecast and plan and work individually in a critical way. This requires a revolutionary educational change in both teaching strategies and curricula design. Besides, learners need to be motivated to read critically so as to develop their critical thinking skills.

In 2004, the BBC news uttered a call for all educational stakeholders to promote 'learning to think the right way'. In the USA, Critical Thinking Movement in higher education apparently emerged in 1980. California State University Executive Order (338)

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declares the following: "Instruction in critical thinking is to be designed to achieve an understanding of the relationship of language to logic, which should lead to the ability to analyze, criticize, and advocate ideas, to reason inductively and deductively, and to reach factual or judgmental conclusions based on sound inferences drawn from unambiguous statements of knowledge or belief."

Spache and Spache, (1986) point out that students should be taught to think logically, analyze and compare, question and evaluate what they read. Lipman (1990) states that "… the shift is from learning to thinking. We want our students to think for themselves, and not merely to learn what other people have taught."

Educational experts and curriculum policy designers all over the world have unanimously issued a call for promoting critical thinking in almost all courses taught at school and university levels. Similarly, students of education at Arab universities resort to memorization to pass exams with high scores. Actually, they are not aware of the importance of the cognitive levels for developing their critical thinking skills as they are not trained to apply critical reading strategies during the process of reading to answer at least certain questions. They are content to written material as given without discussion. They graduate with a certificate and yet still lack the ability to criticize or even evaluate a topic critically due to a number of reasons. Hence, this study has been conducted to find out whether using critical reading strategies enhances and develops university students' critical thinking skills or not.

**Problem, Purpose, and Significance of the Study:**

The problem of the study could be identified in this question:

What is the degree of undergraduate students' practicing of critical thinking skills through using the strategies of critical reading? The aim of this study is to answer this question. It also aims at finding out the effect of motivation for reading on developing the students' critical reading skills. More specifically, this study aims at answering the following questions:

1. Do university students apply critical thinking skills by using critical reading strategies?
2. Do students who are motivated to read critically use critical thinking skills?
3. Is there any effect of the interaction between using critical reading strategies and motivating students to read on improving university students' critical thinking skills? These questions require testing the following null-hypotheses:

- There are no statistical differences at $\alpha = 0.05$ in university students' use of critical thinking skills due to the use of critical reading strategies.
- There are no statistical differences at $\alpha = 0.05$ in university students' use of critical thinking skills attributed to the variable of being motivated to read.
- There are no statistical differences at $\alpha = 0.05$ due to the interaction between using critical reading strategies and being motivated to read.

**Previous Literature:**

Relevant literature indicate that although researchers emphasize the importance of the concept of critical thinking, it is apparent that focusing on critical thinking skills through teaching critical reading strategies at the university level has been deemphasized. The critical thinking movement is at present responding widely to the challenge of teaching thought processes to students at the university level. However, most attempts in this research area have scarcely considered teaching critical reading strategies as an effective factor that may enhance critical thinking skills.

Kitchener & King (1984) state that the amount of formal education, net of age and intelligence, is positively associated with the overall quality and complexity with which students are able to reason, develop, and support arguments. For instance, significantly greater gains in complex reasoning and judgment are found among students who have attained a Bachelor's degree when compared to peers with similar prior academic preparation and intelligence who have not attended college. Various approaches have been applied to enhance and develop the skills of critical thinking.

Cotton (1991) reviews 56 documents in this domain of which 22 are research studies or evaluation. In her research 'Teaching Thinking Skills', Cotton lists techniques and approaches in many specific critical thinking skills of which the following list includes the most appropriate to university students: Study skills, creative and critical thinking skills, metacognition, inquiry training, prediction, probing, reinforcement, asking higher-order questions, cognitive research trust, higher-order thinking-skills, instrumental enrichment, structure of intellect and thinking.

Wilson (1988) suggests that teachers re-think the way they teach reading and look critically at their own teaching/thinking processes. She cautions against skills lessons that are repackaged in the name of critical thinking but which are only renamed worksheets. She points out that teaching students to read, write, and think critically is a dramatic shift from what has generally taken place in most classrooms. According to Wilson, critical literacy advocates the use of strategies and techniques like formulating questions prior to, during, and after reading; responding to the text in terms of the student's own values; anticipating texts, and acknowledging when and how reader expectations are aroused and fulfilled; and responding to texts through a

variety of writing activities which ask readers to go beyond what they have read to experience the text in personal ways.

Glock (1987) asserts that a college course should require students not only to exercise judgment by describing alternate solutions, but also to make decisions, and to be able to justify those decisions. The development of critical thinking will allow students to move beyond the passive learning of evaluative standards to the creation of their own standards of criticism. The incorporation of critical thinking skills as a primary objective of college-level courses will have a great impact on the college curriculum and its responsibility in assisting students to develop the skills necessary to arrive at better answers. Critical thinking skills can accelerate learning in almost all fields of studying. Students' critical thinking skills in the context of their discipline, should be enhanced to do well in other areas and thus create a learning environment of critical thinking across the curriculum.

The current state of critical thinking in higher education has been dealt with in Paul (2005) who came with the following three disturbing facts: (i) university faculties lack a substantive concept of critical thinking; (ii) most college faculty don't realize that they lack a substantive concept of critical thinking, believe that they sufficiently understand it, and assume they are already teaching it; and (iii) lecture, rote memorization, (largely ineffective) and short-term study habits are still the norm in college instruction and learning today. It is also stated that the majority of college faculty consider their teaching strategies just fine, no matter what the data reveal. Whatever problems exist in their instruction they see as the fault of students or beyond their control. Research demonstrates that, contrary to popular faculty belief, critical thinking is not fostered in the typical college classroom (Paul, 2005).

