

**From passive learners to critical thinkers
Preparing EFL students for tertiary level success**

Dr. Kamal Othman Sharfi Mohmed
Head of the English Department, Taif University-Turaba campus,
K.S.A.

د/ كمال عثمان شرفى محمد
رئيس قسم اللغة الإنجليزية- جامعة الطائف- تربة- الطائف- المملكة العربية السعودية

From passive learners to critical thinkers Preparing EFL students for tertiary level success

Introduction:

Many students who learn English as a foreign Language (EFL) and who seek admittance to a university , do not have sufficient language skills to understand lectures, comprehend text books participate in classroom discussions, or generate satisfactory written work. They often have only experienced teacher-centered instruction, where they are passive learners or mere memorizers of rules. Critical thinking is not considered as part of the curriculum, and they do not have the opportunity to develop meta-cognitive strategies to help them organize, plan, and make decisions about their learning.

For these reasons some universities offer foundation or pre-university programs to help students improve their language skills because in the university environment they are expected to think, to reason, to take notes, to communicate, and to continue their learning outside the classroom.

Objectives of the Study

Implementation of methods to strengthen the pre-university program become crucial this paper describes how to create lessons and activities suitable for, specially, for our students, to equip them with the critical thinking ability and English skills required for regular university classes.

Various Definitions of Critical Thinking

Critical thinking is a way of deciding whether a claim is true, partially true, or false. Critical thinking is a process that leads to skills that can be learned, mastered and used. Critical thinking is a tool by which one can come about reasonable conclusions based on a reasoned process. This process incorporates passion and creativity, but guides it with discipline, practicality and common sense. It can be traced, in the West, to ancient Greece with its Socratic method, and, in the East, to ancient India with the Buddhist sutta and abhidharma literature. Critical thinking is an important component of many fields such as education. Politics, business, science and arts.

Critical thinking Definition:

The definition of critical thinking has changed somewhat over the past decade. Originally the dominion of cognitive psychologists and philosophers, behaviorally-oriented psychologists and content specialists have recently joined the discussion. The following are some examples of attempts to define critical thinking:

- ...the ability to analyze facts, generate and organize ideas, defend opinions, make comparisons, draw inferences, evaluate arguments and solve problems (Chance,1986, p. 6);
- ...a way of reasoning that demands adequate support for one's beliefs and an unwillingness to be persuaded unless support is forthcoming (Tama, 1989, p. 64);
- ...involving analytical thinking for the purpose of evaluating what is read (Hickey, 1990, p. 175);
- ...a conscious and deliberate process which is used to interpret or evaluate information and experiences with a set of reflective attitudes and abilities that guide thoughtful beliefs and actions (Mertes,1991, p.24);
- ...active, systematic process of understanding and evaluating arguments. An argument provides an assertion about the properties of some object or the relationship between two or more objects and evidence to support or refute the assertion. Critical thinkers acknowledge that there is no single correct way to understand and evaluate arguments and that all attempts are not necessarily successful (Mayer & Goodchild, 1990, p. 4);
- ...the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Scriven & Paul, 1992);
- reasonable reflective thinking focused on deciding what to believe or do (Ennis, 1992).

* "The skill and propensity to engage in an activity with reflective skepticism " (McPeck , 1981).

*"Disciplined , self-directed thinking which exemplifies the perfection of thinking appropriate to a particular mode of domain of thinking" (Paul, 1989, p. 21)

In a seminal study on critical thinking and education in 1941, Edward Glaser defines critical thinking as follows

“The ability to think critically, as conceived in this volume, involves three things: (1) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experiences, (2) knowledge of the methods of logical inquiry and

reasoning, and (3) some skill in applying those methods."(Edward Glaser,1941).

