INTEGRATING CRITICAL THINKING SKILLS INTO PLANNING AND IMPLEMENTATION OF TEACHING TURKISH: A COMPARATIVE CASE STUDY OF THREE TEACHERS

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ABSTRACT

INTEGRATING CRITICAL THINKING SKILLS INTO
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This study aimed to investigate how teachers integrated the development of students' critical thinking skills into their teaching during the three major phases of their teaching, namely, their planning practices, interactive practices, and reflective practices and to evaluate the influence of their instruction as felt by students in fourth grade Turkish course. The study was conducted as a comparative case study in which three teachers from three different primary schools participated. Data were collected through classroom observations, interviews with teachers and their students, logs written by students and documents. The findings of the study indicated that, in the planning stage, factors such as autonomy, methodological stance and relevance played a role on the level of teachers' incorporation of critical thinking into the process. In the lessons, their classroom climate and management, perception of their realm of influence, their approach to challenge and tendency to create a common frame of reference were found to have an effect on the ways their students were involved in critical thinking processes. Furthermore, metacognitive skills and critical reading skills, together with others, were addressed by teachers in different ways. In their reflection, the way they referred to the strengths and weaknesses of their lessons and the way they evaluated their students' learning

as well as their discrimination of thinking concepts and the ways they dealt with assumptions underlying students' reasoning involved elements revealing their approach to critical thinking. Among students, some interactive patterns, curiosity and interest constituted the factors that motivated students to think critically.

Keywords: Critical Thinking, Teacher Planning, Implementation, Reflection, Case Study

ÖZ

ELEŞTİREL DÜŞÜNMENİN TÜRKÇE ÖĞRETİMİNDE PLANLAMA
VE UYGULAMA
SÜREÇLERİNE ENTEGRASYONU:
ÜÇ ÖĞRETMENİN KARŞILAŞTIRMALI DURUM ÇALIŞMASI

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Bu çalışma, öğretmenlerin ders planlama, ders uygulama ve ders üzerine yansıtma şeklindeki öğretim sürecinin üç ana aşamasına öğrencilerinin eleştirel düşünme becerilerini geliştirmeyi ne şekilde entegre ettiklerini araştırmayı ve öğretimin bu boyutunun öğrenciler üzerindeki etkisini, dördüncü sınıf Türkçe dersleri kapsamında değerlendirmeyi amaçlamıştır. Araştırma, farklı üç ilkokuldan üç öğretmenin katılımıyla karşılaştırmalı durum çalışması şeklinde gerçekleştirilmiştir. Veriler, sınıfiçi gözlemler, öğretmenler ve öğrencilerle görüşmeler, öğrenciler tarafından tutulan günlükler ve belgeler aracılığıyla toplanmıştır. Çalışmanın sonuçlarına göre, planlama aşamasında, özerklik duygusu, eğitim yöntemlerine bakış, ders içeriğinin öğrencilerin hayatlarına uygunluğu, metinler, disiplinler arası bağlantı kurma, okuma becerisine yaklaşım, yazma becerisine yaklaşım ve öğrenciyi algılayış biçimleri gibi etkenler öğretmenlerin bu sürece eleştirel düşünmeyi ne şekilde kattıklarında belirleyici olmuştur. Planlarını uygulamaya koyduklarında, sınıf iklimi ve sınıf yönetimi ile kendi etki alanlarını algılayış şekilleri gibi etkenlerin öğretmenlerin öğrencilerini eleştirel düşünme süreçlerine ne derece dahil ettiklerinde belirleyici olduğu görülmüştür. Ayrıca, derslerde, üstbilişsel beceriler ile eleştirel okuma

becerilerinin yanı sıra tahminde bulunma, düşüncelerle duyguları birbirinden ayırt etme, sav geliştirme ve ortaya atılan savları değerlendirme gibi becerilerin öğretmenler tarafından farklı ölçülerde ele alındığı da bulgulanmıştır. Öğretmenler yaptıkları dersler üzerine yansıtmacı düşünürken, derslerinin güçlü ve zayıf yönlerinden bahsediş biçimleri, öğrencilerinin öğrenmelerini değerlendirişleri, düşünme ile ilgili kavramları ayırt ediş düzeyleri, öğrencilerinin akıl yürütme sürecinde düşüncelerini dayandırdıkları varsayımlarla ilgileniş biçimleri ile eleştirel düşünmeyi farklı düzeylerde sürece katmışlardır.Öte yandan, sınıf içindeki çeşitli iletişim şekilleri, merak ve ilgi öğrencileri eleştirel düşünmeye güdüleyen öğeler arasında ortaya çıkmıştır.

Anahtar Kelimeler: Eleştirel Düşünme, Öğretmenlerin Ders Planlaması, Uygulama, Yansıtma, Durum Çalışması

To my mother and father

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

1.1   Background to the Study

Teaching how to think has always been a primary aim of education. The long history of improving the intellect is traced back to Socrates. The consensus over this aim in education, however, is not maintained in the methods considered to be effective in achieving this aim: While the study of the classics and mathematics was regarded as the single most effective way of disciplining the mind in the 19th century, with the introduction of a constructivist psychology by Bruner, Vygotsky and some others, the idea of learner as the active creator of knowledge changed the methods of teaching thinking in the 1960s (Nisbet, 1990). With the critical thinking movement of the 1980s, critical thinking as an indispensable component of curriculum was resurrected in schools. In the circles supporting critical thinking movement, there seems to be a widespread agreement on the pioneering role of Dewey with his work on reflective thinking and inquiry in the formation of the concept of critical thinking in its modern sense (Ornstein and Hunkins, 1998). Later, with the contributions of educational philosophers such as Ennis, McPeck, Siegel and Paul, the meaning of the term critical thinking was refined from 1980 to the present (Streib, 1992) in a way that lay the ground for developing strategies to improve it.

Of the definitions of critical thinking which have carved a place in educational settings, Ennis's seems to stand as the most widely acknowledged and cited definition in the critical thinking literature. According to Ennis (1987), critical thinking is "reasonable and reflective thinking focused on deciding what to believe or do." This definition of critical thinking draws a parallel with that of Dewey's (1933): "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the

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grounds that support it and the further conclusions to which it tends" (p. 118). McPeck (1981) defines critical thinking as "the propensity and skill to engage in an activity with reflective skepticism." What is different in Mc Peck's definition of critical thinking is the distinction he makes between propensity and skills, which was later echoed in the critical thinking conceptions of many scholars in the field. To him, acquiring the skills to think critically, such as developing arguments that can be justified on the basis of explicit reasonable standards and evaluating others' arguments against these standards is not sufficient to become a critical thinker unless the person has the disposition, some kind of readiness and willingness, to use these skills in every aspect of his/her life. On the other hand, Paul et al. (1990) distinguish critical thinking from other modes of thinking by focusing on its self-directed, self-disciplined, self-monitored and self- corrective nature. With this definition, they emphasize the metacognitive aspects of critical thought, which entails monitoring one's own thought processes.

Freire's conceptualization of criticality deserves mention in any discussion of critical thinking as it brings two different dimensions to the definitions of North American and European philosophers of critical thinking discussed above. First, while philosophers like Ennis, McPeck and Paul aim at the liberation of the intellect of the individual, Freire, with other theorists of critical pedagogy (Giroux and McLane), propose that education, with critical thinking at its heart, should aim to emancipate the oppressed people in different social classes from social injustice through the development of what he calls as conscienticizao (critical consciousness). Then, in its strictly Freiren sense, the goal of instilling a critical view in learners is to transform institutions, ideologies, traditions and relationships. With its orientation on the social aspects of critical thought, critical thinking as framed in critical pedagogy moves away from the individual towards the recognition of one's own place in the system. Next, different from critical thinking perception of the pioneers of critical thinking movement of the 1980s, his definition of criticality involves action as well as reflection, which he conceptualizes as praxis. When compared to Ennis's definition of critical thinking, "reasonable and reflective thinking focused on

deciding what to believe or do", which considers "deciding" as a sufficient result of critical thinking, Freire's definition is broader as it sees action taken at the end of critical thinking as part of the process (Burbules and Berk, 1999). In this respect, Siegel (1988) also joins Freire and other critical pedagogists by adding reasoned action to principled thinking as an essential component of his definition of critical thinking (Couros, 2002).

Although the inflation of definitions of critical thinking to guide education may be seen as a sign of the disagreement even among experts as to the constituents of this skill, there is mutual agreement as to the fact that thinking critically can be and should be taught.

Osana et al. (2004) consider the ability to reason appropriately as an important skill for achieving contemporary success in every aspect of life (everyday, academic, professional contexts) characterized more by complex interdisciplinary problems. To these authors, critical thinking is a must for dealing with the ever-increasing complexity and interdisciplinary texture of modern life.

Paul et al. (1990) define the problem that calls for critical thinking as the natural tendencies of most people's mind toward "biased, distorted, partial, uninformed, or downright prejudiced" thinking when left to itself. To them, unless excellence in mind is systematically cultivated, the quality of our life as well as the quality of what we produce is reduced significantly.

Damji et al. (2001) see the practical value of critical thinking at two levels as its benefits for individuals and for the society. There are four dimensions of the benefits of critical thinking for the individuals described by the authors:

1. Decision making: A realization that our lives are shaped by global as well as local political, psychological, social, economic, environmental, and physical forces,
2. Growth: Awareness that comes from interaction with cultures, languages, ethnic groups, religions, nationalities, and social classes other than our own,
3. Refinement of our humane sensibilities: Reflecting on recurrent questions about human existence, love, life, and death,
4. Critical appraisal of the human condition.

According to the authors, the value of critical thinking to society is twofold:

1. Protection from political exploitation: An electorate that considers the pros and cons of issues; judges and juries that do not let their biases govern their decisions,
2. Protection from economic exploitation: People who are able to analyze and interpret market trends, evaluate the implications of interest fluctuations, and explain the potential impact of those factors which influence large scale production and distribution of goods and services (p. 4).

Parallel to the idea that critical thinking protects societies from political exploitation, Brookfield (1987) attributes the importance of critical thinking to its power for sustaining a healthy democracy. According to him, critical thinkers can think for themselves evaluating the choices available to them and coming to their own judgments in an informed way. This prevents them from letting others make the decisions on their behalf. In his own words, by thinking critically,

> We refuse to relinquish the responsibility for making the choices that determine our individual and collective futures to those who presume to know what is in our own best interests. We become actively engaged in creating our personal and social worlds. In short, we take the reality of democracy seriously (p. 10).

To Brookfield, critical questioning is vital for democracy not only in politics but also in all types of relationships among humans ranging from those between employers and labor union leaders to teacher-student relationships and those relationships between parents and children, spouses or lovers.

The value attached to educating students to become critical thinkers rightfully brings up the question in mind about the timing of the renewed interest in critical thinking as an outstanding construct in all curricula from elementary schools to college in the 1980s. Although the interest of philosophers and educators, as early as Socrates, was directed to instilling critical thinking in younger generations, critical thinking owes its renaissance in schools of the concerned countries today to such factors as the not-so-optimistic reports on the evaluation of schooling as well as alarming results from standardized tests

assessing student achievement and the insightful observations of some intellectual circles considering themselves responsible for reflecting on educational policies.

To understand the origin of interest in Turkish education in critical thinking in general and the interest of this research in this topic in particular, it is thought to be useful to encapsulate the factors behind the revival of interest in critical thinking in western education. As Vandermensbrugghe (2004) states internationalization of education is largely under the influence of Western Anglo-Saxon countries (mainly the U.S., the U.K., Canada and Australia) and this paves the way for the universalization of the education practices of Western Anglo-Saxon countries. Thus, it is not surprising that there have been attempts to transfer critical thinking as a learning practice which has a long history in western education to the curricula of non-western countries.

Not surprisingly, courses teaching classical languages such as Greek and Latin, poetry and grammatical rules once depended heavily on memorization in western countries, too. However, through courses such as history, philosophy, logics and language with a critical approach to serious literature of western civilization, critical thinking has long been ingrained in western curriculum (Vandermensbrugghe, 2004). With the emergence of economic competitiveness as a top-priority goal in 1960s and 1970s, education shifted its focus to the creation of an educated work force, particularly in the U.S. Upon this new emphasis in education, practical courses aiming to educate students to become successful candidates as employees in companies replaced others that prioritized critical thought (Goodlad, 2004). Prioritization of the demands of market forces in setting educational goals in two decades led the U.S. education to the foundation of National Commission on Excellence in Education and paved the way for the committee to release a report titled "A Nation at Risk: The Imperative for Educational Reform" in 1983 which described the risk for the nation as "erosion of educational foundations of the society by a rising tide of mediocracy" (NCEE, 1983). The committee produced recommendations specific to each subject area and those for the teaching of English referred to equipping

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graduates with higher order thinking skills such as comprehension, interpretation and evaluation of what they read. Due to similar concerns, in England, the 1981 curriculum prepared by the Secretaries of State offered a broad list of educational aims to which local authorities and schools could refer in order to form their own list of educational aims. The aim that appeared as the first item of the list read as follows: "To help pupils to develop lively, enquiring minds, the ability to question and argue rationally and to apply themselves to tasks, and physical skills." On the same list, "To help pupils to understand the world in which they live, and the interdependence of individuals, groups and nations" was stated as another top-priority aim of education in England.

As the above discussion implies, though neglected for some time, critical thinking in western education had its roots in history as a common learning practice. Therefore, we mention the resurrection of critical thinking as an educational goal in western countries with the critical thinking movement of the 1980s rather than its first-time introduction to the curriculum.

In this argument about the position of critical thinking within the traditions of different cultures, Turkey holds its own place. The observations of Turkish intellectual circles about critical thinking in Turkey reflect pessimism. Cem (1971) observes lack of some important components of critical thought such as inquisitiveness, creativity and tolerance among ordinary Turkish people as well as Turkish intellectuals. There are some intellectuals and scholars who look at the history of Turkish education to trace the roots of these problems. In his analysis of Turkish culture, Tanilli (2006) emphasizes the significance of such cultural elements as collective security, contentment, order and harmony that held different nations together for many centuries under the same roof and the contribution of these characteristics to the postponement of the formation of the *individual* in its western sense. In the same time frame, Turkish people had a rather extended experience with the Ottoman elementary education that was based on the rote memorization of the Quran without really understanding the text due to the impossibility of learning Arabic to this extent for the layman. Furthermore, the social order at that time did not even allow the mention of the

individual; thus, it would be unrealistic to expect that schools or even one-to-one tutorials aimed to develop some kind of individual consciousness. Modernization that started towards the collapse of the Ottoman Empire and even modernization in the early republican period did not erase some elements of the traditional education: memorization and physical reprimand which are directly related to the education centered around religion (Onur, 2005). Yet, with the foundation of the republic in 1923, Turkey made great strides towards westernization. The country witnessed rapid changes in every arena of social life and education did not stand as an exception. A very significant endeavor to revolutionize education was inviting Dewey to Ankara. In the report he prepared for Turkish education, Dewey is reported to have suggested the formation of citizens, autonomous men and women, constitutive members of self-governing society as well as instilling the ability to think scientifically and good habits in intellectual pursuits in elementary education (Wolf-Gazo, 1996).

Parallel to this interest in critical thinking in Turkish educational history, some alarming test results of Turkish students from recent international tests can be said to have contributed to the mention of critical thinking as a goal of education in the new elementary school curriculum in Turkey. In this respect, the implications of PISA (Program for International Student Assessment) occupy an important place. To this effect, PISA, with its four main components (reading, science, mathematics, problem solving), aims to assess some sub-skills that are directly related to critical thinking. To exemplify, in its reading component (due to its relevance to the focus of the present research), skills like hypothesizing, inferring, analyzing, evaluating , interpreting and reflecting are tested through continuous and non-continuous texts. Furthermore, PISA's key features are described as its "innovative literacy concept, which is concerned with the capacity of students to analyze, reason and communicate effectively as they pose, solve and interpret problems" (PISA, 2006). Therefore, the poor exam results of Turkish students in problem solving (34th among 41 OECD member countries) as well as in the other three areas of this international test (32nd in reading skills, 33rd in mathematics, 33rd in science) can be interpreted as an

indicator of some ineffectiveness of Turkish education in this respect (OECD PISA 2003 Data Base). In fact, The Ministry of National Education refers to the results from this international assessment as a significant factor underlying its recent decision (dating back to 2003) to shift paradigms by implementing a new curriculum with an emphasis on critical thinking.

In their evaluation of the new curriculum, Educational Reform Initiative (2005), composed of scholars from various universities, considers the thematic nature of the new curriculum, its student-centeredness and focus on skills like critical thinking, creative thinking and problem solving and its acknowledgement of individual differences between students as its strengths. However, they still see the curriculum as a project in progress and emphasize the need for its evaluation by both outside researchers and insiders (school administrations, teachers etc.). In addition to this, they regard teachers' in-service training about learner-centered instructional methods and about the integration of skills such as critical thinking and creative thinking in instruction to be essential for the successful implementation of the new curriculum. As for the integration of developing students' critical thinking skills into the curriculum, Gürkaynak et al. (2003) underline the importance of the transformation of the school ethos since schools convey messages to the students that go beyond the boundaries of the curriculum. The writers consider such factors as the hierarchy between teachers and students, the school building with its isolation from the neighborhood and the importance attached to examinations as obstacles that have to be overcome for the new curriculum to achieve its goals.

Turkish education, against the odds, can and should renew itself in a way that can incorporate critical thinking at all levels. However, for this line of thinking, which is mostly associated with western culture, to flourish in this context, efforts should be made in educational research to closely analyze the circumstances prevailing in Turkish classrooms posing obstacles to the improvement of critical thinking as well as those circumstances that are favorable to its enhancement. By providing detailed descriptions of Turkish classroom life in different settings, educational researchers can set the ground

for curriculum makers to find ways of incorporating critical thinking as a goal in a realistic manner. In this respect, the work of researchers like Irfaner (2002), Kürüm (2002), Akınoğlu (2001), Hayran (2000), Gelen (1999) and others on the aspects of critical thinking related to both teachers and students, which will be discussed further in the literature review, take steps toward such a description. The findings from research in critical thinking in Turkey imply that a variety of groups that have a stake in education (teachers, student teachers as well as students at different levels of education from primary school to college) lack the very basic critical thinking skills, and that there are grave misconceptions among teachers as to what critical thinking is and how it should be fostered in the classroom (Şahbat, 2002; Gelen, 1999) Being a philosopher of education, Norris (1992) regards empirical research as the ultimate solution to the question of how to foster students' critical thinking development rather than abstraction of the concept. Lewis and Smith (1993) also warn the in-service and pre-service preparation program makers about the risks embedded in assuming that "teachers know, or have been taught, how to teach higher order thinking skills including critical thinking" (p. 136). They designate researchers to work on issues like how to teach such skills and how to incorporate the findings from that research into teacher education programs. Therefore, furthering this line of inquiry through direct observations of classrooms with an eye to critical thinking will help contribute to the elimination of criticism towards the present implementations of the curriculum with an emphasis on critical thinking in Turkish schools.

1.2 Purpose of the Study

The purpose of this study is to investigate how teachers integrate the development of students' critical thinking skills into their teaching during the three major phases of their teaching, namely, their planning practices, interactive practices, and reflective practices and to evaluate the influence of their instruction as felt by students.

To this effect, this research study aims to seek answers to the following research questions:

1. How do teachers integrate critical thinking into planning stage?
2. How do teachers integrate critical thinking into teaching and learning process?
3. What are teachers' reflections about the aspects of their teaching regarding critical thinking?
4. What perceptions and reactions do students have with regard to the practice of critical thinking in class?

1.3 Significance of the Study

There is by now an almost universal consensus on the value of critical thinking for individuals to survive in a rapidly changing world both in the eastern and western education. Its benefits for all the societies in which citizens are equipped with this skill are undeniable. However, how critical thinking can best be instilled in individuals through education should be largely determined in the context of that society. This is particularly so for Turkey whose historical and cultural heritage cannot be considered supportive of the improvement of critical thinking skills unlike many western countries. Thus, instead of importing critical thinking programs or curricula from the US and Europe that emphasize critical thinking skills, developing programs that recognize the contextual factors framing Turkish classrooms gains importance. The present study which intends to understand how critical thinking is integrated into instruction by teachers and its effects on students in Turkish classrooms provides a description of the classrooms as they are. By doing so, it analyzes the obstacles before critical thinking as well as detecting the opportunities for developing it that are available to teachers or created by them through their instruction. This kind of groundwork that identifies the conditions prevailing in the classrooms, when put together with the results of similar research, will hopefully inform curriculum makers, material developers and teacher educators about the opportunities and

obstacles in the way of critical thinking and guide them to make programs that are suitable to the needs of Turkish classrooms.

By gaining insight into the classroom events through the perspectives of the students as well as those of the teachers and interpreting the effect of instruction on the students, this study provides a comprehensive analysis of the classrooms in which the research was conducted.

In the research literature of critical thinking in our country, studies that employ direct observation of classroom life for relatively extended periods of time, for reasons other than observing the effects of an experimental instructional method, are scarce. This study with its emphasis on description of the classrooms may help future researchers to show interest in the richness of the data hidden in the every day lives in the classrooms and inspire them to conduct this line of research in the field of critical thinking. When results from such research accumulate, they may contribute to better portraying the obstacles and opportunities in the way and provide the decision-makers with the basis upon which they can construct sound policies for the improvement of critical thinking.

1.4 Definition of Terms

Critical Thinking and Critical Thinker: Critical thinking is purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results, which are as precise as the subject and the circumstances of inquiry permit (Facione, 1990).

Planning: The non-linear, dynamic process in which many foreseen and unforeseen factors related to environment and organization, curriculum and

resources and pupil characteristics interplay to create dilemmas both for teaching and thus for planning (Yinger, 1982).

Implementation (Teaching and Learning Process, Interactive Practices): The actual operationalization of planned lessons that are also influenced by teacher's practical reasoning at the time as a response to the unforeseen factors related to environment.

Reflection: Teacher's cogitation on his/ her teaching after a lesson, evaluating it on the basis of his/her own criteria.

CHAPTER II

REVIEW OF LITERATURE

The present study aims to investigate how teachers integrate the development of students' critical thinking skills into their teaching during the three major phases of their teaching, namely, their planning practices, interactive practices, and reflective practices and to evaluate the influence of their instruction as felt by students. In this chapter, the literature related to critical thinking as a concept and its reflection in the field of education as an instructional objective will be reviewed to set the ground for the study. To achieve this aim, the following aspects will be studied under five main headings in the remainder of this chapter: Definitions of critical thinking, frameworks of critical thinking, critical thinking as an educational goal, research in the US and Europe and research in Turkey. Finally, a summary of the literature reviewed and its implications for the study will follow.

2.1   Definitions of Critical Thinking

Conceptualizing critical thinking, identifying what constitutes critical thinking, is a necessary step to be taken before concentrating on its relevance to education. However, this is not an easy task as the process of conceptualization requires taking into consideration different, sometimes irreconcilable, views to critical thinking, which can be attributed, to a large extent, to the contentious nature of the concept.

As Cuban notes,

Defining thinking skills, reasoning, critical thought and problem solving
is troublesome to both social scientists and practitioners. Troublesome is
a polite word; the area is a conceptual swamp (1984, cited in Lewis and
Smith, 1993).

In fact, when other cognates like creative thinking and higher order
thinking are added to Cuban's list, distinguishing critical thinking or categorizing
it with other concepts becomes more complicated. In their efforts to bring some
order to this conceptual turmoil, Lewis and Smith (1993) trace back the origins
of critical thinking and problem solving in philosophy and psychology
respectively. They observe that while philosophers stress the need for critical
thinking, psychologists emphasize problem solving and that while the sciences
and mathematics are adopting a scientific problem solving approach, the
humanities are using critical thinking as a way of reflective and logical thinking.
However, when the writers are assigning forms of thinking to disciplines in this
manner, they are also cautious as they are well aware of the fact that there is an
increasing tendency to use both types of thinking skills together toward the
completion of a task in many disciplines today. As the lines between different
modes of thinking blur, Lewis and Smith suggest the use of the concept "higher
order thinking" as an umbrella term to shelter problem solving, critical thinking,
creative thinking, and decision making. They argue that an encompassing
concept like higher order thinking, once clearly defined, has the potential to help
educators close the gap between problem solving of the sciences and critical
thinking of the humanities. They suggest the following definition:

Higher order thinking occurs when a person takes new information and
information stored in memory and interrelates and/or rearranges and
extends this information to achieve a purpose or find possible answers in
perplexing situations (Lewis and Smith, 1993, p. 136).

The role of critical thinking in such a network is evaluative according to
the writers. To illustrate, when one is put in a situation where he/she has to
choose between believing or rejecting an argument, critical thinking is the mode
of thinking that he/she should adopt as it necessitates examining the information

given and making judgments regarding the reliability of the evidence, the possible fallacies in the language and the appropriateness of the logic.

There have been many other attempts by scholars to define critical thinking. Most of these definitions have commonalities and when they are closely studied, they seem to be revolving around certain ideas, there are also those that bring new dimensions to our understanding of critical thinking. In this respect, Mingers's (2000) review of critical thinking literature provides a good starting point in that he captures four significant elements of critical thinking that are included in most cited definitions of the concept:

1. The critique of rhetoric-being able to evaluate the validity or credibility of arguments and/or a general skepticism towards statements and knowledge

2. The critique of tradition-being skeptical of conventional wisdom, "common sense", long standing practices and traditional ways of doing things

3. The critique of authority-being skeptical of one dominant view and being open to a plurality of views

4. The critique of knowledge-recognizing that knowledge is never value free and its subjective and contextualized nature.

Of these four elements, the ability to evaluate arguments is reported by Minger to be considered the most important component of critical thinking as it underlies all other forms of critique. This observation of Minger is parallel to what Lewis and Smith come to conclude when, of all other forms of thinking, they assign evaluation of arguments to critical thinking.

Bailin et al. (1999) detect three lines in the conceptualization of critical thinking: critical thinking as skill, critical thinking as mental processes and critical thinking as procedures in their meta-analysis of the work of critical thinking scholars. They refer to the work of Siegel (1988), who defines critical thinker as someone who possess "a certain character as well as certain skills" (p. 39) and that of Paul (1984) for whom critical thinking is "a set of integrated

macro-logical skills" (p. 5). To illustrate, this view of critical thinking entails a critical thinker noticing ad hominem fallacy in an argument or performing cognitive skills such as interpretation, analysis or evaluation. For those who adopt a view of critical thinking as mental processes, the authors cite the work of Kirby and Kuykendall (1991), who hold that "thinking is a holistic process in which different mental operations work in concert" (pp. 7, 11). They list processes such as classifying, inferring, observing, evaluating, synthesizing and hypothesizing as types of mental processes involved in critical thinking. The final category, as was observed by Bailin et al. (1999), is critical thinking as procedures. For those who define critical thinking as a set of procedures, critical thinking can occur when a sequence of steps is followed. The authors criticize all three perceptions of critical thinking claiming that they are based on misconceptions about the concept. Against critical thinking as skills approach, they raise the criticism that this view ignores the importance of contextual factors or background information as skills, once acquired, suggest their use whenever they are needed regardless of context and background information. On the other hand, they find fault with the process approach stating that unlike physical processes, mental processes cannot be observed. As a result, defining an abstract concept like critical thinking on the axis of processes which go on only in the mind is not promising as it can only be defined on the basis of its products. As for the critical thinking as procedures approach, they object to the retrospective nature of this perception. To illustrate their objection, Bailin et al. cite the work of Eckberg. Eckberg (1977), in his "Decide Model," which sets out to explain critical thinking as a procedural activity, specifies asking "Was my course of action correct?" as one of the evaluative steps of his model. However, according to Bailin et al., this question does not signify a step as it does not show how to check the accuracy of a course of action but rather retrospectively has one to evaluate an action already taken. Therefore, although the writers find the description of critical thinking as a procedure appealing considering particularly its educational implications, they do not endorse this approach.

