

THE NEED FOR TEACHING CRITICAL THINKING TO STUDENTS OF ENGLISH: A RATIONALE

Mahmoud Al-Maqtri, Ph.D

*Associate Professor of English, Faculty of Arts, University of Ibb
mmaktri@yahoo.com*

Abstract:

The purpose of this paper is to offer a rationale for the need of introducing critical thinking education to Yemeni [and Arab] schools and colleges. The paper began with the assumption that education in the Arab World [Yemen included] is still dominantly traditional. It does not prepare learners to cope with increasing demands and challenges of the modern age, which requires that an individual be well equipped with different mental, personal and social skills among which the critical thinking skills. Then the paper proceeded to give some background of the concept and its history. Next, the paper offered justification (a rationale) for the idea behind this proposition. The paper concluded by presenting a rough outline for a course in critical thinking that can be adopted to be taught to students at college level precisely for the students of the English Department as a trial.

Critical thinking is the buzz word of the day in the educational circles. It is one of the persistent issues in education particularly in the developed world in countries such as America, Canada, Australia, Japan and some other developing countries like Malaysia and Venezuela. Scholars and educationists in these countries have observed that their students are not able to think critically and their learning is more or less a kind of rote learning. The same is said, and we are saying about education in the Arab and Muslim world, and Yemen is no exception. Education has continued to be unproductive in schools and universities. Of course, there is more than one cause of this unhappy situation. But for the purpose of the argument of this research a major reason behind that is the lack of the ability to reason critically and think creatively on the part of the learners due to the dominance of rote, passive and superficial type of learning which in turn is a result of not being trained in critical and creative thinking skills.

But what is the connection between learning and thinking? Why must we argue that bad learning is a result of lacking training in critical thinking? The answer to this question is that nowadays we almost always talk about success and progress in our life both as individuals, groups or societies. No single person with a sound reasoning will deny the fact that the real success in our life is tied to success in learning. At the same time every phase in the learning process is tied to thinking. To think is to learn and to think poorly is to learn poorly and the vice versa (Fisher, 2001). Any skill or discipline can be learned critically or uncritically. What prevails

in our educational institutions whether schools or universities is that learning is done with little attention to the critical thinking skills which are taken to be the core of modern education, and which have their impact on the nature and type of modern life. This is emphasized by Sumner who indicates that "Education in the critical faculty is the only education of which it can be truly said that it makes good citizens." (as cited in Paul & Elder, 2006, p. 272). The current practices in our educational institutions, including English education, are of the type in which education is done superficially with the focus on acquiring knowledge by the traditional means of memorizing for exams not learning for life.

The need for rethinking of this unlucky situation is thus pressing. What we need is simply to keep up with the still fresh wave of the enthusiasm of introducing critical thinking courses to schools and universities in the developed and some developing countries whose educationists and educational philosophers have concluded that critical thinking is considered the centre of the process of education, or at least for higher education (Moon, 2008, p. 6). But this is not an easy job and the way is not paved before us; many difficulties are quite predictable, and resistance from different parties, especially those who are traditionally oriented as far as education methodology and curriculum is concerned is unavoidable. They are to be convinced of the importance of training our learners to think critically and thus creatively. This paper aims at this very idea, to present a rationale and an outline for introducing critical and creative thinking to students of English at colleges.

The Statement of the Problem

It has been observed that Yemeni students at universities [schools are included], day by day, show dwindling signs in their learning which has mostly become superficial, short-lived and unproductive. The most obvious reason for the researcher is the lack of training learners in the ability to think critically or reason rationally in almost all fields of knowledge (foreign language teaching and learning is no exception). This claim is supported by McGregor who maintains, "Retention, understanding, and active use of knowledge can be brought about only by learning experiences in which learners think about and think with what they are learning." (2007, p. 4). The problem, of course is shared in both the curriculum and the methodology followed at our universities. Therefore, the reasonable remedy for this problem is to introduce courses of critical and creative thinking either as infused in or as subject specific (separate) or both in the domain of English education [and also recommended in all other domains].

The Objectives of the Study

The study aims at:

1. Shedding some light on the problem of our present education (English education in particular) in connection with critical and creative thinking.
2. Casting a look to the history of critical thinking.
3. Reviewing some of the relevant literature.
4. Justifying introducing critical and creative thinking courses to higher education institutions in particular.
5. Offering a rough outline of a critical thinking course to be used in the Departments of English.

6. Creating some kind of awareness of the need for training in critical and creative thinking skills.
7. With the overall aim of offering a rationale for introducing critical thinking training to our schools and universities.

The Significance of the Research

This study touches on education and particularly on the role of critical thinking in English education. It is an important issue that is considered the wheel of progress, development and modernization. The research takes for granted the issue of backwardness, passivity and lack of productivity in the Arab and Islamic world in all domains of life, social, cultural, scientific, technological economic and industrial. This unhappy state is due to the bad education, which fails to address the pressing issues and problems of the changing life. The current state of education is very deplorable for it focuses on the lower learning skills rather than on the higher ones. It does not provide for the critical thinking skills in the curricula or in the methodology. To the researcher, critical thinking education should be the main aim of education for the role it plays in shaping the personality of the individuals as well as the society as a whole, and for its role in preparing them to face the different challenges and problems of life. The absence of critical education has led to the absence of democracy, and to the dominance of dictatorship and above all to the spread of corruption and hence backwardness. Lack of training on critical thinking, has led to passive people who are exploited by many including ignorant and corrupt rulers. The result has been our nations deteriorating in all aspects of life and lagging behind all other nations. Another important thing is that critical thinking is an Islamic duty. Islam appeals to the human mind and urges it to be critical and creative. Therefore, introducing creative thinking is hoped to fulfill not only an Islamic obligation but also a moral and practical necessity. As English education has been a gate of change in the areas of curriculum and methodology, so introducing critical thinking in this discipline is hoped to give way to change in other educational areas.

The Scope of the Study

Though this paper is supposed to address the need for introducing critical thinking courses in the field of English language as a foreign language, yet the researcher finds it plausible to make the rationale more general to include the whole field of education as the problem is rather a general one and overlapping. This rationale, therefore, is workable to any subject and English education is one of the areas that need to be reconsidered. Second, the focus of the study is on 'critical thinking', yet, throughout the pages of the paper there are infrequent references to 'creative thinking' and even to thinking in general. This should not be understood that the study breaks one of the research conventions that the research topic should be limited and specific. The researcher sees that the two types of thinking are inseparable. Critical thinking has to be creative, and both creative and critical thinking are types of thinking. Though some educators and writers see that there is a difference between the two terms 'critical' and 'creative' yet, they can be related and the teaching of one necessitates the other. Further, the researcher's intention here is that some sort of awareness of the issue in hand is to be emphasized. Therefore,

attention should be given to both critical and creative thinking and the process of thinking as a whole. This does not mean that each should have its own independent courses. Any of the two types can be presented as an integrated course or each as a separate course of its own, independent of the other.