Critical thinking calls for a persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends. It also generally requires ability to recognize problems, to find workable means for meeting those problems, to gather and marshal pertinent information, to recognize unstated assumptions and values, to comprehend and use language with accuracy, clarity, and discrimination, to interpret data, to appraise evidence and evaluate arguments, to recognize the existence (or non-existence) of logical relationships between propositions, to draw warranted conclusions and generalizations, to put to test the conclusions and generalizations at which one arrives, to reconstruct one's patterns of beliefs on the basis of wider experience, and to render accurate judgments about specific things and qualities in everyday life.

Skills

The list of core critical thinking skills includes observation, interpretation, analysis, inference, evaluation, explanation, and meta-cognition. According to Reynolds (2011), an individual or group engaged in strong way of critical thinking gives due consideration to establish:

Evidence through observation.-

Context skills.-

Relevant criteria for making the judgment.-

-Applicable theoretical constructs for understanding the problem and the question at hand.

-Applicable methods or techniques for forming the judgment.

Critical thinking procedure calls for the ability to:

*Recognize problems, to find workable means for meeting those problems.

*Understand the importance of prioritization and order of precedence in problem solving.

*Gather and marshal pertinent (relevant) information.

*Recognize unstated assumptions and values.

*comprehend and use language with accuracy, clarity, and discernment.

*Interpret data, to appraise evidence and evaluate arguments.

*Recognize existence (or non – existence)of logical relationships between propositions.

*Draw warranted conclusions and generalizations.

*Put to test the conclusions and generalizations at which one arrives.

*Reconstruct one`s patterns of beliefs on the basis of wider experience.

Render accurate judgments about specific things and qualities in everyday life.

Critical thinking also is considered important for human rights education (Critical Thinking Books and Software 1076)

Habits or traits of mind

The habits of mind that characterize a person strongly disposed toward critical thinking include a desire to follow reason and evidence wherever they may lead, a systematic approach to problem solving, inquisitiveness, even handedness, and confidence in reasoning.

According to a definition analysis by Kompf & Bond (2001), critical thinking involves problem solving, decision making, metacognition, rationality, rational thinking, reasoning, knowledge, intelligence and also a moral component such as reflective thinking. Critical thinkers need to have reached a level of maturity in their development, possess a certain attitude as well as a set of taught skills.

Edward Glaser proposes that to think critically involves three elements:

- 1- An attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one`s experience.
- 2- knowledge of the methods of logical inquiry and reasoning.
- 3- Some skill in applying those methods.

In schooling

John Dewy is one of the educational leaders who recognized that a curriculum aiming at building thinking skills would benefit the individual learner, the community, and the entire democracy.

Critical thinking is significant in academics due to being significant in learning. Critical thinking is significant in the learning process of internalization, in the construction of basic ideas, principles, and theories inherent in content. And critical thinking is significant in the learning process of application, whereby those ideas, principles, and theories are implemented effectively as they become relevant in learners` lives. Good teachers cultivate critical thinking at every stage of learning, including initial learning. This process of intellectual engagement is at the heart of the Oxford, Durham, Cambridge and London school of economics tutorials.

In 1995, according to a meta analysis of the literature on teaching effectiveness in higher education, politicians and business men discovered that higher education was failing to meet society`s requirements for well educated citizens. It concluded that although faculty may aspire to develop students` thinking skills, in practice they have tended to aim at facts and concepts utilizing lowest levels of cognition, rather than developing intellect or values. (John Dewy,1995)

Critical thinking is an important element of all professional fields and academic disciplines, by referencing their respective sets of permissible questions, evidence resources, criteria ...etc. Within the framework of scientific skepticism, the process of critical thinking involves the careful

acquisition and interpretation of information and use of it to reach a well justified conclusion.

Planning for curricular change

The suggested changes to the curriculum included integrating the speaking and listening and the writing and reading language skills, adding lessons to spur critical thinking and authentic communication, and modifying assessment practices.