After their rejection of three approaches to the conceptualization of critical thinking, Bailin and et al. (1999) suggest the characterization of critical thinking in terms of standards to be fulfilled for a performance to be considered as successful. Thus, being able to think critically, to the writers, does not only involve asking whether a course of action taken was right or wrong but it also require the evaluation of the action on the basis of prescribed standards like fairness, precision, logic and depth. In fact, this view of critical thinking is very much similar to Paul's inclusion of standards into his conceptualization of critical thinking to align with critical thinking skills and dispositions. Paul et al. (1990) define critical thinking as "the art of thinking about thinking in order to make your thinking better: more clear, more accurate, or more defensible." (p. 12).

This type of meta-analytical examination of critical thinking as has been done by the authors like Minger, Lewis and Smith, and Bailin et al. is valuable as they attempt to offer a broader picture of the field. In the following parts, two central dichotomies that lead to some tension in the field when discussing what critical thinking is or not will be introduced to represent the current situation.

2.1.1 Critical Thinking: Skills vs. Dispositions

When critical thinking was first introduced as an educational goal, the definitions were given on the basis of skills. Later known as skills-approach, these earlier definitions lacked the mention of the dispositions. In his earlier work, one of the pioneers of critical thinking movement in North America, Ennis (1987), acknowledged that a person is a critical thinker "when he has the skills, abilities, or proficiencies necessary for the proper evaluation of statements." This pure-skills approach, despite Ennis's later addition of the "tendency to exercise the proficiency," has raised criticism due to its emphasis on acquisition of necessary skills to the exclusion of exercising them appropriately in real-life situations.

An emphasis on dispositions as well as skills is discernible in Norris's approach to critical thinking. In Norris's terms (1985), a critical thinker is not

only able to assess the views of others and one's own views according to acceptable standards of appraisal but also able to conceive of alternative courses of action and candidates for belief, before critically appraising which alternative to choose. In addition to these, he must be able to produce reliable observations, make sound inferences, and offer reasonable hypotheses. Finally, one must have disposition to perform thinking, without which the fulfillment of all the previous conditions is null.

Bailin (2003) also views dispositions, character traits, and/or intellectual virtues central to critical thinking by giving her approval to the notion of critical spirit coined by Siegel that represents the dispositional dimension of critical thinking.

The most significant contribution to the conceptualization of critical thinking taking into account dispositions as well as skills, however, comes from Paul. Paul (1982) makes a distinction between strong-sense critical thinking and weak-sense (atomic sense) critical thinking. According to Paul, the former entails that one challenges his/her deeply held beliefs in an area which involves egocentrism, socio-centrism and self-deception, whereas the latter only equips one with the skills to rationalize the biases in emotionally- socially charged issues. In other words, when students are taught to exercise critical thinking in its atomic sense, they only improve on refuting the counter- arguments through manipulations evading the responsibility of challenging their deep-seated beliefs. What is noteworthy in Paul's approach to critical thinking is his recognition of critical thinking as an activity that goes beyond merely exercising the right skill at the right time, such as questioning the credibility of a source before taking action based on the information presented in a document but as an activity involving challenges to one's long-held beliefs that have the potential to threaten the quality of the decisions to be made.

2.1.2   Critical Thinking: Transferable or Non-transferable?

What follows from the earlier discussions on whether to include or exclude dispositions when defining critical thinking, which has evidently seems

to have ended with the approval of dispositions as an indispensable component of critical thinking is the debate on whether critical thinking skills are transferable or non-transferable. In other words, once acquired, can critical thinking be transferred from one subject matter to another or from one topic to another?

In line with his understanding of critical thinking, Ennis argues for the transferability of critical thinking from one subject area or topic to another as he thinks that there are underlying abilities. Once they are acquired by sufficient practice, it is possible, to Ennis, to use them in different disciplines and then later in life in different situations. In secondary schools, especially in senior high schools, he offers English or social studies departments to be in charge of the introduction and review of basic critical thinking skills.

Contrary to the subject-neutral understanding of critical thinking which is supported by many, Margison (2003), moving to a different direction from the discussions on skills and dispositions from that of Ennis, objects to the underlying assumption of skills approach that high-road transfer (consciously applying abstract knowledge, heuristics, or procedures learned in one context to some novel problem-solving situation) is possible. According to Margison, accepting such a possibility is reducing critical thinking to a set of simple heuristic strategies that can be transferred between different problem-solving contexts. Although he regards such a spontaneous and automatic transfer possible in areas where significant reflection or additional knowledge is not needed as in situations where basic understanding of mechanical procedures is in question, he does not endorse transfer of critical thinking, with its complexities, from one discipline to another. Therefore, he proposes virtue epistemology as a way of enabling transfer of critical thinking skills. Epistemic virtues including personal qualities, character traits, and dispositions rather than problem-solving strategies, heuristics or meta-cognitive skills, have the potential to be transferred from one situation to another according to the writer. In fact, what is referred to as epistemic virtues (virtues of impartiality, intellectual sobriety, intellectual courage, etc.) by Margison corresponds to what is referred to as critical thinking

dispositions by many writers in the field and they are deemed of equal importance to attainment of critical thinking as skills, or proficiencies.

McPeck (1981, cited in Siegel, 1988) claims that critical thinking skills are not generalizable, that is, when they are acquired in one specific domain, they cannot be transferred to other subjects efficiently. To be able to think critically, one has to identify the underlying assumptions in arguments; however, being equipped with logical knowledge regarding the nature of assumptions does not enable one to achieve this. It is specific knowledge of the subject matter that is needed to identify assumptions. Siegel (1988) also agrees with McPeck to a certain extent, i.e., some specific knowledge might be needed to exercise critical thinking, but challenges McPeck's view by claiming that, in the reverse situation, when one has specific knowledge of the field but does not have the skills to think critically (when he does not know what an assumption is), the resultant arguments would not be sound either. In the final analysis, Seigel holds the opinion that both subject-specific knowledge and logical knowledge are necessary; they are complementary to each other; thus, he interprets McPeck's prioritizing knowledge of the subject matter as trivializing critical thinking.

Further to the debate of subject-neutral or subject-specific nature of critical thinking, Norris (1985) claims that critical thinking, by nature, is context-bound. According to Norris, background assumptions play an important role in determining what inferences a person should make on a given task. Therefore, differences in the eventual inferences made by two examinees, say, on a critical thinking test, may not always indicate that one inference is correct, whereas the other is incorrect. It may rather point to the fact that the value judgments that the assumptions are based on lead to different inferences.

Having discussed the dichotomies on the continuums of "skills or dispositions" "transferable or non-transferable," we are to direct our attention to the tension between rational and non-rational components of critical thinking in the next part.

2.1.3 Complementary Thinking Skills to Rational Thinking

Walters (1990) suggests that efforts to build a conceptual model of critical thinking be essential in order to attack the "sacred-cow" status that it has acquired. Thus, first thinking critically about critical thinking itself should guide theory and research; otherwise, Walters cautions, it will be dogmas that will guide the field. In his analysis of the models of critical thinking, Walters observes two dominant views prevailing in the discussions: The first is the view that focuses exclusively on rationalistic aspects of critical thinking, composed of skills that he labels as "calculus of justification." Critical thinking, in this sense, corresponds to conventional critical thinking approach or logico-analytical view of critical thinking or to what Bruner names paradigmatic thinking (1986). According to this view, for a person to be called a critical thinker, he has to have a set of logico-analytical thinking skills, including those skills related to distinguishing between relevant and irrelevant propositions, noticing implied premises and conclusions, being aware of an array of informal fallacies that may camouflage invalid arguments, thus being able to separate rational from irrational arguments. It is the reaction to this view of critical thinking that is in the center of counter arguments raised by feminist scholars, relativist scientists, and literary community as described by Siegel.

In the analysis made by Walters about competing conceptions of critical thinking, the second is the view which holds that critical thinking also involves another type of cognitive operations which is referred to as "intuitive-synthetic" (narrative thinking in Bruner's terms) as well as logical analytical thinking operations. Walters explains that this second set of thinking skills is composed of "non-logical functions such as intuition, insight, and imagination which are essential in the construction and discovery of new conceptual models, methodologies, and problems" (p. 4). Dominowski and Dallob (1995) define insight "as a form of understanding of a problem and its solution that can result from restructuring, a change in a person's perception of a problem situation" (p. 75). According to the proponents of this view, the understanding of human rationality is incomplete without incorporating both these cognitive functions,

namely, logical- analytical thinking skills and intuitive-synthetic thinking skills. As for the implications of such a conception of critical thinking for education, schools should recognize that these two forms of thinking are complementary to each other. With a focus on the former, education will enable students to manipulate inductive and deductive logic and with a focus on the latter, it will enable students to think more extensively than they can do by utilizing logical-analytical thinking skills since tacit knowledge gained by thinking intuitively is more extensive than what one can justify through logical-analytical thinking (Polanyi, 1985, cited in Walters, 1990).

Another scholar to put great emphasis on critical thinking is Eisner (2003). In his discussion of what schools should teach, he gives top priority to judgment, critical thinking, meaningful literacy, collaboration and service (the ability to make contributions to the larger community). For enhancing judgment, Eisner emphasizes the importance of recognizing that there is not one correct answer to real life problems people need to deal with. Therefore, schools should provide the students with tasks and situations in which they learn to tolerate the ambiguity caused by not having correct answers and in which they see the risk of making quick judgments and forming quick opinions at the expense of making the most reasonable judgment. By critical thinking, he refers to the ability to critique ideas and to enjoy exploring what one can do with them. Looking at the list, one can be tempted to think that for Eisner rationality is the only form of thinking that deserves to be mentioned. However, this is not the case. Unlike Walters, who puts rational and intuitive thinking under the umbrella term of critical thinking, Eisner handles the issue of what we referred to as intuitive-synthetic thinking as a distinct entity and focuses on it separately. He identifies the mission of schools as embracing a broader view of mind. By a broader view of mind, he points to those functions of the mind that cross the frontiers of rationality and penetrates into the realm of senses, bodily, or tacit knowledge. This is exactly what Walters calls pattern of discovery, Bruner narrative thinking, and others synthetic- intuitive thinking. Thus, for Eisner, too,

meaningful education is possible through a happy balance between judgment, critical thinking and the thinking that occurs beyond rationality.

One form of thinking that occurs beyond rationality is creative thinking. Guilford (1959, 1966, cited in White, 1990) makes a distinction between convergent and divergent thinking and considers creative thinking as a form of divergent thinking, which requires the production of multiple solutions or hypotheses. Convergent thinking, on the other hand, is about the product of "one" correct solution to the problem. This distinction was made by Guilford after he found out the multidimensional nature of the intellect with his famous research on "The Structure of the Intellect." His research data stated that there are at least 120 factors in the structure of the mind and divergent thinking is one of these factors. He determined originality, adaptive flexibility, spontaneous flexibility, ideational fluency, expressional fluency, associational fluency, word fluency, sensitivity to problems, visualization judgment, and redefinition as the high level aptitude factors involved in creative performance. The creative attitude is also recognized by the famous psychologist Fromm (1959). According to Fromm, such an attitude involves the following:

1. the willingness to be puzzled- to orient oneself to something new without frustration,
2. the ability to concentrate,
3. the ability to experience oneself as a true originator of one's acts,
4. the willingness to accept conflict and tension caused by the climate of opinion or lack of tolerance for creative ideas (p. 112).

As is explained by both Guilford and Fromm, for creative, or divergent thinking, to come into being, one should develop an attitude and be emotionally ready. Creative thinking is very much associated with the thought processes followed by artists and inventors. Thus, the educational implication of this is determined by Finke (1995) as the need to emphasize creativity in training people to become scientists and researchers. By incorporating creative thinking into the science curriculum, students will gain the ability "to seek to find novel uses for structures or novel implications of these structures by making contact with other ideas and possibilities that one might not ordinarily consider with the

discovery of remote associations" (pp. 255-256). Envisioning a hypothetical, often paradoxical situation and considering its consequences is mentioned by Finke as a type of exercise that can be used in such training.

Walters is also convinced that a more comprehensive approach to thinking skills instruction is necessary, particularly in the middle and high school years when students are more likely to retain what they learn in the years to come and as this period is considered to be the times in which cognitive habit formation is more possible. He cites techniques of pretend play, visual imagery, creativity in musical education, emphatic learning, discovery learning and intuitive problem solving as methods that can be incorporated into the existing curriculum to complement training in conventional thinking.

In conclusion, name it narrative thinking, synthetic-intuitive thinking, pattern of discovery, divergent thinking or creativity, the part of literature reviewed so far argue that any definition of critical thinking excluding these thinking skills will be lacking an important constituent. Beyer (1990) finds perceiving creative thinking as the direct opposite of critical thinking naive and he supports the argument developed by Lipman that the opposite of critical thinking is undiscriminating, undisciplined, and unquestioning thought. Having discussed creative thinking, one of the most controversial forms of thinking in that what lies beneath creative thinking is still puzzling even for the scholars studying it, we need to direct our attention back to critical thinking in its less controversial forms.

In fact, the work of most prominent scholars and researchers studying critical thinking focuses on diagnosing the sub- skills and dispositions that make up critical thinking analytically rather than struggling to define the boundaries of critical thinking. The following section will bring to attention a variety of frameworks of critical thinking, which will lay the ground for the next section about the impact of such frameworks on the educational use of the concept.

2.2   Frameworks of Critical Thinking

As was discussed under the definitions part, the writing of Paul et al. (1990) holds a distinct place in critical thinking literature as his frame of critical thinking involves a comprehensive list of both cognitive strategies and affective strategies. Paul states his aim as determining the constituents of the global concept of critical thinking in order to come up with a strategy list that can also serve as a list of instructional strategies. Paul's contribution to the conceptualizing of critical thinking with this analytical approach is significant since he also used these strategies in remodeling traditional lessons in a variety of subject areas into lessons that cater for the development of students' critical thinking skills in light of these strategies in different grade levels in K-12. Paul's frame is made up of three major categories: affective strategies, cognitive strategies (macro-abilities), and cognitive strategies (micro- abilities). Consisting of 35 dimensions of critical thought, the list also serves to distinguish between critical thinking in its strong sense and critical thinking in its weak sense, two concepts that were developed by Paul. Paul argues that if a person is competent in using the cognitive skills only, but has not internalized the affective aspects of critical thinking, then he/she can be said to be a weak sense critical thinker. However, if he/she can also use the affective strategies as well as those that are cognitive, he can be named as a strong-sense critical thinker. Therefore, in Paul's frame, affective strategies are of utmost importance and he lists nine such strategies:

1. Thinking independently
2. Developing insight into egocentricity and sociocentricity
3. Exercising fairmindedness
4. Exploring thoughts underlying feelings and feelings underlying thoughts
5. Developing intellectual humility and suspending judgment
6. Developing intellectual courage
7. Developing intellectual good faith or integrity
8. Developing intellectual perseverance
9. Developing confidence in reason

Furthermore, Paul brings a new dimension while conceptualizing critical thinking. He states that while thinking about an issue, a problem or a situation, a

critical thinker should also constantly check the quality of his/her thinking. For doing this, he suggests the use of a set of standards which he calls as the universal standards of thought. These standards are clarity, accuracy, precision, relevance, depth, breadth and logic. To sum up, it can be said that Paul's frame is made up of 35 cognitive (macro and micro skills) and affective strategies and nine standards to be applied while using these strategies.

Jones et al. (1995) also carried out a detailed study to define critical thinking and analyze its components in order to provide a framework for its assessment among college students. In their study, the authors defined critical thinking in seven major areas: interpretation, analysis, evaluation, inference, presenting arguments, reflection, and dispositions. Under each title, they produced a list of skills and sub-skills pertaining to that skill that contribute to the definition of critical thinking in a concrete manner. Interpretation involved sub-skills like categorization of data, detecting indirect persuasion and classifying meaning. Analysis was thought to include examining ideas and purpose, and detecting and analyzing arguments. Evaluation was considered to be based on such skills as assessing the importance of an argument, its reasonability and practicality as well as evaluating the sources of information, assumptions, statistical information used as evidence to support an argument, evaluating conclusions of an argument in face of new data, evaluating analogies, detecting bias, narrow-mindedness and contradictions. Under inference skills the authors listed collecting and questioning evidence, developing alternative hypotheses and drawing conclusions. The skill of presenting arguments was made up of sub-skills of presenting supporting reasons and evidence for their conclusions which address the concerns of audience, negotiating fairly and persuasively, presenting an argument with its crucial points, considering alternative positions and opposing points of view, and illustrating arguments with significant examples and showing how these examples apply in real situations. For reflection skills, the sub-skills involved applying the skills of analysis and evaluation to one's own arguments to confirm and/or correct reasoning and results, critically examining and evaluating vested interests,

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beliefs and assumptions and making revisions in arguments and findings when self-examination reveals inadequacies.

As for their handling critical thinking dispositions, Jones et al. bring five more aspects to those described by Paul: Being curious, being organized, orderly and focused in inquiry or in thinking, being flexible and creative in seeking solutions, monitoring own understanding of a situation and progress toward goals, and finding ways to collaborate with others to reach consensus on a problem or issues.

This framework that rests upon an exhaustive list of critical thinking skills (in fact, the writers describe each sub-skill cited in the previous paragraph in a rather detailed fashion) is noteworthy as it was later used to assess the quality of major critical thinking tests highly acknowledged all around the world such as California Critical Thinking Dispositions Inventory, California Critical Thinking Skills Test and Cornell Critical Thinking Test (Erwin, 2000).

Another detailed study to set the framework of critical thinking skills comes from 46 experts in the fields of philosophy, education, social sciences and physical sciences. Using the Delphi method, the experts produced The Delphi Report on critical thinking in 1990. The report cites analysis, evaluation, inference, interpretation, explanation and self regulation as the core critical thinking skills. Of these six core skill areas, the experts are reported to agree virtually unanimously on three skills, namely, analysis, evaluation and inference. As for interpretation, explanation and inference, there is said to be strong consensus among experts as to the fact that these three skills are central to critical thinking as well. When compared to the frame developed by Jones et al., the Delphi Report also includes analysis, evaluation, inference and interpretation as the major skills constituting critical thinking. However, as opposed to what are referred to as presenting arguments and reflection in the list of Jones et al., there is explanation and self-regulation in the Delphi Report. When closely studied with their sub-skills, it can be concluded with confidence that explanation in Delphi Report is an alternative term for presenting arguments in the list of Jones et al. Similarly, self regulation is used in the same sense as

reflection. Therefore, in terms of the central areas that they set for critical thinking, the two frames can be said to be quite parallel to each other. As for the seventh area of dispositions, the Delphi Report treats them as a distinct category from cognitive skills and deals with them under the heading of affective skills similar to the categorization of Paul et al. (1990). However, the Delphi Report distinguishes between those affective dispositions that are attained toward life and living in general and those that are attained to specific issues, questions or problems and consider both as the permanent traits of critical thinkers at times that they are using one of the cognitive skills as well as those times that they are not employing a cognitive critical thinking skill.

In the report, it is strongly emphasized that in order to count a person as a critical thinker, it is not necessary that he/she should be proficient at every skill.

Ennis (1987) occupies an outstanding place in the field of teaching critical thinking. With his taxonomy, Ennis aims to analyze the constituents of critical thinking in order to explore the ways to assess it. The abilities that are represented in his taxonomy are as follows (the list does not include the sub-skills Ennis identifies):

1. Focusing on a question
2. Analyzing arguments
3. Asking and answering questions of clarification and/or challenge
4. Judging the credibility of a source
5. Observing and judging observation reports
6. Deducing and judging deductions
7. Inducing and judging inductions
8. Making value judgments
9. Defining terms, and judging definitions
10. Identifying assumptions
11. Deciding on an action
12. Interacting with others

Although his taxonomy is much less comprehensive compared to the frames presented earlier in this section, being a pioneer in the educational use of the concept of critical thinking, his taxonomy has been much cited in the critical thinking literature.

2.3   Critical Thinking as an Educational Goal

Be it an array of skills or a tendency, subject-neutral or subject-specific, context-bound or context-free, in its weak sense or strong sense, critical thinking emerges as a multi-layered concept before researchers. The significance of these definitions cannot be underestimated not only because they shed light to various components of a complex conception like critical thinking but also because definitions introduced by different lines of thought have noteworthy implications for education, that is, for why and how to teach critical thinking and its content. However, before moving into these discussions, some basic questions have to find their answers in the following part.

Is critical thinking a desirable educational aim for all? Is it a universally agreed upon goal to educate citizens to become critical thinkers? If the answers to such questions were positive, the current situation about the place of critical thinking in our schools would be more promising. The curriculum would be emphasizing higher order thinking skills more either within the subject areas or as a separate course; textbooks would be designed to promote sub-skills of critical thinking and teachers would be educated to foster such skills in their students. According to the Primary School Regulations issued by Turkish Ministry of Education and printed in Official Gazette dated 27.8.2003/ 25212, to ensure versatility by fostering students' skills and mental abilities and to enable them to acquire thinking skills and realize their creative potential are the two goals of Turkish education among others. If the current state of affairs is not satisfying in terms of the final product, i.e., students lacking thinking skills, is it that stakeholders are only paying lip service to development of critical thinking and that in reality they are against the idea? Siegel (1988) mentions those fractions in the intellectual circles that are somewhat against critical thinking movement on theoretical bases. The first fraction that raises objection to critical thinking is the feminist scholars, associating it with rational male thinking. To them, cultivating critical thinking at the expense of female intuitive thinking is a sexist approach. The second group opposing critical thinking is some Marxist circles for whom critical thinking is connected to hegemonic interests. For such

Marxist groups, critical thinking cannot be thought without a priori ideologies, which are there to protect the existing order. Then, in critical thinking as an educational goal is embedded the ideologies in power. The third fraction rejecting critical thinking as an educational goal is, in Siegel's words "a surprising number of" contemporary philosophers of science who are adhered to some form of scientific relativism, denying rationality. The fourth major group against critical thinking, or rationality is the literary community, considering creativity and bodily knowledge as the anti-thesis of rationality. Thus, critical thinking, though desirable for many, needs to be justified on both philosophical and pragmatic levels if the intention is to enhance its place in schools as a fundamental educational goal. The commonality between the arguments of these groups against critical thinking, except for that of Marxist fractions, lies in their uneasiness about the emphasis placed on "rationality" in the efforts made to conceptualize critical thinking. The discomfort of all these groups with rationality is best, though in an extreme fashion, reflected in Feyerabend's words:

> Reason, at last, joins all those other abstract monsters such as Obligation, Duty, Morality, Truth and their more concrete predecessors, the Gods, which were once used to intimidate man and restrict his free and happy development; it withers away (1975, quoted in Siegel, 1988, p. 49).

Still, there seems to be consensus in many countries to set the instruction of critical thinking as an educational goal as was discussed in the previous chapter. Then, the real question to be asked in the first place is "Can critical thinking be taught or not?" To Presseisen (1986), critical thinking can be taught as there are essential cognitive processes that underlie good thinking; through instruction, these processes can be made available to learners regardless of their genetically transmitted abilities for thinking. In fact, the ideal of teaching critical thinking has a long history in education. As Ornstein and Hunkins (1998) work on setting the framework for psychological foundations of curriculum, they emphasize the latest opinion at that time that "critical thinking is a form of intelligence that can be taught and that it is not a fixed entity" (p. 118). They place the studies on the inclusion of critical thinking into curriculum under the

heading of cognitive learning theories. The impact of Piaget's developmental psychology became more evident in the educational arena through the work of Tyler, Taba and Bruner. Piaget believed that it was abstract symbolic reasoning that distinguished human beings from other animals and from a cognitive developmental stance, it was only possible for students to be engaged in this type of reasoning when they reached a certain level of maturity. Drawing on his work, a group of psychologists known as cognitive scientists started to investigate, in the 1960s, what happened inside a person's head when he/she was thinking and learning. As an extension of their work, Ornstein and Hunkins state, there emerged a growing interest in problem solving, as was called earlier, and later known as reflective thinking and today known as critical thinking.

Among the scholars who study the teaching of critical thinking in schools, the contribution of philosophy, and educational research is regarded essential. Many scholars seem to agree that a favorable balance has to be stricken between insight that philosophy may offer, with its huge accumulation of centuries, and insight that psychology may offer, with the accumulation of years of experimental research into the measurement of critical thinking, and options educational research may suggest, with the examples of good practice (Huitt, 1998).

In his discussion of what philosophy offers to the teaching of thinking, Beyer (1990) answers the question saying "In a word, everything" (p. 55). Although he admits the undeniable contributions of psychology to teaching thinking by making efforts to explain how thinking procedures might effectively be taught, he maintains that philosophy offers insight about what ought to be included in a good thinking skills program. Beyer gives philosophy its due by stating that the richness of conceptual repertoire of philosophy has a lot to offer to the applied disciplines concerning thinking. Of this treasure of concepts, he identifies six that philosophy may particularly place at education's disposal:

1. Reasoning: The systematic inferring of information according to rules of logic so as to demonstrate or ascertain the validity of a claim or an assertion,

2. Critical judgment: A willingness (indeed a predisposition) and an ability to scrutinize and evaluate one's own thinking as well as others' to determine truth, accuracy, or worth and to construct logical arguments to justify claims,
3. Criteria: To think critically about the standards on which thinking is based and use these standards to judge thinking and its products,
4. Point of view: The position from which one views thinking, which is a product of one's accumulated experience,
5. Dialogue: A major method by which individuals exercise their critical thinking abilities through interchange with one or more people on a given topic by giving and analyzing evidence, reasoning logically, identifying assumptions and so on (for which Socratic questioning is an example)
6. Dispositions: A particular mental set that calls for distinct, habitual ways of behaving; the spirit, or affective dimension of critical thinking making it much less mechanistic than it is customarily portrayed to be (pp. 58-59).

Beyer emphasizes the fact that critical judgment is an essential aspect of critical thinking and it is named so not because it is negative or accusatory but because it judges according to prescribed criteria. Therefore, he reminds that the results of critical thinking can be positive or negative. What critical thinking entails is evaluating objectively before accepting or rejecting blindly. It can also be applied to a wide range of situations such as an oral statement, a written document, a film, a painting, an action, or an event.

As for Beyer's expectations from the curriculum in light of his understanding of critical thinking, he claims that such a curriculum should, at a minimum, include the six basic concepts of philosophy and that regardless of the cognitive skills that are selected as learning objectives, inductive, deductive and analogical reasoning ought to be included in the curriculum since these skills form the basis of all thinking. Moreover, considering the role of critical judgment in generating and evaluating the hypotheses, theories, and conclusions that emerge as a result of thinking, Beyer states, critical judgment and operations constituting it should also be an indispensable part of curriculum. Finally, the criteria against which accuracy, worth, and truth of critical thinking is judged together with dialogue and questioning, should also be included in the curriculum as related objectives according to the writer.

Lipman also outlines a strategy for teaching critical thinking (Ornstein and Hunkins, 1998). He created Philosophy for Children program in 1969 and today it is applied in more than fifty countries. As Accorinti (2000) puts it, drawing from the belief that children are inherently inclined to think philosophically, the purpose of this program is to preserve this natural inclination to think critically and creatively. According to Lipman, children, by their very nature, are inclined to inquire into abstract concepts, such as truth and fairness; therefore, the strategy outlined aims to activate this in-born inclination. Basically, what Lipman does in this program is having students spend a considerable portion of their time thinking about thinking, and about ways in which effective thinking is distinguished from ineffective thinking. In this program, philosophical texts that are written specifically for this program are used. Teachers are provided with manuals in which they can find a variety of discussion plans and exercises through which they can exploit the issues raised in the texts for educational purposes. Furthermore, teachers are trained before they start participating in this program to enable them to make use of the texts to the fullest and to transform their classrooms into a community of inquiry , which reflects the pedagogical methodology of the program, i.e. dialogue. Another significant aspect of Lipman's Philosophy for Children program is that it aims to raise language awareness (the knowledge of semantic and syntactic structures, the detection of speech vagueness etc.) as well as familiarizing children with the plural and dynamic nature of reality (Accorinti, 2000).