Definitions of Terms

Thinking: It is an activity that influences who a person is, how he or she lives and the meaning he or she gives to his or her existence (Gorden as cited in quoted in Al-Maqtri, 2006, p. 19). Bruner (as cited in Halpren, 1997, p. 47) defines it as "going beyond the information."

Thinking (working definition): In this paper is taken to mean the activity in which the student is required to actively use his/her mind to solve problems whether real or assimilated ones similar to those in real life which may take place in and outside the classroom. It is the reverse of blind or rote learning.

Critical thinking (Roper Ennis widely used definition) is reasonable, reflective thinking that is focused on deducing what to believe or do (Norris & Ennis, as cited in Fisher, 2002, p. 7; Ennis as cited in McGregor, 2007, p.12).

Critical thinking (working definition): In this paper, in addition to the meaning given above, *critical thinking* means that students go beyond memorizing the material to asking reflective questions and initiating thoughtful ideas and not accepting things at their face value.

Creative thinking: It is the kind of thinking that leads to new insights, novel approaches, fresh perspectives, and whole new ways of understanding and conceiving of things (Facione, 2007, p. 11).

Infusion is integrating thinking skills instruction into the regular curriculum; Infused programs are commonly contrasted to *separate* programs, which teach thinking skills as a curriculum in itself (Cotton, 1991, p. 4). This infusion will constitute a considerable portion of our recommended critical thinking courses.

Ijtihad (interpretation or legislation using one's mental effort) is one principle of the Islamic Sh'aria for measuring judgments based on a personal judgment when judgment cannot be found in either the Qur'an or the Sunnah (action and speech of the Prophet). It is based on what is called *qiyaas*.

Al- Imam Al Shafi'i considers *ijtihad and qiyaas as equivalent* "They are two names for the same thing" (Ijtihad, 2008).

Qiyaas (analogical reasoning) according to the Islamic scholar Al-Shafi'i, *Qiyaas* is a method for reaching a legal decision on the basis of evidence (a precedent) in which a common reason, or an effective cause, is applicable" (Al-Alwani, 2008).

Rote learning (working definition) is a learning technique which avoids understanding the inner complexities and inferences of the subject that is being learned and instead focuses on memorizing the material so that it can be recalled by the learner exactly the way it was read or heard.

Critical Thinking: a historical background

Critical Thinking in the West

Critical thinking is said to be as old as its entomology; it came before schooling was even invented, and it lies at the very roots of civilization. It is a corner stone in the journey human kind is taking from beastly savagery to global sensitivity (Facione, 2007, p. 9). But when man started consciously to talk about it can be traced to the teaching and vision of Socrates about 2,400 years ago. Socrates was famous for his method known as the "methods of probing questioning" where he discovered that "people could not naturally justify their evidence of self contradicting beliefs often lurked beneath smooth but largely empty rhetoric" (Paul et al., 2007, p 1; Paul & Elder, 2006, p. 457). These methods are best known as critical thinking teaching strategies, in which Socrates highlighted the need in thinking for clarity and logical consistency. Socrates set the agenda for the traditions of critical thinking. He did that by questioning common beliefs and explanations and carefully distinguishing those beliefs that are reasonable and logical from those that are not though they are apparently appealing, but in reality are superficial. Other Greek philosophers, like Plato and Aristotle followed the steps of Socrates. They all emphasized that things are often unlike what they appear to be, and that only the trained mind is prepared to see through the way things look to us on the surface. From this ancient Greek tradition emerged the need, for any one who aspired to understand the deeper realities, to think systematically, to trace implications broadly and deeply, for only thinking that is comprehensive, well-reasoned, and responsive can take us beyond the surface (Paul et al., 2007, p. 1).

In the middle ages, critical thinking continued to strife. It can be traced in the writing of some thinkers like Thomas Aquinas who highlighted our awareness not only of the political power of reasoning but also of the need for reasoning to be systematically cultivated and crossed-examined (Paul et al., 2007, p. 2).

The renaissance in Europe started in Spain and moved to Italy and then to the rest of Europe, thinking critically was a fashion among many scholars of the age who started to question concepts like religion, art, society, human nature, law and freedom (Paul et al., 1997, p. 2). The common assumptions for them were that most human domains were in need of deep analysis and critique. In England, for example, Bacon argued for studying the world empirically. In France, Descartes in his book, *Rules for the Direction of Mind*, argued for the need for a special systematic disciplining of the mind to guide it in thinking. He developed a method of critical thought based on the principles of systematic doubt (Descartes as cited in Paul et al., 2007, p. 6).

Sir Thomas More's model of *New Social Order, Utopia*, was a call for the need for a radical analysis and critique of the established social order. Similarly Machiavelli, in the *Prince*, critically laid the foundation for modern critical political thought.

Generally speaking, the critical thinking of those Renaissance and post Renaissance scholars opened the way for the emergence of science and for the development of movements like democracy, human rights and freedom of thought, the fruit of which many of us enjoy today (Paul et al., 2007, p. 3). In other words, these developments were due to the effort of exercising the critical thinking ability.

Moving up to the 17th and 18th Century, one is encountered with very great and influential scholars and scientists like Isaac Newton and Robert Boyle and many others. These two, for instance, criticized the traditional way in science of accepting world view. It is in these two centuries that critical thinking was extended to the domains of economics and politics. In the 19th century, critical thought was extended even further into the domains of human social life and to issues like capitalism, human history and culture and biology. The 20th century gave birth to William Graham Sumner in whose *Folkways* is documented the tendency of the human mind to think sociocentrically and the parallel tendency for schools to serve the uncritical function of social indoctrination (Paul et al., 2007, p. 4). He criticizes the function of schools and schooling saying:

Schools make persons all on one pattern orthodoxy. School education, unless it is regulated by best knowledge and good sense, will produce men and women who are all of one pattern as if turned in a lathe ... An orthodoxy is produced in regard to all the great doctrines of life. It consists of the most worn and commonplace opinions, which are common in the masses. The popular opinions always contain broad fallacies, half truths, and glib generalizations. (Sumner, as cited in Paul et al., 2007, p. 4)

Critical thinking according to Sumner is a product of education and training (1906 as cited in Paul et al., 2007, p. 4). This is what we propose in this article. However, not any education can lead to the development of the faculty of critical thinking. It is that type of education of training in the critical faculty itself which can be truly said to make a good citizen.

Another important figure in the history of critical thinking is John Dewey. He is considered by many, the father of the modern critical thinking tradition, "He foresaw that education had to be redefined as the fostering of thinking rather than as the transmission of knowledge" (as cited in Hare, 1995, p.1). He criticizes schools for the type of education they offer which he says is empty and useless for it is devoid of critical thinking.

Critical thinking in the twenty first century has gained more momentum with the development of computer and internet. The idea is spreading more rapidly with many different projects, centers, communities programs, and universities, websites and other programs that have undertaken to foster critical thinking research and training.

