IMPLEMENTATION OF THE COMPONENTS OF CRITICAL THINKING IN AN

ENGLISH 101 COURSE IN THE FIRST YEAR ENGLISH PROGRAM AT

BILKENT UNIVERSITY

A THESIS PRESENTED BY

SEMİH İRFANER

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ABSTRACT

Title:	Implementation of the components of critical thinking in an Eng 101 course in the F.Y.E.P. at Bilkent University
Author:	Semih İrfaner
Thesis Chairperson:	Dr. William Snyder Bilkent University, MA TEFL Program
Committee Members:	Dr. Sarah Klinghammer Bilkent University, MA TEFL Program
	Dr. Dannelle Stevens, Bilkent University, Graduate School of Education

Critical thinking has been a controversial topic in the field of education over several decades. The idea behind it is that in order to become more valuable members of society, students have to be encouraged to think and be taught how to use the information gained in classes. Courses should include not only content to be learned but also the opportunity for students to question what they learn. Students should be able to implement the learning, not only within the academic atmosphere but also in the larger society.

The objective of this study was to investigate one teacher's implementation of the components of critical thinking through written assignments in one Eng 101 class offered in the First Year English Program (F.Y.E.P). at Bilkent University. The study investigated to what extent the instructor was able to understand and implement the components of critical thinking included in the F.Y.E.P. curriculum and to analyze the students' implementation of those components in their essays.

Interviews were conducted with the course instructor, two students, and the director during the spring semester of the 2001-2002 academic year at Bilkent University. The course instructor and the students were interviewed eight times, and the director was interviewed once. The focus of seven of the instructor and student interviews were essays written by the students in the course. The purpose of the instructor interviews was to elicit her definition of the components of critical thinking, and her subsequent evaluation of these in the student essays. The purpose of the student interviews was to elicit their understanding of the expectations for each writing assignment in regard to the components of critical thinking, how well they felt they had met the critical thinking goals in each assignment, and the process they went through while completing their assignments. The purpose of the director interview was to collect the F.Y.E.P. departmental goals for critical thinking. In addition to the interviews, the course instructor was given a form whose aim was, first, to record the instructor's plans for implementing the departmental critical thinking goals within the lessons and then the accomplishment of these planned activities during the lessons.

The data collected through interviews and instructor forms were analyzed through categorization based on the course instructor's understanding of the components of the critical thinking and her expectations of student use of these components of critical thinking.

The data results indicate that the instructor does not have a fully developed definition that she can express but rather operationalizes her internal understanding through expressing expectations for student performance. The instructor's final list of components of critical thinking compiled for discussion during the interviews

was more extensive than the one given in the initial interview but contained the same components as those listed by the Director and in curriculum guidelines. The results also indicated that the students appeared to understand what some of the critical thinking components were and the main instructor expectations for each assignment, showing convergence through a series of drafts in terms of implementing them in the writing assignments. Students were able to use some of these critical thinking components in their assignments while performing the task assigned.

At the end of the semester, the instructor reported satisfaction with the level of student use of critical thinking components in completing their assignments.

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INSTITUTE OF ECONOMICS AND SOCIAL SCIENCES

MA THESIS EXAMINATION RESULT FORM

July 12, 2002

The examining committee appointed by the Institute of Economics and Social

Sciences for the thesis examination of the MA TEFL student

Semih İrfaner

has read the thesis of the students.

The committee has decided that the thesis of the student is satisfactory.

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Author:	Semih İrfaner
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	Dr. Dannelle Stevens, Bilkent University, Graduate School of Education

We certify that we have read this thesis and that in our combined opinion it is fully adequate in scope and quality, as a thesis for the degree of Master of Arts.

_____

Dr. William Snyder
(Chairperson)

_____

Dr. Sarah Klinghammer
(Committee Member)

_____

Dr. Dannelle Stevens
(Committee Member)

Approved for the
Institute of Economics and Social Sciences

_____

Kürşat Aydoğan
Director
Institute of Economics and Social Sciences

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To my late sister

Associate Professor Yasemin Koşar (M.D.)

You will always be in my heart

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CHAPTER 1: INTRODUCTION

Background of the Study

This study is about the concept of critical thinking and its implementation through student essays in an Eng 101 course in the First Year English Program (F.Y.E.P.) at Bilkent University.

The study investigates the implementation of critical thinking goals in an Eng 101 course through written assignments. Since Bilkent University seeks for excellence in academic studies and in educating better citizens for the country, its administration believes that equipping learners with critical thinking skills is a crucial factor in the learning process; therefore, the faculties and the departments within the university have been undergoing change to include these skills in their departmental goals and objectives. It is the university's aim to produce individuals who can think, question issues, challenge ideas, generate solutions to problems, be tolerant of ideas, and be flexible to the changing world and ideas. One of the aims of the F.Y.E.P. is to try to teach some critical thinking abilities to first year students taking Eng 101-102 courses. The reason for this study is to find out whether the defined goals and objectives related to critical thinking in the curriculum are understood, applied and, used by learners in classroom situations.

Critical thinking has been discussed and used since the time of Socrates. In more recent times many scholars and researchers have conducted studies concerning the effects of the concept in different disciplines. Its benefits are much discussed, yet Parker (1999) believes that there has been controversy in the field about whether the concept of critical thinking is teachable or not. Some, Walsh and Paul (1988), and Lipman, Sharp, and Oscanyan (1980), believe that C.T. is innate

and cannot be taught, while others hold the opposite view and work on techniques and strategies to advance the use of the concept in classrooms (Ruland-Parker, 1999). Such work is due to the concerns that have been raised relating to the lack of thinking skills of students within educational systems. Researchers criticize education systems for not encouraging students to think and produce opinions. This is considered to be a problem by scholars within the field, which has led to an increase in studies on critical thinking.

Critical thinking has been a subject for researchers from a variety of disciplines for more than twenty years. In fact, the concept is not new to us, as it was first introduced by Greek philosophers and has been used from the times of the Greek Empire until today, gaining importance during its long travel throughout history.

> The intellectual roots of critical thinking are as ancient as its etymology, traceable, ultimately, to the teaching practice and vision of Socrates 2,500 years ago who discovered by a method of probing questioning that people could not rationally justify their confident claims to knowledge. (Center for Critical Thinking, 2001, Introduction section, paragraph 1).

According to the resources of the Center for Critical Thinking Critical (2001), this historical trip began with Socrates and Plato, continued with Descartes, and was a topic in essays by Montesque and John Locke.

In today's world, many people in the field of education and other disciplines complain about the fact that students do not think when they are performing their work. Cromwell (1992) explains this concern, with the statement "one of the main goals of education, agreed upon by almost everyone, is the improvement of student thinking. And in the last decade there has been a growing concern that graduates at all levels do not demonstrate higher thinking abilities" (p. 39). Celep (1993) explains that the problem is more serious in Turkey since the Turkish education

system has been identified for the most part as a "read and repeat" model. Students in the system of national education in Turkey are expected to get knowledge and repeat it during an examination. Students do not attempt to show any evidence of thinking, as they are not expected to do so. One of the major scientists in Turkey, Ali Nesin, underlined this problem saying; "The sole importance is given to knowledge in the national education system in Turkey. Yet, we have to teach our students how to think, question, do research, and learn" (1995, p. F3). Nesin directed attention to the importance of thinking, the lack of which stands as a deficiency in Turkish Education.

The lack of critical thinking skills affects not only students' success but also their post education life when they graduate and start working. Hirose (1992) reports that many large companies around the world point to the same problem, that recent graduates from schools and colleges come into companies without knowing how to think. Hirose indicated that recent graduates began their work life without basic thinking skills.

> Many of today's youth lack the basic skills to function effectively when they enter the workforce. A common complaint is that entry-level employees lack the reasoning and critical thinking abilities needed to process and refine information. With the modern work environment requiring more thinking and problem solving than the jobs of the past, community college teachers and administrators should emphasize critical thinking on their campuses, in their curricula, and in their teaching practices in order to prepare students to function effectively in today's workforce (p. 1).

Howe and Warren (1989) support this observing, "Business and industry continue to report that many employees are not able to think critically in job situations" (p. 1).

In order to study an implementation of the concept, it is necessary to provide a definition of critical thinking. There are various definitions of critical thinking. A broad definition is stated by Ennis (1989), "Critical thinking is the process and skills involved in rationally deciding what to do or what to believe" (p. 8). Another definition by Paul (1997), the director of the Center for Critical Thinking, expands this general definition. He defined critical thinking as follows, "Critical thinking is 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" (p. 1). In the literature, Atkinson (1997), Benesch (1997), deBono (1992), McPeck (1981), and others try to define the concept but scholars have not found a concrete, observable definition of what critical thinking is. That is why the problem of definition had to be considered in this study.

The idea behind critical thinking is that it is necessary within a society to protect human beings from being attacked for their beliefs or brainwashed into believing what others want them to believe without having the opportunity to question or inquire for themselves; thus critical thinking needs to be applied to life outside the classroom atmosphere. Auerbach and McGrail (as cited in Benesch, 1993) discuss how critical thinking should be reflected by students in classrooms as follows: "In classrooms that feature critical thinking, students are encouraged to participate actively, raising issues of concern in their lives such as work, school, housing, and marriage, as topics for class scrutiny" (p. 547).

The importance of critical thinking in the classrooms of a democracy has been highlighted by Mason and Washington (1992) with the following quotation:

> The citizens of a democracy must be able to sustain open and informed debate on many difficult and possibly intractable questions and topics. They need to be able to think for themselves, to reach their own conclusions and to act on them… The educational task is to teach students how to think seriously about series of issues (p. 9)

Today, with the advancement of technology, information has become something that can be found and utilized easily. Thus, knowledge on its own, as opposed to understanding, is not as difficult to acquire as it used to be. This naturally underlines the importance of the use of critical thinking, as dealing with information effectively has become more important due to its very abundance.

In order to activate critical thinking in students, our teachers need to present alternatives, different ways of interpreting texts, and different conceptions of the world. As Mason and Washington (1992) underline the importance of thinking in today's democracies and other countries, they highlight the importance of a liberal education, which includes the concept of critical thinking. "Liberal education is one which teaches that there is always more than one way to see things and that it is always up to the individual to judge just where the truth lies on any given issue" (p. 10).

The concept of critical thinking within the field of the education is also not new. Dewey (1928) highlighted the importance of thinking individuals for society and mentioned in his work, *Progressive Education and the Science of Education*, that one cannot claim learning information provides judgment. Memory is like a refrigerator, which stores the knowledge to be used in the future, "memory provides a stock of meaning for future use, but judgment selects and adopts the one to be used in an emergency" (p. 115). For Dewey, thinking plays a crucial role for individuals in the process of learning. Therefore, steps to implant critical thinking

in the process of education should be taken with the understanding that critical thinking cannot be learned as a separate concept by itself, but must be integrated into content curriculum activity.

Due to the deficiency of entry-level students and the importance of possessing thinking skills and with the help of research studies conducted over time, many educational institutions have added a critical thinking component into their courses and their institutional goals. Colleges and universities have also started initiating courses in which a critical thinking aspect exists. The English 101-102 courses at a college freshman level at Bilkent University are an example of this.

Mason and Washington (1992) believe that the solution to the problems of liberal arts teaching is the integration of compositional and critical thinking skills as part of the educational project and not as something separate. Research conducted by NAEP (National Assessment of Educational Progress) as cited in Applebee, Arthur, Judith , and Ina (1986) shows that there is a link between effective writing and critical thinking skills. Research also shows that writing enhances learning. According to the report from The Indiana Department of Education (as cited in Risinger 1987), the primary goal of curriculum planners is to help students develop the ability to make well-informed, well-reasoned decisions, and to act responsibly.

> Responsible decision-making requires practicing the skills of acquiring, evaluating, and using information for the purpose of identifying courses of action and predicting their possible consequences. Lessons that emphasize writing can contribute significantly to achievement of this goal (p. 1).

Statement of the Problem

In the First Year English Program at Bilkent University, the notion of critical thinking has been applied for more than 8 years. In 1999-2000, a newly developed course description included,

> The primary objective of this course is to help students improve their general and academic use of English. Students will gain skill and experience in using common (researched) academic genres through process based approach. Students will gain skill in reading and analyzing texts that will help broaden their perspectives concerning intellectual and artistic traditions. In addition, students will learn how to complete basic research at the library, evaluate sources, and properly document in formation. Students will also improve their ability to actively participate in classroom discussions and present information and opinions effectively in an oral format. (The First Year English Program of Bilkent University, 2000, p. 183).

Critical thinking components or classroom activities that can be seen in the above description are, broadening perspectives to look at issues from different aspects, analyzing texts, completing basic research, evaluating sources, and participating in classroom discussion to present information and opinion. Following this general guideline, instructors in the First Year English Program English 101-102, utilizing content-based instruction, encouraged students to read, conduct research, discuss, and eventually reflect their own understanding and thinking through written assignments concerning a general theme chosen at the beginning of each semester.

Under this system, instructors and students had the chance to read material based upon the chosen themes and discuss their ideas through their own understanding within the framework of written assignments. Instructors prepared their own syllabuses for a 15-week course. Students read, discussed, conducted research, wrote their own thoughts through journals, and discussed their ideas through written assignments. The intention was to help students acquire knowledge

through reading activities and, with the help of research from different sources, try to relate that knowledge to the topic of their writing and develop their own arguments.

Many institutions state that they promote critical thinking in their course descriptions but it is not possible to say that they succeed in enriching critical thinking skills, as there has not been sound research on this issue. Even indicating the existence of critical thinking in language courses is not an easy task. For one thing, scholars have not been able to agree on a common definition as critical thinking is not a concept that can be easily measured, defined, and observed. This lack of an operationalized definition of the concept stands as a major barrier to effective research.

At the time of this study there was no evidence showing the extent to which the Eng 101-102 courses had an impact on students' critical thinking skills. This study will provide an operationalized definition of the components of critical thinking in order to analyze the relationship between critical thinking elements in the curriculum and college freshman course writing assignments.

<div align="center">Purpose of the Study</div>

A university education is an important step in one's life, since during that time one is provided the opportunity to gain the critical thinking ability. Learning to think critically is a gradual process; therefore, in order to provide evidence of the impact of critical thinking in a curriculum, several steps of investigation need to be conducted during students' educational process. This study is intended to be a first step in analyzing the effect of critical thinking in the F.Y.E.P. curriculum by investigating one Eng.101 instructor's implementation of critical thinking goals in

her evaluation of student essays within the Eng 101 curriculum in the F.Y.E.P. at Bilkent University. The implementation was analyzed through three main areas, instructor's defined components and expectations from students during the semester, the implementation of critical thinking during teaching and tutorials, and students' use of the components of critical thinking in their three assignments and related drafts.

<div align="center">Research Questions</div>

This study will attempt to address the following research questions;

1- What does the instructor consider the components of critical thinking to be, in terms of students' written performance?

2- How does the instructor implement departmental critical thinking components in planning writing assignments for students?

3- In instructor evaluations of student writing, what evidence does she find of the realization of the expected critical thinking components?

4- What is the students' understanding of the components of critical thinking in the Eng 101 course?

5- Is there a relationship between the instructor's evaluation of Critical Thinking components in written assignments and students' perceptions of critical thinking components in writing assignments?

<div align="center">Significance of the Problem</div>

Much has changed since the time of Socrates in the field of education. Learners need to be aware of how to use information and make it useful in their struggle to survive in today's rapidly changing world. Facilitating this process is a primary reason for introducing components of critical thinking into a curriculum.

One of the beliefs of the F.Y.E.P. at Bilkent University is that critical thinking skills can be taught and are being taught to students through the curriculum of the F.Y.E.P. However, this claim has not been analyzed through objective examination. This study looks at what the department and its instructors consider the components of critical thinking to be and how these components are realized in their curriculum. It has been mentioned in an earlier section that critical thinking is not a concept that can be measured and observed; therefore, this study may be a contribution to the literature as an attempt to observe the use of critical thinking components in learners' products. This study may also help to draw attention to the importance of the implementation of C.T. in all curriculums, regardless of discipline and institution to educate better citizens equipped with the necessary skills to cope with information both in the work place and in the broader society.

The next chapter will cover literature in several areas related to this study, the history and the development of the concept of critical thinking, the implementation of critical thinking in the field of education and language teaching, the role of teachers and students, and instruction through reading and writing.

CHAPTER 2: LITERATURE REVIEW

Introduction

The unexamined life is not fit to be lived by a human being (Socrates, 399).

This study investigates the implementation of critical thinking goals within the Eng 101 curriculum through written assignments. This chapter reviews the literature in the field, including a brief history of critical thinking, various definitions of critical thinking, and the teaching of critical thinking.

History of Critical Thinking

The concept of critical thinking has long received attention from scholars. Thayer-Bacon (1998) states that its history is as long as philosophy. The real origin of critical thinking is the logic used by early philosophers to prove that their arguments were sound. Logic was first introduced 2400 years ago by Plato under the name of dialogical thinking, using the model of Socrates. The Center for Critical Thinking (2001) states that Socrates, around 2500 years ago, with the help of a probing questioning technique, showed that people could not rationally justify their confident claims to knowledge. Socrates argued that prevailing confused meanings, inadequate evidence, and self-contradictory beliefs could not be relied on for sound knowledge and insight. People holding power and influence could still be confused and irrational. Even in those times Socrates realized the importance of asking probing questions and thinking prior to the acceptance of any idea as worthy of belief. The technique thus developed, based upon questioning that requires clarity and logical consistency, is called Socratic questioning and thinking. Ross (1993) describes Socrates as a person who approached issues through question and answer discussion. Socratic thinking

requires approaching issues with critical scrutiny and does not allow human

beings to commit themselves to beliefs they do not know to be absolutely true as

knowledge they acquire is subject to change under conditions in life. Socratic

Thinking questions are used with the guidance of logic. Paul (1993) believes that

every question serves a purpose and puts a specific demand on people. The

purpose behind these questions is explained with its relation to raising critical

thinkers.

> If I ask you `To what extent are your students learning to think
> critically?`, the question requires that you 1) understand
> precisely what is implied by the expression `thinks critically`
> and 2) assess your students' thinking by some means
> appropriate to determining the relative standing of your students
> either with respect to a fixed ideal of critical thinking or some
> standardized norm to which your students' performances (of
> thinking) can appropriately compared. An appropriate answer is
> one that is constructed in accordance with the logical demand of
> the questions (p. 113).

Following is a brief history of critical thinking summarized from the

Center for Critical Thinking web-site (2001). The age of Socrates was followed

by Plato (his student), Aristotle, and the Greek skeptics. The thinking during this

time highlighted the fact that things are different from what they appear to be.

