Advances in Asian Social Science (AASS)
Vol. 2, No. 1, 2012, ISSN 2167-6429

www.worldsciencepublisher.org

Critical Thinking: An Influential Factor in Developing English Reading Comprehension Performance

[1]Reza Vaseghi*, [2]Reza Gholami, [3]Hamed Barjesteh

[1]Department of Language and Humanities Education, Faculty of Educational Studies, University Putra Malaysia

[2]Department of Language and Humanities Education, Faculty of Educational Studies, University Putra Malaysia

[3]Department of ELT, Islamic Azad University, Ayatollah Amoli Branch, Amol, Mazandaran, Iran

Email: r.vaseghi@hotmail.com

Abstract - Considering the substantial roles of EFL/ESL reading comprehension and critical thinking skills, it can be noted that these two variables are required for students to succeed in academic English settings. This paper aims at reviewing the various pedagogical approaches and theories in critical thinking, reading comprehension and critical reading. It also highlights the significance of critical thinking in reading instruction by describing the major aspects of critical thinking that could be most effective to learners' reading comprehension performance. Finally, it examines the related theoretical and empirical studies in line with the goal of this study.

Keywords – Critical Thinking; Reading Comprehension; Critical Reading

1. Introduction

Despite the controversy over a unified definition for CT, there is a general consensus that CT can be influential in almost every discipline and occupation, due to its association with abilities such as problem solving and decision-making. Dewey (1997) stated that reflective thinking is the idea that we must train the mind to think reflectively and that cultivation of the habit of thinking must be a goal of education. Like Dewey, Frank Smith (1990) also believed that thinking is a natural function of the brain. He believed that all individuals are naturally predisposed to thinking creatively and critically and that all that people need are opportunities to maximize that inherent ability. In the absence of critical thinking skills, people can be vulnerable or simply less than their best. Improving students' critical thinking skills can be considered a universal goal of all educational endeavors.

The main benefit of critical thinking is that it encourages active learning by teaching students how to think rather than what to think. This is the remedy to uncritical, unreflective, and thinking and this is what is expected of students in English-speaking academic settings. In order to meet these expectations, students need to be trained in these skills to increase their chances of academic success. Due to the fact that native speakers require special instruction in critical thinking, it logically follows that non-native speakers need it as well. Brown (2004, p. 25) states that in an ideal academic English program, "the objectives of a curriculum are not limited to linguistic factors alone, but also include developing the art of critical thinking."

Reading has also been considered one of the most important skills in EFL/ESL context (Farhadi & Mirhassani, 2001). Hence, the integration of critical thinking and reading could be most effective to learners. To develop students' critical reading ability is a major goal in reading instruction and teachers need to "present students with opportunities to analyse, synthesise and evaluate ideas through cooperative problem solving" (Flynn 1989, p. 664).

2. An Overview of Critical Thinking

The historical roots of critical thinking can be traced back to Socrates and the Socratic Method. The Socratic Method is a philosophy that encourages people to rectify inconsistent and irrational thought processes, including confused meanings, inadequate evidence, contradictory beliefs and empty rhetoric (Paul, Elder & Bartell, 1997). The Socratic Method established the importance of seeking evidence, closely examining reasoning and assumptions, analyzing basic concepts, and tracing out implications. The practice of Socrates was followed by the critical thinking of Plato, who recorded the thoughts of Socrates. Plato was followed by Aristotle, and the Greek skeptics, who emphasized that things are often very different from what they seem to be and that only the trained mind is prepared to see through the way things look to us on the surface to the way they really are beneath the surface (Paul, Elder & Bartell, 1997).

To date, the literature confirms that critical thinking is difficult to define. Over the last several decades, critical

thinking has been discussed and contemplated in educational circles. Many definitions of critical thinking have been offered. The most commonly reported definitions tend to be broad, suggesting that critical thinking is a reasonable, reflective process involving both skills and dispositions (Ennis, 1987). He identified a number of characteristics that are common to critical thinkers. The characteristics include; being; open minded and mindful of alternatives; attempting to be well-informed; able to judge well the credibility of sources; able to identify, conclusions, reasons, and assumptions; and able to judge well the quality of an argument, including its reasons, assumptions and evidence. He also suggested that critical thinkers would be likely to be able to develop and defend a reasonable position; ask clarifying questions; formulate plausible hypotheses; plans experiments well; define terms in a way appropriate for the context and draw conclusions when warranted.

In support of a broader definition, Facione and Facione (2007) define critical thinking as “reflective decision-making and thoughtful problem-solving about what to believe and do” (p. 44). According to Elder and Paul (1994), “Critical thinking is best understood as the ability of thinkers to take charge of their own thinking. This requires that they develop sound criteria and standards for analyzing and assessing their own thinking and routinely use those criteria and standards to improve its quality.”

According to Chafee (1988) critical thinking is "our active, purposeful, and organized efforts to make sense of our world by carefully examining our thinking, and the thinking of others, in order to clarify and improve our understanding" (p.29). According to Halpern (1989) critical thinking is "thinking that is purposeful, reasoned and goal directed. It is the kind of thinking involved, in solving problems, formulating inferences, calculating likelihoods, and making decisions" (p. 5).

Critical thinking can be set apart from problem solving (Hedges, 1991) in that problem solving is a linear process of evaluation, while critical thinking is a comprehensive set of abilities allowing the inquirer to properly facilitate each stage of the linear problem-solving process.

Thus, based on the several definitions above, the researcher believes that critical thinking is a complex process, and it is generally higher order thinking or cognitive processing. A critical thinker is able to solve problems, make decisions, evaluating information and formulating inferences. This means that critical thinking involve the ability to use our minds to achieve our goals.