An attempt to reestablish the importance of critical thinking competencies has been developed in a study conducted by Robinson (1996) through using several teaching models by the Valencia Community College graduates, where each graduate should be able to "think critically and make reasoned choices by acquiring, analyzing, synthesizing, and evaluating knowledge. The researchers concluded that " Nine Valencia sub-competencies that can be used in the process of assessing and measuring critical thinking include having to (i) know what to observe and systematically make accurate observations; (ii) represent observations in an appropriate pattern to show relationships; (iii) recognize problems that need to be and can be solved; (iv) use sequential and holistic approaches to problem solving; and (v) analyze information and ideas to make decisions. Some models of teaching that fit easily into the critical thinking competency are concept attainment, scientific inquiry, inquiry training, simulation, role playing, thinking inductively and the advanced organizer.

A relevant descriptive study conducted by Sommers, Androne, Wahlarb and Polacheck (2004) describe how 10 students read critically in several desirable reading behavior domains via using rubric design (a map of literary reading responses). Such courses which offer students the opportunity to think for themselves can encourage them to read literature critically and actively. This study focused on the critical reading engendered in a very special kind of literature course, one based on a problem-based learning pedagogy. The results indicate that students with limited background literary study learned successfully although there is some suggestion that more mature students in term of their academic year might perform better.

Paul, Elder, and Bartell (1998) conducted a large study of 40,000 faculty members randomly selected from colleges and universities across California encompassing prestigious universities such as Stanford, Cal Tech, USC, UCLA, UC Berkeley, and the California State University System. The study, which was supported by the American Council of Education, found that 97 percent of the respondents indicated that the most important goal of undergraduate education is to foster students' ability to think critically. The results of this large study of 38 public colleges and universities and 28 private ones focused on the question: To what extent is faculty teaching for critical thinking? Faculty answered both closed- and open-ended questions in a 40-50 minute interview. Some of the key results from the study are the following:

- Though the overwhelming majority of faculty (89%) claimed critical thinking to be a primary objective of their instruction, only a small minority (19%) could give a clear explanation of what critical thinking is. Furthermore, according to their answers, only 9% of the respondents were clearly teaching for critical thinking on a typical day in class.

- Though the overwhelming majority (78%) claimed that their students lacked appropriate intellectual standards (to use in assessing their thinking), and 73% considered that students learning to assess their own work was of primary importance, only a very small minority (8%) could enumerate any intellectual criteria or standards they required of students or could give an intelligible explanation of those criteria and standards.

- Although the majority (67%) said that their concept of critical thinking is largely explicit in their thinking, only 19% could elaborate on their concept of thinking.

The results of this study stated that the faculty members are aware of the importance of teaching

critical thinking; however, they have not mentioned any policy or strategy of doing so.

Tsui (2000) in a study on the effects of campus culture on students' critical thinking pointed out that emphasizing the development of critical thinking skills has positive implications for the immediate learning environment as well. Students who are exposed to classroom environments that foster critical thinking skills begin to see themselves as active contributors to the learning process. Exploring viable solutions to complex problems with peers constructing knowledge alongside professors and instructors allows students to situate themselves within the learning process thereby encouraging development of higher order cognitive processes and mastery of subject matter.

In an attempt to prove that critical thinking is not restricted to scientific fields, Kromrey (2001) conducted a study in which Paul's model for critical thinking was infused into a community college history course by teaching the model explicitly and training students to use the model to analyze primary documents. Pre-tests and post-tests included an Advanced Placement Examination, the Ennis-Weir Critical Thinking Essay Test, the California Critical Thinking Dispositions Inventory, and a History Content Exam. ANCOVA indicated that the experimental group performed significantly higher than the control group in historical thinking and in general critical thinking skills. No significant differences were found on the other tests. Infusing Paul's model into classroom activities appeared to promote students' abilities to think historically and critically without lessening their end of term knowledge of history content. Results indicated that explicitly integrating Paul's approach to critical thinking into course content can be an effective way to elicit the kinds of critical thinking abilities desired of college level students.

However, in a study conducted at the University of Melbourne on improving critical thinking via using the software (Reason Able!) in educational technology, Gelder (2001) points out that cognitive skills are improved by practice. The practice should be motivated, guided, scaffolded, graduated and followed by feedback so as to enhance critical thinking skills.

As there is no literature dealing with critical reading, critical thinking and motivation, Wigfield and Guthrie (1995) tried to conceptualize the nature of motivation specifically for reading, arguing that motivation to learn can be domain-specific. Similarly, due to a lack of literature dealing specifically with reading motivation, both of them sought support for their model by drawing upon a number of general motivational constructs that are relevant to engaging in reading. Based on 11 theoretical aspects of reading motivation, Wigfield and Guthrie (1995) conducted a study in Japan, and developed the Motivation for Reading Questionnaire (MRQ). Their study aimed at finding out the major sub-components of motivation to read in English for a sample of university students in an EFL setting. A total of 447 students at a women's university in Japan participated in their study. All of the students were in intact groups and separated into 15 different reading classes with approximately 30 in each class. A 30-item, seven-point Likert scale questionnaire was administered as a means of investigating students' foreign language reading motivation in Japanese. Measures of learning and results suggested that students who had Concept-Oriented Reading Instruction (CORI) for four months surpassed a comparison classroom in amount and breadth of reading and intrinsic motivations for reading. The CORI students gained significantly in the cognitive strategies of search and comprehension during the time period of four months. CORI instruction was contrasted to experience-based teaching and strategies instruction in terms of their support for motivational and cognitive development.