Critical Thinking in the Muslim and Arab World

It has become customary to say that Arab's effective existence is associated with Islam. Before Islam Arabs did not have any kind of philosophy in the meaning we understand today as compared to Greeks, Romans and Indians, or Pharos for example. It is only with the coming of Islam that the Arabs had first acquired philosophy. In other words, philosophy in the Arabic and Islamic worlds was first linked with Islam. When Islam emerged, Arabs were given the chance, for the first time, to deal with logic or critical thinking. This is acknowledged by some fair-minded and objective western scholars. For example, we hear one says, "The most important thing that Arabs and Muslims left behind, in Spain, is 'logic' (Al-Undalosiyoona, 2007). This happened for two reasons: the first is that Islam itself urges its followers to use their minds and question the truth of things deeply and not to take things for granted at face value except that comes from Allah (God) and his infallible Prophets especially when dealing with monotheism. The second one is a corollary of the first one; because Islam insists on thinking and reasoning this makes

the first generations of Muslims search, investigate and think critically. This kind of thoughtful search brought them to the gates of the great philosophies of the world, the most important of which are the Greek, Hindi and Chinese civilizations. But it was the Greeks whose influence was so obvious on the Muslims. As the civilization of the Greeks came to end, the Muslims were their inheritors. They not only inherited the Greeks through translation of the great works, but they also added to that a lot and represented it in a new and more sublime form. This Greek heritage of thought and knowledge, ironically, reached the other parts of Europe through Muslims. Again a few fair minded western scholars acknowledge this role of the Muslim Arabs. For example the French philosopher Jules Régis Debray indicates that in the Middle Ages, Europe was in the school of the Islamic World and through the Islamic World Europe learned philosophy, medicine, the Arabic numbers, algebra, paper manufacturing and many other methods and techniques (Without Boundaries, 2008). The historical remains in Spain and many other parts of the world stand as a witness of the Muslims' achievement.

One has not to overlook what the Muslim Othman Turks added particularly in the domain of architecture and Islamic calligraphy. Surely that would not have been achieved if not for their critical insights, reflective and creative minds.

At the very beginning, the domain of critical thinking was limited to all that related to the Islamic faith. But later, it extended to include many other fields like medicine, chemistry, astronomy, sophism, architecture, morals, music, and arts. So critical thinking was required in all these fields which in turn led to the prosperity of Muslims in many such areas. This means that Islam had its own great philosophers and scientists in these different fields. To mention but a few, we have Ibn Rushed [Averroes a rationalist], Abu Bakr Ar-Razzi, [father of Arabs scientists], Al-Byrooni [linguist and multitalented scientist], Ibn Al-Hytham [the father of modern optics], Ibn Khaldoun [the founding father of sociology], Alfarabi, Al-Kindi, Ibn Sina, Al-Gazali [wrote a lot in logic and philosophy]. All these and others were not only great scholars in their respective domains but also they were great thinkers and philosophers (Al-Abd, 1979, p. 247).

It is Islam which insists that its followers make the best use of their minds in distancing themselves from personal biases and whims. Ar-Razzi, for example, considers the mind the only tool to gain knowledge, and it was critical and creative investment of the mind that was behind the great Islamic sciences and civilization (Al-Abd, 1979, p. 247). Mahmoud Abbas Al-Aqad, a 20th century Muslim scholar and philosopher sees that thinking on religious matters is fundamental in Islam, and it is considered a necessity that exempts persons from Ijtihad - one principle of the Islamic Sh'aria for measuring judgments- (when they are unable to perform that). He continues,

The worst of people are those who try to deprive other humans from the gift and faculty of reasoning. For God Himself, commands human kinds to think and contemplate, and warns them of the bad consequences of those who do not exercise the power of reason (as cited in Sulaiman, 1994, p. 90).

It is commonly known that the prosperity of the Muslim civilization was due to first Islam itself, second to its respects of the mind which pays much attention to critical reasoning, and third, to Muslims' working accordingly. It is sometimes argued that

the fall of Muslims and their present backwardness is due to their neglect of the critical reasoning. By losing the power of reasoning they lost a lot: knowledge, personality, identity, unity (Al-Abd, 1994, p. 6). This is really the case; Arabs and Muslims lost almost everything even sovereignty of land. The beginning of this deterioration of Muslims was in the 7th century of Hijrah [13TH century] when Islamic philosophy witnessed a great loss as a fatwa was issued that whoever works in philosophy was a heretic.

The hostile attitude of some Sunni Muslim scholars against philosophy [formal reasoning] and in particular the Aristotle reasoning was obvious. It was the Ash'ari school (936 AD) that undertook a hostile attitude against philosophy and logic (as cited in Wikipedia, 2007, p. 1). This hostility was justified at that time because of the fear for the Islamic creed and Islamic fundamentals, for that reasoning was understood as a call to question things that are unquestionable in the Islamic Shari'a [law and legislation]. Many scholars tried to abide by this stand though they themselves practiced dealing with logic but not publicly. Al-Gazali (a great Muslim philosopher) was one of those who wrote many books on formal reasoning and critical thinking though apparently he denounced it as unaccepted in Islam. It is he who is said to have shut the door of *ijtihad* [traditional Islamic scientific method of reaching judgment] (as cited in Wikipedia, 2007, p. 2).

To sum up, critical thinking has its own history which is long and influential. It started with the great Greek philosophers who demanded the training of the mind as a fundamental. The Muslims, who were influenced by the Greeks under the strong urge of the Islamic religion, which demands its followers to exercise the power of the mind, were so successful and innovative in this very field as well as in other sciences. When reasoning and critical thinking was abandoned, the Muslims abandoned their personality and stopped to contribute to the mankind civilization. This suggests that going back to the use of the power of the mind, which is after all, a prerequisite in Islam, people, will have an easy access to the power of knowledge and therefore to the threshold of development, modernization, and civilization. The present progress that is accomplished in the western world is greatly attributed among other things to the mind and to making use of the power of critical thinking ability, which many claim that it is a western product.

Review of the Related Literature

To the best of the researcher's knowledge, the Yemeni library is poor as far as critical and creative thinking resources are concerned except for some unsystematic and haphazard references here and there. For example, Al-Maqtri (2002) justifies the introduction of learner-centered approaches to Yemeni secondary schools, and argues that one advantage of these proposed approaches is that they pay special attention to thinking and to problem solving activities (which requires critical thinking). For him, critical thinking is necessary particularly in the modern age. Instead of making someone else think for them, the students have to depend on and think for themselves.

In another paper, Al-Maqtri (2006) is more emphatic about critical thinking and deals with it in a complete section. He argues that for effective learning and for a real democracy to prevail, critical thinking is essential on the part of our students

and citizens. He throws some light on the danger when schools and colleges fail to

gkkktrain students on the area of critical and creative thinking.

Sharyan (2003, p. 349) in the course of his talk about literature courses asserts that such courses develop learner's critical and analytical ability to respond to unseen literary texts. He is with those who hold the view that "literature begins with delight and ends with wisdom". He is of the opinion that open-ended questions that elicit personal response are necessary to sharpen the students' own response to literary work. This awareness is at its best when he points out saying, "In a country like Yemen, where the educational system is limited, students need to be encouraged to be critical and independent thinkers and to set their own learning goals" (391). Here the writer shows some kind of awareness of the necessity of the critical and analytical ability, though he limits that to the context of literature alone.