2.1 Criteria for Critical Thinking

On a general note, critical thinking should meet a couple of criteria. The first criterion is that it must be reasonable as opposed to arbitrary or unreasonable. Critical thinking must rely on the use of valid supporting evidence and appropriate inference from which, in general, the best conclusions are drawn. Secondly, critical thinkers must be reflective. They must consciously evaluate their own and others’ thinking in an effort to improve it. Third, critical thinking is focused thinking. It is thinking with a purpose. That purpose is to make the best decision about what to believe or do. Figure 1 (adopted from Norris & Ennis, 1989) provides a visual representation of the critical thinking process.

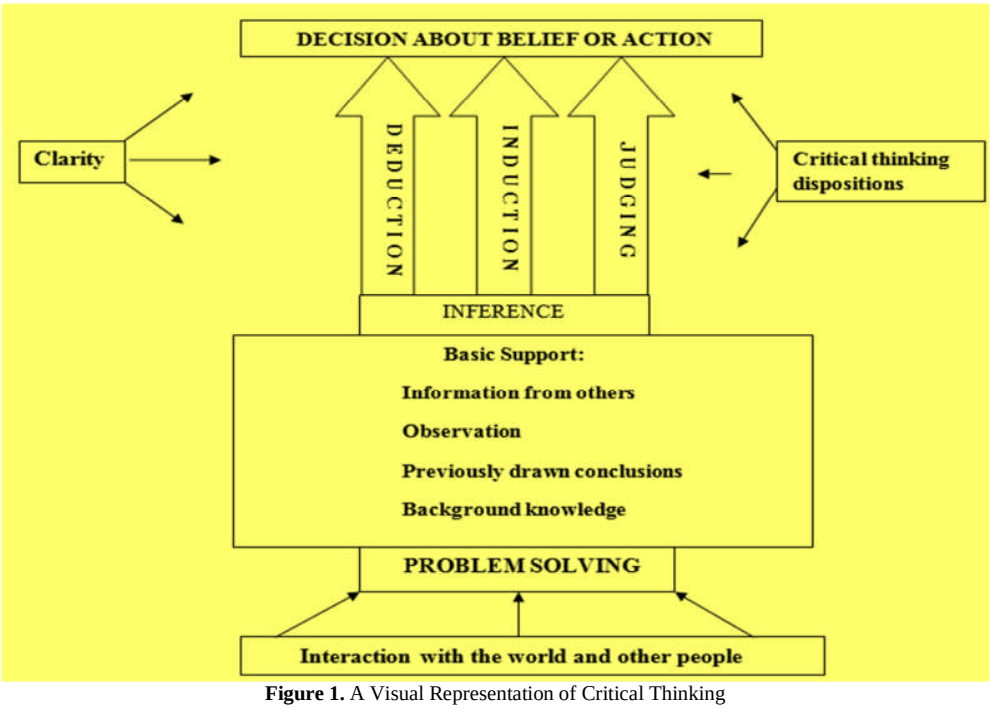

Figure 1. A Visual Representation of Critical Thinking

The model indicates the central criteria (reasonable, reflective, and focused) for our definition of critical thinking. The entire process takes place in a problem solving context; this focuses the thinking. The decision rests on some basic support which is used to reasonably infer some conclusion. The inference link is very important for critical thinking to proceed; a person needs both the skills of the "reason assessment" component and the dispositions of the "critical spirit" component. Reflection acts as a quality check throughout the process. So far, we have discussed in very general terms, some specific details should now be useful.

2.2 Critical Thinking Skills

Critical thinking skills are essentials for higher order problem-solving thinking. The lists of critical thinking skills, characteristics, and aspects identified by experts to indicate they type of thinking and approach to life.

According to Ghazali Mustapha (1998), critical thinking skills can be related to the ability to use the mind to assess and judge the rationality of an idea, maturity of thought, to be able to identify good from bad ideas and to be able to make rational and right decision based on evidence available.

Facione's study (1990) concluded that at the very core of critical thinking are interpretation, analysis, evaluation, inference, explanation, and self- regulation. Inference is comprehending and expressing meaning about a wide variety of experiences, beliefs, procedures, rules, etc. Analysis was found to be about identifying the relationship between statements, questions, concepts or descriptions to express beliefs, judgments or reasons. The experts thought that evaluation was about assessing credibility of statements and representations of others as well as assessing the logical strength of statements, descriptions or questions. Inference was found to be the ability to draw reasonable conclusions and/or hypotheses based on facts, judgments, beliefs, principles, concepts or other forms of representation.

In 1933, Dewey contended that three attitudes were necessary to constitute reflective action (critical thinking); open mindedness, responsibility, and wholeheartedness. An individual was open-minded if they listened to more than one side of any issue. Responsibility referred to carefully evaluating the consequences of a potential action, and wholeheartedness demanded that critical thinkers be intentional in their search for the truth (Cheak, 1999).

2.3 Critical Thinking Dispositions

To Ennis (1986), critical thinking results from the interaction of a set of dispositions towards critical thinking, with a set of abilities for critical thinking. The critical thinking dispositions suggested by Ennis include:

1. seeking a clear statement of the question
2. seeking reason
3. trying to well-informed, and
4. trying to remain relevant to the main point.

Critical thinking is dependent upon a person's disposition to use it (Paul, 1992). Disposition to think critically can be defined as consistent willingness, motivation, inclination and an intention to be engaged in critical thinking while reflecting on significant issues, making decisions and solving problems (Facione et al. 1995, Facione et al. 1997). According to Zoller, Ben-Chaim and Ron (2000), a student's disposition to think critically is a necessary precondition for critical thinking and greatly affects critical thinking capability.