A previous experiment was carried out at the Bangladesh Rehabilitation Assistance Committee (BRAC), one of the largest non-governmental organizations in the world. Founded BRAC university in 2001 to provide students with the critical skills necessary to meet the needs of the developing country. BRAC university is an English medium university, its CfL offers English language education for the entire body. There, applicants are evaluated on their oral and written skills and placed in one of the five modules that focus on speaking, listening, reading and writing. Students must attend the twelve –week program for five days a week, three hours per day, and pass the courses provided to gain admission to the university. A planning group was formed to carry the task. The group consisted of a teaching assistant and nine instructors, including the department leads for composition/reading skills and speaking/ listening skills. The director of the department attended some of the meetings as an observer, and received reports from the planning group, while also providing positive feedback. Positive results were achieved.

The needs assessment

An immediate task for the planning group was to design and administer a needs assessment to gather information on how the students like to learn , how they use English outside the classroom, how they self-assess their speaking and writing skills, and the nature of their future fields of study and career plans. This information is vital to create a learner-centered curriculum and to select methods and topics that are relevant to the students` interests and goals. Students were also asked to write about their favorite and not-so favorite learning experiences, which gave the teachers feedback about successful instructional techniques as well as information about each student`s true writing ability in a non-testing situation. Based on the original pre-university program evaluation, the planning meeting, and the students needs assessment, important changes were made to the BRAC curriculum. (Critical Thinking Books and Software 1076)

Creating an interactive classroom environment

The need to make classes more interactive was a major focus for all components of the newly revised curriculum. The rationale for an emphasis on interaction was based on the idea expressed by Bruffee (1984) that for people to think well, they must first learn to converse and reason in their community. A rich social context in the form of discussion

and collaboration will cue the cognitive action that is necessary for writing and speaking.

It is important to note that when teachers design group work, they sometimes forget that not all students have skills or experience to perform in groups. Students need strategies to motivate them , such as showing that they are listening by making eye contact and nodding, and by saying such things as "What do you think?" or "I like that idea." These skills are simple but they are important, as they allow all students an opportunity to effectively participate in group discussions.

To enhance the quality of discourse in group work, the teachers may move away from routine activities and exercises to choose activities that can only be accomplished with collaboration and serious conversations, including comparing and contrasting information. Summarizing reading, debating and argument essays, composing biographies and autobiographies, conducting interviews, and making presentations. These and other activities give students plenty of time to engage with their classmates and extend their independent use of English outside the classroom. (Bruffee ,1984)

Strategies for integrating the four skills

Skill integrating is a priority because the teacher wants the pre-university class to resemble the actual university, where language skills are not practiced separately. The task of speaking/listening and writing/reading classes was informed by Rebecca Oxford`s image of a language class as a tapestry skills of speaking, listening, writing and reading .Rebecca proposes that:

"one of the most crucial of these stands is that If these four skills are separated from one another, a language is taught; however, if they are integrated with each other, authentic communication is taught." (Oxford 2001)

Coordinate the curriculum for all classes: all teachers use similar themes that are carefully selected to help the students become successful university students. Since writing a second language is typically a difficult task, extra effort is put into designing a feedback on papers. Teachers are expected to interact with their students about difficulties, successes, and new ideas gained from a writing assignment.

The students readily adapted to the critical thinking, enhancement, and writing classes. As is typical with the speaking skill, they were initially hesitant , but when they had the opportunity to express their opinions on relevant academic and social issues, they soon forgot about their shyness. The large amount of positive feedback from the students had a lot to do with effort, enthusiasm, and attitudes of their teachers. According to Singer:

" A climate of warmth and empathy may be the single most important factor in determining how well your students learn".(Singer 1986)

The teachers were, constantly, praising and reinforcing the students, especially about the way they were meeting challenges and adjusting to the university curriculum. This positive reinforcement may have been the biggest reason that students so readily accepted this new way of learning.