Parsad (2004, p. 14) has also thrown some light on the concept though still in the context of literature. He emphasizes the idea that students "...should be encouraged to think logically..." He continues that literature "with its wealth of vocabulary and its rich variety of structure and style can offer a challenge if materials are judiciously selected" By 'challenge' he means that it demands them to use their minds critically and creatively.

Apart from English language and literature, Al-Ba'adani (2007) argues that the urgent shift from the ineffective traditional style of teaching the Islamic Sciences to what he calls a new style that is based on thinking and creativity - one that takes the mind as its guide. He attacks the blind, superficial, uncritical, and rote type of learning that is common at our colleges and schools.

At the regional level, it is hard to find studies that treated critical thinking comprehensively and independently. But one can never ignore the concern of some gulf countries on this new discipline with a number of web sites addressing it and its potentials. However, the western and particularly American literature is abundant of writing in critical and creative thinking. Not only this but many western writers claim that critical thinking is a western product which means that other cultures have nothing to do with critical thinking (Barnett as cited in Moon, 2008, p. 61). Nowadays, there are new trends in America, Canada, Europe, Australia and other countries to teach students critical thinking (De Bono as cited in McGregor, 2007, p. 157). Other countries like Malaysia and Venezuela are also following the same path. They all claim that their education suffers from deterioration and this may be due to lack of critical thinking - a fundamental element for the sophisticated ever changing world. So they see the remedy is to educate their students and train them in this area of critical thinking.

Thus, we find "every year, in hundreds of colleges and universities around the world, students enroll in one-semester courses variously known as Critical Thinking, Informal Logic, Introduction to Reasoning, etc" (Van Gelder, 2000, p. 1).

Research finding on cognitive psychology supports this tendency and the claim the training in critical thinking is productive:

Given research in cognitive psychology, some educators believe that schools should focus more on teaching their students critical thinking skills, intellectual standards, and cultivating intellectual traits (such as intellectual humility,

intellectual empathy, intellectual integrity, and fair-mindedness) than on memorizing facts by rote learning (Van Gelder, 2000, p. 1).

In another study (Facione, 2007, p. 18), of over 1100 college students, results show that on college level, critical thinking skills tests significantly correlated with college GPA [Grade point Average]. It has also been shown that critical thinking skills can be learned, which suggests that as one learns them one's GPA might improve. A further support of this hypothesis is the significant correlation between critical thinking and reading comprehension. Improvements in part are paralleled by improvements in the other.

Harold Steneverson's research on Japanese schooling shows that teaching and training in critical thinking actually brings gains in terms of the acquisition and retention of information (as cited in Hare, 1995, p. 10).

Evidence suggests that critical thinking can be taught, although the average effect is based on a rough estimate and is quite modest in magnitude. Students who receive purposeful instruction and practice in critical thinking and/or problem solving skills appear, on average, to gain an advantage in critical thinking skills of .23 of a standard deviation (9 percentile points) over students not receiving such instruction (Pascarella as cited in Van Gelder, 2001, p. 2).

Cotton (as cited in McGregor, 2007, p. 150) summarizes finding from 56 research studies and reviews that indicated how nearly all programs and practices investigated found show positive gains. General finding from the research base show that nearly all of the thinking skills programs and practices investigated were found to make a positive difference in the achievement levels of participating students. Studies which looked at achievement over time found that thinking skills instruction accelerated the learning gains of participants, and those with true or quasi-experimental designs generally found that experimental students outperformed controls to a significant degree (Austin as cited in Cotton 1991, p. 8).

The Rationale for Critical Thinking

The question that might be asked here and now is, do we have to teach critical thinking? Is there a need to train the students to think and think critically? If the answer is yes, then the next question will be 'why'? To answer these questions, we might assume the following arguments:

First, thinking as language are human characteristics. They are unique only to humans. Man is known to be a thinking being and it is this ability, and that of the language which make him unique among other creatures. Since man, by nature, is a thinking being, then one may say there is no need for our interference. The counterargument goes like this that it is true that man is a thinking creature, but this does not mean that he uses his mind rationally or rather thinks critically all the time. "Humans are not naturally critical", says Van Gelder (2000, p. 2). At the same time, not all men think in the same way all time. This is a fact, and is observed in everyday situations, and is supported by what Socrates believed 2500 year ago when he discovered by his method of 'probing questioning' that "People cannot rationally justify their confused claims of knowledge, confused meanings, inadequate evidence, or self-contradicting beliefs often lurked beneath smooth but largely empty rhetoric" (Paul et al., 1997, p. 1). Socrates argued for the need for a special systematic discipline of the mind and to guide it in thinking (Paul et al., 2007, p. 7).

Sumner goes along with that "the critical faculty is a product of education and training" (as cited in Gold, 2002, p. 4). This seems a convincing argument for introducing of critical thinking courses to colleges and schools.

Harmer (1983, p. 33) further comments on this, "... human beings are thinking people who, hopefully, can rationalize" ... and it seems sensible, Harmer continues, to give an opportunity to their reasoning power when learning new language in the unnatural situation of the classroom". This means that thinking ability is taken for granted and that we expect any human with a sound brain to think. But thinking does not necessarily mean rationalizing. This is true only of an ideal situation. In reality things are not as straightforward as this. One may think, yet, he may not be able to think critically. Human mental reasoning is just like any other human behavior, which may fluctuate between two extremes. For example, in ethics we usually say that a person may be so good and may be as sublime as an angel. Conversely, he may be so bad and be reduced to that of a beast. So is the case with the respect of the reasoning and critical thinking. A human being's mind can be active, critical and even creative. But at the same time it can grow idle, uncritical, and superficial and even self-deceiving. Or, in the words of Van Gelder, "The mind has intrinsic tendencies toward illusion, distortion, and error." (2000, p. 5). He goes on to say, "The mind cannot safely be left to its natural tendencies. If this happens then people develop bad habits of thinking" (2000, p. 1). This idea is more clearly put in the following words:

Critical thinking of any kind is never universal in any individual; everyone is subject to episodes of undisciplined or irrational thought. Its quality is therefore typically a matter of degree and dependent on, among other things, the quality and depth of experience in a given domain of thinking or with respect to a particular class of questions. (Scriven & Paul, 2004, p. 2)

It becomes obvious that critical thinking is a product of training and education. If this is the case, then it becomes a matter of obligation that people who are concerned of the welfare of their nation may come in and interfere to offer a remedy to the situation. This remedy for this particular case is to prescribe critical thinking courses for the new generations so that the negative state is put right.