Experts continue to agree that critical thinking includes the dimensions of skill and disposition (Dewey 1933; Norris and Ennis 1989). In 1990, Facione and his group of experts identified a set of specific skills and sub-skills for the skill dimension and a specific set of attitudes for the disposition dimension (Facione 1990). Facione (2001) developed the CCTDI (California Critical Thinking Disposition Inventory), in order to measure these skills, sub-skills and attitudes. The constructs used are Truth-Seeking, Open- mindedness, Analyticity, Systematicity, Self-confidence, Inquisitiveness, and Maturity (Facione, Facione et al. 2001).

2.4 Critical thinking and Bloom's Taxonomy

Critical thinking has been classified different by different learning theorists. One of the most influential of the critical thinking models is Bloom's Taxonomy. One of the renowned theory that has been viewed as representative of the educational perspective of critical thinking theory is Bloom's Taxonomy (Piaw, 2004).

According to Bloom, there are six levels in a successive hierarchy: knowledge, comprehension, application, analysis, synthesis, and evaluation. While the first four levels are understood to be a "true hierarchy", it is possible that levels five and six are equally difficult (Huitt, 1998, p. 2). Critical thinking is likely part of level six, evaluation, as it is this level that "focuses on making an assessment or judgment based on an analysis of a statement or proposition" (Huitt, 1998, p. 2).

Bloom's theory has been widely accepted and taught in thinking skill courses in all fields of education programmes. Critical thinking pedagogy always refers to bloom's theory, giving learners practice in some of the lower levels of critical thinking skills before moving them on to the more difficult tasks of the higher thinking processes (cited in Piaw, 2004, p.80).

2.5 Critical Thinking in ESL/EFL Pedagogy

With regard to critical thinking and language learning, Seferoglu & Akbtyik (2006) assert that critical thinking is one of the main objectives of the contemporary curricula' (p. 199) although there is no general agreement as the best way of teaching it in the foreign language classroom. The need for learning and applying ways of developing critical thinking and reading skills is growing in teacher education programs. In this regard, Scriven & Paul (2006) as cited in Yagcioglu (2009, p. 289) state that:

> *One of the most important abilities that a thinker can have is the ability to monitor and assess his or her own thinking while processing the thinking of others. In reading, the reflective mind monitors how it is reading while it is reading. The foundation for this ability is the knowledge of how the mind operates when reading well.*

As discussed earlier, to date, various approaches to teaching, critical thinking have been presented more broadly. As before mentioned, Ennis (1987) suggests that "critical thinking is reasonable thinking that is focused on deciding what to believe or do". On the other hand, the National Council for Teachers of English defines critical it as a process which emphasizes on an attitude of suspended judgment, and which incorporates logical inquiry and problem solving and leads to an evaluative decision or action. Additionally, the ERIC Clearing House on Reading and Communication Skills defines it as a way to reasoning that combines a demand for adequate support for one's beliefs with an unwillingness to be persuaded unless the support is forthcoming.

Benesch (1993) and some other teachers of English as a second language students have defined critical thinking as democratic learning process examining power relations and social inequities. According to Benesch, in classroom that feature critical thinking, students are encouraged to participate actively, raising issues of concern in their daily lives such as work, school, housing, and marriage as topics for scrutiny. She encourages ESL teachers to ask students to investigate their experience and its relationship to the language, politics, and the history of the new culture.

The important advantage of critical thinking is that it encourages active learning by teaching students how to think rather than what to think. This is the remedy to uncritical, unreflective, and thinking and this is what is expected of students in English-speaking academic settings. In order to meet these expectations, students need to be trained in these skills to increase their chances of academic success. It is incorrect to assume that students will figure out how to do this on their own.

Due to the fact that native speakers require special instruction in critical thinking, it logically follows that non-native speakers need it as well. In fact, their need is even greater because critical thinking strategies in English are possibly culturally alien to them. According to Atkinson (1997, p. 72), "not only is critical thinking a culturally based concept, but many cultures endorse modes of thought and education that almost diametrically oppose it." For Atkinson, this is reason to be skeptical of the enterprise of teaching critical. However, Richard Day (2003) observes: "I have found students from Taiwan, China, Korea, and Japan receptive to instruction in critical thinking. Not only are they receptive, they have no difficulty in engaging in the process." The experiences of Krieger (2005), Fukuda (2003) and Davidson (1995) all support this view.

Critical thinking skills are required for students to succeed in academic English settings, despite the warning of Atkinson (1997) that it may be an "exclusive" social practice which may not transfer into other subject areas. The fact that critical thinking skills may be unfamiliar, difficult and culturally challenging for students is not a substantial reason to abstain from teaching them. On the contrary, that is precisely why they require focused attention, and it is the teacher's responsibility to help non-native speakers overcome this challenge.

In general, it can be said that critical thinking plays a central role in academic instruction because it is what students need to succeed both in an academic environment and real-life situations. Hence, it seems necessary to provide explicit training in the specific critical thinking skills which students are expected to demonstrate proficiency in.

3. Reading Comprehension

As many concepts in applied linguistics, the "reading skill" does not have an agreed-upon or straightforward definition. Different scholars have offered different perspectives and definitions, some of which are briefly mentioned here.

Reading is sometimes erroneously called a passive skill because the reader does not produce the message in the same sense as a speaker or writer does. However, it is generally argued upon by the cognitivists that reading is not a passive skill, and the traditional view about reading is also sharply rejected by many scholars. In this respect, reading comprehension is a complex cognitive ability requiring the capacity to integrate text information with the prior knowledge of the reader and resulting in the elaboration of mental representation (Anderson, & Pearson, 1984; Afflerbach, 1990; Meneghetti, Carretti, & De Beni, 2006).