This review has revealed a dearth of studies on the effect of using critical reading strategies on developing critical thinking skills in EFL classes. There are few articles on how critical thinking versus critical reading and on how to be a critical reader. To the best of the researcher's knowledge, this study is the first in this research area that tried to investigate the effect of teaching critical reading strategies on developing critical thinking skills at the university level compared to motivating students to read.

**Definition of Terms:**

**Critical reading** is a technique for discovering information and ideas within a text. Critical reading refers to a careful, active, reflective, analytic reading where a reader applies certain processes, models, questions, and theories that result in enhanced clarity and comprehension. Critical reading involves using logical and rhetorical skills.

**Critical thinking** is a technique for evaluating information and ideas, for deciding what to accept and believe. Critical thinking involves reflecting on the validity of what the reader has read in light of his/her prior knowledge and understanding of the world. Critical thinking in reading is like critical thinking elsewhere. Its purpose is to get one involved in a dialogue with the ideas s/he hears in class so that s/he can summarize, analyze, hypothesize, and evaluate the ideas s/he encounters. Critical thinking allows one to monitor his/her understanding as s/he reads.

**Critical Reading Strategies** are strategies that can be learned readily and then applied to help handle difficult material with confidence. Critical reading strategies are many of which Bull, Bear, Harrist and Kimball (2002) have quoted the following: previewing, contextualizing, questioning, reflecting on challenges to one's beliefs and values, outlining and summarizing,

evaluating an argument and comparing and contrasting related readings.

**Critical thinking skills** are those diverse cognitive processes and associated attitudes critical to intelligent action in diverse situations and fields that can be improved by instruction and conscious effort such as decision making, problem solving, fluency, observation, exploration, classification, generating hypotheses (Glock, 1987). Critical thinking skills can include many of the thinking skills: analysis, synthesis, evaluation, problem solving, and some of the productive habits of mind. Critical thinking can also include the abilities to seek truth, clarity, and accuracy.

**Motivated readers** (or engaged readers) are strategic in using multiple approaches to comprehend. They use knowledge actively to construct new understanding from text. And they interact socially in their approach to literacy. Engaged readers are decision makers whose effects as well as their language and cognition play a role in their reading practices (Guthrie, McGough, Bennett, and Rice, 1996).

**Method and Procedures:**

The population of this study included 414 students enrolled in English Language Classroom Teacher major at Al-al-Bayt University during the Second Semester of 2005-2006 as documented in the Admission and Registration Department records. The sample of the study could be considered a purposive one as it was an available systematic sample. The subjects should have completed between 87-99 credit hours and those added up to 141. But 35 of these students were not registered for the course "Selected Literary Works/ I" (Course No. 307352, Appendix 1) and 6 students dropped the course for some reason or other leaving only 100 students in the sample. 43 of these students comprised the experimental group and (57) acted as the control group. Both sections attended classes on Sundays, Tuesdays and Thursdays; section 1 at 9-10 am. and section 2 at 1-2 pm.

The methodology of critical reading strategies suggested by Bull, Harrist and Kimball's module (2002) was used for teaching the skills of critical reading for the experimental group, whereas the traditional strategies of teaching reading comprehension of scanning, skimming, intensive reading and reading for exam purposes were used in teaching the control group. Directions and instructions are direct and easy to be handled by the instructor to fulfill the objectives of this study. The instructions and the directions included in the module (Chapter 28) for teaching critical reading strategies suggested by Bull, Bear, Harrist & Kimball (2002) were followed during the course. Students in the experimental group were asked to answer critical questions that concentrate on the domains of identification, analysis, hypothesis, summarizing and evaluation on each text they read. The types of these questions are based on developing the skills of critical reading and critical thinking skills (Appendix 3). Students were motivated to identify, express, comment, suggest, analyze, criticize, conclude and evaluate what they read as a response to those types of questions. They were trained on using the critical reading strategies that enhance critical thinking strategies. They were also encouraged to express their own opinions and ideas orally or in writing. On the other hand, reading strategies such as, scanning, skimming, intensive reading and reading for exam purposes were followed in teaching the control group where all students agree on the same answers as mentioned in the texts.

To achieve the goals of this study two questionnaires were used: **The first questionnaire** which consisted of 75 items and was developed to measure the degree of using critical thinking skills during the process of critical reading. Content validity of this instrument has been ascertained through submitting it to a qualified jury of six (two full professors and four assistant professors) at Yarmouk University and Al-al Bayt University. They have omitted, adjusted and agreed on 56 items distributed into the following main domains of critical thinking skills that represent the critical reading strategies of identification, summary, hypothesizing, analysis, and evaluation (Appendix 1). The reliability of this instrument was established by giving it to a different section to be answered; and after 14 days it was given to the same section to be answered. The internal consistency estimate of reliability for the questionnaire with the 56 items was calculated. The coefficient of reliability was 0.81 and 0.89 which could be considered as reliable and accepted for the sake of the study.

The distribution of the 56 items of the questionnaire on critical thinking among the five domains that represent the methods and the strategies of teaching critical reading and the percentage of the number of items in each domain are shown in Table 1 below:

**Table 1:** The distribution of critical thinking questionnaire items into the five domains:

| Domains of the critical reading strategies | Distribution of items among the five domains. | Total | Percentage |
|---|---|---|---|
| Identification | 1-2-3-4-23-27-28-38-46-47-50-54. | 12 | 21.42 % |
| Summarizing | 5-7-16-17-20-22-45-49. | 8 | 14.28 % |
| Analysis | 9-14-24-26-39. | 5 | 8.93 % |
| Hypothesizing | 8-11-18-19-21-25- 30-31-32-34-35 -41-42-43-44-51-55-56. | 18 | 32.15 % |
| Evaluation | 6-10-12-13-15-29-33-36-37-40-48 -52-53 | 13 | 23.22 % |
| Total | 56 | 56 | 100 % |

The answers of each item of the questionnaire consist of 5 levels that are arranged as follow: very frequently which has the highest range 5 points; frequently 4 points; sometimes 3 points; rarely 2 points; and never 1 point that represents the lowest range. Participants were asked to read each item, and then decide the degree of their appropriate choice by putting X in the given space. The means of these ranges represent the students' degree of choice as is shown in

the following table (Table 2) which may shed light on the level of practicing critical thinking skills according to the frequencies of using these skills.