Integrating critical thinking in the classroom

Critical thinking is paramount and should be integrated throughout the curriculum, which could be made easier by the concomitant emphasis on interaction and skill integration. The teachers borrowed many ideas from Bean(1996), an excellent source for critical thinking activities. The ability to think critically is especially important for students living in a country with political and socioeconomic problems, for it will help them to look at issues from different viewpoints and become independent thinkers and responsible citizens. An important technique to get students to look at both sides of an issue is based on Elbow`s(1986)*believing and doubting game*. This activity encourages students to put themselves in another`s shoes and to have empathy with another`s opinion.

Re-conceptualizing interactional groups:

The first decision the teacher must face involves the optimum number of learners per group. Bell (1988) suggests a range of three to seven students. A group of reticent students may be capped at three to force all to speak, while a larger group of six dominant students will receive valuable practice at social turn-talking. There is no instructional rule that demands equal group size.

Fixed vs. flexible grouping

The second decision that teachers face is fixed grouping ((constant) group membership for extended periods) vs. flexible grouping. Fixed group rosters allow learners to get to know others in a deeper way and to develop tolerant and trusting relationships; it also saves the teacher valuable planning time. However, when groups remain together for too long, learners may be missing out on a diversity of viewpoints and language interactions. Thus, the balance between the security of established groups is mentioned.

How to teach skillful thinking in the Content Areas

What Teachers should Learn About the

Design of Infused Lessons

Robert Swartz and Rebecca Regean (1998) state that :

" the teaching of artificial and creative thinking in content area instruction involves blending direct instruction in skillful thinking with content leaning. This requires a structure for lesson design to help students internalize habits of thought that make their thinking skillful."

This involves the following basic components:

-Engaging students in active thinking structured by organizing , and focusing prompts helping students *reflect* about their thinking.

-Giving students a variety of opportunities to practice these habits of thought while the teacher gradually phases out of the process.

-Choosing contexts for infusion lessons in which there is a robust blending of thinking and the content enhances content learning dramatically.

- Infusion contrasts, on the one hand, with stand-alone programs which promote direct instruction in thinking skillfully.

-Teachers being trained in infusion should learn the basic features of lesson design and should apply them to their own instruction by designing lessons which incorporate them.(Robert Swartz and Rebecca Regean ,1998)

How Lesson Design Features Can Be Communicated to Teachers

ICCT communicates these features to teachers in three ways. The first is through direct presentations, the second is through active lesson demonstrations, and the third is through engaging teachers in lesson design themselves.

The use of lesson demonstrations is the centerpiece of this approach. Lessons which clearly incorporate each of these features should be chosen for demonstrations in the workshop components of each module. It is then the choice of the presenter as to whether the demonstration is followed by a commentary on this overall three pronged structures or of one of the basic components. It is usually helpful to start a staff development project with lesson demonstrations which clearly illustrate the way the three components weave together in a well structured infusion lesson. The "Three Components" transparency can be used to point out these components in the commentary on the lesson. Then each of the three can be stressed individually in subsequent demonstrations.(Robert Swartz and Rebecca Reagan, 1998)

STAFF DEVELOPMENT MANUAL INFUSION PROGRAM

Students' reflection on their own thinking, accompanied by the use of the meta-cognition log, can be used to illustrate various meta-cognitive techniques. And a lesson in which there is an elaborated series of follow-up examples can be used to illustrate teaching for transfer. This can be accompanied by the internalization graphic.

Contributions to our thinking about critical thinking

Contributors from the area of cognitive psychology (such as Paul Chance and Richard Mayer) delineate the set of operations and procedures involved in critical thinking. They work to establish the differences between critical thinking and other important aspects of thinking such as creative thinking.

Contributors from the area of philosophy (such as Richard Paul) remind us that critical thinking is a process of thinking to a standard. Simply being involved in the process of critical thinking is not enough; it must be done well and should guide the establishment of our beliefs and impact our behavior or action.