Urquhart and Weir (1998) stated that "reading is the process of receiving and interpreting information encoded in language form via print" (cited in Carrell & Grabe, 2002, p. 234). Carrell and Grabe (2002) declare that, this definition does not reveal all the components which are required during the cognitive process of reading. They state that a definition of reading requires phonological, morphological, syntactic, semantic, and discourse level. The reader should also be engaged in goal setting, text-summary building, interpretive elaborating from knowledge

resources, monitoring and assessment of goal achievement, making various adjustments to enhance comprehension, and making repairs to comprehension processing as needed.

3.1 Importance of Reading Comprehension

Alderson and Urquhart (1984) states that in many parts of the world, reading knowledge of a foreign language is often important in academic studies, professional success, and personal development. This is specifically true of English because much professional, technical, and scientific literature is published in English today. Emphasizing the importance of reading, Farhady (1998) argues that since the language of science and technology is often English, reading in English has received priority among other objectives of English language teaching. He reasons that the main goal of teaching English in many countries of the world, especially within the educational program, is set to improve the reading ability of the students in order to enable them to extract incoming information from the English sources in their field of study. Carrel (1988) claims that, reading is the main reason why foreign students learn English.

In the same line, Richards and Renandya (2002) assume that there are a numbers of reasons for the fact that reading receives a special focus in many second or foreign language situation. First, many foreign language students often have reading as one of their most important goal. They want to be able to read for information and pleasure, for their career, and for their study purposes. In fact, in most EFL/ESL situations, the ability to read in a foreign language is the most important goal of language learners. Second, written texts serve various pedagogical purposes. Extensive exposure to linguistically comprehensible written texts can improve the process of language acquisition. Good reading texts also provide good models for writing, and provide opportunities to study language (e.g., vocabulary, grammar, and idioms). Reading, then, is a skill which is highly valued by students and teachers alike.

3.2 Types of Reading

It is essential that reading teachers to decide what approach to reading they will use to achieve their desired goal. Approach “refers to theories about the nature of language and language learning that serve as the source of practices and principles in language teaching” (Richards & Rodgers, 2001, p.20).

There is a distinction between extensive reading and intensive reading. Intensive reading is related to further progress in language learning under the teacher’s guidance. Extensive reading develops at the student’s own pace according to individual ability.

An extensive approach to teaching reading is based on the belief that when students read for general comprehension large quantities of text of their own choosing, their ability to read will consequently improve. Brown (2001) asserts that extensive reading is carried out to achieve a general understanding of a longer text. Most extensive reading is performed outside the classroom and it is mainly for the purpose of pleasure.

Extensive reading defers from intensive reading. In intensive reading, students read short texts with close guidance from the teacher. The aim of intensive reading is to help students obtain detailed meaning from the text, to develop reading skill and to enhance vocabulary and grammar knowledge (Renandya & Jacobs, 2002).similarly, Brown asserts that, intensive reading is usually a classroom-oriented activity and a content-related approach, in which students’ attention is on linguistic or semantic details of the passage.

According to Chastain (1988) readers read what they need or want to read in the real world based on their inclinations, they spend a great deal of time scanning reading material or they may also skim the material if they are pressed for time. Scanning is a type of speed reading technique which is used when the reader wants to locate a particular piece of information without necessarily understanding the rest of a text or passage. In Scanning, the reader goes through the lines and pages quickly in order to find the specific information he is searching for. Skimming is a type or rapid reading which is used when the reader wants to get the main idea or ideas from a passage. Ability to determine the main idea of a paragraph is one of the most useful reading skills one has to develop.

In addition, Rivers (1981) makes a distinction between observational reading and searching reading. In observational reading, the reader goes through the matter and observes every word (or almost every word) and waits to see what ideas arise. This case is that of a reader learning to read. In searching reading, the reader skims over the surface of printed matter definitely searching for certain required items.

3.3 Models of Reading

The varying models of reading include Bottom-up models, Top-down models, and Interactive models. In the case of reading, as with other cognitive processes, psychologists have distinguished between two kinds of processing. Bottom-up processes are those that take in stimuli from the outside world -- letters and words, for reading -- and deal with that information with little recourse to higher-level knowledge. On the other hand, top-down processes, the comprehension of information is guided by an individual’s prior knowledge and expectations. Models of 1970’s tended to be linear information processing models, whereas later models tended to be interactive "with opportunities for feedback loops from components in the later stages to influence components in the earlier stages”

(Samuel & Kamil, 1988, p. 25). Interactive approaches refers to the reader (reconstructs the text information based in part on the knowledge drawn from the text and in part from the prior knowledge available to the reader (Barnett, 1989; Carrell & Eisterhold, 1983).

3.4 Schematic View to Reading

In order to make sense of any text we need to have some background knowledge of that text. Indeed, we understand something only when we relate it to something we already know. And we can comprehend something only when we can relate new experience to an existing knowledge.

The idea of schemata, as it is used today, was first introduced by Bartlett (1932). According to Bartlett, the term schema refers to "an active organization of past reactions and past experiences"(cited in Anderson & Pearson, 1988, p.39). He believed that individuals do not build the whole from details, but they first get a general impression of the whole and then construct the possible detail based on their impression.

According to schemata theory, comprehending a text is an interactive process between the reader's background, the text, and the knowledge of the world. Comprehending words, sentences, and entire texts involves not only one's linguistic knowledge but also one's knowledge of the world (Carrel & Eisterhold, 1988).

In sum, the fundamental assumption of schema theory is that the process of comprehending a text is an interactive one between the listener or reader's background knowledge of content and structure, and text itself. Comprehension, then, involves much more than just relying on one's linguistic competence. In fact, one's linguistic competence is just one part of one's total background knowledge.