**Table 2:** The means that represent the degree of using critical thinking skills in the questionnaire.

| Level | Points | Means | Degree |
|---|---|---|---|
| very frequently | 5 | 5.00- 4.50 | Highest degree |
| frequently | 4 | 4.49- 3.50 | High degree |
| sometimes | 3 | 3.49- 2.50 | Moderate degree |
| rarely | 2 | 2.49- 1.50 | Low degree |
| never | 1 | 1.49 - 1.00 | Lowest degree |

It is assumed that critical reading strategies may improve the undergraduates' critical thinking skills. These skills include their ability to identify, summarize, analyze, hypothesize, and evaluate a text. Hence, the 56 items of the questionnaire were distributed into the following five main domains of teaching strategies: identification, summarizing, analysis, hypothesizing and evaluation.

**The second questionnaire,** the Motivation for Reading Questionnaire (MRQ) developed by Wigfield and Guthrie (1995) (Appendix 2), was administered as a means of investigating students' foreign language reading motivation. Based on 11 theoretical aspects of reading motivation, this 30-item, seven-point Likert scale questionnaire was administered to investigate students' foreign language reading motivation. Each degree of agreement is given a numerical value from one to seven intervals on a continuum ranging from "agree" to "disagree". Subjects are instructed to indicate the extent to which they agree or disagree with each statement by placing a mark in the interval or circling the number in the scale which shows how close to either the "strongly agree" or " strongly disagree" end of the continuum they feel they belong to. In the case of seven-interval scale, the end of the continuum that is "unfavorable" toward the attitude object is commonly scored as 1, while the "favorable" end score is 7. To come to a final decision, subjects are asked to confirm their agreement or disagreement (yes or no) according to the number they mark in the scale. These two questionnaires were answered by both groups in the third week of the semester and later in week 14.

**Design and Statistics**

This study could be considered a semi-experimental one as the sample was not randomly chosen. The independent variables of the study are: the strategies of teaching reading and motivation to read. The strategies of teaching reading are two: the critical reading strategies (identification, analyzing, summarizing, hypothesizing, and evaluation) and the traditional strategies of teaching the course of Selected Literary Works-I (scanning, skimming, intensive reading and reading for exam purposes). The second independent variable is motivation to read: students are either motivated or not motivated. The dependent variable is using the critical thinking skills. The data were collected, sorted out and statistical calculations were estimated by using SPSS.

To answer the questions of this study, correlation among the domains of teaching critical reading strategies were calculated. The most widely used measure of correlation was the Pearson product-moment correlation coefficient. Table 3 shows that there are statistically significant correlations at $\alpha = 0.05$ among the five domains of teaching strategies of critical reading: identification, summary, analysis, hypothesis and evaluation. Correlation is significant at the 0.01 level as shown in Table 3.

**Table 3:** Pearson Correlations among the domains of teaching critical reading strategies

| Domains | Identification | Summary | Analysis | Hypothesis | Evaluation |
|---|---|---|---|---|---|
| Identification | | | | | |
| Summary | .257 (**) | | | | |
| Analysis | .450 (**) | .377 (**) | | | |
| Hypothesis | .490 (**) | .283 (**) | .549 (**) | | |
| Evaluation | .531 (**) | .139 | .595 (**) | .585 (**) | |
| The whole test | .767 (**) | .505 (**) | .752 (**) | .825 (**) | .802 (**) |

** Correlation is significant at the 0.01 level (2-tailed).

To answer the first question of the study: (Do university students apply critical thinking skills due to using critical reading strategies?) The study revealed that except for the strategy of summary, (as shown in the bold- typed column of summary) the other four strategies of teaching critical reading revealed that university students apply critical thinking skills due to teaching critical reading strategies. There are statistically significant correlations at $\alpha = 0.05$ among the four domains of critical reading strategies which allow the use of MANCOVA.

To answer the second question of the study: (Do students who are motivated to read critically use critical thinking skills?), table 4 shows the numbers of the students in both groups at the level of being motivated.

**Table 4:** The numbers of the students in both groups at the level of being motivated:

| Groups | Reading motivation | | Total |
|---|---|---|---|
| | yes | No | |
| experimental | 34 | 9 | 43 |
| control | 45 | 12 | 57 |
| Total | 79 | 21 | 100 |

**Equality between Groups:**

To find out equality between the groups, means and standard deviations and t-test for the pre-test were calculated as shown in Table 5:

**Table 5:** Means, Standard Deviations and t-test for pre-rest according to methods of teaching critical reading variables.

| | N | Mean | Standard Deviation | t-test | Sig. (2-tailed) |
|---|---|---|---|---|---|
| Experimental Group | 43 | 3.18 | .39 | -5.039 | .000 |
| Control Group | 57 | 3.50 | .25 | | |

Table 5 shows that there are statistically significant differences at $\alpha = 0.05$ in the pre-test due to the variable of the methods of teaching critical reading. It is concluded here that those two groups are unequal according to the variables of the methods of teaching, so ANCOVA will be used on the post-test.