One is able to see surface appearances; however, in order to see deeper into an

issue, special training or a different way of looking is essential.

> From this ancient Greek tradition emerged the need, for
> anyone 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 to objections can take us
> beyond the surface (p. 1) (11/11/2001)

In the middle ages, critical thinking continued to develop with the help of

the writing of Thomas Aquinas (Sumna Theologica). Aquinas raised "awareness

of the need for reasoning to be systematically cultivated and `cross-examined`."

In the 15th and 16th centuries, with the arrival of the Renaissance, scholars began to think critically on various subjects like religion, art, society, human nature, law, and freedom. Scholars like Cole, Erasmus, and Moore claimed that people need to have more analysis and critique in real life. Bacon argued the need for trained minds and Descartes emphasized that the mind should be trained to discipline, for thinking requires clarity and precision which can only be realized through a basis of systematic thought so as to prevent any kind of false assumption and fallacies.

The discussion continued in the 16th and 17th centuries with Hobbes and Locke who claimed the possibility of explaining everything through evidence and reasoning. In the 17th century many scientists, such as Robert Boyle, and Sir Isaac Newton, believed ideas were to be developed from carefully gathered evidence and sound reasoning. This view rapidly gained impetus in Western thought.

In the 19th century, scientists in different disciplines extended the vision of critical thinking, social science leading to many discoveries and innovations in science such as Darwin's *Descent of Man*, the reflections on Sigmund Freud's works, and field-based linguistic studies.

In the 20th century, people came to a more visible and explicit understanding of critical thinking as well as its power, especially in relation to education. In 1906, one major criticism (Folkways as cited in Center for Critical Thinking, 2001) identified uniformity in education and thought as a major problem with the schools and education of the time. The highlighted point in this criticism was that students were not able to produce opinions by themselves but got carried away with assumptions, fallacies, and hearsays.

> Schools make persons all one pattern, orthodoxy. School
> education, unless it is regulated by the best knowledge and

> good sense, will produce men and women who are all 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 (p. 4).

In recent times, there has been a growing awareness about critical thinking. It is believed (Sumner, as cited in Center for Critical Thinking, 2001) that "…Education in the critical faculty is the only education of which it can be truly said that it makes good citizens" (p. 4). Furthermore, accepting all ideas and beliefs as they are, does not make people ready to survive in the world. The above mentioned idea is also evident in Dewey (1991) who stresses the importance of human thought.

Although philosophers and scientists throughout the recorded history of Western thought have discussed the need for critical thought, as shown above, the concept has been difficult to define, measure, and observe. Although this study will not be based on an already established definition, some background on definitions is needed to provide a basis for this investigation.

<center>Modern Ideas of Critical Thinking</center>

In the review of related literature, some scholars appear quite frequently with their ideas and statements regarding the definition and the use of critical thinking in different contexts. Although each scholar quoted in this literature review looks at the issue from a different perspective, there are points in each which show considerable similarity in terms of understanding the concept. Atkinson (1997), Dewey (1928), Ennis (1992), Glacer (as cited in Kurfiss, 1988), Knapp (1992), and Paul (1997) have all contributed definitions of critical thinking, discussed here from the general to the specific.

Definitions of Critical Thinking

Dewey (1928), a significant scholar and scientist in the field of education, tried to explain thinking, "thinking in its best sense is that what constitutes the basis and consequences of beliefs" (p. 5). In discussing this definition, Dewey does not give any value to adopting beliefs without any test or support and encourages critical thinking, which is another concept that he covered. To Dewey critical thinking is "…active persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it; and the further conclusions to which it tends" (p. 6). He also includes the importance of prior experience in suggesting that thinking does not happen in the mind without any source. There must be a background or impetus that pushes people to think. Dewey's example is that of a man seeing dark clouds; he thinks of clouds and thinks that they might mean rain. His prior experience with clouds is the basis for his belief that it might rain. Therefore, thinking and, naturally, reflective thinking require searching for a basis for an idea or a belief. Determining which belief to accept or reject, however requires taking one step further than reflective thinking, which is critical thinking. The importance of prior experience has been highlighted by Edward Glacer as well.

Glacer (as cited in Kurfiss, 1988) tested the feasibility of critical thinking and identified three components:

> - an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experiences,
> - knowledge of the methods of logical inquiry and reasoning, and
> - some skills in applying those methods" (p. 8).

Glacer, like Dewey, stressed the existence of prior experience, and the need for knowledge, questioning and reasoning applied to that life experiences to arrive at reasonable decisions.

The three points stressed in Dewey and Glacer's definitions are that there need to be experience, prior knowledge, and the application of these in the thinking process of an individual. These three points are the common points that will consistently recur in the following definitions by scholars in the field, beginning with Knapp.

Both semantically and logically, thinking constitutes the essence of the concept of critical thinking. Therefore, it is essential to consider what thinking is and how it is linked to the idea of critical thinking. According to Knapp (1992), most researchers agree on a definition of `thinking`, "… thinking as a search for meaning, involving the mental processes that make sense out of experience" (p. 1). Jones et al. (as cited in Knapp, 1992) explain the idea further, "… learning depends on prior knowledge and the specific mental strategies that evoke understanding in the learner" (p. 1). This also supports Dewey's ideas on the necessity of the prior knowledge in thinking. Beyer (as cited Knapp, 1992) touches upon similar points, adding different dimensions. "… thinking involves perception, prior experience, conscious manipulation, incubation, and intuition" (p. 1). The three points highlighted here are the individual's own capacity to use previously gained knowledge or experience, the application of this experience, and the importance of common sense while processing it.

Another important figure in the field is Robert Ennis. Ennis (1992) defined critical thinking as "reasonable, reflective thinking that is focused on deciding what to believe or do" (p. 22). The common point with the above definitions that Ennis implies here is that the decision making process is based on data accumulated previously since reflection cannot occur without input. Ennis suggests learners can be educated to reach reasonable decisions, which action is the essential product of critical thinking. Decision making takes place with the help of critical thinking when an action is necessary.

Atkinson (1997), in contrast to Ennis, considers critical thinking to be an implicit social practice. He believes the concept to be defined by a culture, and thus learned by an individual within his native culture. Although also highlighting the importance of life experience, he would probably say that "reasonable" thinking is defined by culture and is an amorphous concept rather than a well-defined, teachable set of behaviors.

Another important scholar related to critical thinking is Richard Paul. Paul is currently the director of the Center for Critical Thinking, which is devoted to the development and spread of the application of critical thinking in various disciplines as well as in education across the world. Scriven and Paul (1997) prepared a draft definition for the National Council for Excellence in Critical Thinking which reads: "Critical thinking is 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" (p. 1). The above definition includes two components, a set of skills to process and generate information and beliefs and the habit of using those skills to

guide behavior. Paul's definition is very similar to Ennis's (1992), which is "what to believe and do" (p. 22).

Almost all the definitions given above include several common points; that critical thinking is based on previously accumulated information, that it entails a process of questioning, analyzing, and synthesizing this information through experience, and that the result is a conclusion based on accurate reasoning which leads to taking an action.

This has been a brief explanation of the emergence and definition of both thinking and critical thinking. Writers and scholars defined critical thinking as a process needed to challenge old assumptions and blindly adopted beliefs and ideas and search for alternatives. Moreover, critical thinking aims at moving one step ahead, beyond the current state of mind or currently established ideas to a more sophisticated or advanced level, which would give learners the opportunity to develop and improve themselves. Therefore, an individual who goes through this process can become a critical thinker with the abilities illustrated by Chaffe (2000), in Figure 1, a graphic representation of the aspects of critical thinking.

Figure 1: Chaffee's (2000) Aspects of a Critical Thinker

Thinking critically: making sense of the world by carefully examining the thinking process to clarify and improve our understanding.

| Thinking actively | Carefully explainnig situations | Thinking independently | Viewing situations from different perspectives | Supporting diverse perspectives with reasons and evidence | Discussing ideas in an organized way. |
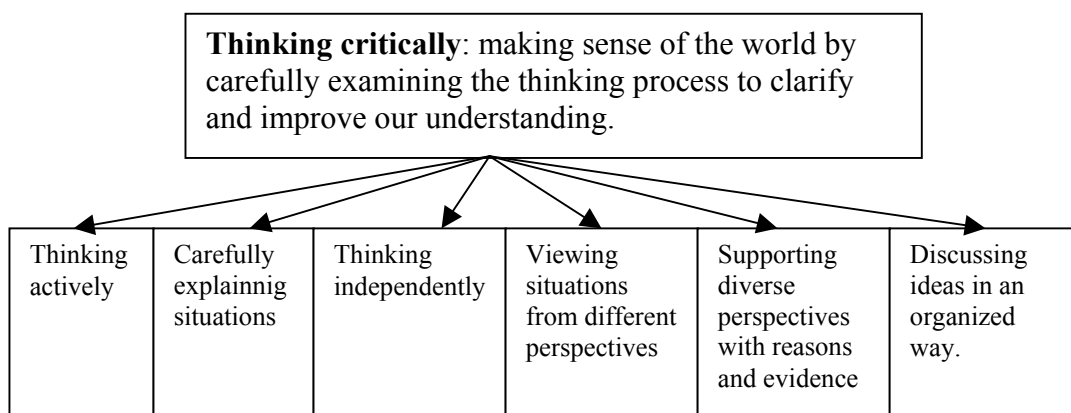
Figure 1: Chaffee's (2000) Aspects of Critical Thinking

Chaffe (2000), with the help of this figure, encapsulates the definitions given by different scholars. In fact, his figure is a illustrative explanation of Paul's definition which includes active thinking, analysis of situations, thinking free of biases, viewing issues from different perspectives, justifying arguments with valid reasons, and discussing these in an organized and orderly way.

The definitions discussed so far describe the requirements and components of the concept of critical thinking but most of them are still theoretical and too abstract to be measured; therefore, it is still necessary to consider how to put critical thinking into action; to realize the theory. In this study a definition of critical thinking is expressed in terms of teachable components. The aim of the study is to analyze one F.Y.E.P. instructor's implementation of critical thinking components in her classroom, therefore, these components must be measurable and the definition of the components of critical thinking of the F.Y.E.P. is elicited. The critical thinking components that the program requires its instructors to implement in classrooms are examining issues critically, looking at problems from multiple perspectives, considering issues from different aspects, knowing how to collect and apply information, which includes completing basic research at library, creating a strong argument on issues, evaluating sources, presenting information and opinion effectively, and reading and analyzing texts. These components seem to be based on the previous definitions given.

The Development of Critical Thinking in Education

It has been mentioned above that reasoning requires data, information, and evidence. The data could be provided by questions that are asked within the

course of good logic. These questions, which are useful for providing evidence required, are asked through both convergent and divergent questioning tactics. Convergent questions seek to determine basic knowledge and understanding. Divergent questions require students to process information creatively. According to Kindsvatter, Wilen, And Isler (1992) these questions can be linked to the sequence presented by Bloom in *Bloom's Taxonomy of Learning Objectives.*

Critical Thinking in Bloom's Taxonomy

In essence, aspects of critical thinking listed above are present in Bloom's (1956) taxonomy, which is an attempt to describe levels of cognitive understanding. The taxonomy includes six levels, knowledge, comprehension, application, analysis, synthesis, and evaluation. Undoubtedly the first three phases are important within the learning process, setting the foundation for the three phases following them which are components of critical thinking. To explain these steps briefly, knowledge focuses upon a recitation of facts, comprehension focuses upon relating and organizing previously learned information, and application focuses upon applying information according to a rule or principle in a specific situation. Analysis refers to looking at parts and their functionality in the whole, requiring higher order questions that enable students to think critically and in depth. The other step following analysis is synthesis, which focuses on putting parts together to form a new and original whole. In this step, students are asked questions that produce original communications, make predictions, and solve problems. Although analysis questions may also ask students to solve problems, synthesis questions differ in that they don't require a single correct answer but instead allow for a variety of creative answers. The last step within Bloom's taxonomy is evaluation, focusing

on valuing and making judgments based upon information. Evaluation includes a higher level question that does not have a single correct answer. This phase requires individuals to judge the merit of an idea, a solution to a problem, or an aesthetic work. Individuals may also be asked to offer an opinion on an issue.

To teach critical thinking, the instructor needs to focus on the last three levels, analysis, synthesis, and evaluation and to help learners apply results to their own situations, which requires self-reflection. Finding something related to themselves within the curriculum can stimulate learning. Kindsvatter (as cited in Wakefield, 1998) states that if critical thinking takes place hand in hand with relevance, then learning becomes more consistent.

Contemporary Direction

The taxonomy of learning objectives by Bloom has been presented with the help of a figure by Gahala (2001) to bring a new look at the issue so as to front the importance of higher level thinking within the taxonomy. Gahala maintains that even if an individual starts off with little knowledge at the beginning of the process, the emphasis given at the analysis and synthesis levels in instruction may give an individual the opportunity to come up with more at the evaluation phase (see Figure 2). In Gahala's interpretation, the allocated spaces in each phase become larger respectively and also the importance to be given for each phase becomes bigger as well. The figure illustrates that the process itself is cumulative since every step adds something new to the previous one, leading to the very last one, which is the evaluation step for which all previous steps are required in order to enhance the learning outcome of an individual. The value of these taxonomies is to provide a framework for curriculum design.
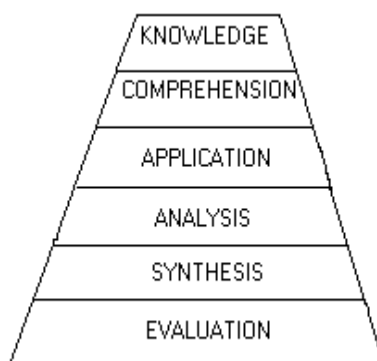
(Figure 2) Gahala's (2001) Interpretation of Bloom's Taxonomy

Teaching of Critical Thinking

The need for Critical Thinking within the Field of Education

      The integration of the concept of critical thinking in the field of education has intensified since the 1980 s. Both Lipman (1991) and articles found in online databases point to 1980 as the year, which brought about a change in national education policy in the U.S. According to Lipman, the educational system was in crisis during those years with teachers and officials in blaming each other for the problems. One origin of the problem was considering to be that students were too focused on accumulating knowledge within the educational system that was not useful to them after graduating from the system itself. One suggested solution to this called for the integration of critical thinking into the educational system. In discussion of this possibility, the question arose as to whether the concept could even be taught and if so, how. The assumption underlying this study is that it can be taught, so the focus is on how.

Issues in the Teaching of Critical Thinking

      Monahan's (1997) view on the question about whether critical thinking is teachable or not is dependent on what is meant by teaching. He believes that if teaching C.T. means making an individual think critically then the answer would

be negative. What is needed is curriculum to help the individual receive the *abilities* to use critical thinking. This fits the approach used in this study.

There is some question as to whether or not critical thinking should be taught as an independent course (the process approach) or within established courses (the content approach). Lipman (1991) believes that thinking should be taught through philosophy. He believes that cognitive skills cannot be taught separately since each discipline should be self-critical. "If it is not critical linguistics, it is not linguistics, and if it is not critical chemistry, it is not chemistry" (p. 263). Suhor (1984) argues that in recent years, specialists in mathematics, visual arts, music, and other subjects have claimed that unique aspects of their disciplines involve distinctive mental skills, requiring specially tailored strategies for learning. Therefore, teaching thinking skills should be interwoven with the subject being taught for students to be able to state cause-effect relationship, to compare and contrast, and to understand inference. Neither the course content nor the thinking skills can be separated from each other within the teaching and learning process. The same is true for language teaching.

Ennis (1989) developed a framework for evaluating critical thinking programs. According to Ennis, a course claiming to be teaching critical thinking skills should be either independent of content, in which case thinking skills would be the focus of the course, or the course should be content-based, with critical thinking skills embedded in the curriculum, or it should be a combination of the two, both "infusion" and "immersion". Ennis (as cited in Ruland-Parker, 1999) explains these:

> using a separate course to teach thinking skills, this can be
> independent of specific subject matter, infusing thinking skills
> deep thoughtful well-understood subject matter instruction,
> giving subject matter instruction in which critical thinking are

not made explicit, using combination of immersion and
infusion approaches, giving C.T. explicitly and in a subject
matter (p. 44).

In a nutshell, Ennis believes that critical thinking skills can be taught in a variety of
ways.

Advocates such as Ashton (1980), Walsh and Paul (1988), and members
of the Committee on Standards (1988) agree that in order to promote critical
thinking abilities in the classroom the role of the teacher is crucial; therefore,
teacher training is needed. They believe in the importance of integrating critical
thinking components within preservice teaching training programs so as to
provide effective models for the future teachers in the program.

Critical Thinking Programs

There are number of programs described on the internet which claim to be
applying critical thinking and its constituents. Two of them are California State
University, Department of Mechanical and Industrial Engineering (http://www-
catalog.admin.csufresno.edu/old/enginddgr.html) and John Hopkins University,
Department of Civil Engineering (http://www.ce.jhu.edu/undergrad.html). These
institutions claim that they have integrated critical thinking skill teaching into
their curriculum. John Hopkins University, in the mission statement section of
the official web site, states that its graduates demonstrate critical thinking skills,
although without explaining how this is evaluated. California State University,
with the help of the Engineering Writing course and other similar courses, claim
that they foster critical thinking in their curriculum. These examples show that
critical thinking is valued in higher education

There are different kinds of programs, which have devoted themselves to
the promotion of critical thinking separate from disciplines. Oxman and Barell

(1983) state that project THISTLE (Thinking Skills in Teaching and Learning) is designed to promote critical thinking skills of precollege urban school students. Lipman's Philosophy for Children is a program for younger students that develops informal logic skills through the discussion of issues raised in narrative tests, including problems of meaning, truth, ethics, reality and imagination. (Resnick 1987). The Instrumental Enrichment program, applied at Gallaudet University, is a content-free paper-and-pencil program that is dedicated to enhancing students' problem solving strategies in 14 cognitive areas. This program helps students to apply these learned strategies from classroom situations into actual ones (Martin, 1984). These programs aim at taking students from the conventional settings of a classroom to one through which students can be responsible for their own learning.

Another program that includes critical thinking is the F.Y.E.P. at Bilkent University , which has used content-based instruction (C.B.I.) since 1999. C.B.I., can be briefly described as *"...the integration of particular content with language teaching aims"* (Why content based instruction?, n.d.). Through C.B.I., the primary aim of the program is not to prioritize a course theme but to present it as an organizing principle while language structures, vocabulary, and structures as well as other targeted objectives needed to examine the theme are determined by the course. Grabe and Stoller (1997) give the main focus of CB.I. as, "When the learners' second language is both the object and medium of instruction, the content of each lesson must be taught simultaneously with the linguistic skills necessary for understanding it*"* (p. 17).