3.5 Strategies of Comprehension

Wide range of strategies have found that readers to employ in reading, especially while they are engaged in comprehending text. According to National Reading Panel (2000), Comprehension Strategies are Modeled, Taught, and Utilized Before 1970, comprehension was considered to be mainly a set of "discrete skills for students to practice and master". In the case of findings, researchers were interested in studying this area further to determine which comprehension strategies, if any, would actually promote student learning. The present study focused on the cognitive and metacognitive strategies, critical comprehension strategies.

3.5.1 Cognitive and Metacognitive Strategies

Research on reading comprehension has taken a number of trends. One of these trends is cognitive strategy training, which focuses on inculcating in students a repertoire of reading strategies deployable in various reading situations. Training students in such categories of cognitive reading strategies as rehearsal, organization, elaboration, inferencing, critical reading, and creative reading was seen as effective in enhancing reading comprehension at various processing levels (Neath, 1998; Rivers, 2001, Wolters et al., 2003).

Cognitive strategies involve direct 'interaction' with the text and contribute to facilitating comprehension, operate directly on oncoming information, manipulating it in ways that enhance learning. Under the heading cognitive strategies, can be classified the following ones: 'underlining', 'using titles', 'using dictionary', 'writing down', 'guessing from the context', 'imagery' 'activating prior knowledge', 'summarizing', 'using linguistic clues', 'using text markers', 'skipping the difficult parts' and 'repeating words or phrases'. Metacognitive strategies are higher order executive tactics that entail planning for learning, monitoring, identifying and remediating causes of comprehension failure or evaluating the success of a learning activity; that is, the strategies of 'self-planning', 'self-monitoring', 'self-regulating', 'self-questioning' and 'self-reflecting' (Pressley & Afflerbach, 1995).

In sum, Knowledge of metacognitive learning strategies is essential if readers are to effectively regulate their strategy use while reading.

3.5.2 Critical Comprehension Strategies

In a study conducted on analyzing the practices of effective first grade classrooms throughout the country, the explicit teaching of comprehension strategies was found to be critical (Allington & Pressley, 2001). The strategies that make the biggest difference in regard to reading achievement include: higher order thinking skills, activating prior knowledge, relating ideas to text, questioning techniques, scaffolding, exchange of ideas, thinking aloud, and conversations about reading.

3.6 Critical Reading

Of the four English language skills, reading is probably used most by EFL and ESL students in the academic context (Farhadi & Mirhassani, 2001). In this regard, Kern (1989, p. 137) asserts that "Students need to have efficient reading skills and strategies to comprehend a large mass of materials both inside and outside the classroom". Having critical literacy stance for developing students' abilities when reading texts is an important aspect of literacy instruction (Stevens & Bean, 2007). When students begin to foster their critical literacy abilities, they can learn how to read texts by taking different stances and considering what the texts communicate from different points of view (Behrman, 2006).

Teaching students to think while reading is referred to as critical reading. Critical reading encourages the readers

to evaluate, predict, and organize ideas which support value judgment, draw inferences, and arrive at conclusion based on evidence.

Shor (1992) defined critical literacy as the "analytic habits of thinking, reading, writing, speaking, or discussing which go beneath surface impressions, traditional myths, mere opinions, and routine cliches; understanding the social contexts and consequences of any subject matter; discovering the deep meaning of any event, text, technique, process, object statement, image or situation; applying that meaning to your own context" (p. 32). According to the synthesises elements of definitions which has been defined by Paul (1993), Flynn (1989), Cheek, Flippo and Lindsey (1989), Hickey (1988) and Rubin (1982), one aspect of critical literacy is critical reading. The synthesis from the definitions is followed by a discussion of existing theories and strategies for teaching critical reading. The strategies for teaching critical reading proposed by Singh, Chirgwin and Elliott (1997) and Karlin (1980) are discussed together with the possibility of using each strategy in teaching critical reading in English as a Foreign Language (EFL) classes (cited in Surjosuseno & Watts, 1999).

According to Paul (1993) Critical reading is an "active, intellectually engaged process in which the reader participates in an inner dialogue with the writer" (p. 461). Paul suggests that, when people read uncritically, they miss some parts of the author's intended message and distort other parts. A critical reader, on the other hand, is aware of the process by which he or she considers the writer's point of view, a view which may be different from their own. In sum, Paul (1993) believes that critical reading is a process by which readers relate the author's ideas or information to their own experiences or problems using a process which includes analysis, synthesis and evaluation.

Flynn (1989) claims that to develop students' critical reading ability is a major goal in reading instruction and that a teacher needs to 'present students with opportunities to analyse, synthesise and evaluate ideas through cooperative problem solving' (p. 664). Therefore, both Flynn (1989) and Paul (1993) focus on the cognitive processes of analysis, synthesis and evaluation involved in critical reading.

According to Rubin (1982) asserts that: "Critical reading is at a higher level of reading than literal interpretation and comprehension as it involves evaluation, the making of a personal judgment on the accuracy, value and truthfulness of what is read"(p. 208).

4. Critical Thinking and Critical Reading

In more recent years, researchers like (Simpson, l986; Browning, l986; Tierney, Sotter, O'Flahavan, & McGinley, l989; Kurt & Farris, l990; Thistlethwaite, l990) have also become interested in the reading-writing connection as means to develop students' critical thinking skills. Following these ideas, there has been a strong effort towards developing effective techniques and model lessons to foster critical reading and higher level thinking skills (cited in Tagliber, 2003).

As a matter of fact, critical thinking is a more general term used in different areas of human activity, one of them being reading (Collins & Mangieri, 1992; Smith, 1990; Manlove, 1989). Beck and Dole (1992) stated that, "although thinking… is related to what has been traditionally called reading comprehension, it is more than that" (p.3). Apparently, according to Beck and Dole, critical thinking cannot be equated with what has been traditionally called reading, involving no more than the literal comprehension of written words. However, it may have a lot to do with a view of reading that is more accepted today and which implies going beyond the surface words in the text. As such, the reader has to reflect, to analyze, to evaluate, and thus to think critically, to read critically (cited in Tomitch, 2000).