Despite the popularity of the program all over the world and the support it has received in educational circles working to promote critical thinking, there is also criticism that is directed to the very idea of philosophy for children and community of inquiry. Vansieleghem (2005), inspired by Arendt's conceptualization of thinking as "wind of thought," attacks the central idea of the program, which is "...the proposition that critical thinking and dialogue are the necessary conditions for emancipating children from determination and for transforming them into democratic, free citizens" (p. 20). According to the author, although Philosophy for Children aims to educate for democracy, by

putting the emphasis on critical thinking and autonomy, it only reproduces the existing discourse as, in this type of prescribed dialogue, children only "...occupy a pre-constituted place in that discourse" (p. 25). As was stated by Accorinti, in this program, teachers are provided with training, materials and plans to guide them how to proceed in the classroom as they start and facilitate inquiry; however, to Vansieleghem, by doing so, the program adopts a "rigid, rational and instrumental approach" (p. 30), contradicting Arendt's conception of natality, which entails a natural search for meaning in the face of novelties rather than sticking to reflexive problem solving procedures. Therefore, the author concludes that despite its initial intention to trigger children's innate predisposition for thinking, the program may end up impeding this disposition.

Similarly, Eisner (2003), though not directly aiming at Lipman's Philosophy for Children, calls for a broader view of mind. As opposed to the dependence of this program on language and dialogue as its central methodology, Eisner argues that thinking should go beyond what could be communicated with words and that cognition can transcend the boundaries of language. He advocates the implementation of programs that recognize the sensory modalities (sight, sound, touch, taste and smell) as legitimate channels of thinking. Despite his emphasis on modes of thinking that go beyond those used in its modern sense, Eisner still counts "critical thinking" as one of the five aims that he embraces as relevant for schools today along with "judgment, meaningful literacy, collaboration, and service." To him, "powerful ideas are those that have legs, that take students someplace." By powerful ideas, he means those that are worth exploring. To make his case, he refers to Bruner who isolated three questions (What is human about man? How did he get that way? What can make him more so?) around which he centered his curriculum and Eisner also proposes topics like "the relationship between culture and personality or the protection of minority rights in a government in which the majority rules" for discussion in a critical thinking curriculum for any age group.

Lipman's confidence in children's ability to reason about existential problems also provokes counter-arguments. Goldman (1984) bases his argument

against the teaching of Socratic method (a dialectic method of inquiry to examine key moral concepts) at an early age based on Plato who advises that this method should be taught after higher education and then not until the age of 30. According to Plato as was cited in Goldman:

> We have from childhood convictions about what's just and fair by which we are brought up as parents, obeying them as rulers and honoring them (538c). But then, lads get their first taste of arguments; they misuse them as though they were play, always using them to contradict and...refute others (539b). They will question what the law says is just and fair, and they will refute arguments about its validity until they come to neither honor nor obey them any longer in the same way (538e). Generalized, it can be imagined that all the customs, mores, standards, values and conventional wisdom of the society will be examined and refuted by these immature dialecticians who are like puppies enjoying pulling and tearing with argument at those who happen to be near (539b) (Plato. The Republic of Plato (Bloom, 1968, p. 58).

In order to prevent this situation, Plato recommends giving people time until they develop stable personalities to be engaged in arguments and philosophy without doing any harm earlier neither to themselves, as immature dialecticians, nor to the people around them. Although Goldman thinks that basic societal institutions should not be taken as gospel since they are relative to the culture they are established in and therefore inevitably prone to change, he also draws attention to the need of human beings, particularly of children, for stability and continuity. As well as the threats embedded in argumentation, Socratic method, or critical thinking (in both Plato's and Goldman's writings they are used interchangeably) for the young practitioner of it, there are also risks for those who educate people to practice it (as was foreshadowed by Socrates' own trial and death). Goldman cites relocation or redundancy as possible risks for teachers even in countries like the U.S.

The response to Goldman comes from Paul (1984). He tries to refute Goldman's argument by sharing the evidence from the empirical positive results of programs aiming to engage young children in philosophy. He also distinguishes between Socratic method and Socratic spirit, claiming that the

former does not have to be pursued exactly as it was performed by Socrates himself:

> We can redirect our efforts to focus on the Socratic spirit, the educational power of rational dialogue focused on questions of significance in an atmosphere of mutual support and cooperation. If we do, we will develop somewhat different variations on the Socratic method (p. 63).

What should be taken into consideration in Paul's remark is his emphasis on rationality, significance and mutual support. Paul, with some modification and interpretation to Socratic method, believes in the benefit of discussion on significant issues for children. The atmosphere that is conducive to this is one that allows dialogue, support and cooperation.

When these conditions are fulfilled, there is no reason for avoiding handling sensitive issues with considerations of causing harm to students. However, the conditions set by Paul to create the environment for critical thinking requires a powerful teacher figure similar to the teacher as "strong individual" image considered to be a prerequisite by Goldman himself.

On the other hand, vanGelder (2005) holds the opinion that critical thinking is hard for many people as they are not naturally critical. To make his point clear, he uses the metaphor of dancing. He states that "Although running is natural, nightclub dancing is less so, but ballet is something people can only do well with many years of painful, expensive, dedicated training" (p.2). In this analogy to dancing, he likens critical thinking to ballet, which is a highly contrived activity. He also cites the research study conducted by Kuhn in 1991 and reported in her book The Skills of Argument. In this research, Kuhn puts a diverse selection of 160 people into an extended, structured interview situation and asks them to support their own opinions with evidence to create good arguments. The results of Kuhn's research show that a great majority of people lack the basic skills of developing arguments to support their own opinions. Based on his opinion which is well supported by Kuhn's research, vanGelder suggests the use of research results that have accumulated in cognitive science and maintains that for becoming critical thinkers, students should be given every

opportunity of practice as critical thinking is basically a skill and every skill can be mastered through practice. They should also be taught for transfer so that they can transfer what they have learned in one situation to other situations, a skill without which learning can be said to have failed. Thirdly, students should be provided with practical theory, that is, the knowledge of the theory of critical thinking. What vanGelder signifies by knowing the theory is knowing the specialist vocabulary. He argues that it is more likely that one can recognize poor reasoning if he/she is equipped with the words to name specifically what the source of the poor reasoning is like "affirming the consequent." Another point that the author draws attention is the need to teach students mapping arguments out, that is teaching them to diagram arguments in question visually as well as teaching them to develop or evaluate arguments using either written or spoken words. Finally, he warns teachers against belief preservation, that is, cognitive biases and blind spots. vanGelder sees belief preservation as one of the major and most frequently encountered barrier in the way of critical thinking and recommends struggling this barrier head-on in any given critical thinking program.

Nisbet (1990) mentions a significant division in the field of critical thinking instruction. There are those who aim to teach thinking skills through specially designed programs and those who aim to teach them through infusion into established curriculum. The major criticism toward the former is about their being fragmentary and reductionist. In these programs, critical thinking is taught as a distinct entity, making its transfer to different subject areas and contexts difficult. On the other hand, when critical thinking is infused into the curriculum, content and process are treated complimentary to each other. Therefore, the claim of those who support the latter is that transfer to different areas through this approach is more likely. However, Nisbet observes that despite this division in the field regarding the way of integrating critical thinking into education, both camps seem to agree on some certain methods like modeling (teacher talking aloud while working on a problem), cognitive apprenticeship, co-operative learning (allowing students to explain their reasoning to each other), discussion

and Socratic questioning by the teacher. What underlies all these methods is metacognition, that is, awareness of one's own thinking processes.

By being aware of cognitive processes and constantly guiding himself/ herself through the stages in these processes with his/ her Vygotskien inner talks, one can gradually get to the point where he/she can initiate a piece of thinking in case of need and follow the steps necessary to maintain it and reach a conclusion. To put this sort of thinking into effect requires the acquisition of necessary meta-cognitive skills. Presseisen (1986) is one of the authors who stress the need for such meta-cognitive abilities to perform critical thinking. By making students conscious of their own thought processes, it is definitely within the realm of possibility to enable them to become intellectually autonomous individuals. To achieve this, she demands that teachers should know their own subject area at some depth and that they work collaboratively with their colleagues to determine what and how to teach. Thus, her assignments for teachers who are entitled to teach higher order thinking skills nullify the so-called "teacher-proof" programs. For effective instruction what is needed of the teacher, as Presseisen notes, is "mediate, question, criticize, inspire, enable," and all these tasks for which the teacher is held responsible for the effective instruction of critical thinking obviously contradicts the traditional profile of the teacher as the transmitter of knowledge.

Apart from the studies that aim to find out the roles to be assigned to teachers for effective critical thinking instruction, there is also effort in the field to set guidelines for assessment of critical thinking both for the diagnosis of students' ability to think critically before or after some instruction and for enhancing critical thinking through assessment.

Norris's claim that critical thinking is context-bound and that value judgments of individuals and their assumptions based on these judgments affect their inferences discussed earlier in this chapter has also implications for the assessment of critical thinking. If people with different value judgments may end up with different inferences, then the performance of examinees with different value judgment in a given critical thinking test may not accurately reveal their

critical thinking ability. We can conclude from this observation of Norris that to evaluate the critical thinking abilities, familiarity with the context in which critical thinking is performed is necessary. In order to take the context in which critical thinking is performed into consideration, Norris suggests that researchers or assessors seek explicit indications of people's reasons for their conclusions. To this effect, he recommends the use of essays instead of objective tests to assess critical thinking skills of examinees since they allow the assessors to trace the flow of reasoning. Another solution was using protocols of students' thinking in the design of a critical thinking test, which was a method Norris himself used in a research study that he conducted with King in 1983. Another implication of Norris's recognition of context-bound nature of critical thinking for educational research is that empirical research should be conducted in natural contexts.

On the other hand, Schafersman (1991) sees examinations and term papers as two course areas that can be used to emphasize critical thinking. In the examinations, the author highlights the importance of having students write as, through writing, students are given the best opportunity to develop arguments and draw conclusions, which are basic to critical thinking. Although they are generally thought to be less conducive to critical thinking, what Schafersman also considers to have a potential to engage students in critical thinking is multiple-choice questions if they are designed carefully keeping critical thinking sub-skills to be employed in order to answer each question in mind.

2.4   International Research on Critical Thinking

As a result of the interest in critical thinking and a widespread consensus on its approval as an educational goal, research on critical thinking is abundant in the west. Therefore, it seems to be relevant to start the discussion of research with those studies that aim to synthesize the research under general headings before moving into the introduction of specific studies in a relatively detailed fashion.

Cotton (1991) in her effort to synthesize research in the field of critical thinking finds out that the vast majority of the research published so far deal

with student populations in the United States and that most of the research take either student or teacher population as target, only few studying both populations at the same time. Elementary students appear to be a highly studied group for critical thinking purposes. She also reports that a very popular research area is investigating the effectiveness of individual practices and whole critical thinking programs. In such studies, the effects of instruction in various aspects of higher order thinking such as analysis, synthesis, argument development or metacognivite functions are reported to have been studied. Cotton also observes the emphasis put on classroom questioning in research into critical thinking. These studies basically focus on the relative effects on student learning produced by questions at higher and lower cognitive levels. There are also studies that investigate the relationship between teacher wait-time and learning outcomes. In addition to these, manipulating the placement and timing of questions during lessons, using probing, redirection and reinforcement strategies, training students in responding to higher cognitive questions and making inferences as well as training teachers in questioning strategies are cited in Cotton's meta-analysis as frequently studied treatments.

Parallel to Cotton's review of research into critical thinking as an educational goal, the following studies reviewed all investigate the efficacy of a variety of treatments in different contexts.

In their study, Hayes and Alvermann (1986) aimed to explore ways to improve reading instruction and, to achieve this, they conducted a study in which they examined the relation of discussions about assigned reading to students' critical reading behavior. In this research, they also investigated the effectiveness of coaching teachers on techniques for discussing the assigned readings. The study involved five teachers from a high school, each with a population of 25 students. While the classes were discussing the readings, they were videotaped. The researchers later analyzed the data by transcribing the tapes and coding the data. The results before teachers were coached showed that teachers treated the discussions of assigned texts in the classroom like tests and very few students participated in these discussions. The teachers were observed

to play a central role. However, after coaching, teachers were found to acknowledge more of student responses, and the number of elaborate student answers increased. For three of the teachers, coaching helped increase the proportion of text connected talk and the talk became more inferential and analytical.

In another study, Osana and Seymour (2004) aimed to investigate the effects of the use of a rubric for evaluating arguments and statistical reasoning on the fostering of critical thinking in pre-service teachers. The researchers implemented a cognitive apprenticeship model, which was made up of three phases, namely, modeling (demonstration by the instructor), coaching (collaborative critique and whole-class discussion), scaffolding and fading (presentation and collaborative critique of students). The rubric, which was designed to measure students' conceptions and use of evidence, notions about research and its applicability in evaluating complex social problems, and ability to consider alternative perspectives proved to improve the ability of participant student teachers to concentrate on conceptions of evidence when judging perplexing matters. The results also revealed that the participants improved in making distinctions between evidence quality and evidence type in assessing the nature of ill-structured problems.

Martin et al. (2002) designed an empirical study to explore the ways in which teachers from two very different cultural settings (England and China) used new ideas and strategies focused on the fostering of creative and critical thinking in their students in primary schools. The participants were eleven teachers from China and ten teachers from England. The researchers used a model for teacher learning in which they first identified teachers who were willing and interested in learning about strategies for fostering creative and critical thinking; they then gave specialized training sessions in those strategies with practice of those strategies first on an adult level; the participants were involved in developing and sharing possible lesson-plan ideas implementing those ideas; feedback for both peers and the authors on those lesson plan ideas were given, and the researchers provided an implementation period of at least 6

months during which teachers carried out and adapted those strategies to their particular classes of learners. The researchers focused on the changes in teachers' thinking and their decision-making processes as they encountered professional dilemmas in the face of a new instructional model. They used a beliefs questionnaire to be used before and after implementation, classroom observation scale to determine the degree of teachers' manifesting the trained behaviors used by outside observers, journals kept by participating teachers and focus groups. The data collected were analyzed through content analysis. The results showed that in the Chinese context in which teachers were not as familiar with teaching thinking skills as their English counterparts, the engagement of students with tasks requiring critical thinking was as high as those of English students after the implementation of the program. However, Chinese teachers were not able to articulate much change in their beliefs or their teaching behaviors and decisions after the program. Martin et al. interpreted this as an indication of the success of thinking skills programs transcending cultural differences and they considered the time lapse between the change in actual performance of teachers and the change in their belief and articulation of change in philosophy as a significant implication for further research and for designers of teacher education programs for thinking skills.

2.5   Research on Critical Thinking in Turkey

Similar to the interest in research on the integration of critical thinking into instruction at a variety of levels in the west, the research in Turkey in this area is also accumulating. In this part, some important studies carried out in this field in Turkey will be introduced.

Irfaner (2002) in his case study on the implementation of the components of critical thinking in a freshman English course on writing at Bilkent University posed the question what the teacher involved in the study considered the components of critical thinking to be in terms of students' written performance. His findings revealed that the teacher did not emphasize continuously the same components of critical thinking; instead, with each assignment she focused on

different critical thinking skills and of the skills which the teacher included in her definition of critical thinking, those skills such as "intellectual flexibility" and "tolerance" were not attended by the teacher throughout the one-semester course. This was interpreted by the researcher not as a mismatch between what the teacher believed and what she actually implemented but rather he attributed teacher's overlooking such skills to the unteachable nature of these skills. Irfaner also suggested for future research the investigation of differences between experienced and inexperienced teachers in the department in terms of their understanding of components of critical thinking as in his study, the participant teacher, being an experienced teacher, displayed an understanding of critical thinking which matched perfectly that of the department.

In his dissertation, Akınoglu (2001) conducted a pretest-posttest control group experimental study in order to test the effects of science instruction based on critical thinking skills on learning among 4th grade primary school students. Akinoglu detected significant differences in the results in favor of the experimental group. As for the implications for further research, he assigned the researchers the task of revealing the obstacles standing in the way of the development of critical thinking by directing their attention to the investigation of school, teacher, classroom, and student characteristics, which are the most appropriate factors on the development of critical thinking skills.

Mecit (2006) investigated the effect of 7E learning cycle model as an inquiry-based learning on the improvement of the fifth grade students' critical thinking skills. She used experimental design in her research by assigning one class of a science teacher to control group, while assigning another class of the same teacher to the experimental group. The students in the control group were instructed with traditional method, whereas those in the experimental group were taught using traditional method. The researcher administered the Cornell Critical Thinking Skills Test Series as pre-test and post-test to students both in the control and experimental groups. The results showed that the experimental group achieved significantly better than the control group.

Uysal (1998) aimed to investigate the effects of instructional methods used in social sciences on improving students' critical thinking abilities. To this effect, he designed a quasi-experimental research in which he administered a pre-test and post-test to the control group and the experimental group. In both groups were university students attending history department of the same university. Students in the experimental group were taught using discussion method for 4 weeks, whereas students in the control group were taught the same content through lectures for the same period of time and by the same instructor. The instrument used in the research was a critical thinking test prepared for TÜBİTAK and it was adapted by experts to be applied in social sciences in this particular research. The results from the study imply that the effective use of discussion method in teaching history has an impact on developing a critical approach toward events and concepts in students.

Gelen (1999), in his research, investigated whether social sciences teachers in primary schools adequately teach problem-solving, decision-making, probing, critical and creative thinking skills and whether there was a significant relationship between teachers' ability to introduce such skills and their experience, training, and gender. In the study, questionnaires and observations were used for gathering data about the target group. First, questionnaires were given to 97 grade teachers in 30 schools and then observations were carried out with 24 teachers randomly selected from the respondents of the questionnaires. The findings unveiled the fact that there were significant differences between teachers' self-evaluation and the scores assigned to them by the researcher in the classroom observations in terms of their achievement of aims regarding target skills; although teachers rated their instruction of problem solving skills at the point of "satisfactory," they were rated at a point close to "unsatisfactory" in observations. In decision-making skills, they rated themselves "satisfactory" again, whereas observations placed them at a point close to "unsatisfactory." In the implications for future research, Gelen urges prolonged observations of teachers by a team of observers with the use of audio or video recording. Another result of the study was that there was no significant relationship

between such characteristics of teachers as the schools they graduated from and their gender and their competence in teaching the target skills. However, a significant relationship was detected between experience and the quality of those aspects of instruction related to critical thinking.

Hayran (2000) conducted research involving 240 teachers in seven primary schools. In his research, participants were given out questionnaires to uncover teachers' opinions about thinking skills and operations. 89% of teachers were found to be frequently employing problem solving skills and to be teaching these skills in their classrooms as well as in their daily lives. Another striking result was in teachers' responses to the question whether they inquired the consistency between their students' thoughts, verbal expressions, and actions. 88% of the teachers said that they inquired whether there was such consistency or not. Teachers' responses to questions related to the extent they practiced critical thinking in their own lives yielded positive answers with considerably high percentages. The researcher reported no significant relationships between the teachers' schools of graduation and their experience in teaching and their opinions about critical thinking skills. However, he detected significant relationships between gender of teachers and their opinions about critical thinking in favor of women. Unlike Gelen's research, in Hayran's research, observations did not accompany questionnaires, he did not have the chance of comparing the extent of consistency between teachers' opinions about their practices of critical thinking and their actual practices.

Şahbat (2002) studied the effect of the attitudes of religious culture and ethics teachers on the development of students' critical thinking skills in three public secondary schools and one private secondary school in Istanbul in the 2001-2002 academic year by distributing a questionnaire of 48 questions. The results of the research showed that there was such effect on students' critical thinking skills and that, for most of the students, it was difficult to object to the ideas stated by teachers. The majority of the students also saw teachers as lecturers who impart knowledge and considered the remarks of their teachers as correct and trusted them. Furthermore, the students regarded factors other than

themselves such as school administration, inspectors and the curriculum as obstacles to the development of critical thinking skills.

Kürüm (2002) investigated 1047 teacher trainees' opinions about their competence of critical reasoning using Watson-Glasser Scale. Teacher trainees scored average in terms of their critical thinking skills. Gender was not found to be a significant factor on critical thinking ability. Younger trainees scored higher compared to their older counterparts. The researcher proposes the development of a scale specifically designed for Turkish students.

Dayıoğlu (2003) aimed to examine the critical thinking levels of the students who attended Hacettepe University English Preparatory School in the academic year of 2002-2003. She also used Watson-Glaser Appraisal Test as a tool to collect data from her population. The results showed a significant difference in favor of the science students who had been admitted to the university with their scores from numerical type questions as opposed to the students in social sciences.

Another researcher who investigated students' level of critical thinking was Kaya. In her study carried out among 244 university students selected from various faculties, such as science, health, social sciences and engineering, through stratified random sampling , Kaya (1997) aimed to find out university students' ability to think critically, to describe the factors that may have an effect on their critical thinking skills and and to make suggestions in line with the findings. Just like Kürüm and Dayıoğlu, Kaya also used Watson-Glaser Scale. The results from her study showed that students from health and engineering faculties had higher scores from the test compared to those from social sciences faculty. As for the relationship between personality traits and ability to think critically, the results imply that those who defined themselves as risk-takers and inquisitive tended to score higher in the critical thinking test. Kaya also detected a significant relationship between students' socio-economic status and their capacity to think critically in favor of those who came from a higher socio-economic background, whereas there appeared no such relationship between critical thinking ability and factors such as gender and parents' education.

In her evaluation of the place of critical thinking in Turkish Language and Literature textbooks, Munzur (1999) found out that the textbooks included many biases and conditioning and that contemporary, humanistic, and universal values were not investigated sufficiently. She also concluded that the books did not encourage students to be creative and free, think critically, research, make comparisons between concepts, and discuss. The role given to students was reported to be passive recipients, not active participants. She suggests that books should be more liberating for teachers by providing them with the latitude they need to teach critical thinking.

In his experimental research, Şahinel (2001) aimed to foster the integrated language skills (reading, writing, listening, speaking) in Turkish through critical thinking. He conducted the research at the fifth grade level and used a rich variety of tools (achievement tests, attitude scales, observations, interviews, questionnaires and journals) integrating quantitative data collection and analysis methods with qualitative methods to explore the impact of his treatment on the experimental group. The research produced favorable results for the experimental group both on the development of critical thinking skills and the integrated language skills.

What one can conclude from the research covered in this section is that academic research in Turkey has so far mainly opted for more quantitative methods for unraveling critical thinking such as survey studies or measurement of students' or student teachers' critical thinking skills. Researchers seem to have chosen to contribute to the field by investigating the relationships between such factors as age, gender, subject area, experience and attitudes to critical thinking. Another preferred research method is experimental designs which aim to see the effectiveness of a given instructional method on the development of students' critical thinking skills through the administration of a pre-test and post-tense experimental design. Gelen was one of the rare researchers who entered the classroom to validate what he had found through his survey among social studies teachers in primary schools. The lessons he observed yielded results that contradicted those he had founded through survey. The picture of the field in

general and what Gelen suggests for future research show that there seems to be a need for in-depth research in the field, i.e., the classroom.

2.6   Summary

The literature reviewed in this chapter implies the confusion in the field as to the definition of critical thinking, its constituents and the lines that identify its boundaries that separate it from other modes of thinking. Despite these controversies, there is a widespread consensus in the field on the recognition of dispositions, or tendencies, to think critically as well as abilities, or skills to consider someone as a critical thinker. Furthermore, despite the criticism against the emphasis placed on critical thinking to the exclusion of creative thinking, it seems evident that the fostering of critical thinking is not counter-productive to the development of creativity.

In the definitions of critical thinking, higher order skills like analysis, synthesis and evaluation together with developing arguments and inferring hold a significant place. As for the environment that is conducive to the enhancement of these skills, teachers, with their changing roles, come to the foreground. It seems that the dispositions and abilities can only be instilled with direct instruction with the guidance of questioning teachers.

The differences in the conceptualization of critical thinking are also mirrored in the methodologies that are considered to be most effective in its enhancement in students. In the Turkish context, surveys that aim to identify the correlations between factors like age, gender, field of specialization and social status and the ability to think critically among students, teachers and student teachers as well as surveys that attempt to find out the frequency of use of various strategies by teachers are common. On the other hand, both in Turkey and in the world, there are other studies that aim to explore the effects of certain methods on the development of critical thinking. In such studies, the context in which the research is conducted is described with much detail. Apparently, the field is no longer an uncharted territory thanks to the mounting research, yet considering the effects of contextual factors, there seems to be a need for

research for the enhancement of critical thinking, particularly in countries like Turkey, where the idea of critical thinking as an educational goal is relatively new.

CHAPTER III

METHOD

This chapter describes the overall research design, data sources, data collection instruments, data collection procedures and data analysis procedures and limitations of the study. In the process of decision making for the method, the options that were available to the researcher and the reasons for taking particular courses of action eliminating the others will be discussed under these headings.

3.1. Overall Research Design

The purpose of this study is to investigate how teachers integrate the development of students' critical thinking skills into their teaching during the three major phases of their teaching, namely, their planning practices, interactive practices, and reflective practices and to evaluate the influence of their instruction as felt by students.

Thus, this research study aims to answer these research questions:

1. How do teachers integrate critical thinking into planning stage?
2. How do teachers integrate critical thinking into teaching and learning process?
3. What are teachers' reflections about the aspects of their teaching regarding critical thinking?
4. What perceptions and reactions do students have with regard to the practice of critical thinking in class?

To find answers to these research questions, observations, interviews, student logs and documents were used. The methodology of the study stems

from what is referred to as naturalistic inquiry in social research literature. According to Guba (1981) the term "naturalistic" represents a paradigm rather than a mere method. The term naturalistic paradigm is interchangeably used by many researchers with such terms as phenomenological, anthropological or ethnographic paradigms. It differs significantly from rationalistic paradigm in that it represents fundamentally different claims about the nature of human behavior (Wilson, 1977). Guba contrasts the key assumptions of the rationalistic and naturalistic paradigms in terms of their conceptions of the nature of reality, the nature of the inquirer/ object relationship, the nature of truth statements, quality criterion, source of theory and instruments. According to Guba, rationalistic inquiry rests on the assumptions that there is a single reality which is manageable enough to be studied by separating it into variables, that the inquirer and the object of the study can exist independent from each other, and that context-free generalizations are possible. For the proponents of this line of thought, a piece of research can be considered as good quality if it has rigor, in other words, internal validity. Rationalistic paradigm also follows deductive reasoning, that is, the researcher sets out on research from a priori hypotheses and the aim of the research is to test these hypotheses, which derive their origin from the theory. To achieve this aim, objective instruments are employed with the claim that such instruments can measure with a greater level of sensitivity. On the other hand, naturalistic inquiry is based on the assumptions that there are multiple realities and the parts of reality are so intricately related to each other that one part cannot be separated from the others to study, that the inquirer and the respondent (not the object) are interdependent and influence each other, and that context-free generalizations are not possible, so the aim of the inquiry is to find out working hypotheses for a given context. The quality of such research is determined against the criteria of relevance. In naturalistic inquiry there are no a priori hypotheses, instead theory emerges from the data which is collected from a specific context. The final aspect of this line of inquiry that Guba refers to is that the practitioners of naturalistic inquiry prefer to use humans (themselves) as

instruments in their research and they risk objectivity and reliability in its rationalistic sense to have more flexibility to uncover tacit knowledge.