The positive link between the C.B.I. and its impact on the enhancement of thinking skills is posited by Cummins (1981). "…content-based instruction

ensures that classroom activities are cognitively demanding (thus enriching

students' cognitive development)" (p. 35). Met (1991) agrees with Cummins,

> [C.B.I.] lends itself to the incorporation of a variety of thinking
> skills, which lead to rich language development, e.g.,
> information gathering skills—absorbing, questioning;
> organizing skills—categorizing, comparing, representing;
> analyzing skills—identifying main ideas, identifying attributes
> and components, identifying relationships, patterns; generating
> skills—inferring, predicting, estimating (p. 282).

The place of critical thinking and the teaching of higher order thinking skills in

C.B.I. are indicated by Short (1991), who says that instruction should be enriched

by content which will help identify the language skills required to learn that

content, and by reasoning abilities such as analyzing, synthesizing, and

evaluating. Short asserts that the objectives of an integrated language and content

course can be divided into categories such as "problem solving, content-area

skills, concept comprehension, language use, communication skills, individual

behavior, group behavior, and attitude" (p. 2). She proposes alternative

techniques to assess these categories like "skill checklists and reading/writing

inventories, anecdotal records and teacher observations, student self-evaluations,

portfolios, performance-based tasks, essay writing, oral reports, and interviews"

(p. 2). Many of the skills listed here are the skills needed for the critical thinking.

Role of the teacher

A method of inquiry related to critical thinking does not occur naturally or

come to a classroom automatically. In order to initiate a method of inquiry,

teachers need to make necessary preparations so as to encourage learners to use

such in their studies. Johnson (1997) suggested the use of academic controversy

to ignite students' critical thinking skills for their studies. Because teachers need

to learn to activate academic controversy, he mentions the importance and

necessity of training learners beforehand. During these training sessions, he believes that teachers learn how to show students how to engage in intellectual inquiry, intellectually challenge each other, consider issues and subjects from different perspectives, and synthesize a variety of positions into a new and creative decision.

Just teaching students to memorize knowledge for a test is not an effective way of educating students for the future. If the ultimate aim is to educate thinking citizens for democratic societies, then students should be taught through courses whose objectives include application and analysis, divergent thinking, and supporting their own judgments and beliefs. McMillan (as cited in Carr, 1990) highlights this need. "It really boils down to whether teachers are creating an environment that stimulates critical inquiry" (p. 1).

Hirose (1992) criticizes an educational system in which instruction is delivered mostly through lectures. Classic instruction is delivered through teachers standing in front of the class, helping students memorize facts and absorb rote knowledge without any thought. However, students should be encouraged to go beyond the memorization of a fact, to learn how to use this fact and blend it with his own experience in his own life. In order to achieve this goal, teachers should change the way they give instruction and present the material. According to Hirose, teachers must know how to ask open-ended questions "why, how, and what if" (p. 2) and help students to find answers to these questions.

When looked at carefully, the teacher's position is like a facilitator or even a guide who set goals and encourage students them to reach their preset goals. In other words, teacher functions as a supporter. Barell (as cited in Ruland-

Parker, 1999) defined quite clearly the role of inquiry, an important technique for

critical thinking, in the classroom with the following words;

> Inquiry demands of the teacher a disposition toward
> finding out –being curious about her students'
> thinking by posing such questions as `how did you
> arrive at that answer? What made you pose that
> question? What brought you to that conclusion? (p.
> 174).

The main aim of inquiry is to find out what students have learned, not what they

know. Fraenkel (as cited in Ruland-Parker, 1999) believes that the questions

being asked by the teacher are the essence of effective teaching of inquiry which

leads students to critical thinking.

<u>Role of the student</u>

The role of the students within the learning process is quite important

since learning should be seen as an interpersonal process. According to a Joint

Task Force on Student Learning (as cited in Huba and Freed, 2000) learning

involves not only teachers or students by themselves, but also a process requiring

cooperation and sharing to enhance the learning. As explained within the

definition of critical thinking, individuals question themselves to become aware

of their own reasoning. This means that individuals' ultimate aim in using critical

thinking is to find out things by themselves. Inquiry and therefore, questioning,

help them to take the initiative to understand things on their own. This also brings

up the issue of asking questions and who should be asking them. Not only the

teacher but also students should be asking questions, conferring with the teacher

as a resource. Ruland-Parker cites several researchers in the field who agree that

students must take the control of and responsibility for their learning. (Woodhull

and McNeal, 1989; Womack, 1989; Zuchner & Teitelbaum, 1987). "The teacher

must make this learner role plain to the students, and the students must know when they are to confer with the teacher before going on to the next step of their investigation" (Ruland-Parker, 1999, p. 175).

<div align="center">Methods</div>

Inquiry and Critical Thinking

    The Use of Inquiry

Inquiry is a method using questioning to search for the "truth". The use of inquiry as a method is applauded by Kurfiss (1988) who states students, using this method, can be invited to analyze a situation while searching for underlying factors. "Students deliberately ask questions, select examples, and use `entrapment` strategies to elicit misconceptions in students' thinking so that they can be corrected" (p. 35). Collins and Stevens (as cited in Kurfiss, 1988) claim that teachers applying an inquiry method should be knowledgeable on the subject themselves, flexible, and smart enough to select appropriate problems for analysis.

Lipman (as cited in Ruland-Parker, 1999) suggests that classrooms can be converted into communities of inquiry. Students can be examined on content and also enhance their critical thinking ability. Lipman answered the question "why inquiry":

> The product of inquiry is meaning, and it is meaning
> for which we are all voracious, perhaps students most
> of all. An education that produces meaning will be
> satisfying for its own sake and not merely for the sake
> of extrinsic benefits. Critical thinking is a superior
> way of processing experience by getting more
> meaning out of such experience and by putting more
> meaning back into it. It is a way of making education
> relevant (p. 170).

While answering the "why" question in the above quotation Lipman makes the connection between inquiry and critical thinking. "Both critical and creative

thinking can be expected to be guided by the pervasive quality of the specific

inquiry situation and to be sensitive to the configuration and contours of that

situation" (p. 194). Therefore, inquiry helps the learners think critically.

The Relationship between Reading and Critical Thinking

"To be able to think, you need something to think about, and that is

normally what someone said or wrote" (Mason & Washington, 1992, p. 18). In a

classroom, there are many techniques for fostering critical thinking however,

students need to accumulate knowledge in order to produce thoughts on matters

and subjects. Mason and Washington indicate the necessity of reading for this

purpose. Referring back to Bloom's Taxonomy of Educational Objectives, the

very first stage in the cognitive domain is knowledge, where learners accumulate

knowledge, and one way of doing that is by reading.

The importance of reading has been emphasized by many researchers in

the field. One of them is Paul (1993), in his book *Critical Thinking*, who defines

reading as the process of translation of the writer's thought into meanings that the

reader can understand. He believes that an author encodes messages into words

and disseminates these with the help of the book or printed material. Readers use

a complicated process to decode these messages for their own understanding.

They have to understand such things as the purpose of the book, what the aim of

the writer is, and what issues or problems are being discussed in the book in order

to understand the author's message. The understanding required to paraphrase

what is read or to remember the meaning of sentences that compose the passage is

not enough for critical understanding. The reader needs to be able to show

understanding in writing and understand the meaning behind the passage. Mason

and Washington (1992) say that the "understanding which grows out of a

reflective reconsideration of texts that can be approached from many directions, interpreted in many ways" (p. 19). According to Armbruster (as cited in Kurfiss, 1988), one effort is to establish a "model of the meaning of the text" (p. 32).

The accumulation of knowledge through reading enables learners to form good arguments, according to Bloom's taxonomy. Students at the end of the learning process come to the evaluation stage, which is approached with the help of the accumulated knowledge and the phases they have gone through to reach this stage. One way to enhance students' background knowledge could be accomplished through improving their reading skills. According to Ruland-Parker (1999), the work of various researchers indicates that classroom activities related to reading, such as the use of advance organizers, comprehension of concepts, concept development, inductive and logical reasoning, representation, elaboration, problem solving, evaluation, and metacognitive effective strategies foster the students' thinking abilities at the college level. Reading is one of the most powerful tools to activate background and prior knowledge and to promote learner participation in a discussion setting. It helps learners to become the part of the learning process, to question and inquire about what they are learning or what is being taught. According to the research conducted by Commeyras (as cited in Tice, 1993) reading lessons have significant impact on students' development in critical thinking lessons. She indicated that these lessons encourage students to refer to the text to clarify information, cover different perspectives and the points of view of various parties, provide reasons to support interpretations, and evaluate the acceptability of alternative interpretations. She has found that children who do these things, which she identifies with "critical thinking," improve in their reading

proficiency. There it is clearly seen that there is an interactive relationship

between reading and critical thinking.

The Relationship between Writing and Critical Thinking

Writing is a tool through which human beings communicate and express

themselves, fostering critical skills and facilitating learning. According to Taba,

(cited in Ruland-Parker, 1999) the relationship between writing and thinking is a

relationship between of kinds of thinking and writing experiences people have

had. This means that people tend to reflect their thinking experiences in writing

while producing a written task. According to a report prepared by the Indiana

Department of Education (as cited in Risinger, 1987) there is a strong tie between

writing and the enhancement of critical thinking skills. The report stresses the

necessity of the existence of critical thinking in a curriculum planning process and

its instructional strategies. The report adds that educated individuals should be

able to collect necessary information, evaluate it, and use it in order to decide

what to do and how to determine possible outcomes or consequences. The effect

of writing on the achievement of this goal is through the writing process and its

contribution to thinking. Flower and Hayes (1994) pointed out that writing is a

problem solving process during which writers produce an organized set of ideas

by selecting concepts from their accumulated knowledge and information and

expressing them according to the need and level of readers. According to Emig

(as cited in Ruland-Parker, 1999), writing involves problem solving exercises the

successful completion of which requires both reading and writing, which are also

correlated with thinking. Students go through a process while solving a problem,

which requires an analysis of the situation at hand, questioning the evidence,

providing accumulated information, and reaching a conclusion with the help of

synthesis. Arapoff (1967) states that a process of writing is largely a process of learning to think more clearly, which means that a writer, in order to explain his ideas to the reader, has to show his thinking process more clearly so as to get the message across to the reader. Mason and Washington (1992) state that writing is the most evident expression of cognitive and expressive skills. Ruland-Parker (1999) summarizes the relationship between thinking and writing as follows;

> Depending on the teachers' purposes, writing can be used as an element of a classroom climate to evaluate students' knowledge and skills or to foster to the development of C.T. skills through the activation of prior knowledge, establishment of relevance, explicit attention to metacognitive process, and creation of an articulate community of inquiry… (p. 285)

The above point is highlighted by Stahl et al. (1992), "writing aids help students in becoming co-creators of the texts they read, in creating their own articulated understanding of content material, and in providing a means of monitoring and revising that understanding" (p. 4).

Conclusion

This literature review attempts to introduce the brief history of critical thinking, its the origin and the phases that it has gone through within history. It also indicates the necessity of the instruction of critical thinking in educational institutions as scholars and administrators complain about this area in relation to student abilities after they graduate. The common complaint is that schools cannot provide the kind of education needed to better prepare students for life. Therefore, the students need to be equipped with critical thinking skills so that they will have the capacity to cope with problems or situations encountered. This requires the integration of these skills into school curriculums and programs. While highlighting the importance of integrating C.T. components in curriculums,

however scholars have not been able to agree on a standard, compact definition of the concept. Since the aim of this study was to analyze a course instructor's implementation of C.T. components in her classroom and to find the relationship between what the instructor was implementing and what the program expected her to implement in her classroom, her perceptions of the C.T. components in line with the F.Y.E.P. program requirements were considered and taken as the definition of critical thinking.

In the next chapter, the research tools and methodological procedures followed as well as the setting and the participants used to gather data will be provided and discussed.

CHAPTER 3: METHODOLOGY

Introduction

This study aims at analyzing one instructor's implementation of critical thinking goals in her evaluation of essays within the Eng 101 curriculum at Bilkent University First Year English Program (F.Y.E.P.). To deal with the difficulty of concept definition, critical thinking goals were defined as the components of critical thinking understood and listed by the department and the course instructor. During the study, the researcher will attempt to answer the following questions;

1- What does the instructor consider the components of critical thinking to be, in terms of students' written performance?

2- How does the instructor implement departmental critical thinking components in planning writing assignments for students?

3- In instructor evaluations of student writing, what evidence does she find of the realization of the expected critical thinking components?

4- What is the students' understanding of the components of critical thinking in the Eng 101 course?

5- Is there a relationship between the instructor's evaluation of Critical Thinking components in written assignments and students' perceptions of critical thinking components in writing assignments?

Overview of Procedure

This research study was carried out through interviews with one Eng. 101 course instructor, two pre-selected students, and the director of the F.Y.E.P. One set of interviews with the instructor and the students was based on the instructor's evaluation of papers from five randomly pre-selected students. Interviews with the

instructor consisted of an initial interview, conducted at the beginning of the semester, and interviews on students' drafts, conducted throughout the semester after each evaluation of assignments. Student interviews took place at the beginning of the semester and after each submission of writing assignment drafts. During the study, students submitted three assignments, the first two of which had three drafts each. Each draft was evaluated by the instructor prior to the interview about that draft. For the final assignment, only one draft was required. After the interviews were completed, the data were analyzed.

Participants

The participants in this study were one Eng. 101 course instructor, five students from her Eng 101 course, and the director of the F.Y.E. program at Bilkent University. It should be noted that the researcher, although not a participant, has been a full-time instructor in the F.Y.E.P. for five years.

Students who reach a specified level in English Proficiency at Bilkent University School of English Language and those who pass the COPE proficiency exam by getting at least `C` are considered qualified to take the Eng 101 English Composition Course in Fall semester. In addition to that, students who study only one semester and pass the COPE Proficiency exam at the end of the spring semester and register in their faculty program also add this course. The students who participated in this study had just completed their one semester at the prep school and had added Eng 101 to their course list.

The researcher briefed the instructor's class about the study to be conducted without going into detail, in order to not affect the treatment in the study. Then, students were asked whether they would like to take part and, among those who

volunteered, five were chosen at random. The five participating students were from Engineering and Sciences departments. Two of them were from the department of Computer Engineering and Sciences, two from Mathematics and one was from the Chemistry department. All but one of the participants were full scholarship students. Scholarships at Bilkent University are granted on the basis of students' performance at University Placement Test taking place once a year across the country. The five students were given information on the procedure of the study to be conducted, again without going into detail, and a request was made for two more volunteers from among the five participants for the interviews. Two students volunteered. They were interviewed in order to elicit information about their understanding of the assignment requirements and the work they did to meet those requirements. The reason for limiting the number of student participants during the study was to be able to investigate the complex intellectual process involved in the implementation of critical thinking, which requires in-depth investigation.

In reporting the findings of the study, pseudonyms were used in place of the real names of the participants.

The course instructor involved in the study had been working in the program for more than 8 years as a language instructor. She is a graduate of an English Language Teaching department of a reputable university in Turkey and completed the Master of Arts in Teaching English as a Second Language Program (MA TEFL) at Bilkent University. Considering her years of working experience in the field of education, she is a qualified language instructor who knows the Bilkent University student profile and course goals and objectives well.

The director of the F.Y.E.P. had been at Bilkent University for four years. He completed his Graduate degree in literature at a reputable U. S. university. During his tenure as Director, he was involved in the restructuring of the program curriculum and the emergence of a Content-Based Instruction focus.

Materials

The instruments used for the study were five guides for interviews conducted with the course instructor, the two pre-selected students, and the F.Y.E.P. director, and a class form to be filled in by the course instructor.

Interviews

Borg and Gall (1983) stated that interviewing is necessary when we cannot observe behavior, feelings, or how people interpret the world around them. They also highlighted the importance and the benefits of rich and in-depth data that can be collected with the help of a well constructed and planned interview procedure.

Instructor Interviews

There were two types of instructor interviews in this study, one that was conducted at the beginning of the term and the other that was done after submission of each draft for each written assignment. Interview guidelines were drafted for each different interview based on the research questions of the study and data needed to answer the research questions. (see Appendix A)

The initial interview was conducted using a set of eight interview questions to elicit the course instructor's understanding of the components of critical thinking and how she reflected her understanding in the teaching material and writing assignments, along with her expectations of students during the semester. When and where necessary, the researcher asked follow-up questions to clarify responses.

Each post-evaluation interview was conducted with the course instructor after she had evaluated a set of submitted writing drafts. The aim of the interview was to elicit from the instructor to what extent students displayed components of critical thinking in the assignment in question. In addition, the interview aimed at discovering the connection between what was taught in class and what was expected in the assignment.

Student Interviews

The student interviews were of two types, similar to the instructor interviews, one conducted at the beginning of the semester and the other after each draft was submitted to the instructor for evaluation. (see Appendix A)

The initial interviews were conducted in order to discover students' familiarity with the components of critical thinking and their awareness of critical thinking-related activities that might be part of the course.

The post-submission interviews were conducted each time students submitted their drafts to the course instructor. The aim of this interview was to examine the students' understanding of the purpose of the assignment, what they thought their instructor expected them to do, the process that students followed while writing their drafts, what kind of plan they had in their minds, and whether they thought they had used critical thinking components while planning and writing their assignments.

Director Interview

This interview was to elicit the F.Y.E.P. director's understanding and definition of the concept of critical thinking as components embedded in the goals and objectives within the curriculum. In addition, this interview aimed at finding

evidence concerning the extent to which the program fosters and supports the enhancement of the concept of critical thinking within classes and instructors' materials, and finally, to discover if the instructor's understanding of the concept of critical thinking correlated with that of the department. (see Appendix A)

Instructor Form

This form (see Appendix B) was created by the researcher to be completed by the course instructor. The aim of this tool was to record, first, the instructor's plans for implementing the department critical thinking goals within lessons and second, how these planned activities were accomplished during the lessons. The instructor completed this form for her specific section of Eng 101. Before going to class, she wrote her objectives for that day's writing draft and what she planned to do to implement the C.T. goals. After class she noted whether and how these planned activities were accomplished.

Procedure

In this study qualitative data were collected by means of a series of interviews. Borg and Gall (1983) stated that interviewing students not only helps the researcher collect data but also helps students gain insight into the subject being studied, establish better communication with the instructor, and become aware of their importance within the process, both to the instructor and the institution. During this study, the course instructor was interviewed eight times, the students eight times, and the director of the program once. Each interview conducted during the study lasted around twenty minutes. The detailed information concerning the sequence and the purpose of interviews is given in Table 1.