Following the same idea, Thistlethwaite (1990) points out, critical thinking skills frequently listed in textbooks for teaching critical thinking are similar to, or perhaps the same as those listed in reading texts described as critical reading skills (p.587).

Commeyras (1990) states: "The claim that critical thinking is closely related to reading comprehension is similar to the view that reasoning is an integral part of reading". She also states that "Critical thinking, which involves reasoning, is the process the reader uses to determine which interpretations are consistent with textual evidence and background knowledge"(p.201). This view is also supported by Colins, Brown, and Larkin (1980). Newton's (1985) view is beyond than that. She states: "To read critically is to think critically. Based on Miller's (1981) findings there is a positive relationship between gains in critical thinking achievement and gains in reading proficiency achievement.

5. Related Empirical Studies on Critical Thinking and Reading

A literature search was conducted to identify and obtain as much current information and recent empirical studies on the area of critical thinking and reading comprehension as possible as follows.

In a more recently study was conducted to find out the effects of critical thinking strategy training on male/female EFL learners' reading comprehension (Fahim et al, 2012). This study used taxonomy of CT skills drawn up by Facione (1990) to probe the effect of critical thinking strategies training on reading comprehension of Iranian EFL students. In this study data were collected from 240 male and female Iranian EFL students were selected and

screened into two proficiency levels. The results suggested CT skills significantly affected EFL learners' reading comprehension performance. Overall, the findings provide empirical support for the facilitative effect of critical thinking strategy training on reading comprehension performance of EFL learners.

Another recent study was conducted by (Yagcioglu, 2009) on compatibility between teaching of critical thinking and task based learning approaches in teaching reading courses in the Modern Languages Department at Dokuz at a local University in Turkey. This study was employed by 45 students which are given tasks before reading their passages and course book activities which are done during the course. It was found that that critical thinking and task based learning helps students to improve our language skills.

A study was investigated on Taking Reading beyond Comprehension Level by Developing Critical Thinking in Classroom (Abushihab, 2008). The study was employed by choosing a text which included stages to foster process of critical thinking. He concluded that the reader has to develop a set of strategies with every text he reads in order to understand the intentions of the writer. Critical reading is highly demanding on the part of the teacher and learners since they attempt to take reading beyond comprehension level.

A study was analyzed Enhancing ESL Teacher Trainees' Critical Thinking Skills through Scaffolding (Rafik-Galea & Nair 2007). In this study data were collected from 16 subjects for the duration of 8 dyads. This study was used one local short story and the transcripts of the dyads' interactions. They concluded that scaffolding strategies provides the necessary platform to enhance ESL teacher trainees critical thinking skills in comprehending literary texts.

A study was investigated by (Gray, 2006) on Improving Critical Reading and Critical Thinking Skills through pedagogy style. This study was conducted for the duration of fourteen weeks and with 20 students in a Critical Reading class. He concluded that pedagogical methodologies which advance hands-on and metacognitve critical thinking pedagogy on a consistent basis, can positively impact the range, quantity and quality of student critical reading and critical thinking skills performances. His result of this class student revealed that Learning log entries were ability to define and more readily identify behaviors they can perform to demonstrate ability to analyze, synthesize and evaluate written material, auditory input or life events.

Loni Kreis Taglieber discusses the concepts of critical reading and critical thinking as they are used in the field of reading and writing today, bringing us a state of the art which can be of great value to both researchers and teachers involved in the area. The author stresses the importance of higher-order thinking skills in all areas of human activity and contends that the university has an important role in terms of providing individuals with the appropriate skills to help them "act independently and autonomously" (cited in Tomitch, 2000).

Sara Oliveira's paper is concerned with the type of questions found in Brazilian-Portuguese reading textbooks. She maintains that question asking is an important way to foster critical thinking and thus materials writers and teachers should be worried about helping students to ask the "important, relevant" questions which will stimulate higher-order thinking skills (cited in Tomitch, 2000).

6. Conclusion

This paper examined various approaches and theories in critical thinking and reading comprehension. It is evident that critical thinking is necessary in all aspects of daily living. One of the important educational goals is that all students use critical thinking in their educational pursuits. The EFL/ESL teachers are attempting to align themselves with those educational goals; it is working to insure that learners utilize critical thinking in performance of their courses, especially in reading course. Many strategies have been developed to help teach students to think critically and to read critically, but the literature review revealed that there is no single, widely accepted definition for critical thinking. In fact, critical thinking is complex and difficult to define. The obvious problem in teaching critical thinking is that teachers themselves do not fully understand the concept of critical thinking. Therefore, they are unable to effectively teach it.

In this study based on empirical studies presented, there is strong relationship between critical thinking and reading comprehension. It can be deduced that critical thinking should be taught to students, and that it is, in fact, the responsibility of the teacher to develop students who will have the ability to read and think critically. Therefore, based on definitions and studies of critical thinking and of critical reading, it can be perceived that there is close similarity between critical reading and critical thinking.

References

Abushihab, I. (2008). Taking Reading beyond Comprehension Level by Developing Critical Thinking in Classroom. *EKEV AKADEMİ DERGİSİ Yıl: 12 Sayı: 37 (Güz 2008).*

Aebersold, J. A., & Field, M. L. (1997). *From reader to reading teacher*: Issues and strategies for second language classroom. Cambridge: Cambridge University Press.

Afflerbach, P. (1990). The influence of prior knowledge and text genre on readers' prediction strategies. *Journal of Reading Behaviour*, *22*, 131-148.