Second, life changes and everyday life demands are getting more complicated. Technological advancement adds to the complexity of life. Education, itself, in its general term, in many situations falls short of fulfilling these complicated and rapidly changing demands, which in turn necessitate not only critical but also creative thinking to be an essential part of the curriculum. This problem is almost universal. Informed commentators agree that schooling today does not foster the higher order thinking skills and abilities, which represent the "basics" of the future (Paul & Nosich, 2007, p. 5). In fact, many experts fear that some of the things people experience in schools are actually harmful to the development and cultivation of critical thinking (Facione, 2007, p. 9). Educators and others insist that the development of critical thinkers...out to be a key aim of contemporary education (Winch, 2006, p. 10). Barnett believes that higher education should be the development of the critical being (as cited in Moon, 2008, p. 128).

Keeping with this uneasiness about education, educators in America ask vital questions, as the following: How can we reverse the pervasive emphasis in education on lower rather than on higher order learning, on recall rather than on reasoning, on students merely 'reproducing' rather than 'producing' knowledge' (Paul & Nosich, 2007, p. 5)?

In America again, they complain that students are not doing well in higher order skills. They cannot reason, prepare an argument or infer a proposition; they are very weak at predicting, analyzing, estimating, or problem solving (Paul & Nosich, 2007, p. 5). If this is the situation in America, what one can say about that in Yemen or any Arab country? Our students are poor not only in the higher type of skills but also in the lower type. Unlike the Americans, they cannot even write or read well not only in the foreign but even in their mother tongue. Lashuel (2007) comments on the educational situation in Yemen saying, "Employers in Yemen often find university graduates deficient in writing and communication skills, some can not even write a simple application letter, or fill out a simple form." In such a situation, the need for such a reform is, therefore, even more pressing.

Third, Critical thinking is essential for a democratic state. Many Arab and Muslim countries are increasingly joining the world club of democracy which is a necessity for free citizens and for a productive society. A democratic state means that people enjoy the freedom of thought and speech, among many other demands. Experts say that "critical thinking is fundamental, if not essential for a rational and democratic society" (Facione, 2007, p. 19; Cotton, 1991, p. 1). Without this critical thinking "people would be exploited politically and economically [as the current situation is]. Citizens who are not informed with critical thinking would not survive the competitive free-market economic enterprise, and the democratic institutions will not succeed. This is the case in many if not all Arab and Muslim countries. Hence comes the real need for teaching critical thinking to the present and future generations to help them free themselves from such an unwelcome situation.

Fourth, Islam is a dominant religion in the Arab world, and not only thinking but also thinking critically is a religious requirement Islam requires that thinking and thinking critically be practiced by its followers. The word *Hikmah* meaning wisdom and wise and other derivative meanings have been repeated 118 times in the Holy Qur'an. Similarly, the word *tatafaku(roon)*, which means that you people have to think and reflect, has been repeated 18 times throughout the Holy Book. "Allaah appeals to the human mind and rationality in the Qur'an, saying, (which means): "Were they [men] created from nothing, or are they [themselves] the creators" (The Noble Qur'an, 35/52)? Quite obviously, we have been created, and brought into existence after being non-existent, and it is also plain that we do not create ourselves. The point here is that this is a call to exercise our minds in core issue such as existence and creation. Allah also says, (which means): "And also in your own selves will you not then see (reason critically) (The Noble Qur'an, 21/51)?" In these verses as also in many others in the Qur'an God demands that human beings use their minds and do that thoroughly and critically. That is why words which means 'don't you think' and the word 'wisdom' have been used tens of times in the Qur'an the main authority of Muslims. In other words, thinking critically, is an essential

element in Islam. If so, then this ability of thinking critically must be cultivated, and schools, colleges and universities are the real places for this cultivation, after the home, of course.

Fifth, there are more valid reasons that call for the need to introduce critical thinking into colleges and schools in all subjects and in English in particular. In most classes in many Arab and third world countries, education has been deteriorating and almost is not functional. Though there is more than one reason behind this, yet a major one is the absence of critical thinking among all parties concerned at colleges. Policy makers, course introducers, educationists, teachers, and students, all seem to work in the absence of the spirit of critical thinking. This results in having learners who are shallow thinkers and rather parrot-like learners, or at best, who are rote learners. This is a daily observation in classes when students work but without taking the trouble to question, to reason or reflect. They accept statements as they are without further investigating their truth or validity.

Sixth, the application process of teaching critical thinking to students at schools, colleges and universities, is already going on, and many American, European and even some developing countries educational institutions have already started this training. Many other universities around the world especially those that follow the American model are making *critical thinking* courses compulsory. The result, in general, is promising. Therefore, not to keep up with this movement, is a kind of foolishness and betrayal to our nations and future generations.

Seventh, there is a great deal of the research currently being reported indicating that the direct teaching of critical and creative skills can produce better and more creative thinkers (as cited in Cotton, 1991, p. 2). Preseason goes even further to say that "the most basic premise in the current thinking skills movement is the notion that students *can* learn to think better if schools (in our case colleges) concentrate on teaching them *how* to do so (as cited in Cotton, 1991, p. 44). There is a body of evidence that thinking skills courses have positive effects that are transferable to other real life situations (Halpern, 1997, p. 7). If this is the case, then why should not we teach critical thinking skills to the learners if their thinking will improve and if the result is having better critical and creative thinkers?

Eighth, teaching critical thinking to our children is a moral obligation. To quote Hatcher,

If, [...] there is a moral obligation for all humans to develop intellectual virtues akin to critical thinking, then the justification for teaching students to be critical thinkers is absolute, or, as Kant would say, "Categorical." If people can be held morally accountable for the quality of their beliefs just as people are held accountable for other behaviors or character traits, e.g., honesty, showing respect for persons, temperance, and benevolence, then teachers have a duty to help students understand and successfully meet these ethical obligations. (1995, p. 1)

I would agree with the argument that a human being has a moral obligation to be critical. In other words, not to be critical is to sin against mankind. Or as Hatcher puts it (1995, p. 9) "to be 'an uncritical thinker,' endorses certain general habits of

mind which, if widely practiced, would undermine human wellbeing, and hence, is the "one long sin against mankind". Hence it is a moral duty for teachers to teach their students to be critical thinkers. Hatcher maintains, "If teachers have a duty to help students become more proficient critical thinkers, then to ignore that duty or to allow students to maintain their natural inclination toward mental laziness is a moral vice" (1995, p. 10).

Finally, to narrow the discussion and to be more specific, we have to talk about our students of English. Generally speaking, this type of learners like other type of learners, are not making uses of critical reasoning. This is apparent in their spoken and written English. Or we can put differently, that teachers of English are simply not training their learners to think and think critically. Even those who pretend to do that they are doing it at a very superficial level. The students are addict to memorizing and are poor of those skills that are essential to prepare them to have a place in this competitive world. The need for teaching them critical thinking courses is even more bending. Let us imagine the worse, and say that courses on critical thinking are useless and they do not help to improve the critical ability of the learners. This causes no harm for our students of English, as they already study many courses which themselves consider as useless. Literature, for examples, is valueless as seen by a number of students. Other courses like applied linguistics and the like are of no use to other learners. But we may argue that still these courses may help improve their English one way or the other because these courses are in English. This holds true of critical thinking courses; they are in English which means their English will be improved. On the other hand, we are not saying that it must be a special course independent of the current subjects. On the contrary, they can be trained to think critically through other courses. They can learn to think critically through literature, grammar, and language skills courses like speaking reading, writing and so on. The important thing is that teachers should be aware of the need for critical thinking skills so that they can teach of their respective subjects critically. They can make their students think critically and apply all the elements and skills of critical thinking through their subjects or what is known as infused or integrated teaching of critical thinking with the ordinarily courses.