**Results:**

This study aimed at identifying the degree of undergraduate students' practicing critical thinking skills through using the strategies of critical reading at Al-al-Bayt University. These skills include their ability to identify, summarize, analyze, hypothesize, and evaluate a text. It also aimed at recognizing the effect of being motivated to read on the degree of applying critical thinking skills. Means and standard deviations as well as estimated marginal means of students responses on post-test according to strategies of teaching critical reading and reading motivation variables were computed (See Table 6). Calculated results show that there is a slight variance in the means of the post-test according to the strategies of teaching critical reading and motivation variables. Except for the strategy of summary, the other four strategies of teaching critical reading revealed that university students apply critical thinking skills due to the variable of teaching critical reading strategies. The means of the domain of summary in the experimental group was: 4.14 and in the control group 4.02. The standard deviation of the experimental group was.31 and in the control group.41. Table 6 shows a slight variance in the means post-test according to the strategies of teaching critical reading and motivation variables.

**Table 6:** Means, standard deviations and estimated marginal means of students' responses on post-test according to teaching critical reading strategies and reading motivation variables**.**

| Domains | Reading motivation | Experimental group | | | Control group | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Estimated Marginal Means | N | Mean | Std. Deviation | Estimated Marginal Means | N | Mean | Std. Deviation | Estimated Marginal Means | N |
| Identification | yes | 3.76 | .41 | 3.86 | 34 | 3.53 | .41 | 3.44 | 45 | 3.63 | .42 | 3.65 | 79 |
| | no | 3.47 | .47 | 3.65 | 9 | 3.49 | .31 | 3.42 | 12 | 3.48 | .37 | 3.53 | 21 |
| | Total | 3.70 | .43 | 3.75 | 43 | 3.52 | .39 | 3.43 | 57 | 3.60 | .42 | 3.59 | 100 |
| Summary | yes | 3.85 | .46 | 3.93 | 34 | 4.14 | .31 | 4.07 | 45 | 4.02 | .41 | 3.99 | 79 |
| | no | 3.58 | .41 | 3.69 | 9 | 4.09 | .36 | 4.05 | 12 | 3.87 | .45 | 3.87 | 21 |
| | Total | 3.79 | .46 | 3.81 | 43 | 4.13 | .32 | 4.06 | 57 | 3.99 | .42 | 3.93 | 100 |
| Analysis | yes | 3.82 | .47 | 3.91 | 34 | 3.66 | .32 | 3.57 | 45 | 3.73 | .40 | 3.74 | 79 |
| | no | 3.61 | .59 | 3.75 | 9 | 3.33 | .28 | 3.29 | 12 | 3.45 | .45 | 3.52 | 21 |
| | Total | 3.78 | .50 | 3.83 | 43 | 3.59 | .34 | 3.43 | 57 | 3.67 | .42 | 3.63 | 100 |

| Domains | Reading motivation | Experimental group | | | Control group | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Reading motivation | Mean | Std. Deviation | Estimated Marginal Means | N | Mean | Std. Deviation | Estimated Marginal Means | N | Mean | Std. Deviation | Estimated Marginal Means | N |
| Hypothesis | yes | 3.49 | .41 | 3.54 | 34 | 3.31 | .33 | 3.26 | 45 | 3.39 | .37 | 3.40 | 79 |
| | no | 3.37 | .30 | 3.47 | 9 | 3.20 | .16 | 3.19 | 12 | 3.27 | .24 | 3.33 | 21 |
| | Total | 3.47 | .39 | 3.50 | 43 | 3.29 | .30 | 3.23 | 57 | 3.37 | .35 | 3.37 | 100 |
| Evaluation | yes | 3.83 | .34 | 3.91 | 34 | 3.49 | .30 | 3.39 | 45 | 3.63 | .36 | 3.65 | 79 |
| | no | 3.41 | .51 | 3.52 | 9 | 3.08 | .22 | 3.12 | 12 | 3.22 | .40 | 3.31 | 21 |
| | Total | 3.74 | .42 | 3.72 | 43 | 3.40 | .33 | 3.25 | 57 | 3.55 | .41 | 3.49 | 100 |
| Whole test | yes | 3.72 | .326 | 3.81 | 34 | 3.57 | .244 | 3.49 | 45 | 3.64 | .290 | 3.65 | 79 |
| | no | 3.46 | .381 | 3.57 | 9 | 3.39 | .112 | 3.38 | 12 | 3.42 | .257 | 3.48 | 21 |
| | Total | 3.67 | .350 | 3.69 | 43 | 3.53 | .233 | 3.43 | 57 | 3.59 | .295 | 3.56 | 100 |

To find out whether there are statistical significant differences in these means, two way MANCOVA was conducted on sub-scales as shown in Table 7, and two way ANCOVA on the whole test has been estimated on the post-test as shown in Table 8.