As can be understood from the distinction that Guba makes between rationalistic and naturalistic paradigms, the way they view reality differs significantly. Thus, researchers are at the crossroads to make a choice between them and it is the nature of the reality that they aim to enlighten that should determine their choice. In this study, there are two fundamental concepts that set the scope of the research: critical thinking, and teacher thinking and implementation. Both concepts are highly complex in that they have underlying multiple layers. For the former, there is discussion about the constituents of critical thinking and qualities of successful critical thinkers. Furthermore, even if the skills and dispositions that underlie critical thinking are clearly defined, it is not possible to ignore the difficulty of judging whether they exist or to what extent they exist in an observed event as there are many context-bound factors that shape them, e.g., the inevitable effect of the context on assumptions underlying a conclusion drawn by a person as was identified by Norris (1992). As for the latter, there is the interplay of complex determiners of teachers' behaviors such as their knowledge base, beliefs, goals and conceptions about teaching and critical thinking, the socio-cultural context in which they exist as human beings and function as teachers. It is not possible to gain insight into how these factors come together to form teacher behavior in a given situation through a snapshot approach. It is tacit knowledge that this research study aims to gain access to and only through in-depth, contextual investigation of the problem is it possible to attain such knowledge.

Once the paradigm that sets the frame of the study is determined to be naturalistic, the next decision to be made is about the qualitative research strategies to be used. Rossman and Rallis (1998) mention three such strategies for researchers' choice:

a. evaluation or policy study, which aims to describe, analyze, and inform decision-making
b. descriptive cultural study, which aims to describe social phenomena and contribute to understanding about them

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c. action research, which aims to change existing programs or practice and describe and analyze what happens (p. 17).

As the key term that shapes this research is "to understand" the phenomena related to critical thinking as it is conceived, planned, implemented and evaluated by teachers and as it is perceived by students in the classrooms, this study can be classified as descriptive cultural study in terms of the research strategy.

As for the research design, this study can be categorized as what is referred to as comparative case study in qualitative research literature. Case studies provide the design for the researchers to gain in-depth knowledge about the concepts that they study. Furthermore, as Geertz's maxim rightfully determines, "There is no ascent to truth without a corresponding descent to cases" (Geertz, 1973, cited in Wolcott, 1990, p. 364).

Rossman and Rallis (1998) inform the researchers who are at a point to make a decision about the size of their sample about the presence of two choices: Either to gather data broadly or to gather in-depth data. They state that gathering data from a large number of participants bring about information from many perspectives, whereas gathering data from a few participants encourages an in-depth understanding which is not possible with a large number of participants. The only way of combining the benefits of both choices, that is, gathering in-depth data with breadth is to work in the field as a team. As the present study was to be undertaken by one researcher and the aim of the study was to gain in-depth understanding of the phenomena, it seemed plausible to opt for a sample size small enough to carry out an in-depth study with large enough variation so that it reflected the differences in the population to some extent and allowed for meaningful rich comparison.

In compliance with this choice for a small-scale research allowing in-depth inquiry and with the time frame which the researcher was bound by, three cases, each of which would be studied for one academic term, seemed to be appropriate.

Bogdan and Biklen (2007) report that many qualitative researchers prefer to study one site at a time instead of conducting fieldwork at different sites simultaneously and that they start studying the next site upon the completion of their work at the previous site. They endorse this choice in favor of one site at a time mainly because researcher's presence at different sites within the same time frame may be confusing for the researcher. Apart from their concern for the researcher's ease, they cite two other reasons for studying one site at a time that are directly related to the quality of the research. The first reason is that the experience the researcher gains at the first site can contribute to the improvement of their technique, thus leading to the attainment of higher standards in the subsequent sites. The second reason is that researchers can have the opportunity to focus on more elaborately defined parameters in the following sites in the light of the data they have collected in the first one.

In this research study, the choice made in favor of doing fieldwork at one site at a time, as was recommended by Bogdan and Biklen, proved to contribute positively to the quality of the end product. Being an outsider not only to the three sites at which the research was conducted but also to the overall context of elementary schools, the researcher seized the opportunity to familiarize herself with the climate and discourse of elementary schools at the first site, which in the next two sites smoothed the path of reaching the right data sources and enabled her to define her presence in the classroom and in the school with more ease. Furthermore, it urged the researcher to make necessary adjustments in the data collection tools. To illustrate, with the experience that was acquired at the first site about eliciting answers in the interviews both from the teacher and from the students, the interview questions became more focused in the second and the third cases, rendering the answers more compact and the interviews shorter.

Although the importance of these modifications cannot be denied for the well being of the research, still the most significant effect of carrying out the study in three subsequent rounds was felt in the data collection and analysis procedures. At the first site, although there was an endeavor on the researcher's side to analyze the data collected as quickly as possible to avoid the situation

described by Coffey and Atkinson (1996) as "the recipe for unhappiness, if not total disaster for a qualitative researcher" (because the meaning making process would be severely damaged if one stage was divorced from the other), the need to synchronize the data collection and analysis procedures became more pressing as the research proceeded. This led the researcher to improve her ways of transcribing and analyzing data to make them less time consuming. In addition to this, while keeping focused on the aspects of critical thinking during the observations was more challenging at the beginning of the research since there was a multitude of factors interacting with each other, which made the isolation of the aspects related to the research arduous, engagement with the task for a rather extended period of time contributed to the refinement of the factors in charge of explaining the critical thinking events in the classroom, rendering the observations less burdensome and more worthwhile for the researcher.

On the other hand, despite the positive transfer of knowledge gained at one site to another in the ways described above, it should not be ignored that each site brought its own challenges, most of which were unpredictable before they emerged. However, overcoming each challenge or, in some cases, coming to terms with the losses moved the research one step closer to the fulfillment of its aims.

3.2 Data Sources

Marshall and Rossman (1989) state that qualitative research should observe the following criteria to determine the rationale for the selection of a certain setting in an organization or the selection of a certain group of people as subjects in the research:

1. Entry should be possible.
2. There is a high probability that a rich mix of many of the processes, people, programs, interactions, and/or structures that may be a part of the research question will be present.
3. The researcher can devise an appropriate role to maintain continuity of presence for as long as necessary.
4. Data quality and credibility of the study are reasonably assured by avoiding poor sampling decisions (p. 54).

The set of criteria proposed by Marshall and Rossman seems to lend itself for the evaluation of the validity of decisions made to choose the schools and teachers to be studied in the present research:

To start with, entry to two of the schools required the permission of the ministry as they were public schools that were affiliated to the ministry. Entry to the second school, on the other hand, was possible with the permission granted by the school administration as it was a private school. However, the researcher visited the schools prior to applying for official permission in order to select the teachers by mutual consent of the researcher, the school administrations and the prospective participating teachers instead of depending merely on the assignment of the school by the ministry and the assignment of the teacher by the school administration. The school administration at the first site did not assign a teacher at the first visit but gave their approval for a research study in this nature to be carried out in their school and assured the researcher that there would be many teachers that would be willing to participate in a relatively long term study like this based on classroom observations and interviews, requiring considerable commitment by the participating teachers. The school administration at the third site allowed the researcher to contact the teachers personally to see whether they would be interested in participating in the research and informed the researcher that they would give their consent for the research to be conducted at their school providing that one of the teachers would be willing to participate. Then, carrying out the research at these two sites became possible. As for the second site (the private school), upon the written application of the researcher for permission to the administration, which was the routine of the school for researchers aiming to conduct their study at the school, the administration informed the researcher about their approval and the name of the teacher assigned by themselves by phone. However, although these steps had to be followed to comply with the regulations of the school regarding outsider researchers, in the first face-to-face meeting with the teacher assigned by the administration, she was assured that her withdrawal from the research any time she wished without declaring any reason would be respectfully welcome. Within

the course of the study as well, the researcher checked whether the teacher was willing to continue the research on a regular basis.

Then, by seeking and obtaining the approval of the teachers as well as that of the ministry and the school administrations, entry to the sites became possible in a way that guaranteed the researcher's continuity of presence at the sites.

Within the framework of the present research, Marshall and Rossman's second criterion about having access to a rich mix of people intersected with their fourth criterion about sampling.

Sampling decisions made for this research study fit into what is referred to as purposive sampling in qualitative research. In purposive sampling, the informants are selected according to some characteristic. As the name suggests, it is about selecting a particular sample on purpose. Patton (1990) identifies sixteen cases of purposive sampling, one of which is maximum variation. In this type of sampling, researchers are proposed to select a wide range of variation on dimensions or factors theoretically linked to the research question(s) being addressed. Maximum variation is particularly recommended when the sample size is too small and sampling patterns like random sampling become too dangerous to represent the population.

The variation in the schools in which the participating teachers worked (one pilot public school, one private school, one normal public school) and the variation between the teachers in their certain characteristics with a potential to affect their teaching (teaching style, gender, experience, education, in-service training) will be discussed under the headings of schools and teachers.

3.2.1 Schools

At the outset, the researcher contemplated doing the fieldwork in three classrooms in the same school for the sake of convenience. However, that would run the risk of studying the school as the variable rather than individual teachers in it. Such a choice would also affect the multiplicity, negatively considering the influence of school culture on the ways teachers perform their job. Therefore,

studying teachers from different contexts would enhance the quality of the research by providing "a richer mix of many of the processes, people, programs, interactions, and/or structures" as was suggested by Marshall and Rossman. To enhance the multiplicity further and to ensure data triangulation (Denzin, 1978), the research was conducted at three different types of schools: a pilot public school, a private school and a regular public school.

3.2.1.1 School A

The year the researcher would embark the fieldwork (2004- 2005 academic year) the new curriculum that would be implemented by the ministry in elementary schools all over the country in the following academic year (2005-2006 academic year) was being piloted in some laboratory schools designated by the ministry. Therefore, to be able to conduct the research in three different settings subsequently as all three teachers were implementing the same curriculum with an emphasis on the development of critical thinking skills at least on paper, it seemed sensible to start the research in one of these pilot schools in the 2004-2005 academic year. By doing so, in the 2005-2006 academic year, the fieldwork would continue in two other settings, not necessarily pilot schools any more, as the new curriculum would have spread over all schools.

Another advantage of conducting the first phase of the research in a pilot school would be that, as the name suggests, pilot schools would differ from the other public schools as they would be the ones at which the new curriculum would be tested and this would imply that they would be under closer scrutiny by the ministry as well as receiving more support from it. The effects of this would manifest itself in many aspects of implementation, in a way that would bring variety to the data.

In fact, the pilot school in which the first phase of the research was carried out came to the researcher's notice when the news about the school appeared in a prominent newspaper (24.10.2004). The student-centered curriculum the school followed was particularly emphasized in the article.

Furthermore, the support provided by the school for extra-curricular activities in music, arts and sports, the use of technology in the classes (computers, the internet, overhead projectors, TV sets), U-shape seating arrangement that encouraged interaction among students, the importance the school attributed to training students willing to do research were all mentioned in the newspaper article accompanied by photographs. Furthermore, the school had opened its doors to students for the first time only a week ago. Then, the researcher contacted the school administration and following the steps previously reported in this chapter started the research in the next semester at this school. The study at School A was conducted in the second term of the 2004-2005 academic year. The school provided all the facilities mentioned in the newspaper and in addition to those, there were many others such as science laboratories, a drama classroom, multi-purpose workshops, and student counseling office. Both the school administration and teachers radiated enthusiasm as they talked about their school and educational program. A rather young school principal with only eight years of teaching experience informed the researcher that the school differed from all the other pilot schools in Turkey since it piloted a variety of projects simultaneously ranging from learner-centered constructivist curriculum to programmed school development model. Even in the first meeting with the principal, students' from both lower and higher grades coming into his office freely for asking a question or requesting permission underscored the difference in the structure of the relationships at the school. In the same way, teachers walked into principal's office in the breaks to talk to him without any sign of strain caused by being in the presence of someone at a higher position. When he was asked what his goals were as an administrator, he answered the question with a question: "Why shouldn't the first Turkish astronaut come out of our school?"

In the school, researchers from different universities were welcome as the principal and teaching staff regarded one of the missions of the school to contribute to the progress of educational sciences.

3.2.1.2 School B

The research at School B was conducted in the first semester of 2005-2006 academic year at a private school. Although in the schools all over the country the new curriculum at elementary school level would be implemented for the first time in this term, the school the research was conducted had been following a learner-centered curriculum with an emphasis on thinking skills for some time. With some adjustments in their program (changing their curriculum into a thematic one), they were able to adopt the new curriculum. Different from School A, School B offered high school education as well as elementary school education. Although there were not computers in every classroom, the school had facilities such as computer laboratories, science laboratories, sports facilities and a center for cultural activities. The premises spread out on several multi-floor and single-floor buildings on a rather large area. In the elementary school, for each grade level from the first to the fifth there were six classes. Therefore, in terms of the area it covered and the size of the staff and the students, the school was much bigger than the previous. To cope with this size, the administrative structure was very sophisticated with many divisions and subdivisions all reporting to a general director. All the elementary school and high school administrative staff including the principals were affiliated to the coordinator. The general director was also responsible for making decisions about granting permissions to the researchers willing to do research at the school. Some time after the research had started a short meeting with the general coordinator became possible. Compared to the first setting, the relationships were more formal. The isolation of administration was apparent since administrative units were located in a separate building. However, the office of the principal and the assistant principal in charge of the elementary school were in the same building as the classrooms. In the short meeting with the general coordinator, he emphasized the school's mission to educate students to become thinking, searching individuals showing interest in the extra curricular activities offered by the school as well academic issues.

3.2.1.3 School C

The fieldwork at School C was carried out in the second term of the 2005-2006 academic year. In the visit made to the school at the beginning of the previous term, the participating teacher shared her concerns with the researcher about the confusion prevailing over the new curriculum as that would be the first semester she would teach the new curriculum. Therefore, she wanted the observations to start in the second semester when she would feel more comfortable with the program. The teacher's request was accepted without questioning. Doing otherwise would seriously plague the ethical quality of the research as informants' participation in a research study on a voluntary basis is a prerequisite in all research (Bogdan and Biklen, 2007). Thus, the researcher continued the research at the second site where there did not exist such a problem at that time. In the second semester of 2005-2006 academic year, the research started upon teacher's statement that they "survived the initial state of shock caused by the new curriculum and that (she) was ready for the research" (personal contact, February, 2006).

School C, located in a typical inner city neighborhood, was similar in size to School A. It only offered elementary school education between grade one and grade eight. At each grade level there were three classes. With the humble state funds it received, the school differed from the other two schools in terms of the facilities it provided and its overall physical environment. Founded in 1993, the first computers appeared in the teachers' room in the term the research was carried out. Students did not have access to computers at school. On the other hand, the relationships between the staff were warm as they were all sharing the same staff room in the breaks. As for the management, the school principal and his assistant formed the administrative staff. Since the school principals were constantly changing at the time, the assistant had a more active role in running the school. The school was not used to being visited by researchers; therefore, the arrival of the researcher to the site requesting permission to conduct observations and interviews met with surprise. Still, the administration

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welcomed the idea of a research project at their school and helped the researcher in every way possible throughout the research.

Table 3.1 displays the timetable for the three phases of the research together.

Table 3.1

Overall research schedule

School A	2004-2005 academic year II. term
School B	2005-2006 academic year I. term
School C	2005-2006 academic year II. term

3.2.2 Teachers

The participating teachers in this research (Şemsettin, Zehra, Ayşe [these are the names given by the researcher to the participating teachers] from School A, School B and School C, respectively) will be portrayed in detail in the profiles section of the next chapter. Here they will be introduced with their qualities addressing the methodological concerns.

Şemsettin was a teacher at the age of twenty six with a five-year-experience in teaching. He graduated from the department of elementary education of a prominent Turkish university. He started his graduate studies at the same department but could not complete it as he failed to fulfill the foreign language requirements. After graduation, Şemsettin worked in ten different schools until he started to work in the pilot school in which the research was conducted. In the summer of 2004, just before he started teaching at his present school, he and his colleagues at his new school received a seven-week in-service training on learner-centered constructivist teaching organized by the ministry. Şemsettin was described by the school principal as an ideal informant for a research study focusing on the teacher as he was known among his colleagues to be a teacher who enjoyed trying new things in the class. He also prioritized creating a liberal classroom atmosphere in which students could exercise different ways of thinking on the topics given to them.

Zehra was twenty four years old and started her teaching career at her present school. She had two years of experience in teaching. She graduated from the same school and department as Şemsettin. In her first year of teaching, she attended the course of one of her professors on total quality management for a year at the university she graduated from. In addition to this, she attended several seminars on education. In her school, teachers were specialized in either teaching grade levels from 1 to 3 or teaching grade levels from 4 to 5. Zehra had taught fourth and fifth graders in the first two years of her career and at the time of the research was teaching fourth graders again. During the talk with the school principal, Zehra was portrayed as a good teacher who compensated for the lack of her experience with her natural talent for teaching. In her teaching, she valued a structured environment in order to have the students fully benefit their mental capacity.

Ayşe was thirty two years old with ten years experience. She graduated from art history department of the university Şemsettin and Zehra graduated from. She started teaching in a different city and worked there for four years teaching from grade 1 to grade 4. Then, she was appointed to a post in one of the ministry departments. There she worked for six months and returned to teaching in a public education center where she taught literacy to adults. Having worked for two and a half years there, she came to the school she was currently teaching. She had worked with her present class for three and a half years when the research started. Her education in teaching was limited to the pedagogical formation program she had attended at the university. Apart from this, she had no institutionalized in-service training throughout her career. Unlike the other two participating teachers, Ayşe displayed an overall insecure attitude toward teaching, particularly towards the learner-centered curriculum introduced in the year the research was conducted and she perceived her lack of training in education as a disadvantage for herself as a teacher.

The variation in gender, age, experience of the teachers when combined with their different teaching philosophies and methodologies that will be discussed extensively in the next chapter is thought to have contributed to the

transferability of the findings to some extent parallel to the logic of theoretical/ purposive sampling. Table 3.2 shows the participating teachers' background information.

3.2.3 Students

As School A was a new school and had a good reputation in the neighborhood, the students had been chosen by drawing lots among those living in the neighborhood. For each grade level from one to eight, there were two classes each with a maximum of 35 students. In Şemsettin's class, too, there were 35 students with different schooling background. Şemsettin regarded it as a priority to develop a common culture in his class. His students mostly came from middle-income families with some exceptional students from low-income families.

Table 3.2

Teachers' background information

School	Type of School	Teacher	Gender	Age	Department of Graduation	Experience
School A	Pilot public school	Şemsettin	Male	26	Elementary Education	5 years (10 posts)
School B	Private school	Zehra	Female	24	Elementary Education	2 years (same school)
School C	Regular public school	Ayşe	Female	32	Art History	10 years (4 posts)

As School B was located on a university campus, children of the academic staff formed the majority of the students. Compared to the students in School A, they came from families with higher income. In the school Zehra was teaching, in some courses, including Turkish, the students were divided into two sections. Each section, composed of 12-13 students, were taught Turkish

separately. While one section was in Turkish class, the other was in English class. As Monday and Wednesday classes of one section and Friday classes of the other section fitted the researcher's own schedule, the observations were made with two different groups of students. This did not lead to any problems in terms of the continuation of the program from one section to another because the Friday classes of the second section picked up from where the first section had stopped on Wednesday. This was because both sections had the last round of Turkish classes on Friday.

The profile of students in School C was similar to that of the students in School A (children living in the same neighborhood with mostly average income families). In Ayşe's class, there were 35 students and they had been together since they were in the first grade. Table 3.3 presents background information about the students that participated in the research.

Table 3.3

Students' background information

Students	Number of Students	History of the Class with the Teacher	Students' Background
Şemsettin's Class	35	1 semester with the teacher and the other students	From middle-income families with some exceptional students from low-income families
Zehra's Class	12-13	1 month with the teacher and a minumum of 3 years with each other	From higher-income and educated families
Ayşe's Class	32	3,5 years with the teacher and with each other	From middle income families with some exceptional students from low-income families

3.2.4 Documents

The documents that were used in the research are comprised of lesson plans, supplementary materials that were used by teachers in the lessons and student logs.

The number the lesson plans that were collected differed between teachers. Şemsettin and Zehra prepared their weekly lesson plans for all the weeks throughout the semester. Although the researcher was able to have all the plans prepared by Şemsettin, she was able to collect half of the lesson plans

prepared by Zehra due to some inconveniences. Ayşe, on the other hand, did not prepare any lesson plans by exercising the discretion given to her by the ministry with the introduction of the new curriculum (See Appendix E).

In the same manner, the number of the supplementary materials used by teachers also varied. As Şemsettin taught his classes using materials designed by himself, he turned out to be the richest source of documents. Zehra used supplementary materials only a few times. Ayşe did not use them at all (See Appendix F).

Table 3.4

Types of documents

Documents	Lesson plans of Şemsettin Zehra
	Textbooks
	Supplementary materials prepared and/or used by the teachers
	Peripherals

3.3 Data Collection Instruments

Trained in a positivist tradition, Guba (1996), a pioneer of qualitative research in education in his later life, describes his first interpretivist research undertaking in 1966 (though he did not know at that time that what he was attempting to do was a research in a paradigm new for him) as an eye opening experience. When he asked, as the head of the research team, what the objectives of the evaluation would be so that he could use his friend Stufflebeam's systematic evaluation model. The firm assigning him to the evaluation project stated that they had no objectives and that they only wanted to see what would happen at the four sites where the evaluation would be done, so all they wanted him and his research team to do was to act like "flies on the wall."

By using the metaphor "flies on the wall" for explaining the role they wanted the team to adopt, what the firm representative meant was just to observe what was going on and not to intervene under any circumstances. Guba (1996) shares the influence of this experience as follows:

All this was new to us. The project ran for two years, and left me stunned with the insights we were able to gain by simple observation and interview techniques. And there was hardly a variable or a correlation or a measurement instrument in sight (p. 44).

Moving to the present research, the aim of which was to gain insight into the aspects of teaching concerning critical thinking, two data collection instruments, observations and interviews, acknowledged by Guba as powerful tools of qualitative inquiry, were used.

As these data collection tools were being used, throughout the research, but particularly in the first two-three weeks of fieldwork at each site, the researcher constantly practiced reflexivity. She recorded her insights from the site after each visit, sometimes writing them in notes, in some other cases audio recording her own voice. These notes and recordings involved researcher's comments about her experiences at the site on a given day, ideas about analysis and the next steps to be taken at the site as well as the feelings that evoked from being an outsider in a site. As in the first weeks, the researcher was bombarded with a lot of data about a new place, and these first impressions were invaluable as later there appeared the risk of taking things for granted, recording everything without subjecting the data to elimination was important. The recordings also provided insight to the researcher about how her thinking changed over time about the concept of critical thinking as she was making efforts to see the relevance of the data coming from the field to the concept of critical thinking in her mind and how these two sources were interacting with each other to give the data its final form presented in the next chapter.

After this brief comment on reflexivity as the data were collected through observations, interviews and documents, each data collection tool will be introduced in detail in the following parts.

3.3.1 Observation Forms

As the study aimed to unfold teachers' cognitive processes as they planned and implemented their lessons and as they later reflected on these lessons and the extent to which they involved critical thinking skills into their

teaching practices, what determined the data collection instruments used in the study was their capacity to enable the researcher to investigate these internal processes and their manifestations in teachers' actions. Denzin and Lincoln (1998), as they discuss the differences between qualitative and quantitative researchers, come to the point where they admit that both are concerned with capturing the individual's point of view; however, they find the paths each group of researchers follow to achieve this goal significantly different. Quantitative researchers, according to the writers, are at a disadvantage in capturing the subject's point of view as they use "more remote, inferential empirical materials." Qualitative investigators, on the other hand, "can get closer to the actor's perspective through detailed interviewing and observations." Furthermore, qualitative researchers are equipped with the advantage of "examining the constraints of everyday life" (p. 10). Their in-depth, rich descriptions better position them to see the world in action, as it is.

To avail the benefits Denzin and Lincoln associated with observations, in the present research, observations in the classrooms of the three participating teachers were made. As was previously stated, data coming from observations constituted the largest portion as they were conducted over an extended period of time.

While conducting the observations in the classrooms, the process was divided into three stages as pre-observation, during observation and post-observation. Each day at site, before the class/classes scheduled for observation started, the researcher was present in the school in the break and reached the teacher in the teachers' room or in his/her place of duty to find out the aims of the lesson/s to be observed and listen to the teacher's brief description of what he/she was planning to do. The researcher tried to enter the classroom before the teacher to be able to describe the classroom and overall atmosphere prevailing in the classroom on that particular day. At times when she entered the classroom with the teacher, she made an effort to make this description while the teacher was taking attendance or trying to organize his/her material for the lesson.

During this time pre-observation notes were taken in the relevant part of the observation form (See Appendix A).

Based on the definition of critical thinking and what were isolated as factors related to critical thinking instruction in Delphi Report (1990) formed by the consensus of 46 participating experts of critical thinking and authored by Facione, the observation tool was formed to record both cognitive and affective aspects of critical thinking attending not only the instructional but also the non-instructional aspects of the lessons. The non-verbal behaviors that contributed to the formation of the classroom atmosphere associated with a particular task were also attended by the researcher. In addition to these, parallel to the aspects of instruction related to critical thinking, the nature of tasks employed by the teachers in the Turkish classes as well as the content of these tasks (the nature of the topic, its significance, relevance etc.) were observed attentively. Another focus of the classroom observations which also yielded the bulk of the data collected through observations was the interaction patterns between the teacher and the students and among students. This aspect required the researcher to attend to such points as the questions directed by the teacher or the students, the feedback and the patterns of exchange of ideas. Finally, the researcher also viewed the students' products at the end of each task when they were hung up on the notice board or walls or on students' notebooks or worksheets.

Immediately after the observations, prior to leaving the site, the researcher took notes of the possible questions that needed answers about the observed class to be directed to the teacher and individual students.

All these three stages of the observations (pre-during-post) formed the structure of the regular classroom observations.

As the present research aimed to understand the events in their natural context as they happened and the classroom cannot be isolated from the larger context of the school, the researcher also attended the events and conditions in the schools in which these three classrooms existed. The description of life in the schools with its aspects that the researcher was able to have access to (in the

teachers' room, in the corridors and in the classrooms during the breaks) were made through unstructured observations by taking descriptive notes.

3.3.2 Interview Schedules

The interviews made with the participating teachers and the students provided the second set of data. The interviews with students were basically informal and aimed to set the ground for the student logs and verify the data collected from the observations from the viewpoint of students. The interviews made with the teachers, on the other hand, were more formal.

There were two types of teacher interviews used in the research. One was the very first interview made with the participating teachers around five major areas (See Appendix B): Their career as a teacher, their philosophy of education, their overall view of critical thinking, their overall view of critical thinking in education and their overall view of critical thinking in Turkish course.

The second type of interviews was the subsequent interviews that were conducted throughout the semester on a regular basis with the participating teachers (See Appendix C). The interviews were based on the discussion of the observed lessons in question-answer format in which the teachers shared with the researcher how they planned the lessons, what inspired them to do the things in the way they did, what they found to be outstanding in the lessons, how they interpreted certain situations and events that emerged in the observed lessons which the researcher thought to have been related to critical thinking.

The subsequent interviews were initially composed of two stages. In the first stage questions regarding the planning of the observed lessons of the week were posed. The first stage specifically inquired the objectives in teacher's mind, the process of text selection and teacher's readership of the text, the design process of the tasks and the questions to be posed to the students.

In the second part, there were the questions about teachers' reflection on the implementation of the lessons of the week. The second stage inquired teacher's perception of the achievement of objectives, evaluation of the impact of the texts, of the tasks, of the questions to stimulate critical thought as well as the

evaluation of the alternatives to what was done in the classroom in the Turkish lessons of that particular week and brainstorming ideas for the following week.