As we have already argued that human beings are thinking beings who, hopefully, can rationalize (if trained) it seems sensible to give an opportunity to their reasoning power when learning new language in the unnatural situation of the language classroom (Harmer, 1983, p. 33). Now, in this situation, there appears the need for special education in the critical and creative thinking abilities. It is this education or training that one hopes to make up for the loss that is just disclosed. Sumner states, "Education in the critical faculty is the only education of which it can be truly said that it makes good citizens (as cited in Paul *et al.*, 2007, p. 5). The above arguments, one hopes to be convincing to introduce critical and creative thinking courses into our educational institutions and colleges in particular.

The Design of a Critical Thinking Course

Assuming that the people concerned are convinced of the rationale for need of critical thinking education, the next step is to address the components of a critical thinking course: the content and the methods or procedures of translating the content into a reality.

Before we talk about the details of the course of critical thinking we have first to refer to the different opinions regarding the approaches to include the element of critical thinking. The most salient approaches are:

1. *The skill approach*: the proponents of this approach see that the best way to train students in critical thinking is by doing that as a set of skills that are taught independently from the rest of the curriculum. De Bono, (See Maclure & Davies, 2002, p. 113) and Reuven Feuerstein and Michael Shayer (See McGregor, 2007, p. 13 &14) are examples of this group.
2. *The infusion approach*: the advocates of this approach believe that critical thinking skills are better infused in the subjects across the curriculum. Those who support this approach are like Linda Elder, Richards Paul, Nisbet, Swartz, and McGuiness (See McGregor, 2007:125), and they are on the increase for the following reasons: First, introducing a new subject such as critical thinking to the curriculum will not be welcome by many including the schools managers and students for the simple reason that the curriculum is already overloaded. So to call for the incorporation of critical thinking in the courses can be a better solution to this situation and any objection may be baseless. Second, such introduction still can be called a kind of innovation and invitation to a change in the methodology and curriculum. Third, if we teach critical thinking as a separate subject independent of other subjects the transfer may not be as effective, but doing that through all courses and by all teachers taking part in the process the result can be more effective and permanent. Fourth, the students' content comprehension in all courses will improve as a result of thoughtful and reflective learning. Paul and Elder (2006, p.140) confirm this saying that to become motivated to learn what you are studying, you have to understand the connection between content and thinking.
3. *The cognitive knowledge approach*: those who advocate this approach believe that the cognitive knowledge [teaching the courses as done currently] by itself will guarantee the development of critical thinking. The critical ability, for this group, will be a by-product of teaching traditional disciplines and pedagogy. Doing that other way may not be productive.
4. *The general logic approach*: the proponents of this last approach see that critical thinking is best taught by teaching the students general logic and the aspects of philosophy, mathematics, physics and politics (Noddings, 2006, p.55; McGregor, 2007, p.9).

Of these four approaches the *infusion approach* is the most appropriate for the Yemeni context and also for many countries that share similar educational systems and similar circumstances. The infusion approach is preferred for the same reasons mentioned above and mainly because it does not imply a radical change in the curriculum. In other words, teachers and others may at least withhold their objection to that, and secondly because it has already shown success in different parts of the world. And above all, it is more natural as when the students are required to think they have to have something to think about and this something is the subject area.

Now, we have opted for the infusion approach to critical thinking for its adaptability and for the possibility of not receiving potential objection. The next section is the outline of the proposed course in critical thinking.

The Outline of the Proposed Course

Introduction

This outline is based on the suggestion that critical thinking is better introduced through content areas (across the curriculum). This is so for the reasons give in the preceding section. It has been suggested that any course in critical thinking should have two parts theoretical and practical. It has to be noted also that no specific materials are given for the practical part because the students will be guided by their respective teachers to think through the content of all courses [literatures or else]. In the theoretical part, however, some topic areas are mentioned for background information. One also has to remember that this is a tentative outline and the whole issue will be subject to discussions and adjustments by the different professors and teachers. As a starter, this course has only to be tried with the students of English. Other departments, colleges and schools have first to be informed of the need for change and for the importance of introducing critical and creative thinking to their students.

Objectives of the Course

Any course of critical thinking should aim at achieving many objectives among of which are:

1. It should assess students' skills and abilities in analyzing, synthesizing, applying, and evaluating information.
2. It should concentrate on the thinking skills that can be employed with maximum flexibility, in a wide variety of subjects, situations, contexts, and educational levels.
3. It should address those versatile and fundamental skills that are essential to being a responsible, decision-making individual in the society.
4. It should respect cultural diversities by focusing on the common-core skills, abilities, traits and topics useful in all cultures.
5. It should be in harmony with and make use of the religious teaching (Islamic or Christian or else) and respect cultural differences and traditions and principles. In other words, it should be sensitive to the religious matters which are very sensitive in this part of the world.
6. It should assess the skills, abilities, and attitudes that are central to making sound decisions and acting on them in the context of learning to understand our rights and responsibilities as citizens, as well-informed and thinking consumers, and as participants in the world of economy.
7. It should enable educators to see what kinds of skills are basic for the future.
8. It should be of a kind that will assess valuable skills applied to genuine problems as seen by a large body of the populace, both inside and outside of the educational community.
9. It should contain items that are, as much as possible, examples of the real-life problems and issues that people will have to think out and act upon.
10. It should be affordable. (This is already considered in the outline given).

11. It should enable teachers and educators to assess the gains they are making in teaching higher order thinking.
12. It should provide for a measure of achievement against some informed standards.
13. It should establish a strong connection between what one learns and his own thinking.
15. It should emphasize deep reflective learning and deemphasize the superficial and rote learning. Many but not all of these objectives are adopted from: Paul and Nosich (2004).

Two Main Components

There can be two main parts of his course: Theoretical and Practical:

Theoretical: this part functions as an introduction to the topic of critical thinking with the aim of familiarizing the students with the concepts and vocabulary of critical thinking. The benefit of such a theoretical background will clearly assist them to perform better, backed by the rationale and by the background about the topic. However, the problem remains is how to teach such a theoretical component while we claim that we are infusing critical thinking skills into the different courses. Here, three possible suggestions can be given: The first is to assign these components to any of the willing teachers to incorporate them with the subject he is already teaching. This may look odd for there seems to impose components which are not related to the respective subject (e.g. reading). However, the students can be informed of the idea for such insertion and just go ahead. The second suggestion is to introduce this component as a new subject by itself but this time of course it has to be detailed and comprehensive. The last one if the first two are met with resistance then it can be given as a self- study course or part of a course and one of the teachers concerned has to follow that.