Anderson, R. C., & Pearson, D. (1984). A schema-thematic view of basic processes in reading comprehension. In P. D. Pearson, R. Barr, M. L. Kamil, & P. Mosenthals (Eds.), *Handbook of Reading Research* (pp. 255 -291). New York: Longman.

Anderson, R. C., & Pearson, P. D. (1988). A schema-theoretic view of basic processes in reading comprehension. In P. L. Carrell, J. Devine

& D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 37-55). Cambridge: Cambridge University Press.

Atkinson, D. 1997. A critical approach to critical thinking in TESOL. *TESOL Quarterly*. 31(1): 71-94

Behrman, E.H. (2006). Teaching about language, power, and text: A review of classroom practices that support critical literacy. Journal of Adolescent & Adult Literacy, 49(6), 490–498. doi:10.1598/JAAL.49.6.4

Benesch, S. (1993). Critical thinking: Alearning process for democracy. TESOL Quarterly 27 (3), 545-548.

Brown, H. D. (2001). *Teaching by principles*: An interactive approach to language pedagogy (2nd ed.). Englewood Cliffs, NJ: Prentice Hall Regents.

Brown, H. D. (2004). Some practical thoughts about student-sensitive critical pedagogy. *The Language Teacher*. 28 (7): 23-27.

Carrell, P. L. (1988 a). Some causes of text-boundedness and schema interference in ESL reading. ". In P. L. Carrell, J. Devine & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 101-113). Cambridge: Cambridge University Press.

Carrell, P. L., & Carson, J. G. (1997). Extensive and intensive reading in an EAP setting. *English for Specific Purposes*, 16, 47-60.

Carrell, P. L., & Eisterhold, J. C. (1988). Schema theory and ESL reading pedagogy. In P. L. Carrell, J. Devine & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 73-92). Cambridge: Cambridge University Press.

Carrell, P. L., & Grabe, W. (2002). Reading. In N.Schmitt (Ed.), *An introduction to applied linguistics* (pp. 231-250). London: Arnold.

Chaffee, J. (1988). *Thinking critically*. Boston, MA, Houghton Mifflin.

Chastain, k. (1988). *Developing second-language skills*: Theory and practice (3rd ed.). Orlando, Florida: Harcourt Brace Jovanovich, Inc.

Cheak, M., J. (1999). The development and field testing of an instrument designed to measure critical thinking in environmental education. Carbondale, IL, Marie Jaegle Cheak.

Chua, Y. P. (2004). Creative and Critical Thinking Styles. University Putra Malaysiya, Serdang.

Davidson, B.W. (1998). A case for critical thinking in the English language classroom, *Tesol Quarterly*, 32 (1), 119-123.

Day, R. 2003. Teaching critical thinking and discussion. *The Language Teacher Online*. 27 (7).

Dewey, J. (1997). How we think. Mineola, NY: Dover Publications Inc.

Ennis, R. H. (2003).Critical thinking assessment. In Fasko, Dan (Ed.), *Critical thinking and reasoning: Current theories, research, and practice*. Cresskill, NJ: Hampton.

Eskey, D. E., & Grabe, W. (1988). Interactive models for second language reading: perspective on instruction. ". In P. L. Carrell, J. Devine & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 223-238). Cambridge: Cambridge University Press.

Facione, P. A., N. Facione, et al. (2001). *California Critical Thinking Disposition Inventory: CCTDI Inventory Manual*. Millbrae, CA, California Academic Press.

Facione, P.A. (2007). Critical thinking: What it is and why it counts. *Insight Assessment.* Milbrae, CA: The California Academic Press. Retrieved July 20, 2007 from http://www.insightassessment.com/articles.html

Facione, P.A., & Facione, N.C. (2007). Talking critical thinking. *Change, 39*(2), 38-45. Retrieved July 15, 2007 from Academic Search Premier.

Fahim, M., Barjesteh, H., Vaseghi, R. (2012). Effects of Critical Thinking Strategy Training on Male/Female EFL Learners' Reading Comprehension. *English Language Teaching, 5(1), 140-145*

Farhady, H. (1998). Constructing reading comprehension tests. *Roshd Foreign Language Teaching Journal*, 13(49), 37-48).

Farhady, H. & Mirhassani, A. 2001. *Reading through interaction*. Tehran: Zabankadeh.

Flynn, L. (1989). Developing critical reading skills through cooperative problem solving. *The Reading Teacher*, 42(9), 664-668.

Ghazali Mustapha. (1998). *An Investigation into Teachers' Questions and Tasks to Develop Reading Comprehension – The Application of the COGAFF Taxonomy in Developing Critical Thinking in Malaysia*. Unpublished Ph.D Dissertation, University of Leicester, U.K. (http: ethos.bl.uk.)

Gorjian, B., Pazhakh, A., Parang, K. (2012). An Investigation on the Effect of Critical Thinking (CT) Instructions on Iranian EFL Learners'Descriptive Writing: A Case of Gender Study. *Advances in Asian Social Science.1(1), 114-118*

Grabe, William (1991). 'Current Developments in Second Language Reading Research.' TESOL Quarterly, 25(3): 375-397.

Gray, R. J. (2006). Improving Critical Reading and Critical Thinking Skills: What is Effective Pedagogy in a College LearningEnvironment?http://www.mcli.dist.maricopa.edu/mil/fcontent/2005-2006/gray_rpt.pdf

Hedges, L. E. (1991). *Helping students develop thinking skills through the problem-solving approach to teaching*. The Ohio State University, Dr. Lowell Hedges.

Huitt, W. (1998). Critical thinking: An overview. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved [date] from, http://www.edpsycinteractive.org/topics/cogsys/critthnk.html. [Revision of paper presented at the Critical Thinking Conference sponsored by Gordon College, Barnesville, GA, March, 1993.]