After the first month of the implementation of the subsequent interviews in this structured manner in Şemsettin's case, the researcher noticed that the teacher tended to give further information about both the planning and reflection stages during informal talks with the researcher in which one idea freely led to the other. To utilize the data coming in that unstructured manner from the teacher in the audio-recorded interviews, the researcher decided to start the interviews after the observed lessons with broader questions that would first allow the teacher to share his thoughts freely and then to proceed with her own structured interview format (See Appendix D). As this addition proved to work better, the same format was used with Zehra and Ayşe too.

Informal interviews were also used to collect data from the students in the classrooms. The questions posed to the students were not structured as they were asked in relation to the data collected from the lessons. Therefore, for each lesson, the number of the questions as well as their content differed. The respondents were selected among those who could represent a specific ability group in the classrooms (weak, average, strong). These students were selected together with the participating teachers who were more knowledgeable about their students. In addition to these pre-selected students, who also kept written logs, there were also those sources of data that were selected by the researcher due to their point of views largely differing from those of the others in a particular observed lesson. When a student made an interesting remark in the lesson, or his/her written work incorporated aspects that differed from the others, he/ she was approached by the researcher to have a short interview. The interview questions were short and focused on the events in the lessons and were posed in the breaks right after the lessons considering the fact that for children, unlike teachers, remembering a segment from a class after some time would be difficult and the likelihood of their memory to mislead them about the past events.

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3.3.3 Student Logs

As for the student logs, they were aimed to collect data about students' thought processes. In the way described under the heading of interviews, the students selected from Şemsettin's and Ayşe's classes were asked to answer some general questions about the lessons which basically inquired students' reactions to the reading texts (See Appendix G). Due to the reasons mentioned earlier, data from student logs were not collected in Zehra's class.

3.4 Data Collection Procedures

In this part the data collection procedures for each of the tools, namely, observations, interviews and documents will be introduced in detail.

3.4.1 Observations

In each site, the observations were conducted at different semesters and it was aimed to spread the observations at each setting from the beginning of the semester to the end. Table 3.5, 3.6 and 3.7 display the number of observed lessons for each case and how these lessons spread over the semester. All the observations were carried out by the researcher.

As for the number of observed lessons, Table 3.5 shows that thirty six of Şemsettin's classes were observed. Although the semester started towards the end of February and ended in the middle of June, observations could only commence in April since the permission of the ministry was received by then. Despite the delay in the start up of the observations due to the problems in obtaining official permission for entry, once the research started Şemsettin did not cancel any observation (except for a day in April when he went to a seminar and did not have classes). There was also a loss of one day as official holiday (May 19). Therefore, it became possible to observe thirty six lessons of him corresponding to the whole Turkish lessons he taught throughout the semester. Every week in addition to the five Turkish classes he taught, the class had two periods for free reading. These periods were not observed as there were no teaching or other activities such as classroom discussions.

As the teacher reported, sometimes he used these free reading classes to catch up with the program of other courses.

In Zehra's class, as shown in Table 3.6, thirty five observations were made throughout the semester. Although the research started in a timely fashion, there occurred frequent intervals caused by national holidays and religious holidays. However, the longest interval was the one between December 5 and December 21 when examinations were given in the school.

During this period, lessons were rescheduled, making it impossible for the researcher to be present in the classroom. Still, the observations added up to a satisfactory number of thirty five.

In Ayşe's case, as can be seen in Table 3.7, a significant difference in the number of observations appeared. With a total of sixteen lessons, observations of Ayşe's class equaled to only a half of the observations in the other classes. The emergence of this situation is telling and can be attributed to two reasons. First, unlike Şemsettin's students, the vast majority of the students in Ayşe's class actively participated in the 23 April National Sovereignty and Children's Day celebrations in the folkloric dance team of their school. In March and April many lessons were cancelled as these students were preparing in the school courtyard for the show on April 23.

The second reason why only sixteen observations were made in Ayşe's class was that Ayşe considered Turkish as a course that could be cancelled the most conveniently among the other courses such as math or science due to reasons that will be discussed in the next chapter in detail. Therefore, no matter which course students' dance practice coincided with, she compensated for it by eliminating the Turkish classes and doing math or science instead.

In all three cases, no observations were made in the last two-three weeks of the term depending on the teacher's choice as they completed their course program earlier and wanted to stop teaching lessons. They stated that they did not feel comfortable to be in the presence of an observer towards the end of the semester while they were not teaching the lessons as seriously as they did throughout the semester. Their decision to cease the observations early was

respected and did not cause any problem at any of the sites since by then the objectives regarding data collection had already been achieved. However, leaving the sites did not mean putting an end to the relationships established with the teachers. The teachers (particularly Şemsettin and Zehra) were later contacted several times to collect some missing data or documents.

<u>Audio-Recordings</u>

In the permissions granted by the ministry for entry to the public schools (in Şemsettin's and Ayşe's cases), despite the researcher's request concerning the inclusion of a statement giving permission for the use of video/audio recording during observations and interviews, the documents that were received from the ministry did not indicate permission. As a matter of fact, the final decision would be teachers'. In the first site, after momentary hesitation, Şemsettin gave the permission to the researcher to audio-record the observations; however, he did not want them to be video taped due to his reservations about the presence of camera leading to unnatural behaviors among students. Therefore, all observed lessons of Şemsettin were audio-taped except for the first three lessons since the researcher wanted some time to pass for confidence building before asking for permission for recording.

In consideration of the same emotive factors, again in Zehra's and Ayşe's classes, permission for audio-recording was requested after a few lessons (four lessons in each case). They did not allow the researcher to audio-record all of their lessons but they gave permission for the audio recordings of some lessons on the condition that the researcher informed them about which lessons would be recorded. As a result, of the thirty five observed lessons of Zehra, twenty classes were audio-recorded, whereas of the sixteen observed lessons of Ayşe, five were audio-taped.

Table 3.5
Observation schedule for Şemsettin's classes

Year 2005	Apr. 5	Apr. 6	Apr. 11	Apr. 12	Apr. 13	Apr. 18	Apr. 19	Apr. 20	Apr. 25	Apr. 26	May 2	May 3	May 4	May 9	May 10	May 16	May 17	May 18	May 23	May 24	May 25
I. period class	X	2	4*	6*	8*	9*	11*	13*	14*	16*	18*	20*	22*	23*	25*	27*	29*	31*	32*	34*	36*
II. period class	1	3	5*	7*	X	10*	12*	X	15*	17*	19*	21*	X	24*	26*	28*	30*	X	33*	35*	X

Note. The sign * represents the audiorecorded lessons.

Table 3.6
Observation schedule for Zehra's classes

Year 2005	Oct. 24	Oct. 26	Nov. 2	Nov. 7	Nov. 9	Nov. 11	Nov. 14	Nov. 16	Nov. 18	Nov. 23	Nov. 25	Nov. 28	Nov. 30	Dec. 2	Dec. 5	Dec. 21	Dec. 26	Dec. 28	Dec. 30
I. preriod class	X	3	5	X	9*	10*	X	14*	16*	18*	20	X	24*	25*	X	29	X	32*	34
II. period class	X	4	6	X	X	11*	X	15*	17*	19*	21	X	X	26*	X	X	X	33*	35
III.period class	1	X	X	7	X	X	12*	X	X	X	X	22	X	X	27*	X	30*	X	X
IV.period class	2	X	X	8	X	X	13*	X	X	X	X	23	X	X	28*	X	31*	X	X

Note. The sign * represents the audiorecorded lessons.

Table 3.7
Observation schedule for Ayşe's classes

Year 2006	March 3	March 16	March 23	April 6	April 13	May 8	May 23	May 29	June 6
III.period class	X	2	3	5	7	9	11	X	X
IV.period class	1	X	4	6*	8*	10*	12*	X	X
V.period class	X	X	X	X	X	X	X	13*	15
VI.period class	X	X	X	X	X	X	X	14	16

Note. The sign * represents the audiorecorded lessons.

Audio recordings were made with a palm-size digital recorder working on batteries. However, the fact that the lessons were being recorded did not encourage the researcher to free herself of the obligation to take field notes attentively. Audio-tapes, though very comforting in the interviews, did not promise a full account of the classroom events considering the number of people involved in communication and their interaction manners including overlaps, which made transcriptions immensely difficult and sometimes useless. When the noise factor was added to this (particularly in Şemsettin's and Ayşe's cases), field notes remained as an essential data collection tool in support of audio recordings. In the field notes, as well as the environmental factors in action at the moment of observation, the utterances of the students which ran the risk of not being recorded due to several reasons including the distance between the student and the recording equipment or student's low voice could be found.

Researcher Status Position

LeCompte and Goetz (1982) consider "researcher status position" as an important factor determining the external validity of qualitative research. They emphasize the importance of the role of the researcher in the nature of the data that can be gathered by a particular researcher. This role is so decisive that different researchers with different social roles could return with totally different data from the field. In this research, from the very first encounter with the participating teachers to the end of the research, the researcher endeavored to pass the message that her role was only to gather data that would eventually help her answer the research questions posed to fulfill the purpose of the research. Therefore, it was emphasized that the findings of the research would not bind the participating teachers, schools and students in any way. The researcher was not there to judge nor was she as informed about the context as the participants were. There was an information gap between the researcher and the respondents in favor of the latter and the research was conducted to bridge the gap as much as possible. The same message was conveyed to the students in the classrooms. They showed a tendency to mistake the researcher for an inspector. To rectify

this situation, the researcher made it clear that she was also a student like themselves trying to do research as part of her homework just as they would do when they were assigned to do so by their teacher but only at a larger scale.

Although the teachers preferred to refer to the researcher as a teacher, students' attitude towards the researcher was friendlier than it would have been to a teacher. This kind of relationship seemed to facilitate data collection from the students.

Bogdan and Biklen (2007) place observer roles as "observer" and "participant" at the two ends of a continuum. According to the writers, the former role requires to be only an observer without participating in the activities taking place in the classroom life in any way ,whereas the latter role involves researcher's participating in the activities in the setting as if he/she were a participant. They state that many classroom researchers assume roles that stand at a position between the two extremes. They do not recommend any specific point on the continuum as the ideal role to be assumed by a researcher should be determined according to the research goals. They also mention the changing roles from the beginning of the research to the end, e.g. from a complete observer role to a participant observer as the research proceeds.

In this research, the researcher as observer acted like a "fly on the wall" (after the metaphor Guba reported in his account of his initialization to qualitative research mentioned earlier in the chapter) in three of the classrooms as much as possible, corresponding to "observer" end of the continuum described by Bogdan and Biklen. There were times she contributed to the classroom life by helping the teacher to distribute materials or by commenting on students' products together with the teacher, if there were a competition in the class, by taking part in the decision making to choose the best performer or by assuming the teacher role when the teacher had to leave the classroom for a while. However, she wanted to keep such participation at minimum as this could potentially pose a serious threat to the goals of the research considering the fact that attending the complex interaction between the teacher and the students and among the students and seeing the larger picture required a quieter role. In fact,

the way the researcher determined her role in the classroom was the outcome of the contextual demands that differed from one setting to another.

In Şemsettin's class, the researcher sat in front of the room, close to the blackboard at a position where she could view the faces of all students. Şemsettin expected some kind of participation from the researcher although this was not stated explicitly. Therefore, by observing the teacher closely and following the signals he gave, the researcher decided how to participate in the life going on in the classroom at a specific time of the lesson. This was not disturbing for the researcher as Şemsettin knew well when to let the researcher recede into the background. Therefore, occasional participation proved to be beneficial in terms of establishing and improving rapport with the students.

In Zehra's class, the researcher sat at the very back of the classroom viewing the students from the back. Although the researcher at a position like this can be considered to be at a disadvantage, this was not really much of a problem since the class size was small due to the formation of two sections for Turkish classes. Unlike Şemsettin, Zehra did not want the researcher to participate in the classroom activities although she did not say this directly. As will be discussed in the next chapter in depth, Zehra attached great importance to establishing a classroom environment in which her students could focus on the lesson well and considered any factor that could disturb this as a threat. As Zehra had also trained the students to concentrate on their work, the researcher did not draw much interest from the students during the lessons. Yet, in the early stages of the observations, she warned the students who turned their head to see the researcher. In order not to cause problems, the researcher tried to make her presence as invisible as possible. Therefore, in this classroom, being a "fly on the wall" was rather an obligation than a choice for the researcher in this case. To compensate for the lack of rapport between the researcher and the students during the lessons, the researcher used the breaks and Zehra urged her students to help the researcher in every possible way during the breaks.

In Ayşe's class, the researcher sat exactly the same position in Şemsettin's class viewing the faces of the students. As for the participation

patterns, the researcher made conscious efforts to withdraw herself from classroom activities as much as possible since the students in this class were very enthusiastic to communicate with the researcher, posing a risk of over involvement. Noticing this threat, Ayşe tried to set rules to keep the researcher away from the attention of the students. In the class time, the situation improved after a few observations but until the last day of observations many students waited in the corridor to welcome the researcher and ushered her out the door as she was leaving. Some even wanted to kiss and hug her and offered food and drink and many favors such as giving their books, notebooks, pencils to her. Although this may be considered as an advantage for collecting data from the students at first glance, it was a challenge to calm them down to obtain serious answers to the questions.

3.4.2 Interviews

Some factors such as the frequency of the interviews, their spread over the semester and their length differed remarkably among the three cases. The content, length and frequency of the interviews were determined by the teacher herself/ himself. To illustrate, whereas talking about the planning stage was like story telling to Şemsettin with a lot of references to his own life outside the school and to his own persona, the same act was more like summarizing the major decisions in cause-effect discourse in a rational way to Zehra or a process of discovering some aspects of her teaching for the first time to Ayşe. Table 3.8 displays the dates and the lengths of formal interviews with the participating teachers.

When the numbers of the interviews with each teacher displayed in Table 3.8 are compared, it can be seen that they differ remarkably. The difference is attributable to the working conditions of the teachers and their volition to spare time for the interviews. Şemsettin was able to devote more of his time to the research, whereas Zehra, due to her responsibilities at the school, could not do the same. Ayşe, on the other hand, was not very comfortable with the idea of

formal interviews at the beginning of the research and it took quite a long time for her to be ready for the interviews.

Table 3.8

Interview schedule for three teachers

Teacher	Interview Date	Interview Length
1.Şemsettin	14.04.2005	80 minutes
2.Şemsettin	21.04.2005	23 minutes
3.Şemsettin	28.04.2005	27 minutes
4.Şemsettin	05.05.2005	29 minutes
5.Şemsettin	12.05.2005	24 minutes
6.Şemsettin	26.05.2005	20 minutes
1.Zehra	31.10.2005	45 minutes
2.Zehra	14.11.2005	33 minutes
3.Zehra	05.12.2005	35 minutes
1.Ayşe	17.05.2005	65 minutes
2.Ayşe	12.06.2006	60 minutes

Pring (2000), in his discussion of ethical dimensions of research, cites two arguments for democracy in educational research. First, he mentions the principle of "respect for persons" involved in the research as informants. Second, he refers to the principle of "respecting those conditions necessary for getting at the truth." It is not difficult to see how the present research was plagued by the tension between these two principles of democracy at this point. On the one hand, there was the ethical standard of not causing discomfort to the informant and on the other hand there was the need for cross examination of the data collected from observations against those collected in the interviews. At this point, the researcher made a decision in favor of respecting the informant and found other less threatening (in Ayşe's case) and less time consuming (in Zehra's case) ways of collecting data. .What compensated for the relatively smaller number of the interviews in the second and third cases was the informal talks with the teachers in the breaks. The researcher allotted some breaks for collecting data from the students and others from the teachers. Zehra spent most

of her breaks performing corridor duties and the researcher followed her to the corridor she would be working to be able to hear her account of what had happened in the observed lessons. Ayşe spent her breaks in the teachers' room and felt comfortable conversing over a cup of tea with the researcher about the observed lessons.

All the formal interviews with three teachers shown in Table 3.8 were audio taped. Compared to the recordings of the observations, they proved to be relatively easy to transcribe. Except the first interview with Zehra, all the interviews were transcribed by the researcher herself. After each interview, the researcher produced a written record of her impressions and concerns regarding the interview, which contributed to the formation of the subsequent interview questions with the teacher. In some cases (particularly in the early stages) eliciting the answers to the questions proved to be a challenge, but as time went by, the researcher found alternative ways of posing the questions so that the common grounds could be formed where communication could be more fulfilling. In achieving this, the written records of her impressions of the interviews provided strong support. To exemplify, the terminology used by teachers and the interviewer sometimes differed. What was referred to as prediction by the teacher could well mean stating the main idea or the topic for the researcher, causing confusion in communication. By having access to teacher's idiosyncratic usage of the term, the researcher was able to improve communication in time.

The interviews with Şemsettin and Zehra were conducted at their school. In Şemsettin's case, the lessons were observed on Monday, Tuesday and Wednesday; the interviews were carried out on Thursday when Şemsettin did not teach. Thursday was the day Şemsettin did his corridor duty. Therefore, he was only busy during the breaks and he spared the time students were in their classrooms for the interviews. As the school building had a meeting room for parent-teacher meetings, the interviews were conducted in this room. When this room was occupied, the interview was made in the school principal's office if it was available. LeCompte and Goetz (1982) indicate "social situations and

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conditions" in which data are collected as a variable that is influential on the external reliability of the research. They cite the findings from a research study undertaken by Becker et al. (1961) in which the researchers detected differences between the data gathered from the participants when they were interviewed alone with the researchers and those that were collected from the participants in group contexts. Similarly, in the present research, only in a fragment of an interview that was conducted in the principal's office, another teacher came into the room and in a period of approximately five minutes that he stayed in the office, Şemsettin was observed to be nervous and did not answer the questions in his usual manner. This was an instructive experience for the researcher about the conditions conducive to the elicitation of genuine answers.

Zehra's school also provided the opportunity to conduct the interviews in private without disruption. However, in Ayşe's school there was not an appropriate room for interviews to be conducted; therefore, the researcher invited the teacher to cafes on the university campus where the interviews could be done in a quiet atmosphere.

In Şemsettin's class, out of 35 students, five students were regularly interviewed. In Ayşe's class, seven students out of 35 were interviewed. In Zehra's class, due to the administration's sensitivity towards students' rights to freely use their break time, informal interviews were not conducted in this manner. However, rich data were collected from students in field notes as a particular group of students spent their break time sitting in the classroom and exchanging ideas about what went on in the lessons, providing valuable authentic data for the researcher (See Appendix H). Furthermore, as Zehra used the advantage of the small class size, almost all students took turns to share their answers even in a single period. This also contributed to the researcher's data collection remarkably.

3.4.3 Student Logs

Of the classes of three participating teachers, five students from Şemsettin's class and seven students from Ayşe's class wrote logs on a weekly

basis to answer the questions about that week's Turkish lessons. These students wrote their answers to the questions in a notebook provided to them by the researcher. The logs were kept on a weekly basis and were read together with the teachers provided that students allowed the researcher to do so. In a few cases, the students did not want their teacher to see their responses to the questions due to some reservations and at such times the researcher read that week's entries on her own. Table 3.9 presents a summary of data collection procedures for the three sites.

Table 3.9

Data collection procedures

1. Observations	Şemsettin's 36 lessons (33 audiotaped) (Apr., May 2005)
	Zehra's 35 lessons (20 audiotaped) (Oct.,Nov.,Dec., 2005)
	Ayşe's 16 lessons (5 audiotaped) (Mar.,Apr.,May, 2006)
2. Interviews	6 interviews (about 4 hours) with Şemsettin
	3 interviews (about 2 hours) with Zehra
	2 interviews (about 2 hours) with Ayşe
	(all audiotaped)
3. Student Logs	8 entries from 5 students in Şemsettin's class
	7 entries from 7 students from Ayşe's class
	(a total of 89 entries)

3.5 Data Analysis Procedure

The data collected after each observed lesson and interview were transferred as audio files from the recorder to the computer with a USB port. In addition to its high quality recording, the equipment also facilitated transcription process thanks to its digital editor software. After the recording was transferred to the computer, the digital editor software made it possible to assign the F keys of the user's choice on the keyboard to highly useful transcription functions such as playback, stop, forward, backward. By doing so, the user could press those keys to operate the player when it was hidden behind Microsoft Word window.

Then, without the need for a foot control unit (in fact, the software also allowed its use when preferred) transcriptions were made merely on the computer. Another useful feature was that it was possible to slow down or speed up the voice while transcribing. In addition to this, the use of high quality earphones contributed to the transcription process, also enhancing the quality of the end product. Despite all these truly worthwhile features that were not available to the qualitative researchers a few years ago, it would be tremendously misleading to give the impression that transcribing audio recordings of observed lessons was an easy task. It was one of the most burdensome duties of the researcher throughout the research and doing it on a regular basis without much delay was essential for the smooth flow of the data collection and analysis processes. To ensure that the researcher did not fall behind her schedule, assistance for transcription was received from two people. Of the thirty two audio recorded lessons of Şemsettin, fifteen were transcribed by an assistant with whom the researcher worked very closely. Of the twenty audio taped lessons of Zehra, ten were transcribed by another person. As for Ayşe's recorded lessons, all were transcribed by the researcher herself. Both of the people who helped for transcription were well aware of the importance of the material for the research as the first had a master's degree and wrote her thesis depending on research conducted in qualitative paradigm. The second was a doctoral student working towards her own dissertation. Although both of the assistants were highly credible, the researcher always checked the final product against the original audio recordings and made the necessary changes if any. The research, particularly data analysis, owes a lot to the mutual presence of transcriptions of the audiotapes and field notes since together they enabled the researcher to rely on an adequate account of the classroom events while studying the data for analysis. They also facilitated the job of the assistants in transcription. In fact, more than facilitation, they made the job possible for them since transcribing an unobserved lesson would be very unlikely in the first place. Still, it should be noted that no matter how meticulously the field notes were kept thanks to the diligence and attentiveness of the researcher while observing the lessons and the

precision of the equipment thanks to galloping technology, the data that formed the basis for analysis was merely a humble effort to recreate the reality of the classroom during analysis.

The transcribed material was later subjected to content analysis in which interpretation inevitably played an important role. While discussing the rationalist and empiricist accounts of knowing in a contrastive manner, Falzon (2002) voices some concern about empiricism:

> We can never separate out what we really, literally see from our interpretation of it. As far as perception is concerned, the only thing we have direct and immediate contact with are our experiences, and these experiences vary with the knowledge and expectations of the observer. So on this view, every act of perception involves interpretation. What we perceive is always "theory dependent," inescapably shaped or colored by what we know. Consequently we cannot say with the empiricist that knowledge arises straightforwardly out of experience (p. 38).

A similar concern is expressed by Eisner (1998) about knowledge gained by experience. In his effort to search the roots of qualitative inquiry, he places experience at the center of all research. To him, experience is constructed by qualities. Then, to understand the world surrounding us is to understand the qualities that form it. To know the world in its empirical sense requires the identification of the qualities embedded in it. At this point, Eisner is concerned with the representation of these qualities in one way or the other. The paradox that Eisner points to is that representation requires a medium, the most common being language, and that medium involves mediating and mediation, in turn, inevitably changes the message being conveyed. To Eisner, "The map is not the territory and the text is not the event."

Then, in any research enterprise, one has to take it as a given that there is no objectivity in the sense that any researcher who goes to the field with a given set of objectives will return with the same set of data from it. What shapes the nature of data is first the conceptual framework we use when we are observing it and next the medium we choose to represent it according to Falzon and Eisner.

Then, what makes a qualitative research study valid? In his quest for a better criterion than validity to evaluate qualitative research (he has his reasons to seek it) Wolcott (1990) struggles desperately:

> What I seek is something else, a quality that points more to identifying critical   elements and   wringing plausible interpretations from them, something one can pursue without becoming obsessed with finding the right or ultimate answer, the   correct   version, the Truth. Perhaps someone will find or coin qualitative research's appropriate equivalent for "validity"; we have no esoteric term now. For the present, understanding seems to encapsulate the idea as well as any other everyday term. Among the definitions offered in Webster's New Collegiate Dictionary is the following "understanding: the power to make experience intelligible by applying concepts and categories (pp. 366-367).

In the present research, it was aimed to understand the observed phenomena and to achieve this objective, data were analyzed by "applying concepts and categories." Tesch (1990, cited in Coffey and Atkinson, 1996) divides qualitative analysis into two major stages as de-contextualization and re-contextualization. In the former, data are segmented into meaningful chunks bearing relevance to the conceptual framework of the research and each chunk is labeled with codes. In fact, coding represents an effort to generate concepts. This initial phase of analysis is when the researcher tries to build a bridge between the data gathered from the field and the concepts in her mind, forming the first step of making meaning out of data. In the latter, that is re-contextualization, as the name suggests, the data categorized in chunks are brought together to form a broader, more meaningful whole that represents the reality studied in the field.

According to Coffey and Atkinson (1996), the complexity of coding depends on the level of analysis; they distinguish between general, intermediate and specific codes and state that "codes and their segments can be nested or embedded within one another, can overlap, and can intersect....the same segment can have more than one code attached to it" (p. 36).

In this research, what Coffey and Atkinson emphasized about coding proved to be true: Coding is not a mechanic process. This was particularly so while coding the data that came from the observation of the lessons. It should be

acknowledged that there was considerable difference in the degree of challenge posed by the analysis of data coming from the observations and those originating from the interviews. In the lessons, there was a multitude of factors that were shaping the situation at a given moment and even the very observation, let alone analysis, involved activities of selecting and eliminating the input in line with its relevance to the scope of the research. In the actual analysis of the observed lessons through coding, the researcher had to decide how to fragmentalize the data to lay the ground for coding: Working on too small segments would divorce the analysis from meaning; on the other hand, working on large segments would cause that segment to be cluttered with an overwhelming number of codes, which would surely go beyond what Coffey and Atkinson meant by saying that overlaps and intersections among codes were possible. To strike the balance between these two options, the lessons were divided into episodes, each episode corresponding to a meaningful dialogue carried out with the intention of fulfilling a given purpose (whether it fulfilled the intended purpose and ended with a concluding remark or not did not change the fact that it was an episode, constituting a unit of analysis). Parallel to the overlaps and intersections mentioned by Coffey and Atkinson, in each episode it was possible to detect several layers of meaning that could well deserve coding.

Kate et al. (2002) list some problems that they associate with qualitative studies based on classroom observations. One of these problems is the superficial description of the research process, particularly of analysis methods. In order to avoid committing a methodological mistake that is said to have plagued many qualitative studies, the description of the analysis of data that came from observations will be provided with some depth here.

The following dialogue displayed in Table 3.10 quoted from the transcription of Şemsettin's second period lesson dated 26.05.2005 can serve to illustrate the theoretical discussion of coding based on episodes in the previous paragraph.

The global episode identified here was prediction. This was because the basic event that governed the whole process was students' predicting the reason

why the teacher entered a historical site without paying a fee although the teacher made it clear at the outset that admission to a historical site was subject to payment.

However, coding this whole exchange of ideas in this episode as prediction and moving on would mean leaving out a lot of valuable data. Then, for the sake of indexing, the episode was referred to as prediction but further coding was in order.

First, in this global episode, dependent to it was another minor episode of student collaboration between Student 4 and Student 5 based on inference about the meaning of the word "gavuristan." This minor episode was dependent on the global episode of prediction in that its emergence was a factor of the teacher's use of the word "gavuristan" in his attempt to give a clue for a student to reconsider his prediction. Although the inference made by Student 5 was not correct, it involved reasoning. The student made use of the similarity between the sounds of gavuristan and arabistan (Turkish for Saudi Arabia). This event that developed as an undercurrent of the main episode deserved attention in coding.

Second, the way the teacher initiated the prediction was quite natural. Although the teacher did not pose a question, students went on making predictions rather naturally, which later proved to be a characteristic of Şemsettin's teaching.

Third, the reasoning of Student 1 and Student 2 was disproved by the teacher in tune with the credibility of their thinking.