Contributors from the area of behavioral psychology help to establish the operational definitions associated with critical thinking. They work to define the subtasks associated with final outcomes and the methodologies teachers can use to shape initial behaviors towards the final outcomes. They also demonstrate how educators can establish the proper contingencies to change behavior.

Content specialists (such as Hickey and Mertes) demonstrate how critical thinking can be taught in different content areas such as reading, literature, social studies, mathematics, and science. This is an especially important contribution because it appears that critical thinking is best developed as students grapple with specific content rather than taught exclusively as a separate set of skills.

How is critical thinking related to Bloom et al.'s Taxonomy of the Cognitive Domain?

Bloom and his colleagues (1956) produced one of the most often cited documents in establishing educational outcomes: The Taxonomy of the Cognitive Domain. They proposed that knowing is actually composed of six successive levels arranged in a hierarchy: Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation. Research over the past 40 years has generally confirmed that the first four levels are indeed a true hierarchy. That is, knowing at the knowledge level is easier than, and subsumed under, the level of comprehension and so forth up to the level of analysis. However, research is mixed on the relationship of synthesis and evaluation; it is possible that these two are reversed or they could be two separate, though equally difficult, activities (Seddon G.M. 1978).

Synthesis and evaluation are two types of thinking that have much in common (the first four levels of Bloom's taxonomy), but are quite different in purpose. Evaluation (which might be considered equivalent to critical thinking as used in this document) focuses on making an assessment or judgment based on an analysis of a statement or proposition. Synthesis (which might be considered more equivalent to creative thinking) requires an individual to look at parts and relationships (analysis) and then to put these together in a new and original way.

There is some evidence to suggest that this equivalent-but-different relationship between critical/evaluative and creative/synthesis thinking is appropriate. Huitt (1992) classified techniques used in problem-solving and decision-making into two groups roughly corresponding to the critical/creative dichotomy. One set of techniques tended to be more linear and serial, more structured, more rational and analytical, and more goal-oriented; these techniques are often taught as part of critical thinking exercises. The second set of techniques tended to be more holistic and parallel, more emotional and intuitive, more creative, more visual, and more tactual/kinesthetic; these techniques are more often taught as part of creative thinking exercises. This distinction also corresponds to what is sometimes referred to as left brain thinking (analytic, serial, logical, objective) as compared to right brain thinking (global, parallel, emotional, subjective) (Springer & Deutsch, P 1993).

One problem with the definitions provided above (which is common to most definitions from philosophers such as Paul and Scriven). is that of labeling "good" thinking as critical thinking. This implies that creative thinking is a component of critical thinking rather than a separate, though related, thinking process with its own standards of excellence. To classify all "good" thinking as critical thinking is to expand the definition beyond its usefulness and obfuscates the intended concept. It also has the danger of overselling the concept and having both educators and the general public reject the benefits of focusing on critical thinking. We need to recognize that "good" thinking requires both critical and creative thinking. For example, Duemler and Mayer (1988) found that when students used techniques associated with reason and logic ,as well as, creativity and divergence, they were more successful in problem solving.

A second problem common to several definitions is that of confusing attitudes and dispositions towards thinking with the actual thinking process (i.e., emotion versus cognition; feeling versus reasoning.) For example, Tama (1989) includes "an unwillingness to be persuaded unless [adequate] support is forthcoming" (p. 64) while Mertes (1991) includes using "reflective attitudes" in his definition. This makes it very difficult to separate out the cognitive processing skills from the attitudes or dispositions to use those skills. It is likely that two separate educational methods are necessary to impact these very different desired outcomes.

Proposed definition

I believe Ennis' (1992) definition comes closest to the mark of a useful generic definition for critical thinking. I offer yet another definition only to more closely align the concept to the evaluation level as defined by

Bloom et al. (1956) and to include some of the vocabulary of other investigators. The following is my proposed definition of critical thinking:

- Critical thinking is the disciplined mental activity of evaluating arguments or propositions and making judgments that can guide the development of beliefs and taking action.

