


# **Procedures for Encouraging Creative and Critical Thinking**

**إجراءات تشجيع التفكير النقدي الإبداعي**

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## **Abstract**

The present study is an attempt at highlighting some of the prominent procedures that encourage and sustain critical and creative thinking of EFL students and educators.

Critical thinking refers to the process of thinking involving an analytical evaluation of a situation, in order, to draw various points of view relevant to that situation. Creative thinking involves the generation of ideas, processes and experiences, both types of thinking are located on both hemispheres of the brain, critical thinking is connected to the left hemisphere while creative thinking is connected to the right hemisphere.

The study concludes that university teachers should facilitate and encourage critical and creative thinking by viewing their students differently from what they have presumed.

**Key words:** critical thinking, creative thinking.

## الملخص

تهدف هذه الدراسة الى تسليط الضوء على الاجراءات الرئيسية التي تساعد وتدعم التفكير النقدي والابداعي عند الطلبة الجامعيين متعلمي اللغة الانكليزية-لغة اجنبية وكذلك التربويين.

يشير مفهوم التفكير النقدي الى عملية التفكير التي تنطوي على التحليل التقييمي للموقف اللغوي كي يتم جذب وجهات النظر المتباينة ذات الصلة بذلك الموقف، اما التفكير الابداعي فإنه يمثل عملية توليد الافكار والخبرات المكتسبة ويقع كلا النوعين من التفكير الى الفصين المكونين للدماغ البشري اذ يتصل التفكير النقدي بالفص الايسر من الدماغ، اما التفكير الابداعي فإنه يتصل بالفص الايمن منه.

وفي الختام قدمت الدراسة بعض التوصيات حول كيفية بناء المنهج التدريسي طبقا لذلك وان يقوم المدرسين بتسهيل تبيق الاجراءات التي من شأنها تنمية قابلية التفكير النقدي والابداعي لدى الطلبة.

الكلمات المفتاحية: التفكير النقدي، التفكير الابداعي.

## **1) Introduction**

In formal education much of the teaching and thinking had done emphasize the skills of analysis. Critical thinking refers to the process of thinking involving an analytical evaluation of a situation; it is the ability of drawing a delicate discrimination between various points of view related to the situation in order to derive the best possible solution to a problem. Critical language learners must also be able to identify and cite valid reasons for their opinions by eliminating incorrect paths in favour of correct ones – (Lipman, 1988).

Creative thinking is considered to be involved with the creation or generation of ideas, processes and experiences. It is, then, the type of thinking that concentrates on exploring ideas, generating possibilities, looking for many correct answers and combining them in novel ways (Smith, et al,1995).

The differences between critical and creative thinking can be encapsulated into the following terms: critical thinking is analytic, convergent, probable, judging, objective, focused, left brain, verbal and liner, while, creative thinking is generative, divergent, possible, suspending judgment, subjective, diffused, right brain, visual and liner, while, creative thinking is generative, divergent possible suspending judgment, subjective, diffused, right brain, visual and associative.

Thus, according to Hellige (1993) and Levy (1985) reading a story we use both hemispheres the left brain and right brain: the left brain is responsible for processing words logically and finding verbal meanings in sequence, while the right brain is responsible for appreciation, imagery, emotional content and finding immediate association between things (see Table.1)

After presenting what is expected of creative and critical thinking language learners, this paper aims at suggesting some procedures that can improve our students' achievements in reading the topics, preparing for assignments, examinations and in writing their graduation research papers. To achieve the aims stated above, it is felt necessary first to explore the need for creative and critical thinking, second to scrutinize the role of the teacher as he has an enormous number of responsibilities in the classroom, third to state some factors that hinder creative and critical thinking and finally, suggesting some procedures that can encourage creative and critical thinking.