Table I: An outline of the data collection schedule and purpose

Participants	Method	Purpose	Time
Instructor	1- interview: the selected instructor will be asked a set of prepared questions.	1- to elicit instructor's definition and understanding of critical thinking to be used as a criterion in the study.	1- beginning of the semester
	2- interview: 5 students' papers will be selected and the selected instructor will be asked a set of questions after the evaluation of these papers.	2- to find out how the selected instructor evaluates the existence and the progress of critical thinking skills of a student as reflected in writing assignments.	2- during the semester.
	3- form filling. The selected instructor will be asked to fill out a form designed in advance.	3- to find out how the instructor connects class activities and evaluation being practiced in the assessment.	3- 3-4 times during the semester
Students	1- interview.	1-. To find out their expectations and their fulfillment level.	1- beginning and end of the semester.
	2- interview. Two randomly selected students will be interviewed based on the pre-designed questions	2- to find out their perception of assignments, what they have written down the process they have been through and what they thought they were doing in terms of critical thinking.	2- after each assignment is submitted
Director of F.Y.E.P.	1- interview with the help of the pre-selected set of question	1- to find out the departmental goals and objectives and understanding of critical thinking.	1- beginning of the semester

Over the 8-week period of the study, the instructor distributed each assignment prompt to students, outlining what was expected of students for that particular assignment (see Appendix C). According to her self-report, in addition to these, the instructor explained each task to the students with the help of the assignment prompts while giving each assignment. The instructor went over each prompt by explaining what she expected students to do, which points they were to focus on while performing each task, and told students the evaluation criteria. The instructor was also available through tutorials to help students when they needed guidance on the assignment requirements. Tutorials are the hours allocated to individual student conferencing. Making an appointment in advance, students could visit their course instructor in her office or in an allocated space to further clarify the points they had not understood.

The interview guides for the student interviews were designed and piloted with three Freshman Eng. 101 students from the department of Computer Sciences during spring semester. It was noted that neither the questions nor the process were productive enough to collect the required data. Therefore, substantially different sets of questions were prepared and the number of questions was increased.

After the instructor interview guides were prepared, based on the research questions of the study, they were piloted with one faculty member on 08/03/2002 to test the clarity of the questions and the interviewer's behavior. The same process was followed for the students' interview schedule, which was piloted on 12/03/2002 in the presence of a faculty member, who was to observe the interviewer's behavior and give feedback so as to maintain an effective and objective interview process.

As a final step, the director interview was prepared and the questions were piloted with one faculty member on 08/03/2002.

In order to find an instructor for the study, the researcher corresponded with the unit instructors to find out if they were interested in participating. Three instructors expressed interest. The researcher chose the one he was least acquainted with. Then, he contacted the director to ask for permission for her to participate in the study. Permission was granted through electronic mail. Student participants were then selected from the instructor's section.

The five student participants volunteered to take part in the study after the researcher explained the purpose of the study to the class on 01/03/2002 without revealing the details of the study. Considering the time constraints of the program and the amount of data that the interviews would produce, only two of the five selected students were chosen at random to be interviewed. In case one of the two students decided to quit the study, one substitute student was chosen and interviewed until the end of the study but the data gathered from her were not included in the study.

As the aim of the study was to analyze the Eng. 101 instructor's implementation of critical thinking goals through writing assignments, the five students' papers were used as the focus of the instructor interviews to determine to what extent the specified components of critical thinking goals and objectives were realized. Papers of the two students who were interviewed were used to elicit their understanding of the expectations for each writing assignment in regard to the components of critical thinking, how well they felt they had met the critical thinking goals in that assignment, and the process they went through while completing their

assignments. The students were informed that the interview scripts would not be shared, published, or used without their prior consent and that the interview tapes, after being transcribed, would be erased.

In order to trace the teaching of the components of critical thinking in class, the instructor was given an instructor form that she was supposed to fill in over a 2-week period, in order to provide a sample of classroom activities that included the components of critical thinking. The course instructor was briefed on how to use the form, which contained two grids. In the left column the instructor was expected to list the types of activities she had planned to get students to use critical thinking skills. In the right column, she was asked to put her feedback after the lesson on the extent to which the planned activities were accomplished and the reactions of the students to these activities. This form was given to the instructor on 08/04/2002 and collected on 08/05/2002.

The initial interview with the course instructor was conducted in English on 13/03/2002 at the beginning of the semester. The interview was recorded on audiotape and transcribed. After the transcription was completed, it was sent to the course instructor to ask for her final approval for it to be used in the data analysis. This was also done to check and maintain the reliability of the data.

The student's initial interviews took place on 17/03/2002. These interviews were conducted in Turkish so as to let the students express their ideas with ease. The interviews were tape recorded and transcribed. A retired professional translator translated the transcriptions into English, after which they were sent to the students for approval.

Over a period of approximately eight weeks, the interviews with the course instructor and the students were conducted after the submission and evaluation of each draft. The questions asked during these interviews focused on the instructor's evaluation of the five students' performance in their writing assignments, particularly on their use of the taught components of critical thinking. The interviews with the instructor were conducted in English and tape recorded. Following the interviews, they were transcribed and sent to the instructor for final approval.

The purpose of these interviews was to elicit the instructor's perceptions on whether students were able to fulfill the task expectations, how well students used the taught critical thinking components, and how she helped students to attain the critical thinking goals. (see Appendix D for a sample page)

The student interviews on the same written drafts were done in Turkish, tape recorded, transcribed, and translated by the retired professional translator. They were then sent to the students for their final approval. (see Appendix D for a sample page)

As a last step, the interview with the director of the First Year English Program took place on 15/05/2002. The interview was conducted in English and took around 20 minutes. Then, the interview was transcribed and sent to the director for his final approval. (see Appendix E)

Data Analysis

For this study, qualitative data were collected through interview and instructor forms. The data collected through interviews and instructor forms were analyzed through categorization based on the course instructor's understanding of

the components of the critical thinking, and her expectations of student use of these components of critical thinking. Throughout the semester, data on three types of implementation of the components of critical thinking were collected; the instructor's implementation of the components and her expectations in three assignments, her teaching in the classroom and during tutorials, and students' use of the components in their assignments. Due to the insufficient data received through the instructor's form, and the lack of any data focusing on the tutorial sessions, this type of implementation was not analyzed.

The collected definitions from the course instructor, the program director, and the students were entered into another chart to compare those three definitions to each other.

The instructor's expectations and students' understanding of expectations for each assignment were then entered into a set of charts. The course instructor's evaluation of each draft were also entered into a set of charts and analyzed for students' use of critical thinking components.

Then, the data, illustrated with the help of these charts, were examined for similarities and differences between the course instructor's and students' understanding and the course instructor's evaluation of students' writing on each draft, starting with the first draft of the first assignment up to the last assignment, which was a single draft. One additional area of analysis was to note whether a convergence to the targeted critical thinking goals was observed over the sequence of written student drafts.

In the following chapter, the data analysis procedures and results will be discussed in detail.

CHAPTER 4: DATA ANALYSIS

Introduction

In this chapter, in order to investigate the implementation of critical thinking goals within the Eng. 101 curriculum of the First Year English Program and the instructor's evaluation of those goals in students' writing assignments, interview sessions were conducted with an Eng. 101 instructor, randomly selected students, and the director of the F.Y.E. program. In addition, the interview sessions and the instructor forms were organized to collect data at different stages for different purposes, which are outlined below under relevant headings. This chapter presents the results of the data collected and analyzed to provide answers to the following research questions.

1- What does the instructor consider the components of critical thinking to be, in terms of students' written performance?

2- How does the instructor implement departmental critical thinking components in planning writing assignments for students?

3- In instructor evaluations of student writing, what evidence does she find of the realization of the expected critical thinking components?

4- What is the students' understanding of the components of critical thinking in the Eng 101 course?

5- Is there a relationship between the instructor's evaluation of Critical Thinking components in written assignments and students' perceptions of critical thinking components in writing assignments?

The analysis of the data collected with the help of the interviews is based on the course instructor's understanding of the components of critical thinking as the instructor herself interpreted and evaluated these components in the classroom. The

instructor's understanding of components is also compared to department goals and

guidelines to see if the instructor's understanding matches that of the department.

Two randomly selected Eng 101 students were also interviewed to collect their

understanding of the components of C.T. and to elicit information about the process

they used while writing.

In order to elicit this information during the interview, the researcher asked the

question, "What do you understand of critical thinking? In your own opinion, what

are the necessary constituents of critical thinking?" (see Appendix A). Accordingly,

the instructor gave the definition of the components as follows:

> Basically, you read something, see something, and hear
> something however you are not going to believe it. You just
> are going to question that thing. You are going to take another
> stance, change the view, look at it from another perspective
> and you are going too put yourself in another position, you
> are going to change the view and challenge the things, see the
> thing from a different perspective, and reform it actually. And
> by doing so, you must be tolerant as well. You should
> understand the other's perspective you have the kind of
> understanding of the things. You may say "this is right or this
> wrong" and you are not ready to change. You should be ready
> to change as well. You see, hear and you read however you
> question it you just don't go with it (instructor's initial
> interview; 04/03/2002).

The instructor further explained her understanding of the concept with an example

of capital punishment.

> Let me think of an example. Let us take capital punishment. I
> believe that it is right. We have to punish these people
> because these people are monsters. I come with all the biases.
> I believe this person is bad and this person must be punished
> and the best punishment is capital punishment. How about
> this person's family? How about how he feels? How about
> other issues in this issue like what made him commit this
> crime? Is it he who is guilty? Maybe his parents are guilty or
> the society is guilty? Maybe this person has no job. What are
> the issues and sub issues behind this one underneath this?
> Main thing? (instructor's initial interview; 04/03/2002)

As mentioned above, two of the students in the study were interviewed in order to gather their ideas about the components of critical thinking, as was the F.Y.E.P. director. Instructor, students', and the F.Y.E.P. director's list of components are given in Figure 3.

Figure 3: Instructor's, director's, and the interviewed students' list of components of Critical Thinking

INSTRUCTOR'S COMPONENTS	DIRECTOR'S & PROGRAM COMPONENTS	CEMİLE'S COMPONENTS	ENGIN'S COMPONENTS
- Questioning information - Looking at an issue from different perspectives - Tolerance for ideas - Intellectual flexibility - Examining underlying issue, ideas or assumptions - Application of the information to their own situation - Taking a stance - Evaluation of the information accumulated - Identifying and solving a problem - Being objective - Supporting an argument with valid justification - Establishing connection between events and their reasons - Do research	The ability to: - Examine issues critically - Look at problems from multiple perspectives - Consider issues from different aspects - Know how to apply the information - Create a strong argument on issues - Evaluate sources - Present information and opinion effectively - Read and analyze texts - Complete basic research at library	- Approaching topics critically - Looking at topics from different angles - Changing the idea according to different views, and taking a different form. - Not being monotype - Brainstorming	- Assessing and conceiving their values - Evaluating cons and pros of individuals - Sharing of thoughts reciprocally - Brainstorming - Sharing our views

The definitions of both the instructor and the director of the F.Y.E.P. are quite similar to the definitions given by different scholars in the literature review chapter. Most of the components existing in both parties' definitions were voiced by important scholars in the field such as Atkinson (1997), Dewey (1928), Glacer (as cited in Kurfiss, 1988), Kurfiss (1988), and Paul (1997). Although the components were not given by participants in the form of a single definition, the above figure shows the components of the participants' definitions.

During the study, the course instructor, while defining critical thinking, provided not only the components of critical thinking, but also the characteristics of a critical thinker, such as "being objective". In order to maintain the objectivity of the study and the data collection, everything that she expressed related to a definition of critical thinking was put under the instructor's definition column. The components in the director's column were all gathered from the director through the interview, (see Appendix E), from the stated program goals (see Appendix F), and from various lists on the official web site of the F.Y.E.P.

When Figure 3 is analyzed, certain common points as well as different points can be seen between the teacher's, director's, and the students' components of critical thinking. When the teacher's list is compared to that of the Director of the F.Y.E.P., it is seen that the instructor's list includes everything but "read and analyze texts"; therefore, the instructor understanding matches the departmental goals and objectives in terms of the components of critical thinking as defined in this study. It could be argued that the director and program components are the framework for the critical thinking aspects of the curriculum, a framework which is expanded in the teacher's list to fit the material and the course content.

When students' responses are considered, it is seen that students list two components close to those of the teacher and the director of the program, those of examining issues or values and looking at issues from different perspectives or different people's ideas. It could be inferred that students are beginning to have an idea about the components of critical thinking even though it is quite basic and not well defined at this point. Students also considered a typical classroom activity, brainstorming, to be a component of critical thinking.

In order to trace teaching activities and techniques that foster critical thinking in the classroom, the instructor was asked to fill out the previously described instructor form (see Appendix B). She was given spoken guidelines on how to fill in this form and was asked to use that form for a period of two weeks as a sample of classroom activity related to critical thinking. The forms were given to her on 08/04/2002 and they were collected on 08/05/2002. She recorded information for 11 sessions (see Appendix G for a sample page). The data gathered from the instructor form was not as helpful as expected since the instructor could not provide what was expected. In the briefing session, the instructor was given the information that the left column was for the activities that were planned to foster the critical thinking abilities of students in class. The right column was for instructor's responses and students' reactions. The information actually provided in the forms was only about the subject on that day and did not include any activity specifically planned for critical thinking components. In the responses section, the instructor only noted down what was done in class on the day of the session. Thus, the information regarding the how the critical thinking components were taught in class was not gathered. An example of the information in the form is shown in Figure 4.

Figure 4: A sample instructor form grid.

CLASS ACTIVITIES (before class)	YOUR RESPONSE (after class)
03/05/2002 Friday (2hrs) - The curious enlightenment of Professor Caritat- Chapter 23 (Proletariat) - Students will read the chapter report what they have found about Proletariat and write their response.	- Students read the chapters and described Proletariat and identified similarities and discussed the issues and wrote a response paper.

Assignment I

The next step was to analyze the instructor's and students' responses related to the first student essay. In addition to the components of critical thinking, one

classroom activity related to the process of teaching and learning critical thinking skills was frequently listed, brainstorming. Response to the first question concerning the teacher's expectations and the students' understanding of the requirements of the assignment are recorded in Figure 5.

According to Figure 5, there was a common understanding that research would be done. Cemile understood that the essays would include different people's views; and Engin that the information should come from different sources; however, their understanding may or may not have included "both sides". The instructor's objectivity expectation was clearly not reflected by the students. Also, Engin saw gaining knowledge as one of the aims of the assignment. Neither the assignment prompt nor the instructor covered this point, however it may just in a way of expressing "do research" or "collect information". Likewise, Cemile included synthesizing the collected information and relating it to the relevant sections as one of the aims of the assignment. Instructor feedback did not mention having given this direction, although it could be related to the "summarize" instruction in the prompt. Thus, it can be concluded that there are differences between the teacher's expectations and the students' understanding of the assignment, except in regard to the activity expected, doing research. This is especially important considering the major focus of the assignment, including different views. The instructor expressed her expectation as follows:

> So if these two opinions are covered, in terms of content this is done. But if that person comes up with only one of [points of view], then the content is not covered (instructor's initial interview; 04/03/2002).

Figure 5: Instructor and the interviewed students expectations for Assignment I: Descriptive Essay

Assignment description	Instructor's expectation	Students' understanding
- Brainstorm the topic - Summarize information collected from 3 sources	Students will: - Do research on the selected topic - Cover both sides of the issue - Be objective	Engin: I am to: - Do research - Compile pamphlets from different sources - Gain knowledge Cemile: I am to: - Do research - Synthesize the information - Relate the collected information in the essay - Write different people's views

The course instructor also noticed the lack of understanding in students' essays and assumed that the problem might be due to her insufficient explanation of the assignment prompt, as she stated during the interview. Therefore, she stated that she would clear up the explanation of the prompt in class and in tutorials. After giving back the first draft of the first assignment, she commented on the common problems of the students that she noticed in general and reminded them of the points that they had to consider for the second draft. The five participant students visited her during the tutorial hours to get extra assistance from her.

> I am going to talk during the tutorials. I will see each of them and go over their paper and I am going to suggest the things to achieve CT and to achieve the objective to fully cover the research. So they will have a chance in individual tutorials and tomorrow in the class to cover the assignment, prompt again so I will repeat the information there what I am expecting them to do. To some extent what they fail to do. Also I see them in Billwrite for the tutorial (Instructor interviews, I. Draft, I Assignment, 25/03/2002).

As previously mentioned, students wrote an initial draft and two revisions for each essay. The question asked of the course instructor after the evaluation of each draft was "To what extent do you think students have displayed critical thinking components according to your own expectation of the assignment?" (see

Appendix A). The instructor's evaluation of Assignment I for each of the student participants in terms of critical thinking was recorded in Figure 6.

According to the chart in Figure 6, when the first draft is considered based on the expectations given in Figure 4, only Hamit displayed the components of critical thinking in his paper. He managed to be objective, cover the issue from both sides, include different people's views, and reflect on advantages and disadvantages of the issue being discussed.

The other students had a common problem, lacking balance in covering both advantages and disadvantages. In students' second drafts, on the part of Hamit, Adnan, and Firdevs, there is a convergence towards the expectations stated by the course instructor given in Figure 5. In this second draft, Hamit sustained his position, and Adnan and Firdevs made progress, balancing their arguments better and covering advantages and disadvantages. Adnan also managed to be objective in this draft. Engin and Cemile, however, still had some problems with explaining events and applying information effectively in their essays. Cemile had an insufficient amount of information and was unable to establish relationships between events.

In their third drafts, it seems that four students, Engin, Hamit, Firdevs, and Adnan, met the primary expectation stated in Figure 4, that of presenting a balanced argument. Only Adnan and Hamit, however, were able to be objective. The instructor's response to Cemile's paper was more difficult to analyze as nothing was said about the primary focus of the assignment. According to the instructor, this was because of the different nature of the topic Cemile selected to write an essay on.