Components of the Theoretical Part

- Critical thinking (Introduction and Definitions)
- Critical thinking (A rationale)
- The elements of critical thinking
- The standards of critical thinking
- The intellectual traits of the good critical thinker vs the sophistic thinker
- Introduction to arguments
- Types of arguments
- Analyzing and evaluating arguments
- Reasoning: Deductively valued conclusion
- Hypothesis testing skills
- Likelihood and uncertainty skills
- Decision-making skills
- Development of problem-solving skills
- Creative thinking skills
- Detecting propaganda and resisting it (Noddings, 2006, p.50 &196).
- Others as required

Choosing which of these items to teach in this list is left to the teacher to decide as he/she sees fit, taking into account time constraints. However, there are some skills

that are more important than others and the respective teacher again has to attend to this fact and prioritize.

In Addition to the list above there should also be

- Reference to the nature of evaluating the course of critical thinking
- A list of references to both teachers and students

Practical: the second part is a practical component, where the teacher has to make the students apply what they have learned in the theoretical course just mentioned. That is to say, if the teacher is teaching poetry, then this part of the course is a kind of applying critical thinking in English poetry. And similarly if he/she teaches another subject like reading, there should be what can called critical reading. But this should not be understood that it must be necessarily linked to the theoretical one. It can be an independent by itself in which the teacher teaches his subject (whatever it is) but with a critical thinking orientation. In the table below is a list of skills that a teacher of any course of the curriculum can make use of.

The table of skills is adopted from McGregor (2007, p.127) and loosely adapted to serve the purpose.

Thinking Skills	Curriculum Subject/ Content Area			
	Reading	Writing	Poetry	Novel... etc.
Comparing/contrasting				
Classifying				
Part/whole				
Sequencing				
Uncovering Assumptions				
Reliable sources/accurate Observations				
Reasons/ conclusions				
Causal explanations				
Prediction				
Reasoning by analogy				
Generalization/conditional reasoning				
Generalizing possibility				
Generalizing metaphors				
Decision making				
Problem solving				

Figure 1 framework for curriculum organizer to integrate content objectives by thinking skills. Adopted and adapted from McGregor (2007P, p.127). It is obvious that what the teacher is going to do is to modify the focus of his teaching and instead of mainly focusing on the content and how it is reproduced again by the students in the examination paper. This time the focus will be shifted mainly to the thinking process of dealing with that content. So as McGregor (2007, p. 126) puts it, "the objectives and the standards have to be reconsidered."

Some Guiding ideas and Suggestions for Teachers and Students (Methodology)

It is true that we want the students to be trained to be good critical thinkers (in our case, in English). But to accomplish this, the teacher has a real role to play to help students help themselves. The major task of the teacher who teaches critically is to equip students to enter the dialogue, to become seekers in their own right. This is further clarified in the following guide lines and suggestions:

1. The questioning technique has to be a classroom routine that both the teacher and the students have to resort to during the different activities. The teacher has not only to ask but also to encourage students to ask him and their classmates. (See Noddings, 2006, p.6)
2. Problem solving and decision making have to be carried out in group discussion.
3. The teacher should always take the students to real life situations and problems. This is confirmed by Paul and Elder (2006) as they advice the students to “relate the content whenever possible to issues and problems and practical situations in your life.
4. It is very important do develop thinking and the critical thinking abilities is to create some kind of uncertainty and ambiguity (See Haplern, 1997, p.253). There should be something missing that invites the students to think and exercise their mental abilities. Moreover, the teacher should encourage the tendency to take risk on the part of the students.
5. Gradually, teacher should remove extrinsic motivation and encourage intrinsic motivation (See Noddings, 2006). The students have to be aware that critical and creative thinking is by itself self rewarding.
6. Always the students have to be given a thinking time so they can pause and reflect on the question or issue.
7. The teacher has to make a lot of use classroom language related to critical thinking such as “stop and think”, “put you thinking hat” or “shoes” and similar interesting classroom terms.
8. Each teacher should insure that tests and exams are designed in such a way that critical thinking skills are evaluated.
9. It is very important to always remind the students that they have to play the major part in the developing their critical and creative thinking by themselves. Nobody else can do that for them (See Paul & Elder, 2006, p.144). For this reason they can make use of what is called *journal* to assess their own development the area.
10. Each course teacher should always help students think of each subject as a form of thinking. For example, if the subject is a literature one, they should think literarily and so on.
11. The students have to be reminded to test their thinking using the intellectual standards they have already exposed to.

Since our primary concern in this paper is students at college level then there is no need for the teacher training because professors just need to be aware and need the availability of materials and then they can undertake teaching the students with the guiding of referred to earlier. Therefore, the following *references* can be helpful to begin with:

Critical thinking: tools for taking charge of you learning and your life by Richard Paul, Linda Elder. It is a self reading book.

Learning to Think Things Through: A Guide to Critical Thinking Across the Curriculum by Gerald M. Nosich. Publisher: Prentice Hall 2001. This book could be of help to those who are not familiar with English and who teach subjects other than English because it is translated into Arabic.

A Note on the Assessment

The system of evaluating students' performance in Ibb University runs as follows:

Total marks for each course:	100
Final exam:	70%
Other tests including mid term:	30%

What the teacher should do is to assign high marks of the 30% allotted to midyear tests to the oral work of the students: active participation in the class room. By active participation we mean thier exhibition of the creative and critical contribution in the classroom. Of the 70% allotted for the final exam the teacher should give high marks to the critical and creative aspects of the answer. This means no real major change in the system is required. The difference is in the shift of giving high marks from a rote and exact answer to that in which the students express their personal views and where they exhibit creativity and critical ability.

Recommendations

1. The suggested course(s) must be built on what has already been achieved in other parts of the world in this field. We do not have to waste time and start from scratch. However, this does not mean that critical thinking tests and research are not to be conducted.
2. Teachers of the different subjects should work with the spirit of the team as far as critical thinking is concerned. They should work together to implement critical thinking training. For example, the teacher of grammar should implement the techniques of critical thinking similar to that of literature teacher. They should sit together after a designated period of time and assess their instruction and their success. Attention should be paid to the issue of the transfer of critical thinking skills.
3. With the availability of computer and internet, it is recommended that educational technology is used to facilitate not only critical thinking but also the learning process as a whole.
4. As trial, it is recommended that critical thinking should first start with English language learning as foreign language at the college level. Only then other colleges and schools could start.
5. As the authorities concerned are convinced of the rationale behind introducing critical thinking teaching, then the task is to be assigned to the specialists in critical thinking, logic & philosophy and curriculum designers and others at the national level to address the issue as a whole.
6. Teachers should be alert not to fall into the trap of dealing with the critical thinking issue as a dry topic with the main objective is to examine the students by the end of the semesters of the items taught with their success measured by how well they memorized the material.