**Table 7:** Two way MANCOVA results of the post-test related to methods of teaching critical reading, motivation and interaction between the two variables.

| Source | Dependent Variable | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Identification pre (Covariate) | | 2.001 | 1 | 2.001 | 15.435 | .000 |
| Summary pre (Covariate) | | .903 | 1 | .903 | 7.269 | .008 |
| Analysis pre (Covariate) | | .032 | 1 | .032 | .227 | .635 |
| Hypothesis pre (Covariate) | | .742 | 1 | .742 | 7.676 | .007 |
| Evaluation pre (Covariate) | | .449 | 1 | .449 | 5.320 | .023 |
| Method of teaching | Identification | 1.322 | 1 | 1.322 | 10.198 | .002 |
| Wilks' Lambda | Summary | .780 | 1 | .780 | 6.282 | .014 |
| =.588 | Analysis | 1.950 | 1 | 1.950 | 14.054 | .000 |
| P=.000 | Hypothesis | .950 | 1 | .950 | 9.825 | .002 |
| | Evaluation | 2.646 | 1 | 2.646 | 31.342 | .000 |
| motivation | Identification | .224 | 1 | .224 | 1.727 | .192 |
| Wilks' Lambda | Summary | .259 | 1 | .259 | 2.083 | .152 |
| =.800 | Analysis | .748 | 1 | .748 | 5.390 | .022 |
| P=.001 | Hypothesis | .073 | 1 | .073 | .752 | .388 |
| | Evaluation | 1.714 | 1 | 1.714 | 20.304 | .000 |
| Method of teaching* | Identification | .137 | 1 | .137 | 1.056 | .307 |
| motivation | Summary | .166 | 1 | .166 | 1.340 | .250 |
| Wilks' Lambda | Analysis | .058 | 1 | .058 | .415 | .521 |
| =.951 | Hypothesis | .00006 | 1 | .00006 | .000 | .994 |
| P=.488 | Evaluation | .047 | 1 | .047 | .555 | .458 |
| Error | Identification | 11.797 | 91 | .130 | | |
| | Summary | 11.300 | 91 | .124 | | |
| | Analysis | 12.629 | 91 | .139 | | |
| | Hypothesis | 8.802 | 91 | .097 | | |
| | Evaluation | 7.684 | 91 | .084 | | |
| Corrected | Identification | 17.162 | 99 | | | |
| Total | Summary | 17.448 | 99 | | | |
| | Analysis | 17.610 | 99 | | | |
| | Hypothesis | 12.386 | 99 | | | |
| | Evaluation | 16.264 | 99 | | | |

Table 7 shows that there are statistically significant differences at $\alpha$= 0.05 in all sub domains due to methods of teaching, in favor of the experimental group except for summary which was in favor of the control group. The findings also revealed that there are statistically significant differences at $\alpha$= 0.05 only in the domains of analysis and evaluation due to reading motivation, in favor of motivated students as shown in bold type in Tables 7 and 8. There are no statistically significant differences at $\alpha$= 0.05 due to interaction between methods of teaching reading and reading motivation variables.

**Table 8:** Two way ANCOVA results of post-test related to method of teaching, motivation and interaction between them.

| Source | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Pre (covariate)_ | 2.371 | 1 | 2.371 | **44.711** | .000 |
| Methods of teaching | .931 | 1 | .931 | 17.553 | .000 |
| motivation | .444 | 1 | .444 | 8.376 | .005 |
| Methods of teaching* motivation | .069 | 1 | .069 | 1.300 | .257 |
| Error | 5.038 | 95 | .053 | | |
| Corrected Total | 8.635 | 99 | | | |

We notice that (i) there are statistically significant differences at $\alpha$= 0.05 due to methods of teaching variables in favor of the experimental group because the value of F = 44.711; (ii) there are statistically significant differences at $\alpha$= 0.05 due to the reading motivation variable, in favor of motivated students; and there are no statistically significant differences at $\alpha$= 0.05 due to interaction between methods of teaching reading and reading motivation variables because the value of F = 1.300 which means that the third null hypothesis is accepted.

**Discussion and Recommendations:**

The results of the study revealed that there are statistically significant differences at $\alpha$= 0.05 in all domains of identification, analysis, hypothesis and evaluation due to the variable of strategies of teaching in favor of the experimental group except for the domain of summary which was in favor of the control group. These results could be interpreted in relevance to the results of Sommers, Androne, Wahlarb and Polacheck (2004) which indicated that students with limited background literary study learned successfully although there is some suggestion that more mature students in term of their academic year might perform better.

Concerning the domain of summary, it could be assumed that the students are reluctant to write or summarize what they read in their own words. It was also revealed that there are statistically significant differences at $\alpha$= 0.05 only in the domains of analysis and evaluation due to reading motivational variable in favor of motivated students. These results agree with Wigfield and Guthrie's (1995, 1997) conclusions that students who experienced Concept-Oriented Reading Instruction (CORI) reported choosing to read more frequently and widely than students in a basal-using classroom. Students in the CORI classroom reported more intrinsic motivations for reading, such as curiosity, and fewer extrinsic motivations for reading than did students in the basal classroom. Students who experienced the CORI approach gained substantially in the higher order cognitive strategies involved in searching for information, comprehending informative text, constructing conceptual knowledge, and transferring conceptual knowledge to solve novel problems. In brief, the results of the present study show that questions requiring students to do productive thinking and mentally organize, explain, translate, paraphrase, and compare information, supply a reason or cause, cite evidence to support their answers, give evidence, provide reasons for, infer, deduce, draw conclusions, and analyze causes, respond creatively and originally to problems or scenarios, speculate, give an opinion, pose solutions, value, judge, and generate possibilities) can be answered by students who are motivated and trained on using critical reading strategies for the purpose of critical thinking rather than for exam and achievement purposes.

It is recommended that teaching should focus on practicing critical reading strategies, especially at the university level. Teaching should follow at least a higher policy in enhancing critical thinking skills via teaching critical reading strategies. This digital age demands essential and urgent changes in our ways of dealing with the students. It is our responsibility to satisfy our learners' needs and confidence by effectively teaching critical reading strategies so as to apply critical thinking skills to their academic studies in all fields of knowledge they seek after. Besides, more studies are recommended to be conducted on teaching other critical reading strategies to enhance critical thinking skills at other educational levels.