Figure 6: The course instructor's evaluation of student drafts on the first writing assignment

	I. Draft	II. Draft	III. Draft
Engin	- no reasons for events - lack of information - lack of command of sources - no focus	- no reasons for events - pure facts - lack of command of sources	- reasons provided - necessary information provided - advantages and disadvantages - clearer focus - no connection between events and reasons
Cemile	- lack of reasons of events - lack of information - not objective - no covering of present	- lack of reasons of events - lack of information - no relation between events - pure facts	- reasons provided for events - awareness on events - background information
Adnan	-lack of balance - not enough disadvantages - not objective	- balance maintained - advantages and disadvantages - objective	- balance maintained - advantages and disadvantages - objective
Hamit	- the existence of C.T. - objective - advantages and disadvantages - both sides of the issue - covered different aspects - organizational problems	- the existence of C.T. - objective - advantages and disadvantages - both sides of the issue - covered different aspects - less organizational problems	- the existence of C.T. - objective - advantages and disadvantages - both sides of the issue - covered different aspects - less organizational problems
Firdevs	- no disadvantages - redundant information	- advantages and disadvantages - no redundant information - satisfactory research - organizational problems	- advantages and disadvantages - relevant information - satisfactory research

Cemile, also, was successful, according to the instructor, in using a critical thinking skill, examining the underlying issue behind the events. The instructor felt that Cemile was able to go deep into the issue while she was analyzing women's place in politics. Engin covered the advantages and disadvantages of the issue he was writing on. Although he managed to provide reasons, and included necessary information in order to discuss his topics, he still had problems in terms of critical thinking components as he was not able to establish connection between the events and their reasons.

The course instructor was also asked a question concerning what was done in class and what was asked for in the assignment. She believed that there was not sufficient connection or direct relationship between her classroom teaching and the task of the assignment. She stated that she tried to cover the concepts, to practice looking at issues from different perspectives and being objective in the classroom, and to discuss them with the students. So in that sense, there seems to be connection, but what she said in the interview indicated that she did not think she specifically prepared students for the essay.

Assignment II

In the initial interview, the course instructor gave the rationale behind the order of the assignments given over the semester in the Eng 101 course. She stated that students had to explore an issue, learn about a specific subject, and later discuss the things they learned over the 12 weeks. Unlike the first assignment in which students were to explore an issue and try to present both sides objectively, the second assignment focused on argumentation or the presentation of one side with valid and solid justification. The students were to validate stated opinions with information from credible and reliable sources.

The second assignment was therefore argumentative and again based on research. In this assignment, students chose one of these topics: democracy, equality, liberty, or freedom. These topics were studied and discussed in class throughout the term. According to the assignment prompt (see Appendix C), students were expected to focus on a particular aspect of one concept, for example equality in education, and come up with a thesis statement stating a position that they would then support. The expected critical thinking components in this assignment were to question the issues chosen through conducting in depth research

by means of the library and the internet, to take a stance by means of a thesis

statement, and to support their arguments through examining issues underlying the

idea. The assignment prompt, the course instructor's expectation, and the students'

understanding of the assignment are given in Figure 7.

Figure 7: Instructor's and the interviewed students' understanding of the second
assignment.

Assignment prompt	Instructor's expectation	Students' understanding
- brainstorm about the topic - create a thesis statement - find 5 sources - use information from sources to support the thesis	Students will: - conduct in depth research - create a thesis statement - support their claim with the sources they find. – be objective	Cemile: I am to: - discuss a topic - express my own views - support views with the help of others' Engin: I am to: - create a thesis statement - express my own views - support views with the help of others'

Figure 7 shows that there is commonality between the two students'

understanding, the instructor's expectation, and what the assignment prompt asked

for. The assignment prompt and the instructor expected students to do almost the

same things, such as creating their own thesis statement, conducting research, and the

primary critical thinking component, using the research findings to support their

arguments. Similarly, the interviewed students included the thesis statement, stating

their own views, and supporting their views through research findings. From their

responses, it can be seen that students were aware of the necessity of conducting

research since they stated that they had to support their own views with the help of

others' views. The only missing point was being objective. Therefore, both students

were aware that the requirements of this assignment were that they conduct research

and use the research to support their own position, and that this assignment was

completely different from the previous one since the first one was only informative.

Instructor's Evaluation of Students' First Drafts

For this second assignment, the course instructor was asked a set of questions about students' performance.

> 1-to what extent do you think students have displayed critical thinking components according to your own expectation of the assignment?
> a- [If yes], please describe the flow of ideas in the students' paper. (for each of them)
> b- [If not], how do you plan to help him out in/out of the classroom to make him show in the second draft / final copy?
> 2- Considering the students' performance in terms of showing critical thinking components, what is the role of what you have done in class so far?

Her responses can be seen in Figure 8.

Again, measuring students' performance on the final draft against the course instructor's expectations for the critical thinking components in this assignment, the expectations were met to the instructor's satisfaction.

In the first draft of the assignment, all students but Hamit conducted in depth research on the topic they discussed, yet only Cemile and Adnan stated their thesis explicitly. Hamit had the most problems with his essay since he took an issue from a very narrow, biased perspective and was misled by fallacies. Engin and Firdevs failed to produce an argumentative essay in the first draft, but their progress can be observed in the second draft. In this draft, only Engin was not able to state his thesis clearly, on the contrary he gave two thesis statements, which were contradictory to each other.

Cemile applied learning from Assignment I and included different views of different people. In their third draft, all students produced a thesis statement, did research, and supported their claims, showing convergence towards the instructor's

expectations related to the critical thinking components stated by the instructor,

which were in line with the departmental goals.

The instructor gave help to three students through tutorials.

> I am going to talk during the tutorials. I will see each of them and
> go over their paper and I am going to suggest the things to
> achieve CT and to achieve the objective to fully cover the
> research. So they will have a chance individual tutorials and
> tomorrow in the class cover the assignment, prompt again so I
> will repeat the information there what I am expecting them to do.
> To some extent what they fail to do. Also I see them in Bilwrite
> for the tutorial (Instructor interview, II. Assignment I Draft,
> 06/05/2002)

For the second assignment, in terms of connection between what was done in

class and what was asked for in the assignment task, the instructor stated that they

were reading a book and discussing the book. According to her, the book had an

impact since it encouraged students to "brainstorm" and "generate" ideas for their

assignment and she added,

> I guess they have used everything that they have seen in class. I
> can be sure for [Adnan] and [Firdevs's] stuff. Whatever we
> talked about democracy they made use of that stuff. And they
> were able to evaluate if those are really arguable or not. So for
> the others like [Cemile's] ideas are coming from the book we
> have read in class. There is junta, military and seizing the
> power and that kind of stuff, oppressing the people. For
> [Hamit] and [Engin], they actually focused on secularism,
> protecting secularism would it be democratic or not. And I
> believe that ideas came from the presentations. They found the
> newspaper articles which talk about any of the concepts and
> presented them in class. And after that we had a discussion on
> each article. One of the articles was about secularism.
> Therefore, I whatever we did in class helped them come up
> with a topic and a thesis statement. (Instructor interview, II.
> Assignment, Final Draft, 14/05/2002).

Figure 8: The course instructor's evaluation of students' second assignment:

	I. Draft	II. Draft	III. Draft
Adnan	- described the concept of democracy - took a stance - provided reasons from various sources - examined reasons in depth - looked at the issue from both sides; advantages and disadvantages - chose disadvantages - good research - discussed if it is ideal or not	- improved reasons - content excellent - organizational problems - M.L.A. format problems	- examined the pros and cons of the issue - content excellent - no organization problem
Hamit	- misunderstood of the definition "secularism" - existence of fallacies - totally biased - no connection of cause-effect relationship - not enough research on the issue	- definition changed - good claim - supported ideas and details - unbiased - satisfactory research on the issue	- good thesis statement - unbiased - satisfactory supports - good research - organization and grammar problems
Firdevs	- no thesis statement - no stance taken - not argumentative - good research conducted - examined advantages and disadvantages - good coverage of issues	- clear and explicit thesis - strong reasons provided - in depth research on the issue - M.L.A. format problems	- valid reasons - in depth research - minor M.L.A. format problems
Engin	- no thesis statement - no support for his ideas - only factual information - in depth research - informative essay - organizational problems	- two contradictory claims - reasons not explicit - ideas not easy to flow - in depth research - argumentative essay - organizational problems	- clear and explicit thesis statement - good support of his ideas - in depth research on the issue - ideas easy to flow
Cemile	- clear thesis statement - insufficient information for the support - historical information required - serious language problems - conclusion problematic - unity problematic	- clear thesis - good support of claim - different views of different people - in depth research - language problems - organizational problems	- clear thesis - good support - in depth research - minimal organizational problems - language problems

Final Assignment

The final assignment was a reflective essay through which students were

expected to describe their ideas of the best possible society, either fictional or non-

fictional. The course instructor expected students to show their understanding of democracy based upon the ideas and concepts they had discussed during the term and to adapt what they had learned through the semester to their own discussion. Unlike the previous two assignments, there was only one draft collected for the final assignment.

The instructor's expectations for this final assignment and the students' understanding of those expectations can be seen in Figure 9. The information in Figure 9 illustrates that all parties appear to have a common understanding of the primary requirements for the final assignment. Mainly, the assignment asked for the description of an ideal state, the identification of problems that might arise, and a presentation of solutions to these problems. There were three critical thinking components addressed in this assignment: identification of a problem through questioning issues, summarizing advantages and disadvantages of each concept through looking at issues from different perspectives, and presenting solutions to the problems identified while examining issues.

Figure 9 also shows that the students understood the importance of including the negative aspects of the concepts, liberty, freedom, democracy, and equality, so that they could create solutions that would negate these aspects. Thus, students knew that presenting both negative and positive sides in this essay was required and essential.

In the evaluation stage, the instructor reviewed the students' papers and gave them feedback according to their performance in terms of displaying critical thinking components on their essays. Her evaluation can be seen in Figure 10.

Figure 9: Instructor's expectation and the interviewed students' understanding of the

final assignment.

Assignment Prompt	Instructor's Expectation	Students' Understanding
- identify the political system - identify the class, society, services. - solve the problems addressed in the essay that democracy, equality, liberty, and freedom might cause.	Students will: - create an ideal state of their own - identify a problem - find a solution - describe the given concepts. - summarize the advantages and disadvantages - present the state with the advantages - address problems that each concept causes - present the ways to solve these problems - avoid problems through using the advantages.	Cemile: I am to: - make a state suitable to myself - connect the missing points or ideas in the state. - solve the problem - describe the disadvantages of the concepts - combine all the ideas to each other Engin. I am to: - create our own ideal state - introduce the concepts - show the negative sides of the concepts - eliminate these negative sides

Unlike the previous two assignments, this was a single draft essay, and

students did not have a chance for revision. In evaluating this final assignment in

terms of critical thinking components, the course instructor determined that one

student successfully met all the requirements, two partially met the requirements, and

two were not able to fulfill the expected requirements at all.

Firdevs, the one who fulfilled all the requirements of the assignment, managed

to display the advantages and disadvantages of the concept being discussed,

question the concept, solve the possible problems inherent in the concept, and apply

whatever she learned into a real life situation.

Adnan, despite a lack of information and organizational problems, also

accomplished the required elements in his paper according to the instructor. He

described the state well and showed the disadvantages that the concepts might bring

about. The problematic part of his paper was that he did not discuss the advantages

of the concept nor did he discuss in depth how the problems could be solved. He

failed to display the steps that led to the solution.

Figure 10: The course instructor's evaluation of students' final assignment

STUDENT	INSTRUCTOR'S EVALUATION
Adnan	- no advantages - solution to the problem (brief description) - organizational problems - missing information - good description of the state
Hamit	- aware of the advantages and disadvantages of the concept - solution to the problem - organizational problems - missing information - good description of the state
Firdevs	- explicit display of the advantages of the concepts - solution to the possible problems (disadvantages) - very good research, organization, and content - questioning the concepts - good description of the state - application of knowledge learned during the term into a real life situation
Engin	- mentioning about the disadvantages - not explanation on the solution - organizational problems - missing information - not connection of the ideas
Cemile	- mentioning the advantages and disadvantages - solution to the problem but not showed how to do it. - language problems - mentioning about the issues on the surface - not connection of the ideas

Cemile mentioned the advantages and disadvantages of the concept and gave a solution but failed to support it. She was also unable to connect ideas to each other. For instance, she focused on education for solving problems that democracy might create but did not mention how education could do that.

The fourth student, Hamit, also solved the problem and was aware of the advantages and disadvantages of the concept. He managed to look at both sides of the issue in his paper but failed to explain the reasons for his solutions on why he chose the solution to sort out the problem. Moreover, both Cemile and Hamit had organizational problems, which prevented them from effectively displaying the advantages and disadvantages of the concept.

The instructor stated that Engin was not able to reach the desired objective as he was missing information. He failed to discuss the issue through advantages and disadvantages; that is to say, he did not look at the issue from different perspectives. He could not connect the ideas fully, due to both organizational problems and the lack of necessary research. He mentioned many points in terms of solution to problems but did not relate them to a specific problem or disadvantage. "So it is really messy in terms of organization but in terms of content he just describes the state, however he does not show the connection why he says this." (Instructor's Final Assessment Evaluation; 24/05/2002).

The interviewed students also were aware of what they were expected to do in the final assignment. Based on the question as to whether they used components of critical thinking in their essays, Cemile answered,

> That is what we learned all through the year, the ideologies of
> different people, and the evaluations of the situations for example
> I used all of these in my essay. There were problems. I tried to
> find solutions for them from different angles; I guess I made use
> of critical thinking at this part (Cemile, Final Assignment
> Interview;21/05/2002).

Engin also knew what was expected in the final assignment in line with the components of critical thinking. He tried to fulfill what the course instructor wanted to see in their papers. Based on the interview questions which asked students whether they were able to use some the components of critical thinking in this assignment, Engin said,

> I believe I have done so. For example, we said democracy and
> liberalism through positive ideas of these weighed behavior;
> they have negative sides, too. While forming these systems, I
> had to think of the precautions which would do away with their
> negative sides. For this reason, I tried to establish a state to
> avoid the negative sides of these systems. In this meaning I
> made use of CT. there. That is I made use of [the components
> of critical thinking], toward my effort to do away with the
> negative points. (Engin, Final Student Interview, 21/05/2002).

He tried to identify the problems that each concept might create and tried to present solutions to these anticipated problems in his essays. His self analysis was more positive than the teacher's evaluation in which she argued that he covered the disadvantages but did not provide solutions.

Summary

Over the course of fifteen weeks, from the first writing assignment, the critical thinking components or skills associated with critical thinking that the course instructor tried to implement were the ability to question information, look at an issue from different perspectives, examine underlying issues, ideas or assumptions, apply information gathered, evaluate information accumulated, identify and solve a problem, examine ideas objectively, support statements with valid justification, and establish connection between events and causes. While analyzing the data, it was noted that the course instructor was consistent about the components of critical thinking, even though in each assignment, she added components to the list that she gave in the initial interview. As previously mentioned, all of these were combined in the first column of Figure 3.

In terms of the connection between what was done in class and asked for in the assignment, the instructor explained for the final assignment that she did a practice activity with the students. "I shared the board into three columns and put meaning, advantages, disadvantages and asked them to tell me for each concept. So they told me and I wrote them on the board. They were quite good". (Instructor Final Assignment interview, 24/05/2002).

When all the assignments were reviewed, it can be noted that students managed to fulfill the assignment requirements by considering the advantages and

disadvantages of the concepts they discussed, including different people's views, conducting satisfactory, even comprehensive, research using the library and internet, and providing reasons for points being discussed. The course instructor added two features associated with learning the different components of critical thinking: taking a stance and being objective. The students conducted satisfactory research and took a position through a thesis statement, supported their arguments with valid reasons from research findings, and looked at issues from two sides; however, for the most part they were unable to be objective. At the end of the semester, three students managed to identify possible problems inherent in the concepts studied during the term, democracy, equality, liberty, and freedom, and generate alternative solutions to these problems. At the very least of the four students became aware of the fact that every concept had both advantages and disadvantages, and they had to consider both of them in order to apply them to their own positions. Even though students were not always able to fulfill all the requirements of an assignment, the study shows students were able to display and implement some of the components of critical thinking through their writing assignments.

On the other hand some students suffered from organizational problems, which prevented them from linking ideas to each other, and language problems that hindered them from effectively expressing their ideas. They also had little experience with learning the C.T components and applying them in their assignments in other courses in departments. Considering the educational background of these students, it is possible to say that Bilkent University is the first place where they had critical thinking and its components embedded in the curriculums of their courses, yet students showed convergence towards successful

use of the components through their drafts in the first and second assignments with the help of the feedback of the course instructor. Language might be considered a variable in their study. During the post-evaluation interviews, the instructor pointed out the serious language problems of Cemile, problems which might hinder the effective expression of the required components within her assignments. Although this problem was observed in her paper, while not mentioned in other students' evaluations, the rest of the participants might have been influenced by the same problem while performing tasks in their assignments. Specifically, the students' writing skills should be taken into consideration in an analysis of their attempts to apply critical thinking components in their assignments. The instructor underlined certain common problems in students' papers such as "no relation between events", "no reason events", and "no support". These problems might have been partly due to the lack of effective general writing skills. Such a lack might have brought about the organizational problems and the lack of explanation of the points required in the assignments rather than a lack of understanding the content itself.

Nevertheless, the instructor felt that students improved in terms of the desired critical thinking objectives that the course itself targeted.

> I believe that they were aware of the advantages and disadvantages and I believe they are not going to go with slogans from now on. I believe that when [Prime Minister of the Republic of Turkey] says something they are going to interpret that because I also asked them to come up with newspaper articles which has a problem. They discuss that which comes first economy or democracy. Which should be developed first economy or democracy? So they could interpret those things with the help of the things they learned in class. So I believe that they could really apply C.T. those things in real life with that course they showed improvement. (Instructor's Final Assignment Evaluation; 24/05/2002).

CHAPTER 5: CONCLUSION

Summary of the Study

This study investigates the implementation of critical thinking goals through written assignments in an Eng 101 course. The reason for this study is to find out whether the defined goals and objectives related to critical thinking in the curriculum are applied and used by learners in the classroom situation.

First, the participating course instructor was selected from among three volunteer Eng 101 instructors. Then, five Eng 101 students from her classroom were chosen randomly, from whom two students volunteered to be interviewed about their writing process. The students submitted two midterm assignments, each of which had three drafts, and a final single draft assignment. The teacher and the students were initially interviewed using prepared questions to elicit their understanding of the components of the concept of critical thinking. One of the purposes of interviewing the instructor was to elicit her understanding of the components of critical thinking, which would be needed to analyze the collected data. Following these, the instructor and the students were interviewed after the submission of each draft of the first two assignments and after the submission of the final one. The instructor was interviewed based on her evaluation of the components of critical thinking in students' papers. Finally, the director of the program was interviewed to elicit the departmental expectations regarding the components of critical thinking.

Discussion of Findings and Conclusions

Research Question 1

What does the instructor consider the components of critical thinking to be, in terms of students' written performance?