It is important to have a definition of critical thinking so that it can be compared and contrasted with other forms of thinking (i.e., non-critical thinking). For example, non-critical thinking can take the form of habitual thinking (thinking based on past practices without considering current data); brainstorming (saying whatever comes to mind without evaluation); creative thinking (putting facts, concepts and principles together in new and original ways); prejudicial thinking (gathering evidence to support a particular position without questioning the position itself); or emotive thinking (responding to the emotion of a message rather than the content.) Each of these types of thinking may have advantages and disadvantages relative to a particular context. There are situations when each might be more appropriate while the other types would be less appropriate.

Conceptualization of Critical Thinking

Critical thinking is self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way. People who think critically consistently attempt to live rationally, reasonably, empathically. They are keenly aware of the inherently flawed nature of human thinking when left unchecked. They strive to diminish the power of their egocentric and socio-centric tendencies. They use the intellectual tools that critical thinking offers – concepts and principles that enable them to analyze, assess, and improve thinking. They work diligently to develop the intellectual virtues of intellectual integrity, intellectual humility, intellectual civility, intellectual empathy, intellectual sense of justice and confidence in reason. They realize that no matter how skilled they are as thinkers, they can always improve their reasoning abilities and they will at times fall prey to mistakes in reasoning, human irrationality, prejudices, biases, distortions, uncritically accepted social rules and taboos, self-interest, and vested interest. They strive to improve the world in whatever ways they can and contribute to a more rational, civilized society. At the same time, they recognize the complexities often inherent in doing so. They avoid thinking simplistically about complicated issues and strive to appropriately consider the rights and needs of relevant others. They recognize the

complexities in developing as thinkers, and commit themselves to life-long practice toward self-improvement. They embody the Socratic principle: *The unexamined life is not worth living*, because they realize that many unexamined lives together result in an uncritical, unjust, dangerous world. (Linda Elder, 2007)

Why Critical Thinking?

The

Everyone thinks; it is our nature to do so. But much of our thinking, left to itself, is biased, distorted, partial, uninformed or down-right prejudiced. Yet the quality of our life and that of what we produce, make, or build depends precisely on the quality of our thought. Shoddy thinking is costly, both in money and in quality of life. Excellence in thought, however, must be systematically cultivated.

Problem

Definition

Critical thinking is that mode of thinking - about any subject, content, or problem - in which the thinker improves the quality of his or her thinking by skillfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them.

The Result

A well- cultivated critical thinker:

- raises vital questions and problems, formulating them clearly and precisely;
- gathers and assesses relevant information, using abstract ideas to interpret it effectively comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards;
- thinks open mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences.
- communicates effectively with others in figuring out solutions to complex problems.

Critical thinking is, in short, self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem solving abilities and a commitment to overcome our native egocentrism and sociocentrism.

(Richard Paul and Linda Elder, 2008).

Building an Understanding of Skillful Thinking

What to Communicate to Teachers about

Thinking

Strictly speaking, infusion, as a technique for teaching in the content

areas, is not limited to any specific set of thinking skills and / or thinking processes. Whatever kind of thinking is important in a given *context* can be infused. However, ICCT recommends that a whole range of core skills should be addressed across disciplines and across grade levels in K - 12 and college instruction. These include the three basic thinking domains (understanding , retention, and creative thinking) and two domains of important complex thinking processes (decision making and problem solving). ICCT goes beyond simply asking students *to* do certain kinds of thinking (like decision making). ICCT promotes thinking systematically and skillfully. This involves knowing what we should attend *to* in our thinking, how carefully we should consider it, and what standards we use in making critical judgments. "Thinking maps" for structured questioning and specialized graphic organizers display *these* aspects of skillfulness in thinking. In training teachers in ICCT it is therefore necessary to communicate *two* things: the domain of thinking skills and processes to be infused into lessons what makes these forms *of* thinking skillful. Display and discussion of the diagram representing the map of the Thinking Domain clarifies the thinking skills and processes addressed in ICCT. Communicating what makes these forms of thinking skills can best be accomplished by demonstrating lessons which infuse each of these skills and processes. During such demonstrations the corresponding thinking maps can be displayed and explained. (Critical Thinking Books and Software, 1998)