**Table(1)**

**Terminological Distinction  
between Critical and Creative Thinking**

<b>Critical Thinking</b>	<b>Creative Thinking</b>
Analysis	Synthesis
Convergent	Divergent
Vertical	Lateral
Probability	Possibility
Focused	Diffused
Left brain	Right brain
Verbal	Visual
Linear (sequence)	Associative
Logical (reasoning)	Expressive (emotional)
Evaluative	Generative
Eliminating incorrect Answers	Combining many correct answers
Issuing judgments	Suspending judgments

Beyer (1985) and Paul (1993) distinguish between “weak” and” strong” sense of critical and creative thinking, they believe that learners who have the necessary abilities for undertaking critical and creative thinkers but use them only to their own advantage are critical and creative thinking in the “weak” sense. Where, learners who are committed to use these abilities to search for the most accurate and wise positions regardless of their own special advantages are critical and creative thinkers in the” strong” sense.

## **2) The Need for Creative and Critical Thinking**

Creative and Critical Thinking are vital topics in modern education that most educators aspire to teach them to their students. Besides, many academic departments in much developed universities hope that their professors and instructors are well-informed about strategies of fostering creative and critical thinking. It is, then, necessary that our universities should aspire to teach students that how to think, rather than teaching them what to think. It is well-known that education undertakes two essential tasks: First, the transmission of subject matter or the content of the course, and second, the correct path of understanding and evaluation this subject matter. Yet in the actual teaching situation, teachers perform adequately in teaching the content of the course “what to think” and fail in teaching students “how to think” effectively in understanding and evaluating this subject matter.

In 1983 the American president Ronald Reagan issued a report called “A Nation at Risk”: The Imperative for Educational Reform, in this report the National Commission on Excellence in Education consisting of (18) members warned: “Many 17-year-olds do not possess the higher order intellectual skills we should expect them. Nearly 40 percent cannot draw inferences from written material; only one-fifth can write a persuasive essay; and only one-third can solve a mathematics problem requiring several steps”.

This situation called the American educational authorities to implement several types of creativity tests, such as Torrance Tests of creative Thinking (TTCT) AND THE Minnesota Tests of creative thinking (MTCT) which involved simple test of divergent thinking and other problem



–solving skills scored on different scales. Thus, in (1984) the University of Georgia established the Torrance Center for Creativity and Talent Development (Torrance, 1974).

The current situation in our country is that teachers widely practice the method of answers, whereby teachers provide the answers to their students. This is because there are teachers who consider their students as blank sheets which need to be filled with knowledge. Those teachers do not realize that they are spoon-feeding the learners for they assume that learners do not possess any, or little prior knowledge or experience on the subject matter that is going to be taught.

This indicates that teachers have ignored, consciously or unconsciously, the individuality and unique experiences of learners, this will, consequently, make teachers lead boring and unimaginative classroom with minimal participation and avoidance of raising any question: (Costa and Marzana, 1987).

This being so, the learners will feel neglected and develop a passive attitude for they think that their opinions are irrelevant or unimportant to be heard in the classroom which creates an atmosphere of fear and distrust between the teacher and the learners.

### **3) Factors that Hinder Creative Thinking**

According to Smith, et al (1995), there are some preconceived negative attitudes that hinder creative thinking in the learners. These attitudes are related to the following factors.

a) That is a big problem:

When a learner faces a problematic situation, his reaction is often bigger than the problem itself. Many learners avoid or deny problems until it is too late, largely because those learners have never learned the appropriate emotional, psychological and practical responses. A problem is an opportunity which is welcomed and even sought out by creative learners, and meeting them as challenges to build self-confidence.

b) This cannot be done:

This negative attitude is, actually yielding before the battle. The assumption that something cannot be done about finding a solution to any problem, the learner gives that problem a power which did not exist before.

c) I have nothing to say:

A learner may assume that the problem can only be solved by knowledgeable person, but not by me, because he thinks that he is not ready enough to tackle such a problem.

d) I lack creativity:

Naturally, everyone is creative to some extent. Most people are capable of very high levels of creativity, but the problem is that this creativity has been suppressed by rote education. The learner needs some help to put this creativity into operation.

e) The feeling of failure:

One of the main obstacles to creativity and problem solving is the fear of failure. Along the course of learning, failure should be expected and accepted without being frustrated, simply because failure attempts can be learning tools towards success.

f) Prejudice

The older the learner gets, the more preconceived ideas he gets about things. These preconceptions often hinder the learner's ability from perceiving what he already knows or what can possibly be done. This attitude will hinder the acceptance of change and progress.