Findings (see Appendix H) indicate that the course instructor's initial interview elicited only some of the components of critical thinking that she used for assignments, although the components that she included in this interview were consistent with the ones that she stated in subsequent evaluation interviews. While analyzing the data, it was seen that she added components when giving assignment expectations and task requirements. Therefore, in addition to the data gathered in the initial interview, all instructor interviews were used for her list of the components of critical thinking.

The list of the components of or skills related to critical thinking that the instructor includes in her curriculum is as follows;

1. questioning information,

2. looking at an issue from different perspectives objectively,

3. examining underlying issues,

4. ideas or assumptions,

5. application of the information to students' situation,

6. evaluation of the information accumulated,

7. identifying a problem and solving a problem,

8. supporting an argument with valid justification,

9. establishing connection between events and reasons.

When the instructor's components and expectations in each assignment were compared (see Appendix H), it was noted that she did not expect every one of them in each assignment. She introduced the components gradually from the first assignment to the final one. The instructor expected to see all of the critical thinking skills covered during the term utilized in the final assignment. To implement the components over the semester, the instructor designed the

assignments and evaluated the students' performance according to their use of these critical thinking components in their written performance throughout the semester.

In looking at the comparative table (see Appendix H), it is noted that only "considering advantages and disadvantages" was given as a common component of critical thinking in all the assignments. "Covering different perspectives", "linking ideas to each other", and "supporting their arguments and ideas" appeared in the first and the second assignments only. On the other hand, "questioning the issue", "applying the information to their own situation", and "presenting solutions to problems" were exclusive to the final assignment, and not expected in the first two assignments. "Being objective" is the other item that the instructor articulated as a component of critical thinking. The item appeared only in the expectation of the instructor for the first assignment and did not appear in the second and the final assignments. "Evaluating the information accumulated", although given in the instructor's definition of the components of critical thinking, seemed to be implicit rather than explicitly stated as students were expected to do research and use the accumulated information to support their ideas.

Despite the fact that the instructor's definition included "tolerance", and "intellectual flexibility", these were not seen in the assignments as instructor's expectations primarily because these are characteristics of critical thinking rather than components or skills that can be taught and utilized.

Research Question 2

How does the instructor implement departmental critical thinking components in planning writing assignments for students?

Based on the interview conducted with the director and on-line curriculum guidelines (see Appendix H), the department critical thinking goals as manifested in the components of critical thinking are;

Students will have the ability to:

1. examine issues critically

2. look at problems from multiple perspectives

3. consider issues from different aspects

4. know how to apply the information

5. create a strong argument on issues

6. evaluate sources and sources (written and electronic) to be used in writing.

7. present information and opinion effectively

8. read and analyze texts

9. integrate and synthesize work/research of others into their own writing

10. complete basic research at library (Program Director Interview; 15/05/2002).

Also the director added that students will:

> continue to develop their ability to organize ideas in an appropriate manner for writer's audience and purpose (Director's Interview; 15/05/2002).

When the instructor's components were compared with those of the F.Y.E.P. as elicited from the Director and some of the program's teaching guidelines, it was seen that the teacher listed all but one of the components on the F.Y.E.P Director's list, although in slightly different form. Thus, the instructor's understanding of the components of critical thinking appears to agree with that of the department. Considering the background of the students in her class, the material she prepared, and the goals to be attained by the end of the semester, she

appeared to adapt the list of components to the situation in her classroom. However, no information was collected on what was done in the classroom itself to implement the components. According to the instructor's self report, she tried to implement the program critical thinking goals as defined by the F.Y.E.P. component list.

This high level of agreement between the instructor's and the F.Y.E.P. Director's components of critical thinking is a particularly interesting finding in this study. When the program goals and objectives and curriculum guidelines on the program web page were examined, the components given by the Director in his interview were not explicitly stated, which according to the director, was a deliberate omission. But the instructor's components still closely matched those of the department. This suggests that there is an intra-departmental understanding among the instructors in the F.Y.E.P. in regard to what the components of critical thinking are.

Research Question 3

In instructor evaluations of student writing, what evidence does she find of the realization of the expected critical thinking components?

The instructor was not able to find the complete list of the components of critical thinking in students' writing assignments, yet almost all the students seemed to understand the instructor's requirements and expectations and attempted to meet some of them throughout the semester (see Appendix H).

The course instructor gave three assignments during the term where the students could use the components of critical thinking. Each of these assignments had three drafts except for the final assignment, which was a single draft essay. In each of these assignments, the course instructor had different expectations in terms

of the components of critical thinking. Students, in the final draft of each assignment, showed a convergence towards the use of the components of critical thinking while discussing their topics. Also, it was noted that according to the instructor the students met her expectations for the course. However, in the final draft, it was seen that without the instructor's feedback from multiple drafts, students had problems in meeting the expectations of the course instructor in terms of the components of critical thinking. (see Appendix H). When all the assignments were reviewed, it was seen that student work showed evidence of the following critical thinking components;

- covering advantages and disadvantages,

- looking at issues from both sides,

- providing support for their arguments,

- looking from different perspectives,

- presenting solution to problems, and

- application of the information to their own situations.

According to the instructor, only one student was able to be objective, a component which the instructor highlighted in her definition of the components of critical thinking, possibly because it is not clear what this means and how "be objective" differs from "covering advantages and disadvantages", and "looking at issues from both sides or different perspectives".

When the three-draft assignments were taken into consideration, it was seen that there was a convergence towards the use of the components of critical thinking. In addition, students were able to use some of these expected components of C.T. in their final assignment despite the fact that it was a single draft assignment. This suggests that critical thinking components or skills can be

taught, which supports Suhor's (1984) claim that there is a close link between language teaching and critical thinking. As mentioned in the literature review, Ennis (1989) believes in the possibility of teaching critical thinking skills to learners in different situations. These findings also suggest that students can be trained to use the components of critical thinking in their tasks with the help of an instructor who knows how to convey them in a classroom.

<u>Research Question 4</u>

What is the students' understanding of the components of critical thinking in the Eng 101 course?

The students did not have much understanding of the components of critical thinking at the beginning of the semester; however, during the semester, after the second assignment, almost all the students were able to meet most of the instructor's expectations in displaying the components of critical thinking. In addition, in the final assignment, it was noted that students showed improvement in their understanding and use of some of these components. For instance, in the final assignment one student almost fulfilled the instructor's expectations for the critical thinking components in that assignment, three students were quite close to her expectations, while only one student seemed to have some problems in meeting the expectations of the instructor.

In order to find an answer to this fourth research question, the students were asked for their own understanding of the components of critical thinking in their initial and post-submission interviews. Cemile's components were, "approaching topics critically, looking at topics from different angles, changing the idea according to different views, and taking a different form, not being monotype, and brainstorming" (Cemile, Initial interview, 17/03/2002). The other

interviewed student, Engin, stated his as, "assessing and conceiving their values, evaluating cons and pros of individuals, sharing of thoughts reciprocally, brainstorming, and sharing our views" (Engin, Initial interview, 17/03/2002).

Therefore, students, in their assignments, were able to use the components that they listed in their initial interviews, and it was interesting to see, one of the components of critical thinking, "taking advantages and disadvantages" appeared in both students' evaluations. (see Appendix H)

Research Question 5

Is there a relationship between the instructor's evaluation of Critical Thinking components in written assignments and students' perceptions of critical thinking components in writing assignments?

The findings (see Appendix H) indicate that there is a relationship between the instructor's evaluation and the students' perception but it is limited. Students did not seem to have a clear understanding of the use of all these components. Their perception was limited to only some of the components listed by the teacher: providing reasons, synthesizing information, taking different views, looking at issues from different angles, application of the information, choosing relevant information, taking the negative and positive aspects, creating alternatives, and avoiding negative sides that the concepts might cause.

Insufficient data were collected in regard to the actual classroom teaching and practice of the components to speculate much on the reason for limited students' application of the components of critical thinking, although perhaps it is partly due to the gradual and developmental nature of the writing skill itself. A longer study might increase the number of components recognized by the students.

In spite of the limited level of understanding, and use, the instructor felt that students improved their use of the components of critical thinking.

<div align="center">Pedagogical Implication</div>

The findings indicate that a 15-week course is not enough time to teach students to use the components of critical thinking in their studies and assignments. Besides, critical thinking is not a set of skills that can be taught in such a short period of time but needs to be integrated across the curriculum and embedded in program curriculums. However, findings also showed that students can be introduced to these components. Students, with the help of the assignments, relevant tasks, and activities, should be given the opportunity to use critical thinking components so that they can have a better understanding of them.

During the study, it was seen that, although the instructor's implementation matched the program components, she was not able to verbalize a complete a list of the components of critical thinking and had trouble distinguishing between the characteristics of a critical thinker and the components of critical thinking. Therefore, in order to better enable students to learn these skills, instructors offering these courses should be trained on the use of these skills and on designing their materials accordingly. If the program does not wish to give a definition of critical thinking, it might be useful for it to be more explicit about the specific components of critical thinking that should be integrated into the program curriculum.

During the study, students mainly suffered from common problems such as "no relation between events", "no reason for events", and "no support". The reason for these problems, as Arapoff (1967) stated, could be linked to their lack of effective writing skill, which might have hindered them while trying to express

their ideas clearly. Although the instructor provided constant feedback on the assignments and during the tutorials, it was observed that similar problems recurred in the following drafts and assignments. Therefore, a more intense program aiming to link the use of C.T. components and students' general writing skills could be considered.

Students could also be given opportunities to practice these skills both in their courses and in their out-of-classroom activities such as the orientation programs and extracurricular activities, like student clubs, that can meet after class hours, organizations that can be in the student union, and programs that can be organized for new comers, which introduce activities involving the use of critical thinking skills.

<div align="center">Limitations of the Study</div>

This study is limited to the implementation of critical thinking goals of one instructor of Eng 101 in instructor's evaluation of writing assignments in the First Year English Program at Bilkent University; therefore, it is not generalizable to the rest of language courses offered at the university. Considering the main area of the subject, critical thinking, qualitative data were thought to be the most suitable to collect and analyze. Therefore, the number of participants was limited so as to be able to investigate the complex intellectual process involved in the implementation of critical thinking, which requires in-depth investigation. Also, by limiting the analysis to a single instructor's definition, the researcher was able to elicit and utilize an operationalized definition for the key concept, critical thinking, and try to see the effect of the concept on this limited number of students. However, if more students had been chosen as a sampling, then more generalizable results could have been collected.

The data were collected over a 15-week period, or one semester at Bilkent University. If the time had been extended to over one academic year, more reliable data could have been collected and a more reliable analysis could have been performed, especially in regard to student understanding of critical thinking skills.

The instructor was interviewed eight times. During the interviews, it was noted that she could not remember what she stated in the initial interview while conducting the evaluation interviews, which caused some problems during the analysis of the data collected. Therefore, the components of critical thinking listed in Chapter 4 were compiled by the researcher from the entire instructor input. The difficulty of definition is frequently problematic in a study of this nature; however, the use of components as gathered from the instructor allowed for a clear basis for analysis.

The instructor form given to the instructor to trace the teaching of the components of critical thinking was not as productive as expected. Although the instructor was asked to provide information concerning the classroom activities including the components of critical thinking, she only entered activities such as "reading of the book" or the "discussion on the concepts" which was a limited amount of information about what actually happened in the classroom in regard to the teaching of critical thinking components. As a result of this, one step of implementation that which concerned the instructor's use of critical thinking components during teaching and tutorials was not included.

<div align="center">Implications for Further Research</div>

The findings gathered at the end of the study suggest further research could be conducted in a number of areas. For example, this study was limited to one

course and one teacher. It could be expanded to more of the specific unit's instructors and their students taking Eng 101.

One interesting finding in this study was the close similarity between the director's list of critical thinking components and the instructor's since only a few items on the director's list could be found anywhere in the program's written guidelines for instructor's. This suggests a collective program "understanding" of the critical thinking skills that need to be taught. However, such a premise would need to be examined further. It would be especially interesting to examine newer and less experienced instructors' understanding of the department list of critical thinking components to see if the "understanding" of what those components are matches as closely as it did in this study.

This study had to be completed over the 15-week time period due to time constraints; however, a longer study could be carried out to analyze students' performance over two semesters in terms of their application of the critical thinking components listed by the instructor.

The participants of the study were from the engineering and science units and all but one student were scholarship students. In order to get more reliable data a study could be conducted with students selected from a variety of departments across the university, choosing among the non-scholarship as well as scholarship students.

The study was designed and conducted in an Eng 101 course in F.Y.E.P. Other courses that students took were not considered. Therefore, a study could be done to look for the implementation of the components of critical thinking learned in Eng 101 course in content courses that students take over a semester.

Although this study was looking at the performance of the students over the semester and their use of critical thinking components, it did not try to link the use of critical thinking components and improved writing skills. A study focusing on the students' achievement of goals could be designed to measure the use of critical thinking skills and students' performance in an attempt to discover whether the inclusion of critical thinking goals in the curriculum improved students performance on writing tasks.

This study was performed with a non-native English language instructor at an English medium university where the medium of instruction in both classroom and tutorials was expected to be in English. Therefore, language could be an important variable in this study. It would be interesting to investigate what language was used to explain critical thinking concepts both in class and in tutorials and whether the language instruction was related to the improvement shown by students from one draft to the next. Did the occasional use of Turkish facilitate this improvement and if so, would the same improvement occur in class with an instructor who is a native speaker of English?

This study indicated that critical thinking components stated by the course instructor, which complied with definitions stated by different scholars, and academicians in the related literature review, were applicable in a language classroom. This is an important finding since critical thinking and the application of its components in courses, regardless of discipline, is necessary to educate better citizens who can implement these in their real lives while making decisions to contribute to the development of better societies.

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APPENDICES

Appendix A

Interview Guides

Questions to be directed to 2 students at the beginning of the semester.

- Why, do you think, the university offers Eng 101 to all undergraduate students at Bilkent University?

- Did you take "GE100, Ways to Thinking" workshop during the orientation program?

If yes,

- o Why did you choose to attend the workshop?

- o Did you feel that the workshop was useful to you?

  - If so, why do you think that it was?

  - If not, why do you think that it wasn't?

- o Is there anything else that you would like to say about that workshop?

- Have you heard the term of Critical Thinking?

  - o What does it mean to you?

  - o What are things you would consider to be aspects of Critical Thinking?

  - o Would you explain them more?

- Have you been working on critical thinking in class?

- Has your instructor mentioned the term critical thinking and do you think you have been working on critical thinking?

Questions to be directed to the instructor at the beginning of the term

1. What is the purpose of this course?

2. What do you expect your students to achieve?

3. What are the main components / skills you expect your students to use for written assignments?

4. What do you understand critical thinking to be? In your own opinion, what are the necessary constituents of critical thinking?

5. How do you think your students can show critical thinking skills in written assignments?

6. How do you help your students in or out of the class to use critical thinking skills in writing assignments?

7. Do you use critical thinking constituents in designing your writing assignment prompt?

    a. If yes,

        i. How do you do that?

    b. If not,

        i. What is your rationale?

8. What do you expect your students to gain with the help of writing assignments?

Questions to be directed to students after the submission of their drafts

- What was the purpose of this writing assignment? What did it require you to do?

- What do you think your instructor expects you to do? Why do you think your instructor expects you to do that? Do you think you did what your instructor expected you to do?

- Please describe the process you used in writing this paper from the point you began to think about writing until you handed it in.

- Did you have a specific plan in your mind before you started writing?

  o If yes,

    ▪ Could you outline for me?

  o If not,

    ▪ How did you decide what to include while writing?

- Did you use the aspects of critical thinking while planning and writing your assignment?

  o If yes,

    ▪ What were those? Please explain them.

  o How did you use them?

  o If not,

    ▪ What is your general guideline in organising what to write down?

Questions to be directed to the instructor after each evaluation.

1. Considering your own expectations or requirements, to what extent do you think students have displayed critical thinking constituents in this assignment?

    a. If present,

        i. Please describe or read them from the students' paper. (for each of them)

    b. If not present,

        i. How do you plan to help the student out in/out of the classroom so that s/he shows the evidence of Critical Thinking in the second draft / final copy?

2. Considering the students' performance in terms of showing critical thinking constituents, what is connection between what you have did in class and what students wrote down on their papers?

Questions to be directed to the director of the First Year English Program

- What do you understand critical thinking to be?

- In your own opinion what are the necessary constituents of critical thinking?

- How do you think critical thinking is embedded in the overall curriculum of FYEP?

- As far as I have seen on the official website of F.Y.E.P., the term `critical thinking` is not included in the departmental goals and objectives but is under the teaching principles. Is there any particular reason for that?

- In your own opinion, what is the contribution of the focus on `critical thinking` in the program?

- Could you explain the rationale behind the curriculum shift from E.A.P. to Content-based instruction?

- Do you think Content-based instruction has any impact on the promotion of critical thinking?

    o If yes, what kind of impact is it?

Appendix B

INSTRUCTOR FORM

CLASS ACTIVITIES (before class)	YOUR RESPONSE (after class)

APPENDIX C

ASSIGNMENT PROMPTS

Assignment I

ENG 101 English Composition I
2001-2002 Spring Semester
Democracy, Equality, Liberty, and Freedom... How Ideal is "ideal"?
Pelin Altan McLaren

Descriptive Essay Assignment
(15%)

The first academic essay assignment this semester is a Descriptive Essay, which is worth 15% of your total grade. It will be approximately 750 words (roughly three pages long), in which you will describe a concept of your choice using information from your sources. Thus, the assignment will be informative and based on research.

To complete this assignment, firstly you will choose one of the concepts of "democracy, equality, liberty or freedom" that we studied in class and that you are personally interested in. This concept will be your essay assignment topic.

Then you will brainstorm about your essay assignment topic and narrow the topic down. You will focus on a particular aspect of it. To achieve this, there are number of free writing strategies you can use which you will learn and practice. You will find at least three sources about your essay topic. Finally, you will summarize the information you have found in your sources and transfer it into your in accordance with the M.L.A. format. You will learn how to summarize, quote and paraphrase, and how to transfer the borrowed information in your paper.

Your descriptive essay should be word-processed and carefully edited. In writing your descriptive essay, please make sure you follow the guidelines listed on the format page sheet. You can find the format page in the course web page.

Please remember that points will be deducted if the page limit requirements and the prompt are not adhered to and if papers are not returned by the date specified. The paper will not be accepted if it is not word-processed.

Assignment II

ENG 101 English Composition I
2001-2002 Fall Semester
Democracy, Equality, Liberty and Freedom … How ideal is "ideal"?
Pelin Altan Mclaren

Argumentative Essay Assignment
(20%)

The second academic essay assignment this semester is an *Argumentative Essay*, which is worth 20% of your total grade. It will be approximately four pages long, in which you will discuss a concept of your choice using information from your sources. Thus, the assignment will be argumentative and based on research.