Fourth, when Student 3 made a prediction that contradicted the clue that had been given by the teacher at the beginning (that they charged an admission fee from the tourist group in front of him), this met with the same kind of feedback given to the first more careful answers.

Finally, after the third prediction, Şemsettin decided to take another move changing the direction. Although asking the date may seem to be another clue to facilitate prediction, it, in fact, was not. When the teacher posed the question about the date, he had, in his mind, put an end to the prediction process.

It was only an effort to have students actively join in the process of determining the exact duration of the Museums Week (checked in the interview with the teacher).

Then, in addition to these aspects that had to be taken into consideration in coding, there were other layers too. The teacher used the word "gavuristan," which was a loaded word and he did not give any feedback to Student 4's inquiry of the meaning of the word and Student 5's reasoning about its meaning. To do member check, this segment of the lesson was brought to Şemsettin's attention. He stated that he did not mean to offend anyone by using this word and that although he heard the dialogue between Student 4 and Student 5, he did not consider it necessary to explain each and every word he used. If students wanted to find out its meaning, they could search for it.

After all this reflection on this episode of prediction and checking certain aspects of it with the teacher in the interview, how the coded data looked is shown in Table 3.11.

In this segment, the data that was retrieved as "prediction." In the overall index of the second period lesson dated 23.05.2005, this episode would appear among others that were coded in the lesson as is shown in Table 3.12.

The coding for the data from the interviews and student logs did not pose the same amount of challenge as the coding of data coming from the observations. This was due to the fact that in both situations (interviews and logs), the data came in response to the questions posed by the researcher. In other words, the questions invited more structured responses from the informants, which facilitated the coding process.

As was done with the data coming from the observations, the data from interviews and logs were also subjected to content analysis through coding (See Appendix I, Appendix J, Appendix K).

Table 3.10

The vignette from Şemsettin's second lesson on 26.05.2005

T: When I was in Antalya, I went to Side to visit a historical site and you know entrance to such places is completely emotional.*

Table 3.10 (continued)

SS: Which means you have to pay!!! (enthusiastically)
T: They charged from the tourist group in front of me but they didn't charge any money from me.
S1: Because you are a teacher
T: I hadn't shown my identification yet.
S2: They understood that you were a teacher because of your intelligent look
T: It's not written on my forehead.
S3: Because you were a tourist!
T: The group in front of me was made of tourists too. They even had come all the way from Gavuristan.**
S4: Where is Gavuristan?
S5: Must have been Saudi Arabia.
T: I arrived in Antalya on Wednesday. I went to see this historical site on Thursday. What was the date on Wednesday?
S4: Eighteenth of May
(T. puts the date "May 18" on the blackboard".)
T: That means?
S6: You were at the site on the nineteenth of May!
S7: So it was free because of the Youth and Sports Day!
(T. puts on the blackboard below May 18- May 19-May 20---------May 26 : Museums Week)
T: It coincided with the Museums Week.
* The teacher referring to a TV commercial in which the word "emotional" was, rather humorously, used to refer to things involving money.
** A rather offensive word meaning "the land of non-Muslims"

However, as Coffey and Atkinson (1996) underlines, data analysis is not equal to coding. Coding is only an initial step of data analysis. It paves the way for interpretation or what Tesch refers to as re-contextualization.

After segmenting the data which existed in a more coherent and meaningful manner in the original data set, the researcher had more control over the data, seeing the patterns and relationships all over it. Then, the next step was to textualize the data, filtered through the conceptual framework of the research

by means of codes, in such a way that when reading the text, the readers would not feel this fragmentalization caused by the coding of the original data set.

Textualization cannot be regarded as a stage that comes after analysis has been completed. It is a constituent part of analysis in qualitative inquiry. Eisner (1998) considers both method and medium as active instruments in making a message. Then, when the data are presented by using the language as the medium, the message is still being shaped. In textualization, there are alternative ways of representing the data in front of the writer. The same data can be written in different ways depending on the audience.

Bogdan and Biklen (2007) distinguishes between traditional and nontraditional and informal forms of presentation. The writers do not recommend novice researchers to try nontraditional forms until they master more traditional forms first.

However, they also warn the researchers of the risk incurred by traditional forms of representation:

> In more traditional forms of presentation, the findings or points of view are usually presented didactically. The author announces near the beginning what the paper, chapter, book, or dissertation will argue and then proceeds to show the readers by presenting key aspects of the perspective, documenting it with examples from the data. In this style, interestingly enough, the data are discovered inductively, but presented deductively, so the author must make a real effort to show that he or she did not collect data to prove a point of view already held (p. 210).

To avoid falling in the trap of sounding deductive at the end of a research journey characterized by a basically inductive approach, while writing the final draft of the study, the researcher took shelter in including the representative episodes that prompted her to derive a particular concept from the data. In the next chapter, although the readers will find titles that may give the impression that categories were imposed on the data coming from the field, under each title, they will also find illustrative examples from the data that aim to give them the feeling of how themes emerged from the data.

Table 3.11

The coding of the vignette from Şemsettin's second lesson dated 26.05.2005

THEME: Prediction

T: When I was in Antalya, I went to Side to visit a historical site and you know entrance to such places is completely emotional .* ➔ contextualization

SS: Which means you have to pay!!! (enthusiastically) ➔ inference

T: They charged from the tourist group in front of me but they didn't charge any money from me. ➔ implicit initiation to prediction + clue

S1: Because you are a teacher ➔ prediction

T: I hadn't shown my identification yet. ➔ disproving feedback

S2: They understood that you were a teacher because of your intelligent look ➔ prediction

T: It's not written on my forehead ➔ disproving feedback

S3: Because you were a tourist ! ➔ prediction

T: The group in front of me was made of tourists too. They even had come all the way from Gavuristan.** ➔ disapproving feedback

S4: Where is Gavuristan?

S5: Must have been Saudi Arabia.   ➔   reasoning together

T: I arrived in Antalya on Wednesday. I went to see this historical site on Thursday. What was the date on Wednesday? ➔ factual question

S4: Eighteenth of May ➔ factual answer

(T. puts the date "May 18" on the blackboard".)

T: That means? ➔ inference question

S6: You were at the site on the nineteenth of May! ➔ factual answer
S7: So it was free because of the Youth and Sports Day! ➔ prediction
(T. puts on the blackboard : May 18- May 19-May 20---------May 26 : Museums Week)
T: It coincided with the Museums Week. ➔ conclusion

Table 3.12

T*he themes from Şemsettin's second lesson dated 26.05.2005*

23.05.2005 / 2.Lesson	
THEME 1	Curiosity
THEME 2	Metacognition
THEME 3	Prediction
THEME 4	Distraction
THEME 5	Contextualization
THEME 6	Distraction

Table 3.12 (continued)

THEME 7	Other subject matter
THEME 8	Checking against the text
THEME 9	Use of reference
THEME 10	Teacher as writer
THEME 11	Inference
THEME 12	Intellectual humility
THEME 13	Challenge
THEME 14	Prediction
THEME 15	Finding the main idea
THEME 16	Challenge
THEME 17	Vagueness

3.6   Trustworthiness

In this section, the criteria that were observed while implementing the research and the methods to achieve these criteria will be discussed.

The aim of the researcher was to ensure trustworthiness as was described by Guba (1981). Although trustworthiness may give the impression of an easily attainable target, the concept in the sense it was used by Guba in relation to naturalistic inquiry, represents four criteria, each of which requires several measures to be taken for its fulfillment. The four criteria that Guba specifies to ensure trustworthiness of a research study originating from naturalistic tradition are as follows (their equivalents in the rationalistic paradigm are provided in parentheses):

1. Credibility (internal validity)
2. Transferability (external validity/ generalizability)
3. Dependability (reliability)
4. Confirmability (objectivity) (p. 80)

According to Guba, credibility refers to truth value. Whereas rationalists try to ensure internal validity by abstracting several variables of special interest, the naturalists aim to study the patterns in their entirety. To be able to deal with the complexities in naturalistic inquiry, there are certain actions recommended for researchers. These are prolonged engagement at site, persistent observation,

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peer debriefing, triangulation, collection of referential adequacy materials and member checks.

As for transferability, generalizing the research findings is a desirable and possible end product of research for the rationalist. However, for the naturalists, making descriptive and interpretative statements of a context is the ultimate goal as they believe in the uniqueness of each context. To ensure transferability, Guba recommends the naturalist to do theoretical/ purposive sampling, collect "thick" descriptive data and develop thick description of the context.

To Guba, the researchers with a rationalistic orientation try to ensure stable results. For them, stability of the results produced by their instruments is the major factor that renders these results reliable. For the researchers with naturalistic paradigm, the naturalistic equivalent of the term reliability, that is, dependability is not a factor of stability. As the understanding of truth of the naturalist embeds instabilities due to such factors as reality shifts or increased instrumental proficiency as the research proceeds, variance instead of stability is expected. To ensure dependability, the naturalist aims at trackable variance (explainable changes in instrumentation) by using methods such as overlap methods, stepwise replication, and audit trail.

Finally, Guba makes a distinction between the neutrality aspect of research conducted in rationalistic and naturalistic paradigm. The former rests upon the ideal of investigator objectivity, whereas the latter moves toward data confirmability. In rationalistic paradigm, the researcher aims to eliminate the biases of the researcher. However, in naturalistic paradigm, since the researchers use themselves as instrument such elimination is not possible. Therefore, what they do is to achieve data (and interpretational) confirmability by using triangulation, practicing reflexivity and arranging for a confirmability audit.

After the introduction of the criteria to be observed to ensure trustworthiness and the methods at its service in research with a naturalistic orientation, the methods employed in this study will be presented under eight subtitles.

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<u>Prolonged Engagement</u>

Prolonged engagement at the site is considered to be an effective way of eliminating the distortions caused by the presence of researchers. In this study, the presence of the researcher in the classroom as an observer particularly ran the risk of creating what is referred to as observer effect, that is, the difference that is made to the observed phenomenon by the very act of being observed (Carey et al., 2001). However, it can be concluded that one semester long research at each site observing almost all Turkish classes of Şemsettin in two months and observing Zehra's classes in the same course for two months except for two weeks and observing all of the Turkish classes of Ayşe in three months was long enough time to "test the researcher's biases and perceptions, as well as those of her respondents" and short enough to protect her against the risk of "going native" (Guba, 1981, p. 84), that is becoming too intimate with the participants of the research.

<u>Persistent Observation</u>

Persistent observation is regarded as another powerful method to lead to trustworthiness in qualitative research. This method is mainly recommended by Guba for three reasons:

a. understanding what is essential or characteristic of a situation or a milieu
b. learning to eliminate aspects that are irrelevant
c. attending atypical as well as typical aspects of the phenomenon over an extended period of time

In this research, persistent observation of three language classes provided the researcher with these benefits. In fact, particularly outstanding was the opportunity that it gave to learn to screen out the aspects that were irrelevant. Both during the research within each site and from one site to another (thanks to the implementation of the research in consecutive phases) persistent observation helped identify the aspects that were related to critical thinking among many events and situations in the classroom life.

Guba (1981) recommends the use of different theories, different methods and different sources to cross-check data. In this research, triangulation was achieved by the use of different sources and different methods. Guba (1981) maintains that no item of information ought to be accepted that cannot be verified from at least two sources. In line with this, both the teachers' and students' accounts of what happened in the classrooms were used to explain the critical thinking dimension of instruction.

Next, three data collection instruments were employed (observations, interviews, logs) to illuminate instructional aspects of critical thinking in three stages of teaching, namely, planning, implementation and reflection. The way these three instruments were used contributed to the attainment of methodological triangulation (Denzin, 1978).

Member Checks

Guba (1981) prioritizes the role of member checks over all other instruments in achieving credibility:

> Member checks, whereby data and interpretations are continuously tested as they are derived with members of the various audiences and groups from which data are solicited. The process of member checks is the single most important action inquirers can take, for it goes to the heart of the credibility criterion. Inquirers ought to be able to document both having made such checks as well as the ways in which the inquiry was altered (emerged or unfolded) as a result of member feedback (p. 85).

Different data sources and methods were considered complimentary to each other to the extent that the absence of one would render the use of the others vain in meeting the objectives of this research. Because of that, it seems impossible to put these data sources in hierarchical order according to their usefulness to the research.

To illustrate, although observations seem to be the primary data collection tool for implementation stage that took place in the classroom, it would drastically undermine the credibility of the study to explain the classroom

events based merely on observations without taking into consideration the personal accounts of the actors involved in a given classroom event in the interviews made with them after the lesson. In fact, all this fits into the very logic of it, defined by Wiersma as "a search for the convergence of the information on a common finding or concept" (1995, cited in Freebody, 2003, p. 77). Similarly, interviews made with the students after the lessons would not do much to reveal the students' opinions that remained out of the mainstream if the students with whom the interviews would be made had not been selected based on the analysis of their written work in the lessons.

While doing member checks, instead of explicating her account of a given event and then asking for the member's confirmation or refutation of the comment, the researcher tried to describe the event as neutrally as possible (most of the time by reading out the segment from the transcription of the lesson or from the field notes) and then sought the informant's comment. In many cases, different accounts of the events from different actors depending on their standpoint served to complement each other and created a more informed portrait of the event. However, there were also cases in which informant's account of a specific situation contradicted with that of the researcher's. In such cases, another tool named as peer debriefing by Guba came into the foreground that will be discussed under the following subtitle.

A significant aspect of Guba's requirement of member checks stated in the above excerpt is that qualitative researchers should be able to document that they have done member checks. In the next chapter when the results from the research are presented, representative classroom events under each heading will be shared by documenting the standpoints of different actors in the event.

<u>Peer Debriefing</u>

Guba recommends field researchers to "test their growing insights and to expose themselves to searching questions" (p. 85). In this kind of detachment from the site, faculty colleagues or members of a dissertation committee are considered as appropriate sources to give feedback to the researcher. In the present research, the thesis advisor and the members of the dissertation committee played an important role in peer debriefing particularly at the turning points of the research where important decisions had to be made about how to proceed. Furthermore, two colleagues of the researcher, one with a PhD in elementary education and the other with PhD in educational sciences and experience in qualitative research contributed significantly to the analysis of the data. In the above mentioned situations, in which a contradiction occurred between the researcher's and informant's account, the colleagues contributed their own insights into the matter. They also played a key role in the initial phases of coding.

<u>Thick Descriptive Data</u>

Geertz (1973) recommends the use of thick descriptive data for ethnographers. The degree of accuracy by which information collected in one context can be transferred to others is considered to be a function of fittingness of the contexts (the one that the data were collected from and the one that the data will be transferred to). By providing a detailed description of the context, qualitative researchers can make transferability possible for data obtained through qualitative research.

In this study, as well as collecting thick data, it was aimed to develop thick description of the contexts in which the research was carried out and the contextual factors that shaped the situations and events related to critical thinking. In the next chapter, the data will be discussed with the detailed description of the contextual factors shaping it to render the data more meaningful and ensure transferability.

<u>Reflexivity</u>

Reflexivity is defined as "the process of critical self-reflection on one's biases, theoretical predispositions, preferences and an acknowledgement of inquirer's place in the setting, context and social phenomenon he/she seeks to understand and a means for a critical examination of the entire research process" (Schwandt, 1997, cited in Kleinsasser, 2000, p. 155).

Kleinsasser (2000) emphasizes the role of reflexivity to collect good data in qualitative research. She suggests that "reflexivity enables the researcher to explore ethical entanglements before, during and after the research" (p. 157). In the absence of team members in a comprehensive project like this, developing an inner voice provided an invaluable support for the researcher although it did not compensate for this absence. Taking notes of her reflection on the flow of the research and the changes in her perception regularly offered the opportunity to share such changes both in this chapter and in the next chapter with the audience of the research contributing to the attainment of confirmability criterion suggested by Guba. To achieve this, the researcher relied on her reflective notes and audio-recordings she kept after visits to the site.

<u>Ethical Considerations</u>

In this research, the researcher stayed in the participating teachers' teaching contexts (their classrooms, staff rooms, school corridors) in relatively extended periods of time and even took some of their time out of the school (in Ayşe's case for the interviews). Therefore, minimizing the discomfort both for the teachers and the students was a primary concern throughout the research. In order to achieve this primary goal, the researcher had to make sacrifices from the original research design (starting the observations later than planned until the teachers felt comfortable in their new teaching contexts or finishing them earlier, not audio-recording some of the observed classes, making the interviews less formal when the teacher was not comfortable, not sharing student logs with the teacher when the students wanted so etc.). Such deviations from the research

design for the sake of ethical dimension of the research supports Boglan and Biklen's (2007) remarks about the research design of qualitative studies:

> Qualitative researchers proceed as if they know very little about the people and places they will visit... Plans evolve as they learn about the setting, subjects and other sources of data through direct examination. A full account of procedures is best described in retrospect, a narrative of what actually happened, written after the study is completed (p. 54).

3.7 Limitations of the Study

First, as the researcher was an outsider to the sites and the contexts that the research was conducted, in the data collection process, getting permission for certain procedures (audio recording the observed lessons, collecting data from students) became more difficult and caused data loss as permission was not granted.

Second, observations were made by only the researcher. With the participation of one more researcher to carry out the observations taking turns, the credibility of the research could have been increased significantly.

Third, due to such reasons as the delay in the issue of the permission for entry to the schools by the ministry, the cancellation of some lessons because of the preparations for the celebration of official holidays and teachers' personal demands to start the observations late or finish them early, the number of the observations was reduced.

Fourth, data collection process from the students was hindered in School B due to the regulations of the school administration. In this case, data from students were collected indirectly as they could not write logs or participate in interviews.

Fifth, the researcher was only able to conduct one interview each week in which the discussion of both the planning of and reflection on the observed lessons of the week took place together. Ideally, conducting two interviews at different times (one before the plan was implemented, i.e., before the lesson and another after the plan was implemented, i.e. after the lesson) would have

contributed better to creating an atmosphere for teachers to share their planning process more genuinely before they implemented it.

Sixth, the fact that one of the participant teachers was a graduate of Art History Department, whereas the other two were graduates of Elementary Education might be the cause of some differences that were observed between these teachers.

CHAPTER IV

RESULTS

The purpose of this study is to investigate how teachers integrate the development of students' critical thinking skills into their teaching during the three major phases of their teaching, namely, their planning practices, interactive practices, and reflective practices and to evaluate the influence of their instruction as felt by students.

To this effect, this research study aims to seek answers to the following research questions:

1. How do teachers integrate critical thinking into planning stage?
2. How do teachers integrate critical thinking into teaching and learning process?
3. What are teachers' reflections about the aspects of their teaching regarding critical thinking?
4. What perceptions and reactions do students have with regard to the practice of critical thinking in class?

To achieve these aims and to answer these four research questions, the Turkish classes of three teachers were studied through observations, interviews and documents.

The chapter begins with the profiles of the three participating teachers. In the remainder of the chapter, findings in relation to the four research questions are presented.

4.1 Profiles of Teachers

In this part, the participating teachers in the study will be described to the readers in a relatively detailed fashion with regard to their teaching philosophies,

the influences on their teaching and how they perceive teaching as a profession. The data presented in teachers' profiles mainly come from the first interviews made with the three teachers. Taking advantage of the small size of data sources, the primary aim of this part is to help the readers visualize these teachers in their teaching contexts, which is expected to help position the data presented in the following part within a larger frame, thus rendering it more meaningful. By doing so, a requirement of qualitative research, that is, providing thick descriptive data, is intended to fulfill.

4.1.1 Şemsettin

A slightly overweight man with a moustache, Şemsettin looked older than his age and exuded an air of maturity that was well supported by his classic tailored suits and matching ties, which seemed to be worn by choice rather than to meet the dress codes of the ministry for male teachers. However, his willingness to participate in the research and his readiness to start the observations the same day we were introduced to each other by the school principal, pushing the conventions and formalities associated with observers aside, contradicted this first impression of a traditional teacher created by his physical appearance. In fact, this contradiction prevailed throughout the semester as he was implementing his not-so-conventional teaching methods, still projecting his traditional image.

Keeping the thoughts of Boyatsiz (1998) in mind about the significance of the first observation, it would be of value to report the overall climate that prevailed in his classroom in the very first observed lesson. To put the value hidden in this experience in perspective, it is well to remember that, different from the following observations, this first observation was spontaneous both for the teacher and the observer and the observer was more open-minded than she could be at any given time since not having set the mind for observation that day meant not having any expectations about the observation, very close to the ideal blank sheet situation. In addition to this, Peshkin's suggestion (2001) for qualitative researchers is to make use of different lenses that mobilize

foreground and background of events under scrutiny to enhance the researcher's construction of the observed reality. Thus, putting this very first observation in foreground through description in relative detail and then shifting the lens to the background of this picture seem to make the "perceptual efficacy" that Peshkin promises through using different lenses possible.

Semsettin in Charge of Teaching

First, to get a close-up picture of his teaching climate, it will be appropriate to view his class on the first day of observation using a zoom lens: That day, when Şemsettin entered the classroom accompanied by the observer, no apparent change occurred in his tone of voice or in his overall look. The students in Class 4-A did not stand up to greet their teacher. They were preparing for a dramatization activity, which turned out to be a part of their routine post-reading tasks. This was evident in the confidence and naturality with which they were dealing with the task. Both the teacher and the class seemed to be comfortable with the presence of an observer in the class. Rarely did a student look up to see what the visitor in their class was doing. The teacher seemed well-suited for the technology surrounding the students and him (a computer with a fast internet connection, a big screen TV set over the blackboard). He kept busy with typing using the keyboard efficiently as students worked in groups enthusiastically to be ready to present their drama in front of the class. They sat in rows, typical of any given classroom in a primary school in Turkey, which contrasted the contemporary atmosphere of the room inviting groups sitting in circles. Obviously, moving freely in the classroom, turning back in their seats to be able work with their group members, moving from one desk to another were all welcome. Leaving the classroom without permission was obviously the norm. When all the groups were reported to be ready, the teacher asked the visitor to pick a number between one and six corresponding to the number of the groups in the class to choose the group to begin and by doing so, he availed himself of the opportunity to introduce the visitor to the class by her first name. This introduction replacing a more formal one that could

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typically have taken place at the beginning of the lesson served double purpose: The visitor had been introduced to the class and the group to present first had been selected. This later proved to be indicative of the teacher whose tasks aimed to achieve secondary objectives by implication.

When groups were presenting the drama based on a text in their course book involving farmers and corns and corn buntings, talking like humans, ending with a moral saying that "it is only you who can help yourself; don't expect your family, friends and neighbors to save you unless you do your part," the teacher still seemed to be busy with the computer. His involvement with the computer could well create the false impression that he was neglecting the class, an accusation that he would be cleared from when he felt the need to explain the students what the story actually intended to pass on them when some groups seemed to have misinterpreted the moral of the story. Some students in 4-A had apparently interpreted the story under the influence of their life experience, deviating from the author's intent, aligned with their very existence in a society characterized by solidarity as opposed to individuality. To them, the main character's (the farmer) not getting the help he sought at the last minute was caused by the insensitivity of the people around him, whereas the story aimed to convey the message that if a person does not fulfill his responsibilities, he can not depend on other people's help as they, too, may need to exert their efforts for their own duties. As would later be clear to the observer, dramatization in this class served different purposes when applied with different texts, ranging from encouraging students to reflect on a piece of text that had just been read to creating alternative scenarios to demonstrate the importance of something. Here, the teacher used drama as an opportunity to see that not all students were clear about the main idea of the text, or particular to this text, the moral of the story. Instead of asking them what the main idea of the text was in a rather typical fashion, he had them act out the story and reveal their interpretation of the story. While groups were taking their places on the stage in turn to display the scenes from the story in a seemingly repetitious manner, the nuances in students' tones of voice, gestures and mimics were cuing interpretations that were parallel to the

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author's intended purpose and those that were the opposite. The dramatization enabled the teacher to identify this and deal with it.

After all the groups performed in front of the class, he thanked them all for their participation and then moved on working on the post-reading questions in the book.

After he dismissed the class with the ringing bell, he explained that he knew his class was noisy and this had disturbed him in the earlier years of his teaching and now he thought this kind of noise was something that had to be there in every classroom with students at the age of his. He also felt like justifying his classroom management which gave the students' freedom to leave the classroom whenever they needed to by saying that "I don't find it rational to keep them in class, considering their age. Sometimes they may abuse it but most of the time I believe they are capable of making the right decision about when to go out."

Şemsettin as a Professional

Following this snapshot of Şemsettin's class and Peshkin's remarks about the value of using different lenses, it will be worthwhile to view the background of this picture using a wide-angle lens this time. The data under this sub-title derive from the first interview made with Şemsettin on 14.4.2005 and his reflections about his career as a teacher.

Although he gave the impression of a more experienced teacher, Şemsettin had been teaching only for five years and he attributed this more experienced look to the variety of teaching posts he had held throughout these years. In five years of teaching, he taught in ten different schools. Şemsettin's perception of himself as a teacher and as a student was characterized by the challenges he had overcome in these different contexts to be the person he was. He placed his first year teaching post at a boarding school on the top of his experiences since it posed many challenges. He looked somewhat pleased about having had to work with such a difficult group, perhaps because of the satisfaction he derived from overcoming this challenge. The heterogeneous

composition of the class he taught as well as the psychological support he had to provide for his students considering the fact that they were too young to start school away from their families caused him to close the distance between inexperience and experience in a relatively shorter time. Most of his students at his first school were at-risk students who came from families with serious problems to such an extent that they could not have their children by their side in their most formative years. That's where Şemsettin had learned to be sensitive to the background of the students in his classes and while setting his objectives for the lessons and putting the curriculum into action at different dimensions, he was inclined to prioritize the needs and potential of his students. His early experience in his career helped shape a more egalitarian approach to education. Instead of setting his pace according to the fast and more capable learners, he had gotten used to adjusting his lessons to the needs of the average and varying his standards and expectations according to the level of individual students. This approach had worked for him in his early experiences as a teacher and made him notice the reward in investing in students challenged by their background. The pride he took in overcoming the professional challenges was reflected in the way he talked about them. According to the way he perceived education, it had a potential to change the society. Among his students would come out the future politicians, ministers and scientists; for him, the most important people to transform the society, and, equally important, would come out thinking individuals who had good reasons to make a certain choice, who could explain themselves why they made a certain decision no matter what that decision would be. In this process, his role would be that of a "wise man" leading his students to find out ways of doing this.

When it comes to the more factual aspects of his career, he also seemed to be proud of the outstanding scores he took in the exams that were rendered compulsory by the ministry so that he could be appointed to a position in the state schools. At the start of his career, due to his high scores, he managed to stay in the capital although he had to perform his profession in the towns nearby. However, his employment at the school he was currently teaching at the time of

the research (knowing that he met the criteria to teach at this school) stood as the major success story of his career although he humbly stated that all his colleagues teaching at the school deserved to be there more than himself. He looked somewhat puzzled by the fact that he had been called for duty in such a school although he had done nothing special to work there.

Despite his effort to keep a low profile, he briefly mentioned being the author of a social sciences textbook for elementary students when asked about his professional pursuits. In addition to this, his knowledge of computers originating from his keen interest in technology made him a reference person among his colleagues in his present school. This was also evident in the way teachers from different classes popped into his class to get his opinion about their problem with the computer throughout the semester. When the technology provided by the school for the classroom use was combined with his attraction to computers, inoculating interest among his students to learn technology emerged as one of his major goals as a teacher. To him, that was a step forward to help shape scientists and computer literate individuals of the society.

Şemsettin wanted to continue his academic studies in education through a master's program in the university he graduated from, but despite his success in his courses, he was dismissed from the program as he failed to pass the English proficiency exam, which was a prerequisite to fulfill according to the regulations of the university.