How to Communicate About Thinking and What Makes it Skillful

Generally, teachers involved in infusion projects must understand certain basic ideas about thinking in order to be effective in developing and teaching infused lessons. In ICCT staff development programs these ideas are communicated in three basic ways: through direct presentations at group workshops, supplemented by various graphic transparencies and handouts; through active demonstrations at these workshops; and through supplemental reading material contained in their packets. Transparency masters that can be used in direct workshop presentations are included in 1) the domain of thinking and (2) some important skills of thinking, (3) various thinking maps, *d* and (4) various graphic organizers.

STAFF DEVELOPMENT MANUAL

Good thinkers ask various types of questions. Answering these questions well requires skillful thinking that falls into the basic categories of thinking outlined on the map of the thinking domain. A second activity puts workshop participants in the position of reflecting on the way they engage in the types of thinking taught in ICCT and articulating what makes this kind of thinking skillful. For example, participants can be asked to identify examples in which they engage in a certain type of

thinking (e.g. decision making) which do not turn out well. They are then asked to discuss with their neighbor what went wrong and what they could do to improve their thinking.

SKILLFUL DECISION MAKING

Concerning decision making the following questions should be addressed:

- 1. What makes a decision necessary?**
- 2. What are my options?**
- 3. What information is there about the consequences of each option?**
- 4. How important are the consequences?**
- 5. Which option is the best in the light of the consequences?**

FOCUSED COMPARE AND CONTRAST

- 1. What kinds of similarities and differences are significant to the purpose of the comparison and contrast?**
- 2. What similarities fall into these categories?**
- 3. What differences fall into these categories?**
- 4. What patterns of similarities and differences are revealed?**
- 5. What conclusion or interpretation is suggested by the comparison and contrast that is significant to its purpose?**

SKILLFUL PREDICTION

- 1. What things might happen as the result of a particular event or general condition?**
- 2. What sort of evidence could you get now that would make these possibilities likely or unlikely: e.g., from past experience or from reliable sources?**
- 3. What evidence do you have that is relevant to the likelihood of what will happen?**
- 4. How likely are these possibilities based on this evidence?**

EVALUATING THE SIGNIFICANCE AND LIKELIHOOD OF THE CONSEQUENCES OF OPTIONS

- 1. What consequences might result from a specific decision?**
- 2. Does each consequence a, count for or against the decision?
b. rank as important?**
- 3. How likely is. the consequence?
a. Is there evidence that counts for or against the likelihood of the consequence?
b. Based on all the evidence, is the consequence likely, unlikely, or is its likelihood uncertain?**
- 4. Is the decision advisable in light of the significance and likelihood of the consequences?**

(The National Center for Teaching Thinking,1996).

Reliability of Sources

To find out whether a source is reliable:

Ask whether the source: Knows the subject?

Found out from someone else who is reliable?

Found out by careful investigation?

Has a reason for wanting you *to* believe him or her?

Is known and trusted by others?

(The National Center for Teaching Thinking,1996).

THINKING ABOUT THINKING SKILLFULLY

1 -What type of thinking did you engage?

2. How did you do the thinking?

3. Was that an effective way to do this thinking? Why or why not? If not, what

can you do to improve this way of .. thinking?

4. How will you do this kind of thinking next time it is needed?

COACHING TEACHERS ON DESIGNING AND TEACHING INFUSION LESSONS

The Goal of Coaching in Infusion Projects

The component of infusion training that involves the most individualized work is coaching. Coaching means different things' to different people, however. In infusion projects a coach facilitates the teacher's own decision making about the lesson objectives. The lesson is achieved by providing feedback and information relevant to how *to* achieve goal of infusion coaching, therefore, it is the production of high quality infusion lessons I

based on well-informed choices about their design by *those* who teach them.