#### **4) Procedures for Encouraging Creativity and Critical Thinking:**

Can we teach creative and critical thinking?

We can teach creative and critical thinking to the learners as there are many excellent commercial books giving instructions, strategies and measurements of creative and critical thinking. However, it is preferable that teacher should integrate teaching creative and critical thinking in their lectures, homework's, labs, exams and in writing term papers. Accordingly, teachers should attempt to:

- a) analyses their own thinking processes and classroom practices and provide reasons for whatthey do.
- b) be open-minded, encouraging students to follow their own thinking and not simply repeat what the teacher has said.
- c) consistently provide opportunities for students to select from a range of appropriate choices.

- d) exhibit genuine interest, curiosity and serious commitment to the task of learning.
- e) undertake the organization and preparation required for the successful achievement of learning goals.
- f) search for imaginative, creative, ethical and reasonable solutions to the problems.
- g) be responsive and sensitive to the students' feeling, level of knowledge and degree of sophistication.
- h) allow for students' participation in rule setting and decision making related to all aspects of learning including revision and evaluation.
- i) use the terminology of critical and creative thinking themselves (see Table 1).
- j) use Socratic questions which combine inductive and deductive reasoning, in addition to logical fallacy on the truth conditions that govern relations between utterances. (See Table 2).
- k) involve students in discussions and debates which tackle more than one side of an issue and require students to support their arguments with evidence and reference to consequences.
- l) supplement regular textbook with additional related material including handouts, magazine articles, which appeal to more than one sense, and offer alternative ways of knowledge providing a wider variety of perspectives on the subject matter.
- m) have students attempt to solve real life problems where there is a possibility of presenting more than one adequate solution and where several types of information are required.
- n) encourage the students to use analogies, metaphors and proverbs in their explanations, description, and

comparisons. in an attempt to better understanding of new concepts, ideas, principles or theories. (For details see, Paul and Elder,2006).

- o) adopt a lesson plan built upon “how to think?” that encourages critical and creative thinking, rather than the traditional (conventional) lesson plan currently used which is built upon “what to think?” (See Table 3).

**Table (2)**  
**Socratic Six Types of Questions (Paul, 1993)**

<b>Question No</b>	<b>Types</b>
1. Questions for clarification	-Why do you say that? -How does this relate to the discussion?
2. Questions that probe assumptions	-What could you assume instead? -How can you verify or disapprove that assumption?
3. Questions that probe reasons and evidence.	-What would be an example? -What is.....Analogous to? What do you think causes to happen...? Why?
4. Questions about Viewpoints and perspectives.	-What would be an alternative? -What are the strengths and weaknesses of.....? -What is a counterargument for ....?
5. Questions that probe implications and consequences.	-What generalizations can you make? -What are the consequences of that assumption? -What are you implying?
6. Questions about the question	-What was the point of this question? - why do you think I asked this question? -How does .... Apply to everyday life?etc....

## 5) The Educational Syllabus

The present study proposes the following differences between the traditional / conventional syllabus and the critical / creative syllabus as shown in (Table 3):

**Table (3)**

### **Traditional and Critical Educational Syllabus**

<b>Traditional/Conventional</b>	<b>Critical/Creative</b>
Learning objectives partially-Defined	Learning objectives Well-Defined
Fixed course Materials	Varied and Renewed course Material
Static Lesson plan	Revamped Lesson plan
(Reactive teaching behaviours)	(Proactive teaching behaviours)
What to think	How to think
Sole Teacher Authority	Shared Teacher and learner Authority
Spoon-feeding learning (solution-based)	Creative learning problem-solution based (learner's Individuality)
Analytic learning	Analytic & synthetic learning (Negotiation)
Discouraging use of Technology in the classroom	Encouraging use of technology (websites development)
Development of Assignment using two skills (Speaking & writing)	Development of assignment using the four skills)
Mostly Summative feedback	Formative & Summative feedback