To complete this assignment, firstly you will choose one of the concepts of "democracy, equality, liberty or freedom" that we have studied in class and that you are personally interested in. This concept will be your *essay assignment topic*.

Then you will brainstorm about your *essay assignment topic* and narrow the topic down. You will focus on a particular aspect of it, thus you will come up with a *thesis statement*, which is your claim about the topic.

After you choose your focus and find your *thesis statement*, you will find *at least five sources* to support your point, as your argumentation should be based on strong evidence. You can use the information in our texts, or/and the sources in our library and on the net. Finally, you will summarise, paraphrase and/or quote the information you have found in your sources, and transfer it into your paper in accordance with the *MLA Format* to support your point.

Your Argumentative *Essay* should be word-processed and carefully edited. In writing your *Argumentative Essay*, please make sure you follow the guidelines listed on the *Format Page* sheet. You can find the *Format Page* in the course web page.

Please remember that points will be deducted if the page limit requirements and the prompt are not adhered to and if papers are not returned by the date specified. The paper will not be accepted if it is not word-processed.

The due dates are as follows:

Argumentative Essay Draft #1	Week 12	
Argumentative Essay Draft #2	Week 13	
Argumentative Essay Final Paper	Week 14	20%

Final Assignment

ENG-101 English & Composition I
2001-2002 Spring Semester
Democracy, Equality, Liberty and Freedom … How Ideal is "Ideal"?
Pelin Altan McLaren

Guidelines for Reflective Essay
(20%)

The last assignment of this semester is a *Reflective Essay*, in which you will describe your "best possible society". It might be fictional or based on a non-fictional society - you are free to choose. You have access to all sources and all the power! You will establish the best possible that the world has ever seen or will ever see.

In your essay, you are expected to follow a certain pattern and a certain organisation:

Introduction:	▪ First, tell what each concept of *democracy, equality, liberty and freedom* means. Describe what each concept of *democracy, equality, liberty and freedom* constitutes. ▪ Then, tell what problems each concept of *democracy, equality, liberty and freedom* has or might cause. *Or you can,* ▪ First tell what *democracy* means and then tell what problems *democracy* might cause and then follow up with *equality* following the same pattern, ie, what *equality* means and what problems *equality* might cause. And then you can do the same thing with *liberty and freedom*.
Body:	▪ You are expected to address the following questions: **1. Management and Political System (Democratic/Free or Authoritarian State?):** ▪ Is there a head/president/chief/ruler? How is the ruler selected? By who? What are the criteria? Age? Education? Abilities? Intelligence? Knowledge? Experience? Persuasiveness? Inherited? ▪ Is there a Council? Or more than one council? What are their purposes? Who are the members? How are they selected? By who? What are the criteria? Age? Education? Abilities? Intelligence? Knowledge? Experience? Persuasiveness? Are there any subdivisions that would be responsible for local issues? ▪ Are there any governmental departments/bodies/organisations? Why? What are the purposes of them? How do they work? Who controls them? **2. Economy/Private Property/Classes/Social Security/Services (Capitalism or Socialism or Communism?):** ▪ Does the government interfere with the economic issues? Does the government determine and plan how to use and distribute resources? Or who will do what and how? Or it is totally free market system? ▪ Are there any social/political/economic classes? If not how can this lack of classes be maintained? If so, what are they? How do they serve the society/state? What are the purposes of each? How do they function? Any movement between classes? How? Why? How are they formed? Any tests? Inherited? Wealth? How does your society maintain peace? Does the government interfere with this issue? ▪ Is everybody allowed to have private property? Does the government interfere with this issue? If so, how? What is the purpose of such interference? For example: People are given a piece of land and they cultivate the land and give the harvest to the government so that the ones in need can have enough to survive, so that there would be no crime or hostility toward one another? ▪ What is its health system like? Is the health system the state's responsibility or is it considered private enterprise? Does everybody have an equal chance and service for free? ▪ Is the education system the state's responsibility or is it considered private enterprise? Does everybody have an equal chance? Is education compulsory or optional? If compulsory to what level? And why up to that level? What are the purposes of the education system? To educate all or a group of people? To teach about the past so that people would not make the same mistakes they did in the past that caused the collapse of the previous society? To train for the future? To make a strong work force? To direct people into certain jobs? To control people? To impose state's views?
Conclusion:	▪ Wrap up the main points of your best possible society ▪ Restate your reasons why your society is the best possible society ▪ Show, once again but this time briefly, you overcome the problems that *democracy, equality. liberty and freedom* cause in your society

In your *Reflective Essay*, you will not only describe your best possible world but also justify the reasons why your "best possible society" is the way it is. For example, you should justify why you think there should be no classes in your ideal society or why you think power should be equally distributed in your ideal society. In other words, you should convince your readers that it is the best possible society and it would work.

To convince readers you should have sound reasons and support for your ideas. This support can come from any related books, journals, newspapers or magazines that you find in the library or on the Internet as well as from reading material we have studied in class. No matter what you use in your *Reflective Essay*, you must include <u>at least 3 different sources</u>.

You are not required to submit any drafts for this essay assignment; however, you are highly encouraged to see me or a BILWRITE tutor before you submit your essay on May 20th, Monday 17:30.

Good luck!
Pelin Altan McLaren

Appendix D

Sample transcript pages from instructor and student interviews

INSTRUCTOR INTERVIEW
FINAL ASSIGNMENT
PELİN ALTAN
24/05/2002

S: Interviewer

P: Instructor

S: Good morning.

P: Good morning

S: Thank you very much for taking your time for the interview. This is going to be our last interview. You have read the final assignment papers which you call them reflective essay. Well, may I ask you to brief what is required in this assignment? What is task about?

P: This assignment is a kind of reflective evaluative essay. First of all it is for me to see what they have learned during the term so far how much they have got out of this and also it is for them so that they could wrap up the thing and see the things and summarize the things they have learned so far. Based on what they have learned they could apply the information into their own ideal state basically. It is not about like "this is the democracy here are the advantages and disadvantages" I did not want to them write such a thing at the end of the term. I wanted them to use that information and think about it and find a solution to the problems and disadvantages. I wanted to see what they would do if they had all the power, sources and the authority, how they would go with these sources and how they would find a best possible world basically.

S: OK well related to this one what is the difference or what makes this assignment different from the previous ones?

P: They saw a problem here not only do they summarize what they have learned but also they apply that information into real life situation plus and they basically make use of the information in their essay. OK. Most of the times they complain "this is the problem, that is the most problematic issue" but they never come up with solutions. So basically I asked them to come up with a solution. Not only complain about the things only or praise the things or to criticize the things what would you do, find a solution. In the very first bit, introduction, I call a very long introduction, they are going to describe what each concept is. What are democracy, liberty, freedom and equality? And plus they are going to summarize the advantages and disadvantages of each concept and then wrap it up by saying that here is my ideal state that I maintain the advantages. However, solve the problem that each concept causes. So then they describe their ideal state and they show that they actually have solved the problems. They should get rid of the problems meanwhile they maintain the advantages of each concept. This what I have asked in the assignment.

S: OK well then considering your own expectations or requirements, to what extent do you think students have displayed critical thinking constituents in this assignment?

P: Firdevs did an excellent job in this assignment; she was really good like she basically covered all the information covered throughout the semester in a really nice way. When she was describing her state, she just showed explicitly she actually maintained the advantages, that she got over the problems. I loved her ideal state and how each concept is connected to each other. So very good organization, very good

research very good content. She showed me that she learned everything like the advantages and disadvantages that each concept causes. Basically she questioned them as well. And also she applied whatever she learned in a real life kind of situation.

S: How was she able to describe it in her paper? How she was able to make use of the C.T. constituents in her paper with specific examples?

P: Basically she showed that each concept has advantages and disadvantages however the issue there is to maintain advantages and solve the possible problems that each concept has. She does that she stipulates in the democratic state for example. She believes that there are so many advantages of democracy however to solve the disadvantages she came up with solutions for example one of the disadvantages of a democratic state is the representatives and the leaders might the hide the truth just to get the vote or something or they can promise or lie in order to be elected, she comes up with supervising kind of council or people so that those people do not manipulate the power, would not hide the truth or something. Through the elections she is going to check how representatives, and leaders are doing. Also she gives importance to education as well. Because of the disadvantages of democracy is the common man. So they are ignorant they do not know about politics, especially foreign affairs and economics. So she says that I am going to give this basic education to people, I am going to make it compulsory; they are going to know what they are doing, who they are selecting. So with all the things she tries to solve the problems that democracy might bring. In economic system, she believes in the modern liberalism. She learned that in class she used this in her best possible world. She believes that capitalism brings so many advantages; however there are

disadvantages for example for the rich and the poor. So she says that she is going to solve this problem with the tax system. So she is going to get more money from the rich and no money from the poor and maintain the middle class so there will be no gap and so on.

RESEARCH STUDY
STUDENT INITIAL INTERVIEW
17/03/2002
ENGIN

S: Interviewer

E: Interwee

S: Engin, welcome

E: Thank you to be with you.

S: First of all I would like to thank you for allowing time for this. What I would like to ask you first, you are a mid-term entry student, that is you studied at Prep School one term, then you came to Freshman groups. You are studying at the department of computer engineering.

E: Yes.

S: You are taking 5-6 courses.

E: I am taking 4 courses.

S: Are you taking 4 courses.

E: Yes.

S: Is it because you are an irregular student. Among these courses you are attending there is the Eng 101 course. I think they want you to take it as a compulsory course. Why, do you think, the university offers Eng 101 to all undergraduate students at Bilkent University?

E: The course have defined a context as for themselves but I guess as the structure of the course there is a priority for researchers. What can we say along with this. We are trying to create a medium for the course like a critical one by inter discussion or comparing the views of students.

S: That is different I have understood the content of the course. Why do you think the university makes it compulsory for you to take this course?

E: I can't say anything as I have not prepared this course.

S: I mean as for you in your opinion.

E: First of all courses are delivered in English without exception. Medium of instruction is English. Perhaps they do this to be helpful for other courses. Along

with this in order to orient students to researches further, they may be attempting to make the students acquire with such an activity.

S: I understand. I do not know if you remember when you came to the university. After being enrolled there was an orientation program for you. They used to offer quite a lot of courses. Did you join in these?

E: Yes. I joined them.

S: Ok. Among these courses there was one called GE 100 which was a workshop study.

E: Yes.

S: If I am not mistaken the name was ways to thinking or düşünmenin yolları.

E: Yes.

S: Did you take that workshop.

E: I did so.

S: Why did you choose that workshop?

E: In fact there were quite a lot of workshops. One of the reasons why I took it to be honest all the other courses were worth 1 point; whereas, this one was worth 2 points. Therefore, one of the basic reasons for my choosing it was this. Apart from that there is not a very particular reason, for at that time I did not exactly know what it was. I used to go once to one way and once to another. Honestly I took it for that reason.

S: I understand ok. In your opinion was a course of this sort beneficial to you? Was it beneficial for you?

E: In fact, one can say it proved to be beneficial. While the course was being delivered, certain things, I mean certain topics dealt with during the course or the examples given. These changed the way of my thinking, my point of view. I can say this with the help of certain examples. Shall I give you the examples.

S: Please, I will be very glad.

E: There was a question related with a postman. First of all questions were directed to the whole class. For example a postman. A certain man enters and leaves 20 countries in one single day. How can he do this he said. This was possible for a postman by going to consulates and embassies and leaving those places. I did not think that these places were territories of other nations. Most of us were not able to

think of this. Apart from this there were samples for different cars. That is I do not exactly remember one question. They were trying to enter a car in some way. No body brought to mind that the top of the car was open. I think all of us possess certain stereotype fixes ways of thinking. When first a concept was stated we think of these before any other. When one says a car he means a vehicle with four sides close carrying a passenger. Under such circumstances I noticed that we could act a little more flexible we should think from a wider view point. Apart from this they separated us into groups and each group was assigned as I might say individual of the people in question. And they told us to write whatever came to our mind about particular individual. Talks were exchanged about these at length what are the firs impressions of people. They also said these. Specialties were written on the white board you may ask what sort of specialties, characteristics of people. For example if I do not remember wrongly "gossip" for example certain things like "delicate" and when these things were expressed what was the first sex that came to your mind woman or man. They tried to evaluate our prejudice. I think with a greater majority of us the answers were the same. For example "gossip" brings to mind woman. This was chosen or when the word "swearing" was mentioned men were given the priority. Such things were voiced. The workshop was like this as far as I remember.

Appendix E
DIRECTOR INTERVIEW TRANSCRIPT
DAREN HODSON
15/05/2002

S: Mr. Hudson, thank you very much for taking part in the interview.

D: ...

S: Well I have got couple of questions about the first year English Program. What do you understand critical thinking to be?

D: It has two parts one is the students to be able to look at problems, ideas from multiple perspectives because it is quite important to be able to critically examine, to consider the issue from several aspects, several view points if you look at the question from, the second perhaps would be then what do you do with the information once you are examining the topic how are you able to make them use the information, apply the information. It seems to be clear that people will talk about that in terms of argumentation. So can you actually organize information in the ways that you can create strong argument our particular topic is based on multi-dimensional reading.

S: You are talking about Bloom's taxonomy here gaining the information and taking the students through those phases in order to reach the evaluation level at the end with the argument that the students will come up with. Ok. You mentioned about the constituents of CT. Can I ask you this question once again. What do you think the constituents of critical thinking to be? But if you believe that the constituents are the same with the ones you have mentioned above, I can skip that question?

D: Almost the same.

S: Ok. How do you think the CT is embedded in over all curriculum of F.Y.E.P.?

D: I suppose it is the interval part of getting content based instruction that we want students I mean we are giving them the time to look at a particular focused area of study and in that we are looking at the question with multiple perspectives, disciplinary perspectives, so hopefully students will articulate the problem within these disciplines perhaps they are able to get several different perspectives within the same discipline so there is a multiple perspective also. But they are given time to

discuss it in small groups with their instructor, being sure that they understood accurately the information being provided so some sort of assessment that is being that goes on in terms of each of those focus or ideas and then applying it to something probably in oral presentation or some sort of written document even though should say earlier that writing could be used as a tool to get them to exam and to reproduce to summarize various perspectives and ideas on the topic. And then later it would be normal that those would be brought up them into some sort of product where students will apply the ideas to something within their local environment. So I could imagine for instance that there might be a debate in which students are then examining the particular issue, problem in trying to apply with their learning to their issue. Or in a research paper other critical paper where they are arguing some point of view using the information that they have studied in their writing about their course.

S: Well, ok, as far as I have seen in the official website of F.Y.E.P. that the name of the concept of C.T. has not been used but instead in the principles and suggestion for teaching. Is there any particular reason for this? Why is it not in the goals and objectives part but in the teaching and principles part?

D: When we originally developed, there had been a quite a bit about discussion about the use of C.T. Now that from the university perspective, the C.T. is an important goal that should be need to be included but when you say C.T. because that can be interpreted in various ways and what someone understands it could be hundred different things. So rather than just putting within the goals section something to the effect of students will practice critical thinking skills or something like that. That does not say like in terms of what we people do. So rather, the goals would state things like a students will study a topic from at least three disciplinary perspectives so the language that is used in the goals does not explicitly refer back to C.T. but I think the understanding of when those goals are originally devised the people will understand it we are trying to incorporate that in different language into the goals.

S. I just noticed that although the concept was not used there, there are other statements, which also boil down to the idea of the Ct there, but I just wondered why the name had not been used.

Well Ok in your opinion what do you think the contribution of the focus on the C.T. to the program? Then impact of C.T in the program?

D: On students

S: Yes.

D: Well from the university's perspective I know that one of their goals was that the university education was not just about getting particular specific information that if you are engineer that you learn just specific knowledge base that goes along with that but rather a university educated student should have transferable goals to become more enlightened citizenry for instance so I mean when you think about those common life problems of living in the democracy of having to make decisions should I go this way should I do that or something else. To be informed about that requires C.T. skills that you try to get involved with multiple perspective what does one group say what the other says, and then how do my ideas integrate with those fit in. So I think it is really in terms of life skills of a university educated student that is not just knowing your particular field but it is also a sophistication in the way that you can approach problems and difficulties issues that you face in everyday life.

S: And to solve the problems

D: And to contribute in meaningful critical way rather than just a simplistic reductionistic view of an issue how do you make it more complex and see that it is multi-faceted and you need to look at it in those terms.

S: Ok. This is going to be about the past time. Could you explain the rationale behind the curriculum shift from E.S.P. to Content-based instruction?

D: I mean from what I understand this is all second hand accounts. You know have said this and some that. From what I understood the university perspective at least from the rector that there has always been a desire that English classes help give students a broader education so that it is not faculty based.

S: Not their fields only

D: Not their fields only. So the whole idea behind you know E.S.P. you are helping students gain grater master of vocabulary the concepts that they are using in their own field was never something that the rector had in mind. So whatever the reason whatever the program was moving in the direction of E.S.P. in that direction that I do not really know. I think that given the university's vision what university-educated

student is about. That we are trying to allow them to study the content of a different field that would not normally do. We are trying to it seems help students to write, think, speak, in a fashion that is common in an academic environment so by allowing students to study a content that in an academic fashion in a academic critical analytical way it seems that we are miring a model for what should be happening in their other courses so that it is transferable so that when they study something in art or history whatever their particular field have to be it is hopeful that they have gained some skills that they know how to read texts in order to analyze texts in order to create an argument from texts or films or lectures whatever they are immediately working with

S: Do you think Content-based instruction has any impact on the promotion of critical thinking?

D: I think so because to me it seems to be the most authentic way in which you can actually incorporate C.T into a course. Because if you have a course in which there is not a particular subject that is being taught or if the content is such superficial level it really becomes problematic how do you get students to the point that they can look at this topic and then approach it critically? Approach it from multiple perspectives. And then begin to apply the information that they have learned and then try to use fit.

S: Using it in his own life and experience

D: Yes. So it seems tat is such an essential component within the curriculum having a language curriculum having these types of courses seems essential seems to go hand in hand. Too often it seems E.S.P. those types of courses focus on discrete elements that do not really promote the kind of broader more in depth study of a particular area that you need to have

S: And also it does not promote the enhancement of the students' thinking skills

D: Yes.

S: Thank you very much Mr. Hudson

D: ….