Here is a summary of the three typical contexts in which coaching takes place:

*The coach and teacher meet together to discuss a lesson that has been designed prior *to* its being taught.

*The coach meets with the teacher to discuss a lesson in a pre-instructional

Conference. The coach observes the lesson being taught, and the two have a

post instructional debriefing after the lesson.

*The coach and teacher meet together after the lesson has been taught to discuss the lesson.

*How the teacher intends to reinforce the thinking skill through transfer activities.

Coaching Tips

Coaches have offered numerous tips as they go through the process. Here are sometimes that may *be* helpful coaching:

* The role of the coach is to ask nonjudgmental, open-ended questions which focus on the infusion components as the teacher is guided through meta-cognitive reflection about the lesson. He should:

*Encourage the teacher to tell his main concerns in order *to* be helpful.

*Analyze and identify the components of the infusion lesson.

Confirm that the steps in the process and components of the lesson are clearly **and** fully developed in the lesson. Have a clear idea yourself about the steps of the thinking process.

*Be sensitive to different teaching styles.

*Guide teachers to look at various sand strategies.

*Recognize that here is more than one right way to do the lesson.

Encourage the teacher to critique the lesson.

*Keep body language and non-verbal cues of the observer neutral

*Listen and observe carefully and record your reactions.

*Keep evaluation out of coaching.

Correlate coaching teachers for reflection to coaching students for reflection.

مستخلص البحث

العنوان: "خلق روح التفكير الناقد لدى الطالب الجامعي"

تهدف هذه الورقة البحثية الى معالجة الجوانب السالبة ورفع مستويات الطلاب لتحقيق النجاح المنشود.

تبدأ الورقة بتعريف ماهية التفكير الناقد كما جاء في تعريفات (مك بيك ١٩٨١) وتعريفات بادل (١٩٨٩). كما يتناول البحث العناصر الأساسية والمهارات المتعلقة بالتفكير الناقد، وايضا الجانب الاجرائي ودوره في تطوير القدرات المختلفة. ايضا يتناول البحث الجانب التشريحي للعقل وعاداته ودوره في خلق روح الرغبة في البحث والملاحظة واستخدام الادلة المنطقية لحل المشكل وتطوير الفهم المعرفي والتفكير المنطقي ورفع درجة الذكاء. وهذا ما يتناوله إدورد فلوس في شرح عناصر التفكير الناقد، وايضا جون ديوي في توضيح اهمية التحليل الناقد بجانب تطوير الماهج والتقويم الدراسي.

كما تتناول الورقة البحثية الاستراتيجيات التي يمكن اتباعها ودور المعلم وما يفترض ان يتلقاه من دراسة في جانب التطبيق والتصميم والبحث.

References

- 1- Charles Arthur Willard, 1989.
- 2- Edward M. Glaser , 1941.
- 3- Ennis R.H., 1992.
- 4- Geus R., 1976.
- 5- Holt Rinehart and Winston, 1976.
- 6- Hickey Clarkson, 1990, p 175.
- 7- Lindlof T.R. and Taylor, 2002.
- 8- Mayor and Childhood, 1990, p 4.
- 9- Mertes Julie, 1991, p 24.
- 10- Problematizing Global Knowledge. Theory , Culture and Society, Vol.23. 2006.
- 11- Raymond Geuss, 1981.
- 12- Robert Swartz and Rebecca Reagan, 1998.
- 13- Scriven and Paul, 1992.
- 14- Seddon G.M. 1978.
- 15-Tama M. Carrol, 1989, p 24.
- 16- Thomas Jim, 1993.
- 17- Thomas and Smoot, 1994.