4.1.2 Zehra

When we first met in the office of the primary school principal, Zehra looked very young (perhaps in the first year of her teaching). She had a strong voice for a woman of her age, which still did not change the first impression that she was very young. Her revelation of her age (24) during the conversation confirmed the accuracy of the prediction. Her youth was also underscored by her appearance: tall, slim and graceful. After this first impression, as we walked to her classroom, 4-E, her confidence and control over her environment (the way she gave her colleagues a distant and polite nod of acknowledgement as she

walked through the corridor) belied her age. When she finally reached the door and entered the classroom, her discernible authority over her pupils made one forget her age. Throughout the semester in which the research was carried out, her respected authority was never shaken.

<u>Zehra in Charge of Teaching</u>

The first observation took place on Monday and the class checked the homework which involved answering multiple choice questions about a paragraph and some practice about a grammar subject they had learned in the previous week.

In the very first observed lesson, the researcher had the opportunity to hear the voice of all 13 students in the class as they shared their answers to the questions. Students listened to each other carefully. The teacher was also very attentive throughout the lesson as the students read out their answers. At some points, some questions led to discussions. The students shared their knowledge and experiences about the topic with each other and posed some questions to the teacher about the things that they wanted to know more. Although at each desk sat only one student and the desks were placed in rows one behind the other (there were three such rows), students were highly interactive with each other. It seemed to be the part of the classroom culture that students listened to each other since they did this very naturally. Furthermore, they addressed each other by their names and turned to the person they spoke to.

The way they dealt with the multiple choice questions was as follows: First, the teacher read out the paragraph from which the questions came at normal speed. Then, students raised their hand to answer the question. The student that was called on by Zehra read out the question and then stated the correct answer according to him/her. Without being prompted by Zehra, the student read the part of the text that the question came from and explained why he/she had eliminated the other choices. Then, Zehra turned to class and asked if they thought the same way or differently. If there were different answers they discussed until one of the parties changed their decision. Occasionally, when

Zehra asked if there was anyone that had a different answer, some said that they had chosen a different answer but they now understood why their answer was wrong, leaving no room for discussion.

As for the type of the questions, there were some inference questions as well as those that tested basic comprehension indirectly. Therefore, it was necessary to understand the text and distinguish the differences between the choices.

After the completion of this part, they moved on with their answers for the grammar practice which involved forming new words by adding suffixes to the words given and then writing a short paragraph using at least three of the newly created words.

Before starting to share their answers, Zehra refreshed students' memory of how to make new words by adding suffixes. Then, they started sharing their answers. Again, students listened to each other carefully and they meticulously avoided saying the words that had already been written on the blackboard as someone else's answer. When there was a confusing word, the students discussed the accuracy of the answer giving reasons. To be able to do this, they raised their hands and waited patiently for the teacher to call on their name.

Despite the fact that the lesson was the last before the lunch time, the energy in the class (neither the teacher's nor the students') never dissipated. Students were highly concentrated and seemed to be enjoying the lesson. Zehra gave just a few affective feedbacks throughout the lesson such as "Good," "That's interesting." In fact, in this class, students looked older than their age in terms of their attitudes. They participated in the lesson and took notes in the same manner as adults would do.

As for Zehra, she looked as if she knew what she was doing very well and did not display any sign of hesitation when all this was happening. Obviously, in this class, she was not doing anything experimental and all that took place in the lesson was a part of her repertoire.

Only after the bell rang for lunch time, Zehra briefly introduced the researcher who was sitting at the very back of the class viewing all the students

from behind. The vast majority of the students turned back to see the observer only at that moment since the beginning of the lesson. Very few had already looked back to see the researcher once in the lesson.

As the class was leaving, there was no rush. After a few arrangements for the next observation, the researcher left the site.

Zehra as a Professional

The data about Zehra's professional life mainly originate from the very first interview with her dated 31.10.2005.

In the background of the lesson sampled here, there did not lie a long history of teaching. Zehra had been teaching in her current school for the past two years. She did not hide the pride she took in working at a prestigious private school at such a young age, which was the "...last stop on the career track for many of (her) colleagues at the school" (Zehra's interview, 14.11.2005). However, she had other options in her mind that could drift her to far -away places. One such plan was to go to a distant city at the border, which was the least popular destination for the newly graduated teachers for appointment by the ministry. A year ago, a visit to a friend appointed to a post in this city had inspired her to do so. She talked enthusiastically about her teaching experience in the school during her short visit. She had particularly been impressed by the reaction of the students to her use of new teaching methods. Whether this happened or not, she said, she did not see the current school as the place where her career would end. The reason for planning her career this way had nothing to do with any kind of dissatisfaction about her present job. On the contrary, she loved to teach the students in her class as she emphasized many times. However, she was full of energy and idealism about her profession that could well lead her to change tracks.

Zehra had two specific choices in her mind when she took the university entrance exam: to become a lawyer or a primary school teacher, both of which were equally attractive options for her at that time. She had high esteem of some of her college teachers and she playfully mentioned that she had not restrained

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herself from disagreeing with her professors in discussions. Still, it was obvious that she had perceived herself as a successful student throughout her education.

She believed in the importance of academic achievement for a successful future career and she emphasized the meaning of her students' being successful for her. She had a recipe for success which centered on discipline and reasoning for her students as it had been for herself as a student. She had attended a boarding school in her high school years and after that she had always been on her own in the city she was currently living in despite her close relationships with her family. This had taught her a lot and she wanted the same for her students: to stand on their own feet. Being a graduate of a private high school herself, she did not believe in the stereotype of a spoiled child associated with students at private schools.

4.1.3 Ayşe

The data presented in Ayşe's profile mainly come from the interview made with her on 17.05.2005 and many contacts with her that took place in the breaks of her observed lessons.

When the researcher paid the first visit to the school where Ayşe was working, her intention was to find a teacher who would be willing to participate in the study. In the staffroom, as she explained the three fourth grade teachers of the school what the study was about and how data would be collected, she knew that the only person meeting the criteria to be a participating teacher (female, experienced, articulate) was Ayşe. As it turned out, of the three teachers, the only one who was interested in the study was also Ayşe. After a warm conversation with her in the staff room about the school, her students, and teaching, Ayşe explained the researcher that although she wanted to participate in the study, it was not because she thought she was a perfect teacher whose classes were worth being observed but rather that she wanted to make a humble contribution to the development of research of this kind based on classroom observations. She had her reasons to have faith in this kind of research: She thought that decision makers had no idea about what was happening in the

classrooms. Except for regular inspection from the ministry, which did not prove to be very helpful in her case as she had never been given specific feedback about her teaching in the end, nobody had "...bothered to visit her class." Thus, she believed that classroom based research could inform the decision makers. At this point, Ayşe was reminded that being a study to result in a dissertation rather than a report to the decision makers, the impact of the present research could be quite indirect in this respect.

Ayşe stated that as a teacher who was a graduate of Department of Art History of a prestigious university (the same university that Şemsettin and Zehra graduated), she had suffered a lot from lack of training at the beginning of her career as a teacher. At the age of 32, she had been teaching for ten years and throughout her career as a teacher she had never received any kind of substantial in-service training. The method that had made her the teacher she was was "trial and error." Ayşe also remembered an experienced colleague at her first school as a mentor. She had been impressed by her classroom management skills and her communication with her students, which she attributed to the giftedness of the person rather than to the use of methods or strategies.

As she had not been equipped with sufficient education, the image of her primary school teacher had also guided her in the first years. She remembered having modeled her moves and gestures in the classroom, which she believed was too limited a source to rely on.

Getting Started

As mentioned in the previous chapter, Ayşe postponed the research due to her discomfort with the implementation of the new curriculum. The above conversation took place in the summer of 2005 and according to the plan the research would start in September. However, when the researcher visited her in September, two weeks after the school opened, Ayşe was in a totally different mood, more anxious and hesitant to get started. When she was asked if she wanted to withdraw from the study, which would be a welcome decision in any stage of the research, she assured the researcher that she was still interested in

the project but at the time she was under tremendous stress as she did not have a clear idea about what she was expected to do in the classroom. The two-week in-service training in August from the video- taped classes, which demonstrated the new curriculum in action without any voice due to a technical problem, had obviously not been very helpful to familiarize her with the program. Once again in her teaching career she was to discover how to teach by applying trial and error method.

When the researcher visited her for the third time in February to see if it would be possible to start the study in March, Ayşe seemed to be much more confident than she was five months ago. She was ready to start but reminded the researcher to keep her expectations low about what she would observe in her classes.

Ayşe never waned in the intellectual humility which manifested itself in these early conversations with her as the research continued.

Ayşe in Charge of Teaching

In the first observed lesson of Ayşe, the class worked on the vocabulary of a reading text that they had started in the previous lesson. Ayşe wrote the words that she wanted the students to study on the blackboard under the heading of key words. Most of the students had pocket dictionaries on their desks and Ayşe warned those who did not have one not to forget to bring their dictionaries with them again.

In the next step, they started to work on each word on the blackboard one by one. As most of the words were concepts they had studied in the Social Sciences class (thematic curriculum), some of them were defined by students without referring to their dictionaries. For the others, students read out the definitions from their dictionaries and Ayşe decided which definition to be written on the board. As this was happening, Ayşe was also reminding them what they had learned about the topic in the Social Sciences class. In fact, her talk dominated most of the lesson. Of the 35 students in her class (none of the students was absent), a few took turns to talk. One of the students asked further

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questions about a word and Ayşe gave information to the student, which reflected her knowledge about the topic.

In Ayşe's class students sat in three rows and the ones who did not participate in the lesson talked to each other but the level of the noise was never disturbing. However, there was a certain level of energy in the classroom, which Ayşe attributed to the presence of the observer.

Ayşe had informed her students about the researcher before she had come and they had been waiting for her anxiously since then. In the first lesson, a large group of students waited for the researcher and the teacher to arrive in front of the door and they looked at the researcher throughout the lesson.

Ayşe had been teaching the same group of students for four years, so she was knowledgeable about their background and life outside the school. She shared with the researcher many problems (students' problems in character development, lack of attention, laziness and associated classroom management problems) about her students from the beginning of the research to the end. She thought that families and the school had to collaborate more in order to solve these problems and considered the level of participation of parents unsatisfactory. She considered this as a reason for her exhaustion, particularly towards the end of the term.

As for her future plans, married with a five-year-old son, Ayşe did not see herself in a position to make radical changes.

4.2 Integration of Critical Thinking into Teachers' Planning Stage

To seek answers for this research question, interviews made with the teachers, field notes based on informal communication which took place with them between the lessons as well as the written documents such as the lesson plans (if available for a particular lesson), materials generated by the teachers or selected by them to be used in the lessons and sources they reported to have referred to in their planning process were mainly employed. Observations of the implementation of the plans in the classroom also provided a good source for the points to be worked on in the interviews with the teachers. In addition to these

primal sources, the impact of the school culture on the planning phase of teaching was also evaluated by the researcher to the extent that her observations in the settings and informal talks with the actors in the schools permitted.

In most cases, the scheduling of the interviews allowed teachers to talk about their planning process after their implementation of what they had planned in the classroom. Therefore, in such cases, teachers' revelations about their planning and reflection coincided in the same interview. In the occurrence of this situation, an important factor was the planning habits of teachers. They usually started forming ideas for the week ahead at the weekends. As the researcher did not have the opportunity to contact with the teachers at the weekend, inquiries about the planning process had to take place after the plans had started to be actualized. In some other cases, when teachers made plans for a relatively more distant future (long term planning), however, it became possible for the researcher to have access to their planning process before implementation. Sometimes, teachers started to plan for a lesson as they were evaluating their teaching of a previous class. The shifts of this nature between different phases of instruction underlie the decision of some researchers like Clark and Peterson (1986), who reduced teacher thinking to two phases as pre-active and interactive, eliminating post-active process. In the present research, however, dealing with the instructional processes of the participant teachers in three phases proved to be a convenient distinction as it was, most of the time, compatible with the way teachers chose to talk about their instruction.

To be able to present the data concerning this initial phase of instruction for three teachers simultaneously and to make the comparison for the emerging aspects of their planning possible, it seemed appropriate to manage this research question under broader headings . The decision in favor of this choice can be attributed to the nature of the data. Despite similarities in their thinking for the planning stage, there were also significant differences; as a result, data in some categories were abundant for a particular teacher, whereas the category did not even exist for the others.

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In the light of this, these teachers' planning stage is presented under the following headings: autonomy, methodological stance, relevance, texts, interdisciplinary connections, reading approach, writing approach and perception of students.

4.2.1 Autonomy

The extent to which the teachers felt themselves in the position to make decisions about their own teaching was observed to be different for each participant.

Şemsettin placed emphasis on the design of the tasks. In this stage, he referred to "how to teach" as the basic question underlying his planning (Şemsettin, 12.04.2005) He thought that teachers had a wide range of choices at their service and these choices were the determinants of the quality and achievement of their teaching. To him, by employing a proper array of teaching methods and by carefully designing the tasks, a teacher could achieve any given set of objectives using any given material. His commitment to the design of processes is best reflected in his own words:

> In any school in Turkey, in any given classroom, teachers are using similar books to achieve the same objectives but there is always a difference in the outcome. Contrary to the common belief among teachers, this difference is not due to the students because in every classroom, you can detect normal distribution. There will be marginal high achievers and low achievers and the majority will be at average level. You can't change that, so the difference in the outcome is the one that the teacher makes by deciding how to teach (Şemsettin, 14.04.2005).

The idea of teacher as a powerful decision maker that manifested itself in this excerpt was predominant in Şemsettin's planning process. This idea was also well supported by his immediate teaching environment. The school administration encouraged the teachers to use their creativity in their lesson plans and provided them with generous stationary and photocopy quotas to enable them to use various resources. The teachers in the school had wide discretion in choosing the materials to be used in the lessons and the design of

the tasks. The source of this freedom was basically the ministry, which recommended a Turkish course book for each grade at the beginning of the academic year but did not impose the use of the course book throughout the semester (School Principal, 5.4.2005). This climate, combined with the sense of autonomy inherent in Şemsettin's perception of his profession, yielded lesson plans bearing his marks.

In the case of Zehra, a similar sense of autonomy could be observed. Zehra reported many instances in which she took pride in the way she designed a segment of a lesson and then observed the impact of her planning on the enhanced quality of her students' answers. She assumed responsibility in the outcome of her instruction and perceived this as a challenge that made her job "exciting" (Zehra, 31.10.2005). Her enthusiasm in planning her tasks was obvious in the way she explained how she planned a particular task. However, in her case, the environmental factors were not as encouraging as those in Şemsettin's case. First of all, she was expected to plan the lessons with five other fourth grade teachers in her "team." This did not prevent her completely from making her own contributions to the plans. However, the fact that all the fourth graders would sit in the same exams and that the school administration demanded the attainment of a certain level of standardization among classes made it inevitable for her to keep pace with her team members. She reported similar pressures that came from the parents who wanted their kids to keep pace with the kids in other classes. Despite the fact that implementing a lesson plan prepared by someone else was "like wearing someone else's dress" to her, Zehra found the pressure caused by school and parents completely reasonable (Zehra, 9.11.2005). Still, she felt that she had the full control of her teaching. Although she was expected to use the course book used by other classes, she took the advantage of choosing among the tasks suggested in the book. One important factor that contributed to her developing a sense of ownership in her planning was the summer sessions at school in which all the teachers worked individually and in groups to prepare the curriculum of the next academic year. She also reported the way she handled the implementation of the plans in the classroom

as her zone of freedom. From the way she wholeheartedly tried to justify the plans she implemented in the lessons during the interviews with the researcher, it was evident that Zehra did not bear any trace of alienation in the process of planning.

For Ayşe, planning was a process during which she felt herself completely insecure (Ayşe, 6.4.2006). She attributed her insecurity about planning to her implementing a new curriculum for the first time and to lack of in-service training and lack of support for teachers about how to carry out the tasks in the course book. Despite such limitations, the context in which she worked lent itself to ample use of autonomy. Except for routine inspection of the ministry, teachers at school were not monitored strictly for their choices. The school culture did not necessitate imposing restrictions to standardize instruction. As Ayşe frequently stated in the interviews, the parents did not tend to get involved in teacher's decision making processes, which she considered a loss. To her, if they had preferred to get involved in the processes and given her feedback about her teaching, this would have contributed to the improvement of her teaching in time. Therefore, what Ayşe sought in her planning process was more support from different sources such as the ministry, school administration and parents in a way that would guide her about what to do in class and without them she felt confused (Ayşe, 17.5.2006).

When the actual extent of latitude allowed to these teachers in their planning by their contexts and their relative sense of autonomy are compared, the formation of this feeling seems to be related to the teachers themselves and their perception of their own autonomy rather than the actual level of autonomy permitted by their context. Then, it would not be wrong to acknowledge perceived autonomy as the source of the modifications teachers would make in their planning and the risks that they would dare to take to implement a different task. Therefore, the detection of such autonomy is significant as it determines boundaries the teachers would be willing to trespass while planning their lessons.

4.2.2 Methodological Stance

In teachers' designation of their practices, there is interplay of various factors. In the planning process of these practices, the participating teachers sometimes referred to the methodologies they employed to justify the decisions they made although the extent to which they referred to their methodological orientation as the source of their decisions differed.

With his frequent references to literature while he was talking about his teaching, Şemsettin displayed awareness of a wide range of instructional methodologies but he did not want to associate himself with any specific one (Şemsettin, 14.4.2005). He considered different modes of teaching as tools in his repertoire. Although the curriculum he followed promoted discovery learning and inductive modes of thinking as the dominating methodology, he referred to expository teaching as another source which he could rely on when need arose. In the same way, multiple intelligences was a frame about which he felt confident but he constantly avoided naming it as the methodology he based his planning on.

To him, the use of any methodology was legitimate on the condition that the teacher had justifiable reasons for utilizing it. He believed that the nature of knowledge to be learned arbitrated the methods to be used.

Therefore, in his written lesson plans, the format he used did not reflect any affiliation with a specific methodology. Şemsettin made one-page-weekly lesson plans. Typically, he started by writing the objectives of the course which he lifted directly from the course curriculum and these objectives did not change from the beginning of the semester to the end. As these objectives were stated in very broad terms, one needed to refer to his verbal accounts to detect his aims for a particular week. He perceived his lesson plans as his agenda, which helped him remember how to proceed in the lessons. After the statement of course objectives, he used subtitles for each task he would implement. For each week, the subtitles reflected the topic of the text he planned to deal with. To illustrate, in his design of the lessons for the last week of April, the six subtitles that appeared in his lesson plan were "Butterfly, The Meaning of April 23, Reading

the Poem, Let's Find the Capital Letters, Let's Write a Poem, The Things that April 23 Changed." Under each title, he cited the materials he would use in that stage and a brief description of the procedure to be followed. Sometimes he wrote alternative tasks under the subtitles from which he could make a choice in the lesson according to the demands of the moment.

Despite his distancing himself from theory of multiple intelligences at a conscious level, an important aspect that persisted in his planning process from the beginning of the term until the end was his constant effort to cater for the needs of students with different abilities (dramas [kinesthetic], drawing pictures [visuals], writing acrostic [linguistic], uncovering numerical patterns [logical-mathematical]). However, when he talked about his plans, he did not specifically focus on this aspect. As he said,

> While implementing a student-centered curriculum, a teacher should be very cautious about its interpretation. Some teachers may tend to see it as turning everything into fun for the students. What I understand is that you need to tickle the students but not overdo it. As a teacher, you need to get them to have a positive attitude toward learning. But one must take this as a serious job (Şemsettin, 14.04.2005).

Thus, the consideration of the needs of students with different interests and abilities, though present in his planning, was not the ultimate goal of his teaching to him and he was well aware of the challenges of designing learner-centered lessons. In fact, to make his teaching more student-centered, Şemsettin worked hard in lesson planning process. He prepared many task sheets that aimed to involve students actively in the learning process. These tasks did not only mean to keep students busy but rather they aimed to engage learners in various aspects of the issues raised in a particular lesson. For example, if the reading text of the week raised questions about advertisements, he had his students make their own advertisements and evaluate each others' .

Another commonly used method was discovery learning. He applied this method particularly in the teaching of grammar, mechanics of language. By applying this method, he aimed to make his students discover the rules underlying the examples by thinking inductively.

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Although he advocated the use of direct instruction as an effective teaching method when its use was justifiable by the teacher, never in his lesson plans did he cite any stage in which he would use this method.

In fact, what Şemsettin seemed to do while positioning himself in the methodological arena was emancipating himself from the burden of declaring his affiliation with certain methods and as a result from feeling the pressure of following them constantly.

Unlike Şemsettin, Zehra manifested her curricular orientation by preparing her lesson plans according to the theory of multiple intelligences. In her weekly lesson plans, she listed her tasks under the headings of eight intelligences. In the interviews she persistently expressed the convenience of preparing plans according to multiple intelligences as the frame saved her from neglecting the needs of any group of students in the lessons.

However, in the plans, the way she served to different intelligences did not always seem to vary from one lesson to another. While answering a particular set of comprehension questions about a given text was continuously regarded to have appeal to mathematical/logical intelligence, the needs of students with bodily-kinesthetic intelligence were involved in the process through tasks indirectly related to the content, such as writing the unknown words on the blackboard. The majority of the objectives she wanted to meet in a given lesson fitted into the tasks she considered to be relevant to logical and linguistic intelligence. Still, as Zehra stated, her lesson plans always had an aspect addressing the needs of students with diverse abilities.

Another noteworthy aspect of Zehra's teaching was the attention she paid to the use of induction while teaching grammar concepts. Instead of starting by teaching the rules first, she started by exposing students to the examples and guided them to move to the rules by noticing the commonalities among examples themselves. While planning this process, though not explicitly described in her lesson plans, she chose the examples and non-examples with utmost attention and planned each step of the process by anticipating the points of difficulty with care and precision.

Ayşe, on the other hand, took up a different position compared to the other two participating teachers with regard to her methodological stance. Coming from a tradition which perceived teaching as an act of transfer of knowledge from the teacher to learners, she was at a cross fire in the first year of her implementation of a new curriculum, which aimed to involve learners actively in the process. With the reduction of objectives regarding content knowledge in the curriculum, a new demand on teachers, that is, using the class time with interactive tasks that required the participation of students in extended periods of time, had emerged. She intuitively recognized the fact that a reduction in the curriculum, infested by objectives related to mechanics of language, had long been needed. However, when this happened, she found herself in a situation where she felt that she was stripped of her "weapons" (a metaphor she used for her teaching methods) that had proved to be useful in meeting the former objectives (Ayşe, 13.4.2006). For the first time, she was left with the idea of spending a whole week's Turkish classes with a single text in the course book. With longer time and fewer subjects to cover, she came to feel herself idle in the classroom. Nevertheless, instead of modifying the new curriculum in a way that would enhance her control in the process and ease her discomfort, she wanted to adapt herself to the new role expected from her. In this transitory phase, what she seemed to be missing most was a clear idea of what she was actually doing in the classroom. As she stated several times, she did not find what she was doing really meaningful. Yet, this did not cause her to give up following the steps prescribed in the teacher's book in the way she interpreted them.

Unlike the other two teachers who had been exposed to student-centered approaches, and theories like multiple intelligences at some time in their training, Ayşe did not have the theoretical background that she could have turned for help to respond to the challenges of her new teaching context. Deprived of such training and bombarded with new terms with a new curriculum, her well-meaning efforts to meet the demands of the new methods from the teacher did not create the intended impact of her teaching. As a result, rather than aligning herself with a single methodology or an array of

methodologies, she struggled to teach in a methodological turmoil, which prevented her from applying either approach to a degree that satisfied her.

4.2.3 Relevance

In the planning phase, an effort to make the lessons and discussion points more relevant to students' lives was observed as a point of consideration in varying degrees.

To start with, an important characteristic of Şemsettin's planning process was his perception of it as a natural extension of his life. For each theme that was being studied, he first asked questions to himself about the thorny aspects of it. The issues mattered to him as a person, as an individual living in the Turkish society, found their way into his lesson plans. To exemplify, in the post-reading task for a reading text that was about the invention of the telegraph, he planned to start a discussion on the challenges that were in the way of inventors and had his students recall a quote from Edison ("Genius is a matter of perspiration, not inspiration.") which they had learned in the previous lessons. By directing students' attention to this aspect of the topic, what he planned to achieve was to have the students question the extent of such endeavor in Turkish society and the resultant effect of this on the development of science in the country. To do this, he planned to give a research assignment to the class in which they were required to find the names of five Nobel Prize winners and the fields they were awarded the prize. The next day while sharing their research findings in class, students would notice that there was no Turkish name on their lists. This would be quite convincing since 5-item lists by 35 students would probably bear a Turkish name if there were one. Then, this awareness would contribute to students' feeling Turkey's falling behind in the race of scientific discovery. As Turkey's progress in science stood as an ideal for Şemsettin and he detected lack of scientific initiative as a problem, he chose to focus on this aspect by implementing the task

As can be seen in this example, Şemsettin's own agenda about development and progress (the current theme at the time of this lesson) emerged

as a task in his lesson plan. In the same way, a trip he made to another city at the weekend or an article he read in the Sunday supplement of his newspaper all inspired him for his lesson plans. As the contribution of his personal agenda to his planning process was true, so was his teacher identity which contributed to the mitigation of his personal worries as it provided an outlet for such worries. This symbiotic relationship between his life outside school as a person and his teacher identity supported each other in a way that benefited both.

As for the perceived effect of planning in this way on his teaching, Şemsettin made the following remark:

> For each theme we study, I wear different glasses. I look at the environment from the viewpoint of the theme in order to find aspects of the theme that relate to our lives. This happens naturally but I know that it adds to the quality of the lessons. The things we do, we talk about in class differ greatly from those that might happen in other classes; they become more relevant to students' life. That's why, students are so eager to participate in lessons; they have got things to say. Personally, I am also glad to be dealing with such things in the lessons (Şemsettin, 5.5.2005).

Apparently, Şemsettin chose to make use of his personal experiences with the world he is living in as an important source of inspiration for his lesson plans. What was noteworthy in his planning process was that, as well as making efforts to make his teaching relevant to his students, he wanted his lessons to be centered on issues that were also relevant to him. In this choice, his quest to make his job meaningful to himself seems to be playing a pivotal role.

For Zehra, on the other hand, the source of lesson plans was basically the course book she followed. Although in various stages of her instruction, she turned to the lives of her students and her own life to make connections, this was not a predominant factor as it was in Şemsettin's planning procedures. As was stated earlier, due the fact that she was expected to synchronize and align her teaching in line with the other teachers, the contribution of her personal experiences to her planning was scarce. However, when it came to the examples that she planned to give while clarifying a point, or discussion questions that she planned to ask, she was meticulous in choosing those that would have a place in

her students' lives. In addition to this, the feedback she received from the parents about her students (in the form of complaints or the areas of interest) and the common issues that arose from them influenced her decisions regarding her examples and questions.

She made deliberate efforts to familiarize herself with her students' experiences with the world. To keep up with them, she watched the movies that were popular at the time and read the books that they were reading and played the computer games that they enjoyed playing. In an interview, she made the following comment:

> These are children who have access to different media. The majority of parents support them in reaching a large variety of sources. As a result, when we are talking about something in class, they can come up with examples from different sources. To be able to judge how relevant examples they are, I need to know what they are talking about. If I couldn't do this, it would be very embarrassing for me. Therefore, when I am in a bookstore with my friends, I inevitably end up in the children's books section. This is a source of humor among my friends (Zehra, 14.11.2005).

As can be understood from the excerpt, the reasons for which Zehra and Şemsettin thought the life outside school relevant to their teaching differed significantly. For Zehra, it was to understand what students were talking about, thus not to lose control of things in the lessons. In Şemsettin's case, it was to initiate the students to the matters that existed outside the school.

Similarly, Ayşe did not use her own life and her own experiences as a source in a way that she could refer to in her own planning. While making this decision, her concern about following the curriculum as reflected in the course book was a factor. She was in close contact with the parents, but unlike Zehra, who used the feedback from parents in planning her lessons, Ayşe referred to them in their free time, independent from the lessons.