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**Appendices:**

**Appendix 1:** Questionnaire 1 (Critical thinking skills questionnaire)

This questionnaire is designed to measure the degree of applying critical thinking skills through the process of reading any text in English. It is designed for students specialized in English Language Classroom Teacher who have completed 87-99 credit hours out of 129. It consists of 48 items.

Read each item, and then decide the degree of your appropriate choice by putting X in the given space.

Each item starts with" When I read I ……."

| Questions | very frequently | frequently | sometimes | rarely | never |
|---|---|---|---|---|---|
| 1. identify the author's purpose. | | | | | |
| 2. try to identify the main points of the text. | | | | | |
| 3. identify what the author intends to present for the reader. | | | | | |
| 4. identify how the text is organized. | | | | | |
| 5. sort out the differences among the paragraphs. | | | | | |
| 6. examine the facts that are mentioned in the text. | | | | | |
| 7. read the whole text from start to finish, then I summarize the main points. | | | | | |
| 8. expect what I am going to read as soon as I start reading. | | | | | |
| 9. first read the introduction and the conclusion. | | | | | |
| 10. ask myself why the writer chose this text. | | | | | |
| 11. concentrate on the relationship between the title and the content of the text during and after the process of reading. | | | | | |
| 12. accept what I am reading without questioning. | | | | | |
| 13. criticize what I read. | | | | | |
| 14. feel that critical thinking is enhanced during discussing the text with others. | | | | | |
| 15. stop reading from time to time to talk to myself on what I have read. | | | | | |
| 16. write notes and comments in the margins related to the text. | | | | | |
| 17. only summarize the main points for exam purposes. | | | | | |
| 18. connect what I read with what is in reality. | | | | | |
| 19. compare what I read with what I believe in. | | | | | |
| 20. underline important lines, sentences, words or expressions. | | | | | |
| 21. react to the text in a questionable way. | | | | | |
| 22. only look for facts, information and knowledge given in the text. | | | | | |
| 23. ignore graphs, tables, or any information given in figures. | | | | | |
| 24. draw a circle round the important words. | | | | | |
| 25. draw a circle or put a question mark when I have any difficult or ambiguous words. | | | | | |
| 26. read in detail. | | | | | |
| 27. show my disagreement with what I read. | | | | | |
| 28. scientifically justify my disagreement. | | | | | |
| 29. logically oppose what I read. | | | | | |
| 30. suggest solutions or give idea to justify my disagreement. | | | | | |
| 31. accept whatever is written without questioning. | | | | | |
| 32. try to solve any problem mentioned in the text. | | | | | |
| 33. read critically. | | | | | |
| 34. relate what I read to similar and real authentic situations. | | | | | |
| 35. infer impressions about the text. | | | | | |
| 36. consider myself a good reader. | | | | | |
| 37. feel that I posses critical thinking skills. | | | | | |
| 38. look for something during reading. | | | | | |
| 39. analyze what I read. | | | | | |
| 40. evaluate what I read. | | | | | |
| 41. think that my evaluation of the reading text indicates critical thinking. | | | | | |
| 42. believe that critical reading is an indication of using critical | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| thinking skills. | | | | | |
| 43. pause during reading and imagine what you have already read. | | | | | |
| 44. read between and behind lines. | | | | | |
| 45. only study the bits of information that I need to pass my exams. | | | | | |
| 46. justify the author's views mentioned in the text. | | | | | |
| 47. identify the writer's style. | | | | | |
| 48. judge the writer's language. | | | | | |
| 49. find myself questioning what is written. | | | | | |
| 50. identify the points of weakness of what I read. | | | | | |
| 51. think that the writer affects my feelings during reading. | | | | | |
| 52. enjoy reading. | | | | | |
| 53. advise my friends to read the text. | | | | | |
| 54. identify the advantage of the text. | | | | | |
| 55. suggest changes in the text. | | | | | |
| 56. think that the text has effects on my belief. | | | | | |

**Appendix 2**: Questionnaire 2 (Motivational Questionnaire)

This questionnaire is designed to measure the degree of being motivated through the process of reading any text in English. Read each item, and then decide the degree of your appropriate choice from **7-6-5-4-3-2-1** to show your agreement or disagreement:

*7=favorable 6= strongly agree 5=agree 4= satisfactory*

*3= disagree 2= strongly disagree 1=unfavorable*

Indicate the extent to which you agree or disagree with each statement by circling the number in the scale which shows how close to either the "strongly agree"- "favorable" (7) or " strongly disagree" - "unfavorable (1). Finally, confirm your choice of agreement or disagreement by putting X in the given space in the yes/no columns.

*(7- 6 -5 -4 = yes) (3- 2- 1 = no)*

| No. | Statement | 7 | 6 | 5 | 4 | 3 | 2 | 1 | yes | no |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. | By learning to read in English, I hope I will be able to read English novels. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 2. | I get immersed in interesting stories even if they are written in English. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 3. | Learning to read in English is important in that we need to cope with globalization. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 4. | I am learning to read in English because I might study abroad in the future | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 5 | By being able to read in English, I hope to understand more deeply about lifestyles and cultures of English speaking countries (such as America and England). | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 6 | Even if reading were not a required subject, I would take a reading class anyway. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 7 | I am learning to read in English merely because I would like to get good grades | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 8 | Long and difficult English passages put me off. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 9 | I am taking a reading class merely because it is a required subject. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 10 | I would like to get a job that uses what I studied in English reading class | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 11 | I am good at reading in English | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 12 | I like reading English novels. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 13 | I liked reading classes at junior and senior high schools. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 14 | By learning to read in English, I hope to be able to read English newspapers and/or magazines. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 15 | It is fun to read in English. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 16 | I like reading English newspapers and/or magazines. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 17 | English reading is my weak subject. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 18 | Learning to reading in English is important because it will be conducive to my general education. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 19 | By learning to read in English, I hope to learn about various opinions in the world. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 20 | I think learning to speak and/or listening is more important than learning to read in English. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | My grades for English reading classes at junior and senior high schools were not very good. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 22 | I enjoy the challenge of difficult English passages | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 23 | I do not have any desire to read in English even if the content is interesting. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 24 | Learning to read in English is important because it will broaden my view. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 25 | By learning to read in English, I hope to search for information on the Internet. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 26 | Reading in English is important because it will make me a more knowledgeable person. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 27 | It is a waste of time to learn to read in English. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 28 | I would not voluntarily read in English unless it is required as homework or assignment. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 29 | I tend to get deeply engaged when I read in English. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| 30 | It is a pain to read in English. | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |

**Appendix 3**

**1) Types of Critical Reading Questions:**

What is the purpose of the text? What did the author say?
What is the author trying to accomplish?
What issues or problems are raised?
What data, what experiences, what evidence is given?
What concepts are used to organize the data, these experiences?
What does the author think about the world?
Is his/her thinking justified as far as we can see from our perspective?
And how does he/she justify it from his/her perspective?
How can we enter his/her perspective to appreciate what he/she has to say?
What is the issue?
What conclusion does the author reach about the issue?
What are the author's reasons for believing as he/she does?
Has the author used facts or opinions?
Can the facts be proven?
Has the author used neutral words or emotional words?
Are the given reasons clear?

**2) Course Description of Literary Works I (0307352)**

**Pre-requisite: none**

This course aims at developing the students' literary appreciation in two main genres: the short story and poetry. The students are exposed to a representative sample of stories and poems. This involves introducing the students to related literary terms used in the field. In order to enhance the students' enjoyment, comprehension and appreciation, extensive exercises into structure, vocabulary and figurative language are offered. Since the course does not emphasize a certain period or canon, it offers a wide range of authors and poets representing a variety of traditions and epochs in English and American prose and poetry.

**3) Critical Reading Strategies:**

The following seven critical reading strategies presented by the Critical Thinking Across the Curriculum Project - Longview Community College have been activated and applied in teaching the subjects of this study during the second semester of 2005-2006. The teaching material of the course (Selected Literary Works/ 307352) included literary texts followed by different types of questions that enhance critical thinking. Although mastering these strategies will not make the critical reading process an easy one, it can make reading much more satisfying and productive and thus help handling difficult material through discussion.

Fundamental to each of these strategies is: **Annotating** directly on the page: underlining key words, phrases, or sentences; writing comments or questions in the margins; bracketing

important sections of the text; constructing ideas with lines or arrows; numbering related points in sequence; and making notes of anything that strikes the reader as interesting, important, or questionable. **Previewing:** *Learning about a text before really reading it.* Previewing enables readers to get a sense of what the text is about and how it is organized before reading it closely. This simple strategy includes seeing what the reader can learn from the head notes

or other introductory material, skimming to get an overview of the content and organization, and identifying the rhetorical situation. **Contextualizing:** *Placing a text in its historical, biographical, and cultural contexts*. To read critically, one needs to contextualize, to recognize the differences between the contemporary values and attitudes and those represented in the text. **Questioning to understand and remember:** *Asking questions about the content.*These questions are designed to help one understand a reading and respond to it more fully, and often this technique works. With this strategy, one can write questions any time, but in difficult academic readings the reader will understand the material better and remember it longer if s/he writes a question for every paragraph or brief section. Each question should focus on a main idea, not on illustrations or details, and each should be expressed in ones own words, not just copied from parts of the paragraph. **Reflecting on challenges to ones beliefs and values:** *Examining one's personal responses.* The reading that one does for the class might challenge his/her attitudes; his/her unconsciously held beliefs, or positions on current issues. As one reads a text for the first time, he/she will mark an X in the margin at each point where the reader feels a personal challenge to his/her attitudes, beliefs, or status or about what in the text created the challenge. **Outlining and summarizing:** *Identifying the main ideas and restating them in ones own words.* Outlining and summarizing are especially helpful strategies for understanding the content and structure of a reading selection. Whereas outlining reveals the basic structure of the text, summarizing synopsizes a selection's main argument in brief. Outlining may be part of the annotating

process or it may be done separately. The key to both outlining and summarizing is being able to distinguish the main ideas from the supporting ideas and examples. Summarizing begins with outlining, but instead of merely listing the main ideas, a summary recomposes them to form a new text. Whereas outlining depends on a close analysis of each paragraph, summarizing requires creative synthesis. Putting ideas together again in one's own words and in a condensed form shows how reading critically can lead to deeper understanding of any text. **Evaluating an argument:** *Testing the logic of a text as well as its credibility and emotional impact.* All writers make assertions that want the reader to accept as true. As a critical reader, one should not accept anything on face value but should recognize every assertion as an argument that must be carefully evaluated. An argument has two essential parts: a claim and support. The claim asserts a conclusion -an idea, an opinion, a judgment, or a point of view -- that the writer wants you to accept. The support includes reasons (shared beliefs, assumptions, and values) and evidence (facts, examples, statistics, and authorities) that give readers the basis for accepting the conclusion. When you assess an argument, you are concerned with the process of reasoning as well as its truthfulness. **Comparing and contrasting related readings:** *Exploring likenesses and differences between texts to understand them better.* Many of the authors we read are concerned with the same issues or questions, but approach the way to discuss them in different ways. Fitting a text into an ongoing dialectic helps increase understanding of why an author approached a particular issue or question in the way s/he did.