First-Year English Program Principles & Suggestions

Local and Global Connections Goals:

to encourage students to connect what they learn to local and global contexts by:

- helping students to identify links between course content and their local context (social, political, ecological, educational, religious, etc.);

- putting students in contact with local organizations, people, events, etc. through guest speakers, field trips, conferences, etc.);

- putting students in contact with global organizations, people, events, etc., through e-mail, WWW, international media, NY Live, etc.

In order to make the above connections, students will:

- become familiar with technologies such as the Internet, email, word-processing, etc., either through workshops, use of class time, or BilWrite visits.

- connect classroom topics to contemporary issues where appropriate through classroom discussions, texts, writing assignments, out-of-class extension activities, etc.

- connect their research papers to local and global issues

Further suggestions include:

- use outside speakers and presenters and/or take students on field trips.

- compare how cultures differ in respect to particular issues.

- to contact local and international organizations as they complete their research.

- complete original research in the local community.

Intellectual/Artistic Goals:

to broaden students' perspectives concerning intellectual and artistic traditions by:

- engaging students with substantial materials (texts, individuals, films, art, etc.) that will broaden the education that they receive within their faculty at Bilkent University by providing students with material that will not be discussed in their usual course of study);

- by focusing course content on areas that will encourage students to analyze important intellectual, ethical, and aesthetic issues from a multi-disciplinary perspective.

In English 101 and 102, teachers will design courses in which students:

1. read, as primary texts for their courses, works from noteworthy authors, artists, and scholars. In other words, a class on biology might use Stephen J. Gould – a recognized naturalist, biologist, and Harvard Professor – as a primary text rather than a biology textbook. However, these texts should be within reach of the intellectual and language capacity of students.

2. read primary texts which are not necessarily only "classics" or canonized texts, but that meet at least 2 of the following criteria:

- They are more conceptual and less news-based.

- They explore substantial philosophical, intellectual, ethical, and aesthetic issues.

- They are used to engage students in exploring substantial philosophical, intellectual, ethical, and aesthetic issues).

3. are exposed to texts they will not encounter in their faculty courses. The primary text(s) for literature students should not be literary. This does not absolutely exclude literature from the course, but literary texts should not be the focus for the course.

4. read at least one substantial primary text in each ENG 101 and ENG l02. The primary texts should be supplemented by a number of shorter texts.

5. explore issues, use methods of inquiry, and/or incorporate texts from at least three (3) disciplines (e.g., history, literature, art, sociology, psychology, etc.).

Critical Thinking Goals:
to engage students in their own critical, creative and reflective learning process by:

- allowing students to actively contribute to the course – both in terms of content, assignments, assessment, and feedback – in pedagogically sound ways;

- encouraging students to monitor their own learning processes;

- promoting learner autonomy by broadening the focus of courses to include exploration and discovery as fundamental curricular goals;

- designing courses and materials that encourage the consideration of perspectives different from those commonly held by students;

- encouraging students to make connections within and outside of class in creative, critical ways;

- designing materials that encourage students to articulate for themselves and others their own convictions and to reflect on how their thought changes throughout the course;

- creating a learning environment which validates students' ideas and encourages them to respect and engage each other;

- providing one-to-one and small group tutorials.

Principles:
In Bilkent First Year English 101 and 102, instructors will:

- administer at least one mid and one end of semester written course evaluation that is specific to the course.

- provide student feedback on course content that will be given serious consideration in course revision.

- join their unit in compiling, analyzing and sharing feedback and use it in revising/redesigning courses.

Suggestions:
Bilkent First-Year English 101 and 102 students will engage in their own critical, creative and reflective learning process (below are some suggestions):

- contributing to the course – both in terms of content, assignments, assessment, and feedback – in pedagogically sound ways by addressing some number of the following.

Content and feedback:

- choosing texts from a group selected by the teacher.

- taking part in courses that lead gradually to content which content is entirely selected by the students.

- taking part in student 'jam sessions' (e.g., informal brainstorm-like sessions) to collect more informal oral feedback, including using a class representative to present students ideas, etc.

Assignments:

- contributing to refining/defining assignments provided by the teacher.

- choosing between several options of assignments.

- creating/developing an assignment as a part of the assignment.

Assessment:

- analyzing and/or evaluating a given assignment criteria.

- creating a criteria for assessment.

- designing quiz, reading test, or other assessment tools.

- monitoring their own learning processes.

- engaging in self-assessment as part of the course.

- producing reflective writing tasks that ask them to consider particular processes of learning they have experienced and how they have developed through them.

- writing reflective diaries/journals.

- connecting classroom experience with social and personal experience in creative, critical ways.

- inviting speakers to the class.

- bringing student generated materials to class

- doing interviews and polling

- making use of Internet resources, such as chat rooms, listserves and email pen-pals.

- using role-play

- relating discussion topics to the Turkish experience

- attending field trips

- experiencing learner autonomy by taking courses that broaden the focus of learning to include exploration and discovery as fundamental curricular goals.

- taking part in student-initiated independent projects such as finding out about opera, for example, in Ankara and writing a report about it.

- researching/exploring topics around some type of independent study.

- completing assignments that emphasize **discovery** and **uncertainty** in addition to traditional argument and problem/solution types of tasks.

Bilkent First-Year English 101 and 102 instructors will engage students in their own critical, creative and reflective learning process by addressing some number of the following:

- designing courses and materials that encourage the consideration of perspectives different from those commonly held by students.

- creating courses whose subject matter covers a variety of cultural backgrounds and perspectives.

- designing text-based assignments that ask students to examine how and why their own beliefs differ from others'.

- selecting content areas of local and global importance that students may not be very familiar with and that will challenge and complicate beliefs and values they may have developed throughout their lives.

- building into the course texts and activities that address the more general notion of "change" and human development (e.g., what is gained and lost by value shifts? Why are both tradition and change valuable to an individual and society?).

- adopting teaching practices that are intellectually challenging, but not emotionally threatening. For example, a sensitive role play activity ("What would you do if your best friend told you he/she was gay?") needs to be done in a tolerant atmosphere in which students know they will be listened to.

- creating a learning environment which values students ideas and encourages them to respect and engage each other.

- discussing classroom management and operation with the students

- addressing teacher/student expectations explicitly

- modeling and encouraging active listening skills

- teaching functionally appropriate language forms (e.g., agreeing, disagreeing, clarifying, etc.).

- facilitating activities such as debate, discussion and presentation.

- designing courses and materials that encourage students to articulate for themselves and others their own convictions and to reflect on how their thought changes throughout the course.

- assigning and using for reflection pre- and post-unit writing tasks (or video mini-presentations, or audio recordings) where students express their positions on course content issues, and how their beliefs have been influenced by encounters with those who think differently from them.

- having students keep Journals to reflect on how their thinking has changed throughout the duration of the term. Periodically, giving reflective assignments asking students to do the same.

- perhaps, earlier in the term, using texts and activities which examine the value of self-reflection and how certain authors use writing to reflect on their lives (again, not to limit the medium, since they could take forms other than writing).

- using texts featuring characters who have undergone fairly dramatic changes (e.g., *The Autobiography of Malcolm X*, *Metamorphosis*, etc.).

Professional Development Goals:
to enhance professional development in the First-Year English Program by:

- supporting and rewarding research

- promoting better teaching through systematic reflection in the form of peer and/ or other types of observation, action research, etc.

- encouraging faculty to explore innovative approaches to teaching and course design either collaboratively or independently

- to insure that faculty receive regular written feedback concerning their job performance

- to support faculty in course design, testing, and materials development through appropriate training and ongoing support

- establishing and maintaining an up-to-date resource room

- promoting competence in using new and old technology

- supporting and rewarding research

- to establish a research interest group that will meet periodically to discuss ideas and draft materials as well as to provide support and training in research skills;

- to advocate release time for research studies;

- to develop increased financial support for presenting at conferences (national and international)

- to develop an equitable system for distributing funds for conferences.

- promoting better teaching through systematic reflection in the form of peer and/ or other types of observation, action research, etc.

- to support and train faculty in observation skills (lesson planning, conferencing, feedback, etc.);

- to introduce faculty to a variety of options for professional development (e.g., teaching logs, micro-teaching, discussion groups, workshops).

- encouraging faculty to explore innovative approaches to teaching and course design either collaboratively or independently

- to insure that faculty receive regular written feedback concerning their job performance

- to support faculty in course design, testing, and materials development through appropriate training and ongoing support

- to provide sufficient and relevant resources within budgetary constraints;

- to insure that sufficient documentation of courses are kept (materials, tests, syllabi, sample student papers);

- to monitor the quality of the designed courses and to provide constructive feedback.

- establishing and maintaining an up-to-date resource room

- to build a resource collection consisting of books on teaching methodology and techniques, classroom research, observation, teacher development, etc.

- to set up a proper maintenance system for the management of materials.

- promoting competence in using new and old technology

- to increase teachers' knowledge of the technical facilities available on campus (locations, operating times, etc.);

- to encourage faculty to improve their knowledge of technological resources by providing workshops and by promoting autonomous learning;

- to promote the use of the First-Year English Program email list by sharing questions from the research interest group and from unit staff meeting.

Appendix G

INSTRUCTOR FORM SAMPLE PAGE

CLASS ACTIVITIES (before class)	YOUR RESPONSE (after class)
08.04.2002 Monday (10:40-12:30) 2hrs * The Curious Enlightenment of Professor Caritat Chapter = 1-8 Militaria (State #1) Quiz # 1-5% (issues of democracy + liberty + freedom + human rights) 1st hour – 15 mins, sts are allowed to discuss + get prepared 35 mins – quiz 2nd hour – wrap-up (reading strategies practised – comprehension + reading to learn)	* sts suggested to have open-book quiz – I agreed – so they worked individually on the questions for 75 mins. (block hour) If the objective is to understand what happens in the first 7 chapters through practicing reading strategies – that's ok!
08.04.2002 Tuesday (12:40-13:30) 1hr * The Curious Enlightenment of Professor Caritat – Chapter 1-8 (Militaria) 1. wrap up – all the issues are reviewed (based on quiz questions) 2. discussion – one thing sts like + one thing sts hate + reasons	* wrap-up + discussion went well – (although there were 6-7 sts in class)
12.04.2002 Friday (15:40-17:30) 2hrs * The Curious Enlightenment of Professor Caritat – Chapter 1-8 (Militaria) 1. response writing (1st hour) assignment – chapter 8-15 (Utilitaria) will be read 2. Argumentative essay assignment (2nd hour) (thesis statement + organisation + format will be reviewed) 3. midterm evaluation – sts will are written feedback on the course + assignments so far	1. Response do c 2. Essay I – assignment given 3. Midterm Evaluation done Sts don't seem to have any problems/difficulty with the assign – let's see some of them are already very clear about what to write about + they confident about the topic + sources + outline
15.04.2002 Monday (10:40-12:30) 2hrs * The Curious Enlightenment of Professor Caritat – Chapter 8-15 (Utilitaria) Quiz – individual + open book (as suggested by sts last week)	* quiz done * final drafts are returned
16.04.2002 Tuesday (12:40-13:30) 1hr * The Curious Enlightenment of Professor Caritat – Chapter 8-15 – wrap up (based on quiz questions) + discussion	→ hope we could not – as there were only 3 sts in class – we will do this on Friday!

Appendix H:

Summarized Findings organized by research question

RQ. 1: What does the instructor consider the components of critical thinking to be, in terms of students' written performance?

ASSIGNMENT	INSTRUCTOR'S EXPECTATIONS	C.T. COMPONENTS IN INSTRUCTOR DEFINITION
FIRST ASSIGNMENT	- be objective - give advantages and disadvantages - cover different perspectives - conduct research - support the ideas provided - link ideas to each other	- Questioning information - Looking at an issue/idea from different perspectives - Tolerance for ideas - Intellectual flexibility - Examining issues underlying issues, ideas, or assumptions - Identifying the problem and solving the problem - Being objective - Application of the information to their own situation - Evaluation of the information accumulated
SECOND ASSIGNMENT	- look at the issue from both sides - take advantages and disadvantages - cover all the aspects of the issue - avoid fallacy, unsubstantiated claims, and propaganda - bring an argument and supporting that with valid reasons - conduct research in depth - combine information and analysis	
FINAL ASSIGNMENT	- question the issue at hand - applying information to their own situation - suggest solutions to problems - include advantages and disadvantages - conduct in depth research	
INSTRUCTOR FORM I & II:	- response writing - open book quiz	

RQ. 2: How does the instructor implement departmental critical thinking components in planning writing assignments for students?

APPENDIX P

ASSIGNMENT	INSTRUCTOR' EXPECTATIONS	DEPARTMENTAL GOALS
FIRST ASSIGNMENT	- be objective - give advantages and disadvantages - cover different perspectives - conduct research - support the ideas provided - link ideas to each other	Students will: - look at problems from multiple perspectives - know how to use the information - improve process-based written language skills that will prepare them to communicate more effectively in common academic genres, to learn about themselves and their world through writing, and to improve their ability to construct sophisticated research-based texts
SECOND ASSIGNMENT	- look at the issue from both sides - take advantages and disadvantages - cover all the aspects of the issue - avoid fallacy, unsubstantiated claims, and propaganda - bring an argument and supporting that with valid reasons - conduct research in depth - combine information and analysis	Students will: - create strong argument on issues - know how to apply the information - examine issues critically - continue to develop their ability to organize ideas in an appropriate manner for writer's audience and purpose - evaluate and assess sources (written and electronic) to be used in writing; - integrate and synthesize work/resear others into their own writing Comp s of C.T. Th as above
THIRD ASSIGNMENT	- question the issue at hand - applying information to their own situation - suggest solutions to problems - include advantages and disadvantages - conduct in depth research	

R.Q. 3: In instructor evaluations of students writing, what evidence does she find of the realization of the expected C.T. components?

ASSIGNMENT & FINAL DRAFT	INSTRUCTOR'S EXPECTATION OF C.T.	ADNAN	HAMIT	FIRDEVS	CEMILE	ENGIN
ASSIGNMENT I FINAL DRAFT	- look at issues from different perspectives - being objective about issues in question - cover as many aspects as possible - conduct research - discover different aspects of the issue	- looked at the issue from both sides: taking advantages and disadvantages	- covered both sides of the issue - covered advantages and disadvantages	- covered advantages and disadvantages	- covered reasons of the facts - good research conducted	- established command on sources - covered both sides
ASSIGNMENT II FINAL DRAFT	- finding a thesis - be objective - take a stance - support their ideas - conduct research - challenge existent issues - brainstorm and generate ideas	- good and clear thesis - good research - provided reasons and support - included advantages and disadvantages	- good thesis - good support - problematic organization - looked from different perspectives	- good research - good and clear thesis - provided valid and strong reasons - objective	- good thesis - good research - valid support with research findings	- clear thesis - good research - valid support with research findings
FINAL ASSIGNMENT	DEPARTMENTAL - use a variety of discourse types; analysis, synthesis, argumentation, description, definition and comparison & contrast INSTRUCTOR - apply information - solve a problem - use of information - produce alternatives - consider advantages and disadvantages - question concepts and ideas	- good thesis - problem solving - no mention about the solution - no mention about advantages - research needs improvement	- good thesis - missing information - aware of disadvantages - solve problems in the state - good research -	- good thesis - covered advantages and disadvantages - comprehensive research - application of information to her situation - solving problems that each concept causes - considered different perspectives	- good thesis - not solving all the problems that are stated - not mentioning about how to solve the problems - no link between some problems - mentioning about advantages and disadvantages - reasons not explicitly stated	- good thesis - no mentioning about how the problems are solved - reasons not explained clear - problems are stated

RQ. 5: Is there a relationship between the instructor's evaluation of C.T. components in written assignments and students" perceptions of C.T. components in writing assignments?

CEMİLE

ASSIGNMENT	INSTRUCTOR'S EXPECTATION	INSTRUCTOR'S EVALUATION	STUDENT'S PERCEPTION
I. ASSIGNMENT FINAL DRAFT	Student will: - look at issues from different perspectives - question concepts, issues, and assumptions - take advantages and disadvantages - be objective about issues in question - cover as many aspects as possible - conduct research	The student: - covered different aspects - considered different thoughts - included advantages and disadvantages - was objective - gave information on the topic - conducted research - supported the ideas included - found no need for C.T. as information is given here - included the synthesis she made at the end	I: - had clarified problems - related points - provided reasons for events - checked the sources - synthesized the information - did not use of C.T. - commented on the sources read
II. ASSIGNMENT FINAL DRAFT	Students will: - question the argument - take a stance - make a claim - choose the concept - narrow it down - support the argument from credible sources	The student: - had a clear thesis - did in depth research - had good support - had language problems - had minimal organizational problems	I: - took different views - took a stance - supported my views - looked at issues from different angles
III. ASSIGNMENT FINAL DRAFT	Students will: - identify a problem - summarize the advantages and disadvantages - present the state with the advantages - address problems that each concept causes - avoid problems through keeping the advantages. - find a solution - describe the given concepts.	The student: - presented advantages and disadvantages - suggested solutions without giving how - gave surface information - had language problems - did not combine ideas	I: - applied the information to my own situation - chose the most suitable ideology - made and supported the claim - chose the relevant information

RQ. 5: Is there a relationship between the instructor's evaluation of C.T. components in written assignments and students'' perceptions of C.T. components in writing assignments?

ENGİN

ASSIGNMENT	INSTRUCTOR'S EVALUATION	INSTRUCTOR'S EVALUATION	STUDENT'S PERCEPTION
I. ASSIGNMENT FINAL DRAFT	Student will: - look at issues from different perspectives - question concepts, issues, and assumptions - take advantages and disadvantages - be objective about issues in question - cover as many aspects as possible - conduct research	The student: - approached the issue from different angles - conducted in depth research - different people's thoughts - reasons for events - supported the ideas - gave factual information on the topic - no need for C.T. as information is given here - included the synthesis after having read the sources	I: - included different points of view - made comments - synthesized the information collected from sources - reached a conclusion
II. ASSIGNMENT FINAL DRAFT	Students will: - question the argument - take a stance - make a claim - choose the concept - narrow it down - support the argument from credible sources	The student: - clear and explicit thesis statement - in depth research on the issue - good support of his ideas - ideas easy to flow	I: - created a thesis - added my own comments - took results out of the readings - reached a conclusion - supported the thesis
III. ASSIGNMENT FINAL DRAFT	Students will: - identify a problem - summarize the advantages and disadvantages - present the state with the advantages - address problems that each concept causes - avoid problems through keeping the advantages. - find a solution - describe the given concepts.	The student: - mentioned the disadvantages - did not explain the solution - did not provide enough information - did not combine ideas - had organizational problems	I: - took positive and negative sides - created alternatives - took precautions - tried to avoid the negative points