7. For a real success in the projects the students should be continually sensitized to the importance of being critical thinkers in the present time in particular. They should be reminded to shoulder the responsibility for themselves to be autonomous critical thinkers.
8. Critical thinking oriented courses means that we consider how well the students understand the subjects not how much they memorize of the material; this means teachers should not bother by how much to be covered of the course. In other words, quality precedes quantity.
9. It is recommended that a critical reading course is to be introduced. This can be by replacing it with one of usual reading courses.
10. Studies and tests should be conducted to measure the critical thinking abilities of the learners in different institutions including colleges, using standard tests that are designed for the purpose.
11. If required, professors and teachers may be trained in teaching critical thinking.

References

- Al-Abd, A. M. (1979). *Studies in the Islamic philosophy*. Cairo, Maktabat al-Nahdhah al-Musria.
- Al-Alwani, T. (2008). Islamic glossary home. Retrieved January 5, 2008, from MSA. www.usc. Edu
- Al-Ba'adani, F. (2007, November 9). Teaching the Islamic sciences: The need for change from traditional approaches to more thought based teaching styles. *Al-Gumhuryia*, p.4.
- Al-Maqtari, M. A. (2002). *The feasibility of adopting a learner-centered approach to ELT in secondary schools in Yemen*. (Doctoral dissertation, University of Sindh, Pakistan 2002).
- Al-Maqtari M. A. (2006). Promoting democratic values among university students of English, *University' Ibb University Researcher Journal*, 11, 17-33.
- Ash'ari, (2008). Retrieved May 6, 2008, from Wikipedia Free Encyclopedia.
- Austhink, (2006). Retrieved August 20, 2007, from Critical Thinking on the Web.
- Carrol, R. (2007). Teaching critical thinking. Retrieved January 5, 2008, from [www.skeptdic.com/essays/teaching CT.pdf](http://www.skeptdic.com/essays/teaching_CT.pdf)
- Cotton, K. (1991). Close-Up #11: Teaching thinking skills. Retrieved April 28, 2008, from Northwest Regional Educational Laboratory's School Improvement Research Series. <http://www.nwrel.org/scpd/sirs/6/cu11.html>
- Ennis, R. (1992). Critical thinking: What is it? Proceedings of the forty-eighth annual meeting of the philosophy of education society: Denver, Colorado, March 27-30. Retrieved December 22, 1992 from http://www.ed.uiuc.edu/PES/92_docs/Ennis.HTM
- Facione, P. (2007). Critical thinking: What it is and why it counts. Retrieved March 27, 2008, from counts.inf@insightassessment.com
- Fisher, A. (2001). *Critical thinking: An introduction*. Cambridge: Cambridge University Press.
- Fisher, A. (2002). *Critical thinking*. Cambridge: Cambridge University Press. Retrieved May 3, 2008, from [what is critical thinking and how to improve it?](#)
- Gocsik, K. (2004). Elements of critical thinking, Dartmouth writing program. Retrieved May 4, 2008, from www.dartmouth.edu/~writing/materials/faculty/pedagogies/thinking.shtml
- Halpern, D. (1997). *Critical thinking across the curriculum*. Newjersey: Lawrence Erlbaum Associates.

- Hare, W. (1995). Content and Criticism: The aims of schooling. *Journal of Philosophy of Education*, vol. 29, no. 1, pp. 47-60. Retrieved March 2, 2008, from www.blackwell-synergy.com/doi/abs/
- Harmer, J. (1983). *The practice of English language teaching*. London: Longman.
- Hatcher, D. (1995). Critical thinking and epistemic obligations. *Inquiry: Critical Thinking Across the Disciplines*, vol. 14.3 (Spring 1995): 38 pars. Retrieved January 13, 2008, from <http://www.shss.montclair.edu/inquiry/spr95/hatcher2.html>
- "Ijtihad", (2008). Retrieved May 6, 2008, from Wikipedia the Free encyclopedia.
- Khader, M. (2005). The glossary of the Holy Qur'an. Retrieved April 28, 2008, from <http://www.sultan.org/a/>
- Landsberger, J. (2008). Thinking critically. Retrieved May 6, 2008, from Strategies for Critical Thinking (web).
- Lashuel, K. (2007). August, 20). Why a national strategy for honesty and clarity for Yemeni education? *Yemen Times*. Retrieved from the Critical Thinking Community.
- Maclure, S. & Davies, P. (2002). *Learning to think*. San Francisco: Pergamon Press.
- Moon, J. (2008). *Critical thinking: An exploration of theory and practice*. London: Routledge.
- McGregor, D. (2007). *Thinking, developing learning*. New York: Open University Press.
- Nibset, J. (1990). The thinking curriculum *Electric Journal*, no. 47 autumn, 1990. Retrieved January 20, 2007, from <http://www.scre.ac.uk/>
- Noddings, N. (2006). *Critical lessons: What our schools should teach*, Cambridge: Cambridge University Press.
- Paul, R. et al. (2007). A brief history of the idea of critical thinking. Retrieved: May 1, 2008, from [Criticalthinking .org](http://www.criticalthinking.org)
- Paul R. & Elder L. (2006). *Critical thinking: Tools for taking charge of your learning and your life*. Newjersey: Pearson Prentice Hall.
- Paul, R. & Nosich, G. (2007). A model for the national assessment of higher order thinking. Retrieved May 2, 2008, from www.criticalthinking.org
- Prasad, A. (2004). English literature in Yemen: Problems and prospects. *Ibb University Researcher Journal*, no 6, 1-22.
- Rusbult, C. 2001 'Critical Thinking Skills in Education and Life Retrieved': 6 May, 2008, from Critical Thinking Skills in Education & Life.
- Scriven M. & Paul, R. (2004). *Defining critical thinking*. Retrieved May 1, 2008, from www.criticalthinking.org
- Sharyan, A. (2003). Literature and language teaching: A classroom-centered study. *Ibb University Researcher Journal*, no 5, 381-402.
- Sulaiman, A. (ed.) (1994). *The development of theology to philosophy and its approach with Nuserudeen al-Tousi: An analytical and comparative study of the book: freeing the beliefs*. Al Eskandaria: Dar Al-Marifa al -Jamiia.
- Sumner, W. (906). Critical thinking, in *Folkways*. Ginn and Co., pp. 632- 633. Retrieved June 7, 2007, from Wikipedia, the free encyclopedia.
- The Critical Thinking Community: A brief history of the idea of critical thinking* (2007). Retrieved May 3, 2008, from www.criticalthinking.org
- The Nobel Qur'an in the English language* (1996). Translated by M. T. Al-Hilali & M. M. Khan, (Trans.). Darussalam: Darussalam Publishers and Distributors.
- Van Gelder, T. (2000). The efficacy of undergraduate critical thinking courses. Retrieved February 20, 2008, from <http://www.philosophy.unimelb.edu.au/reason/efficacy.html>
- Van, Gelder T. (2001). *How to improve critical thinking using educational technology*. University Retrieved 2 March, 2008, from tgelder@ariel.unimelb.edu.au
- Winch, C. (2006). *Education, autonomy and critical thinking*. Routledge.