Miller, S.L. (1981). The impact of a program of critical thinking on reading comprehension remediation and critical thinking of middle and high school students. Unpublished PhD. Dissertation .United states International University.

National Institute of Child Health and Human Development (2000). *Report of the national reading panel: Teaching children to read.* Bethesda, MD: National Institute of Child Health and Human Development. Also available on-line: http://www.nichd.nih.gov/ publications/nrp/report .htm

Neath, I. (1998). *Human memory: An introduction to research, data, and theory*. California: Brooks – Cole Publishing.

Norris, S. P., Ennis, R. H. (1989). Evaluating critical thinking. *Teaching thinking*. R. J. S. D. N. Perkins. Pacific Grove, CA, Midwest Publications.

Paul, R., & Elder, L. (2005). *A guide for educators to critical thinking competency standards: Standards, principles, performance indicators, and outcomes with a critical thinking master rubric*. Dillon Beach, CA: The Foundation for Critical Thinking.

Paul, R. Elder, L. & Bartell, E. (1997) California Teacher Preparation for Instruction in Critical Thinking: Research Findings and Policy Recommendations: *State of California, California Commission on Teacher Credentialing, Foundation for Critical Thinking.* Sacramento, CA.

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

Rafik-Galea, S., & Nair. B. (2007). Enhancing ESL Teacher Trainees' Critical Thinking Skills through Scaffolding. Pan-Pacific Association of Applied Linguistics 11(1), 99-113

Renandya, W. A., & Jacobs, G. M. (2002). Extensive reading: Why aren't we all doing it? In J. C. Richards & W. A. Renandya (Eds.), *Methodology in language teaching*: An anthology of current practice (pp. 295-302). Cambridge: Cambridge University Press.

Renandya, W. A., Rajan, B. R. S., & Jacobs, G. M. (1999). Extensive reading with adult learners of English as a second language. *RELC Journal*, 30, 1, 39-61.

Richards, J. C. & Renandya, W. A. (eds.). (2002). *Methodology in language teaching*: An anthology of current practice. Cambridge: Cambridge University Press.

Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching* (2nd ed.). Cambridge: Cambridge University Press.

Rivers, W. M. (1981). *Teaching foreign language skills* (2nd Ed.).Chicago: The University of Chicago Press.

Rivers, W. (2001). Autonomy at all costs: An ethnography of metacognitive self-assessment and self-management among experienced language learners. ***Modern Language Journal, 85*** (2), 279-*290.*

Samuel, S. J., & Kamil, M. L. (1988). Models of the reading process. ". In P. L. Carrell, J.Devine & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 22-36). Cambridge: Cambridge University Press.

Seferoglu. S- & Akbiyik, C. (2006). Ele^tirel dü§ünme ve ögretimi. *Hacettepe Universitesi Egitim FakUltesi Dergisi. 30.* 193

Stevens, L.P., & Bean, T.W. (2007). *Critical literacy: Context, research, and practice in the K–12 classroom*. Thousand Oaks, CA: Sage.
Norris, S. P. and Ennis, R. H. (1989). *Evaluating critical thinking*. Pacific Grove, CA: Midwest Publications.
Surjosuseno, T. T. and Watts, V. (1999). Using Bloom's Taxonomy to teach critical reading in English as a foreign language classes. *Queensland Journal of Educational Research*, 15(2), 227-244. http://education.curtin.edu.au/iier/qjer/qjer15/surjosuseno.html
Tagliber.L.K. (2003). Critical Reading and Critical Thinking. The State of the Art. Journal Ilha do Desterro (p. 142-157).
Tomitch. L.M. B (2000). Critical Reading. Journal Ilha do Desterro (p. 7-14).
Veenman, & Van Hout-Wolters, B., H. A. M., & Afflerbach, P. (2006). Metacognition and learning: conceptual and methodological considerations. *Metacognition Learning*, *1*, 3–14.
Wolters, C. A., Pintrich P. R. & Karabenick, S. A. (2003). ***Assessing academic self-regulated learning***. Paper presented at the Conference on Indicators of Positive Development: Definitions, Measures, and Prospective Validity. Sponsored by Child Trends, National Institutes of Health, USA.
Zoller, U., Ben-Chaim, D. and Ron, S. (2000). "The disposition toward critical thinking of high school and university science students: An inter- intra Israeli-Italian study." *International Journal of Science Education* **22**(6): 571-582.
Yagcioglu, O., (2009). Critical thinking and task based learning in teaching reading courses. EKEV AKADEMİ DERGİSİ Yıl: 13 Sayı: 38 (Kış 2009), 287- 297.

Vitae

 **Reza Vaseghi** is currently pursuing his Ph.D. degree in TESL at UPM. He taught English at language schools in Iran. He also worked as a TA at Maziyar University and lectured at Islamic Azad University of Amol. He serves as an editor and a reviewer for various journals and conferences. He has also published journal and conference papers and presented at national and international levels.

 I am a PhD Candidate TESL at Putra University in Malaysia (UPM). I serve as a designated reviewer for various journals and conferences and have published papers in recognized journals, too. I am the Director of the Scientific English Teaching Committee of the Iranian Embassy in Malaysia. As a teacher, I have been working avidly since 2000 both in EFL contexts and ESL contexts. I have also attended various international conferences and presented papers on different ELT issues.

 **Hamed Barjesteh** is a Ph.D. student in research and science campus in Islamic Azad University. He has worked as an EFL teacher and teacher educator in Amol, Iran. Currently, he is the head of English department and a faculty member in Islamic Azad University, Ayatollah Amoli Branch. He has also published journal and conference papers and presented at national and international levels.