Therefore, both the way and the extent the life outside school surrounding the teachers and their individual students influenced the life in the classroom differed from one teacher to another.

4.2.4 Texts

The texts which were used by the teachers seemed to have an effect on the ways they dealt with reading activity and on the degree of their integration of critical thinking into reading process.

Şemsettin was concerned with the texts as he felt their determinant role on the reading process. He thought that with texts that did not raise significant issues about life in general and life in Turkey in particular, the opportunity of making reading and education meaningful would severely be reduced. Although he did not find all the texts in the course book deprived of this quality, he wanted to write his own texts to achieve this aim better. As was discussed under the heading of relevance in this chapter, drawing parallels with the life outside the school was a primary goal in his understanding of education. Therefore, he wrote texts in which he brought to his students' attention the controversial aspects of life. Şemsettin posed questions like "Should money be a goal of life?" "Can we change our beliefs easily or does it come with effort?" in his texts. Thus, by writing his own texts, Şemsettin wanted to engage his students in discussion of bigger problems, problems bigger than those that were posed in the texts of the course book.

Şemsettin also felt the need to make the points at which students would initiate thinking process overt in his texts. Mostly available in his texts was an issue that called for being on one side of an argument. The occasion which called for thinking on behalf of the reader was also underlined with a rhetorical question. He first made his case in his texts and then with this rhetorical question called the readers for starting their own thinking process. Although rhetorical questions are not as powerful as genuine questions in setting the stage for critical thinking, Şemsettin added them into his writings at some point in order to provoke the students with different opinions to voice their thoughts.

Throughout the semester, Şemsettin tried to use the texts that he wrote in his classes, yet he sometimes felt frustrated when he thought that he was not able to create the effect that he had intended to on his students like getting them to

think more deeply and see the issues from different angles. In such situations, he considered his students' age as an obstacle to their thinking deeply about issues.

Though not seen by him as a primary purpose, exposing students to a wide variety of language structures and vocabulary was another reason for his writing his own texts. He felt that the texts in the course book did not serve the language needs of the students as they used the same structures repetitively and recycled an insufficient number of words. Therefore, with his texts, he also aimed to bridge this gap by posing the linguistic challenge that he deemed to be appropriate to the level of the students. Finding their way into his texts were inversions, longer adverbial clauses and words that intrigued the students. He likened deciphering them to solving puzzles.

As for Zehra, she did not hesitate to use the texts in the course book. In her teaching context, she did not have as much freedom as Şemsettin did to be able to change the texts either by writing herself or choosing texts from different sources. However, what actually stopped her from doing this was her endorsement of the texts that were already in the course book. To her, texts did not exist to involve students in the discussion of significant questions related to life. They existed to be analyzed. To her, through reading the texts and answering the questions related to the texts, students would learn how to understand a text.

Zehra wrote a text once, with which she aimed to introduce the concept of metaphoric expressions in a contextualized manner. Considering the fact that she only had a language-related aim by doing so, her work proved to fulfill her aim. She also used the texts in the course book to recycle the linguistic concepts in context.

Ayşe also used the texts in the course book to teach reading. However, as she was doing so, she also had concerns about the texts. As a reader, she did not find most of the texts interesting. She complained about the fact that the texts did not have the content that would start discussions appealing to students' lives. Many times, she did not see any point coming from the text that could lend itself to classroom talk:

I read the text and ask to myself so "What's new in this?" The things that have become common knowledge are put in paragraphs that form the text and I'm expected to spend several lessons having students answer questions related to this text. (Ayşe, 17.5.2006).

She made this comment about many texts in the course book but the following text is worth mentioning as it clearly illustrates her point about the texts. This text was about a young female student who wanted to join the school volleyball team. The girl's parents were portrayed in a conflict in which the father supported the girl about her plan, whereas the mother raised concerns about the possibility of her neglecting her academic life. Both parents discussed the issue with the girl and gave her the opportunity to make her case. When the girl promised them that her involvement with sports would not cause her to neglect school, both parents decided to give her the permission to join the team. In the end, the girl was portrayed as a successful math teacher who benefited a healthy life due to her active engagement in sports.

After the class studied the text for two periods, Ayşe shared her frustration with the text as follows:

I wanted to make something out of it by asking the students how decisions are made in their families but it didn't take us anywhere. When the text does not tell something new, it is hard to do something meaningful with it. (Ayşe, 29.05.2006).

The issue that was raised by Ayşe (that texts were not interesting) and the issue raised by Şemsettin (insignificance of the topics in the texts) were the problems in the texts as perceived by the two teachers.

On the other hand, in terms of integrating grammar into reading, all three teachers made a conscious effort. Although Ayşe did not introduce any new grammar item in the semester the research was carried out, she used the texts to revise the already known concepts. The efforts of teachers toward contextualizing the linguistic concepts in reading texts aimed to make them more meaningful to the learners. This was also in line with the demands of the curriculum concerning language learning.

4.2.5 Interdisciplinary Connections

The participant teachers were well aware of the concept of interdisciplinary connections and the contribution of thematic curriculum to this purpose. They planned to create opportunities for students to make interdisciplinary connections among different courses. To the participating teachers, this meant giving students the opportunity of recalling information from different courses.

For example, Şemsettin meticulously added elements to his texts with which he had his students remember a piece of information that they had learned in the previous lessons in a different course. In a text about tourism, as the writer of the text, he used his discretion to send the main character to Italy instead of another country in the world so that the students could recall the shape of the country resembling a boot on the world map. Ayşe also made efforts to have her students recall knowledge particularly from science lessons as they were reading texts in Turkish classes. A similar perception of the skill was also observed in Zehra's classes.

4.2.6 Reading Approach

One point that three participant teachers had in common was the way they structured their planning around reading skill. Despite the variation of the emphasis on the individual stages, it was possible to detect a typical structure transcending all. In this structure, one could see that the lessons were shaped around three stages: pre-reading, while reading, and post-reading. In the emergence of this structure, the factor that played an important role was that they constantly used reading texts as the input of their lessons. Input of different nature was also used, such as a visual presentation through Microsoft Powerpoint, in some lessons but they all served to supplement the main reading text in one way or the other. Occasionally, reading texts were replaced with listening texts as the input and in such cases, the lessons were designed in pre-listening, while-listening, and post-listening stages. In this format, the content of

each stage showed some variation from one week to another within each case, but these three stages always remained.

Another reason for structuring the lessons in this way was the reading approach that was promoted in the new curriculum. In the curriculum, teaching reading was handled in three stages and the teachers were instructed to use certain tasks in each of the stages. Among the stages, pre-reading drew closer attention and a variety of tasks were recommended to teachers for use in this stage. These tasks were compiled under the heading "mental preparation" and included activities, such as activating prior knowledge, working on key words and prediction. The importance attributed to pre-reading stage is in alignment with the trends in reading instruction that underscores the role of schemata in helping the readers construct meaning from the texts.

In this respect, with the effort he put in designing the materials for this stage, it would not be wrong to conclude that Şemsettin made the biggest investment in his planning of instruction to pre-reading. In these tasks, he effectively planned how to get the students to make predictions about the texts to be read by using clues such as the title or by solving a puzzle. He planned to have them associate themselves with the concepts, use their creativity and background knowledge to have them surface their schemata related to the topic. In his overall planning, the tasks in this part proved to be the most creative and he always talked about his planning in this stage proudly. In his explanation of familiarity with the design of such tasks, he referred to two sources, namely, his training at the university about teaching reading and the in-service training they (with his colleagues in the school) were offered in the previous summer by the ministry. In the former, Şemsettin formed a general opinion of the contribution of asking students questions before reading a text about the topic to their active reading of the text. In the latter, he enriched his repertoire of pre-reading and post-reading activities. In neither of them was he extensively exposed to the reading theories underlying the emergence of tasks in this nature in literacy literature (Şemsettin, 12.5.2005).

In Zehra's teaching, pre-reading also occupied a significant place. She frequently chose to activate students' prior knowledge by using visuals. She planned to have the students talk in pre-reading stage while making predictions about the text. She perceived this stage as the most interactive part of her teaching. Different from Şemsettin, though, in addition to planning the task carefully, she was also very meticulous in the planning of the questions at this stage and she anticipated the possible answers that would come from the students in response to her questions. By doing so, she wanted to be in control of the process and guide the students when they tended to deviate from the topic in prediction (Zehra, 14.11.2005). Zehra also referred to her knowledge from her university as the source of her planning in this stage. However, the team preparation of the lessons with her colleagues was cited as another source of her inspiration for the tasks at this stage.

Ayşe also used prediction as a reading task. However, her understanding of prediction differed significantly from those of the other participant teachers as well as from the rationale of the introduction of prediction activities into the curriculum. Since she had not been familiarized with contemporary reading theories in her previous training, she found herself at a position where she was trying to discover its use on her own. She regarded making predictions about the content merely as a step that she was expected to cover without seeing the value in it and how it facilitated the process of meaning construction. Her lack of knowledge about the rationale of pre-reading stage when complemented by students' habit of reading the texts in the course book at home before they were studied in class caused her to implement some pre-reading tasks in the while reading stage. In such situations, Ayşe had her students predict the text after they read the text and talked about it.

As for the while reading stage, the method that Şemsettin frequently used was interactive reading. In this method, before having students read the text silently and then aloud taking turns, he planned to introduce the text to them by reading it aloud himself pausing at certain points of the text and having them talk about the text (by predicting and/or interpreting). Before the lessons, he did

not specify where to pause and what questions to ask to have students interact with the text. However, whether or not explicitly stated in the lesson plan, he had the idea of introducing the texts in an interactive fashion in most cases. Therefore, while he planned the overall procedure for reading, he did not plan specifically what he would do in each step of the procedure. What was particularly remarkable in the planning of this stage that would have an effect on students' thinking was the lack of a clear vision of the questions to be directed to them about the text. In the emergence of this situation, the fact that he wrote his own texts contributed significantly. Because of his writer identity, he was so familiar with the texts that he did not feel the need to study them with his teacher identity (Şemsettin, 12.05.2005). Apart from the interactive reading process, he did not plan any other task for the analysis of the texts. Nor did he plan to ask any questions before reading the text that students would find answers while reading.

In this respect, Zehra's planning was much more precise as she anticipated the difficulties with the text that students would encounter ahead of time and developed strategies about how to facilitate students' coping with these difficulties. She did not write the questions she would ask about the texts; instead, she chose from the questions that were in the course book. In the selection of the questions to be discussed in the classroom, her rationale was getting the students think most by asking the fewest questions possible. Pinpointing the questions that would have the students analyze the most critical aspects of the texts was a priority. She considered other questions as redundant and believed that redundancy would cause distraction for the students. Therefore, whenever Zehra was entering the classroom, she had all the steps of reading on her mind crystal clear including the questions she would direct at specific parts.

For Ayşe, preparing for a reading lesson meant reading the text and checking the questions that followed. Disturbed by the texts lacking adequate level of challenge for the students, she did not expect much gain from these texts (Ayşe, 17.05.2006). Therefore, getting them to answer the questions in the

course book was her only objective regarding reading. A disadvantage of Ayşe compared to the two other teachers was that the questions about the reading texts were few and they did not show variation from one text to another according to the characteristics inherent in the text. For example, in a text where characters with conflicting interests confronted each other about an issue with which all students had some experience at a certain stage of their lives, the book did not pose any questions that would have the students identify the interests of different parties and find a point where they would reconcile with each other. The questions that followed such a text were not different from those asked about another text (finding the main idea, finding the supporting ideas, identifying the characters, the setting, the time of the event etc.). Although Ayşe was not satisfied with the text or the questions, she did not make an attempt to change the tedious routine of cliché question-answer cycles.

4.2.7 Writing Approach

In the post-reading stage, Şemsettin involved his students into writing tasks in which they were expected to produce a certain number of sentences on a topic related to some aspect of the text studied. Related to the text on telegraph cited under the heading of "relevance" above, Şemsettin asked the students to draw the picture of an invention they would submit to the Nobel committee and then describe it in ten sentences. Then, what students were asked to do was not directly related to the text about the invention of telegraph but drawing upon their experience with the text, they had to make their own invention. Similarly, with other texts, he asked the students to express their thoughts in writing in response to the topic of the text. After studying the text questioning people's purposes in life, they wrote their own thoughts about why people live. Just as Şemsettin mostly wrote his texts for students to read, he also wanted his students to write for him to read. While Şemsettin was writing his texts, he also had some pedagogical concerns apart from his other motives for writing mentioned earlier:

> So far in their reading experience as students, they have read nothing except for the course book and materials in supplementary periodic publications (dergiler). What did this all have them think? Some write

and some use it. They could not even imagine that there were people who wrote the texts that they read in their books. This perception of writers is held not only by our children but also by a significant majority of our people. I believe perceiving writers like this has played some role in the distance between writing activity and our people. By writing texts I'm using in Turkish lessons, I want them to see that writers are humans just like themselves. There is nothing to exaggerate... you go through something that makes you think and you find yourself writing about it in front of your computer (Şemsettin, 14.04.2005).

The rationale unfolded in this excerpt reflects the organic relation that Şemsettin perceives between thinking and writing. By humanizing the writer image ingrained in students' mind, he aimed to encourage them to perceive writing as a means of expression of thought.

Zehra also incorporated writing in the post-reading stage of her lessons although her way of doing this differed from Şemsettin's. She did not establish such a meaningful relationship between thinking and writing. The most typical writing task she employed in this stage was having students form paragraphs using the words selected from the reading text. In fact, her purpose was basically to create an opportunity to practice the new words in the text. Yet, her direction regarding forming paragraphs instead of writing several isolated sentences can well be interpreted as an indication of her endeavor to make writing a part of Turkish lessons. In addition, by setting the criterion of forming "meaningful" paragraphs, she engaged her students in thinking while writing to some extent.

In Ayşe's handling of writing, there were tasks both for writing at sentence level and for writing at text level. In the post-reading stage of some texts, she asked students to complete sentences by using prompts to practice grammar; in other cases, she wanted them to write texts, such as letters, in relation to the topic. The textual dimension that Ayşe brought to writing tasks distinguished her from the other two teachers. At this level, the demand upon students to observe connectedness throughout a longer unit of writing emerged.

4.2.8 Perception of Students

While planning the lessons, a difference in the way and the degree that teachers took their students into account was also observed. In other words, there

was a variation in the way that teachers felt their students' presence in their planning process.

While Şemsettin was talking about his planning process, he basically focused on the smooth progression of tasks from one stage of the lesson to the next. He wanted to design plans that reflected the qualities of a learner-centered instruction in every way possible and made sure that students were actively engaged in every task in his plans. However, he felt that once he had ensured students' involvement with each task, then the needs of students would have been served. In the rest of his planning (which he seemed to consider his main job), he wanted to create the perfect lesson plan. He perceived planning as the phase of teaching in which a teacher could reflect his professionalism and his qualities as a technician (Şemsettin, 18.4.2005). The way he planned each task and sequenced them one after the other had implicit messages for the students. Sometimes, even the way he designed the layout of the materials was related to the topic of the theme. By being so perfectionist and well calculating about the plans, he seemed to satisfy his needs as a professional. He did not expect all these intriguing features to be discovered by all students and did not seem to be disturbed by this at all. However, he thought that some of the students would see more of his plans than the others. At this point there appears an important characteristic of Şemsettin' planning: He took a certain degree of variation among students' understanding for granted. Some students would get more of the messages, while some others would suffice with the superficial meaning.

He also designed tasks in which he permitted a lot of latitude and variation among student output. The only criterion for him to consider a student's work acceptable was his/her ability to justify the work. Therefore, Şemsettin did not go into the classroom with pre-fabricated answers in his mind that he would consider correct. The same degree of latitude was also available in the choice of medium for expressing thought. He planned to give students alternatives so that they could freely express their ideas. Verbal options (writing an acrostic, or sentences) as well as non-verbal options (drawing pictures using or without using colorful pencils) were presented to students without favoring one over the

other most of the time. He did not expect uniformity in the students' products, nor did he consider it as a sign of the success of his instruction. On the contrary, he regarded variety in output as a desirable target.

In relation to this, the amount of challenge that he posed for each student differed according to the potential of the student.

Before Zehra entered the classroom, she also aimed to make the perfect plan but her sense of perfection involved anticipating the possible difficulties that students could encounter and thinking of remedies for these difficulties as well as preparing a coherent lesson plan. With regard to her expectations from students, she was not as flexible as Şemsettin. Even for the tasks that required more open-ended responses that could change from one student to another, she wanted to have some possible answers in mind. Her expectation was that students would come up with one of these answers or the other. In her mind, the likelihood of acceptable answers other than those she could envision was very small. Despite the fact that she did not enter the classroom with a totally closed mind to different responses, she found it safer to limit the answers to some extent.

Another noteworthy aspect of Zehra's consideration of her students at this stage was that she kept her expectations almost the same for all students. Since she had the correct answers in her mind, she was prepared to find ways of eliciting them from students with different levels of ability. Therefore, in her planning, precision was an important quality to be observed. In fact, to achieve this precision, she had a clear vision of students in her mind while planning her lessons, which enabled her to design realistic lessons. Related to this, challenge for all was inherent in her thinking for planning.

Ayşe's coping with student factor in her planning differed significantly from the other participating teachers. As a direct result of her tendency to conform to the tasks in the course book and follow prescribed procedures, her priority was not her students; instead, she was absorbed by the thought of not failing to do the right thing in class. However, in a general sense, she felt that the texts and the tasks accompanying them were below the level of the average

student. Therefore, she did not anticipate much difficulty for students that she had to take into account ahead of time.

4.2.9 Summary of Planning

When the research was conducted in each of the settings, the operating curriculum was the same for all. However, despite their similar concerns at certain points, Şemsettin, Zehra and Ayşe showed some remarkable differences in their planning processes. Table 4.1 summarizes these three teachers' planning processes. Although it is not possible to detect the exact sources of differences among teachers within the scope a study like this, depending on their own comments, their overall training as well as their training for the new curriculum (both pre-service and in-service) seemed to play a role on the emergence of variation in their planning. Also important was the context in which they planned their lessons and how they understood the purpose of education in general. With a multitude of reasons including these and others, the potential of the plans to accommodate instances of critical thinking instruction and the ways of teachers to create this potential seems to be different.

Table 4.1

Summary of data on teachers' integration of critical thinking into planning stage

Integration of Critical Thinking Into Teachers' Planning Stage	
Autonomy	
Şemsettin	Has an idea of teacher as a powerful decision-maker. Has a school environment that supports his autonomy and creativity. Has a wide discretion at material selection.
Zehra	Has a powerful sense of autonomy. Does not have a very supportive school environment of her autonomy in material selection. Has sense of autonomy in task design/selection and implementation.
Ayşe	Feels insecure about planning and does not have sense of autonomy. Feels that parental and school involvement in her decision making process for planning is inadequate. Has a perceived feeling of limitation in planning.
Methodological Stance	
Şemsettin	Adheres to an array of methodologies. Determines the methodology based on the nature of the knowledge he aims to teach. Feels free from affiliation with certain methodologies.

Table 4.1 (continued)

Zehra	Adheres to multiple intelligences while writing her lesson plans. Does not vary the tasks much for specific intelligences. Places the emphasis on logical and linguistic intelligence. Depends on induction.
Ayşe	Teaches in a methodological turmoil. Is in a clash of traditional expository teaching and learner-centered methodology
Relevance	
Şemsettin	Establishes relationship between his life and the topic he is teaching. Obtains inspiration from his life outside the classroom. Considers relevance for both for students' and his life while planning the lessons.
Zehra	Makes efforts to finding relevant examples to students' lives. Makes efforts to be familiar with students' lives outside the classroom to be control.
Ayşe	Does not consider the relevance of the lessons to students specifically.
Texts	
Şemsettin	Writes his own texts as well as using those in the course book. Aims to compensate for the lack of direct experience in the course book texts by writing his own texts. Uses texts as a means of raising significant questions about life and human condition. Exposes students to challenging linguistic structures to puzzle them and raise their awareness of language.
Zehra	Considers the texts in the course book as a means of teaching reading skills.
Ayşe	Uses the texts in the course book despite her belief in their lacking the quality to raise interest in students to read.
Interdisciplinary Connections	
Şemsettin	Perceive making interdisciplinary connections as recalling information related to the topic from other subject areas
Zehra	
Ayşe	
Reading Approach	
a. Pre-Reading Stage	
Şemsettin	Designs the course mainly around the reading skill. Perceives reading as a process made up of pre-reading/ while-reading/ post-reading stages. Places the emphasis on the planning of pre-reading stage. Designs prediction tasks to activate students' schemata about the topic. Addresses students' creativity in this stage.
Zehra	Designs the course mainly around the reading skill. Perceives reading as a process made up of pre-reading/ while-reading/ post-reading stages. Uses a lot of visuals to activate schemata. Plans question-answer sequences carefully. Designs this stage as an interactive stage.
Ayşe	Designs the course mainly around the reading skill. Perceives reading as a process made up of pre-reading/ while-reading/ post-reading stages. Employs prediction task.
b. While and Post Reading Stages	
Şemsettin	Handles reading as an interactive process. Plans the questions to be posed in this stage roughly.

Table 4.1 (continued)

Zehra	Anticipates the problems students could encounter and plans remedies. Avoids redundancy in questions and carefully chooses the questions to be posed
Ayşe	Does not write her own questions or selects among the options follows the questions in the course book.
Writing Approach	
Şemsettin	Aims to set a role model as a writer for students by writing his own texts. Uses writing tasks in the post-reading stage to expand on the topic of the reading texts. Allows students to choose between expressing themselves by drawing pictures and writing.
Zehra	Uses writing tasks in the post-reading stage to have students practice the new words in their writings.
Ayşe	Uses writing in the post-reading stage in sentence completion form to practice grammar or to have students to write texts like letters.
Perception of Students	
Şemsettin	Considers active engagement of each student in every task as a primary objective. Aims to send implicit messages to the students through the organization of the lesson as well as the content to be covered. Takes the differences in students' perceptions for granted. Permits variation among students' output. Does not plan pre-fabricated answers for his questions or have expectations for specific answers from students.
Zehra	Anticipates the difficulties that students could encounter and thinks of remedies for them in her planning. Enters the classroom with a set of expected answers from students for the questions she plans to ask. Does not vary her expectations from students with different levels of ability. Plans to pose challenge to students.
Ayşe	Prioritizes covering the content. Does not make an effort for preparing challenging tasks.

On the other hand, another concern about their planning process should be the extent to which the teachers' initial thoughts about their lessons mirrored their actual lessons. The static nature of the plans (despite their efforts to consider the students in the process) may not always predict the realities in the classroom once the static turns into dynamic as a result of interaction with final recipients, the students. Then, the next part of this chapter will discover the realities embedded in the classrooms of these three teachers as their plans came into contact with their students.

4.3 Integration of Critical Thinking Into Teaching and Learning Process

To answer this research question, the observations carried out in the classrooms of the three participating teachers stand as the primary data

collection tool. In addition to this, the interviews made with the teachers after the observed lessons and both the interviews made with the selected students and the logs written by them in response to the questions prepared by the researcher related to the observed lessons were employed while analyzing and interpreting the observed lessons. The interpretation of the data collected to seek answers for this research question will be represented in a comparative fashion as was done with the first research question. While answering the first research question, broad sub-headings were formed so that different aspects that emerged in each of the three cases could be represented in a comparative mode. Here, in implementation, however, as there were more marked differences among the teachers than there emerged in the planning stage, more specific sub-headings, representing the emerging themes from the analysis of data, were formed. Therefore, in this part, while the reader will find a comparative analysis of the three teachers under some sub-headings, they will find analysis concerning only one or two teachers under some other sub-headings. However, the meaning and implications of presence or lack of any aspect in the classes of these three teachers will be discussed in the next chapter.

The discussion of implementation will begin with a description of the classroom climates of the participating teachers as this is a factor that sets the background of all other aspects of implementation that will be discussed later under different headings. Furthermore, research has shown that classroom climate has a stronger influence on the development of critical thinking skills more than it has on learning in general (Orr and Klein, 1991).

4.3.1 Classroom Climate and Management

In Şemsettin's class, a certain level of noise was the norm. Students sat in three rows, each sharing a desk with another student. The seating arrangement was changed by the teacher twice in the semester. By changing the places of the students, Şemsettin's purpose was not to prevent or lessen the chats between the students; he wanted them to learn how to communicate with different students in the class. When students were sharing their answers, products or research

findings with the class, the noise level reached to disturbing levels, which made it difficult to understand what the speaker was saying. Şemsettin expressed his discomfort with the situation in the interviews. For him, the noise while students were working individually did not constitute a problem, whereas students' not listening to each other while one of them was speaking was a serious problem. To alleviate this problem to a certain extent, he resorted to the fishbone graphic organizer in which the teacher drew a fishbone on the blackboard and for each bone the students named one cause of the noise in the classroom. After all the causes were listed on the fishbone, they were entitled to finding remedies for each so that the level of noise in the room could be reduced. This cause-analysis was effectively carried out; however, as Şemsettin evaluated later, it made little contribution to attaining a quieter class atmosphere. Şemsettin attributed the failure of this method to the formation of students' classroom behavior long before they came to their new school. Coming from many different classrooms with diverse schooling histories, students were not much familiar with the classroom management methods employed by their new teacher. Therefore, Şemsettin decided to tolerate the noise, sometimes warning them mildly (Şemsettin, 21.04.2005).

In his class, teacher's permission was not required to leave the classroom when need arose. Students also had discretion at using their space and arranging their belongings (desk tops, books, bags). Students were allowed to leave their desks to approach the teacher to ask him a question or to share something. Similarly, Şemsettin used a larger space compared to the other teachers by moving among the desks as he was listening to them or monitoring their work or by sitting in their desks while reading a story to them. Physical contact between the teacher and the students was present. For example, while listening to a student, Şemsettin touched the shoulder of the student in the lessons or students wrapped their arms around his waist in the breaks as they were discussing an issue with him. However, this was not very frequent.

There also happened many occasions proving that the students were not afraid of the teacher and they felt close enough to share many things, including

their undesirable behaviors, with him. The following event sets a good example for this trust: In a break, a group of students wanted to find out what kind of information they could find about their names on the internet. When their small search took them to improper websites, they felt embarrassed and stopped the search. Later, as soon as the teacher entered the classroom, they shared with the teacher their experience with the internet in the previous break. The teacher thanked them for informing him about it and they briefly talked about the ways of using the internet effectively. The teacher seemed to have built confidence in his students by responding all kinds of behavior and event patiently without creating a crisis over it.

While managing the classroom, Şemsettin also modeled his students how to be autonomous in decision making and expected them to solve their problems in the classroom among each other without resorting to authority. Most of the time the students got along well with each other. When a problem emerged, he got them to solve it without informing their parents or the school administration. Never in the whole semester did he threaten a student to talk to his/her parents. When a student broke the mouse of the computer with some other students from a different class, Şemsettin put the student in his class in charge of collecting the money to buy a new mouse without talking to the students in the other classroom who got involved in the event himself, making it clear to his own student that the mouse being their own, it was his responsibility to keep it safe.

Whenever students questioned his decisions (the lack of homework assignments or the use of handwriting), which he found to be quite acceptable, Şemsettin justified his decisions by sharing his reasons with them. He did not hesitate to inform them about his pedagogical concerns by eliminating the jargon and simplifying his language. Similarly, if he received a phone call during the lesson (mostly about school affairs), he explained them briefly what the call was about.

To criticize a student for a wrongdoing, he made humorous remarks and conveyed his messages rather implicitly. As was revealed by interviews with the students, they did not have difficulty grasping the message directed to them in an

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indirect fashion. On the other hand, sometimes he chose to be quite direct while criticizing a behavior, which was again taken positively by his students.

Another outstanding aspect of Şemsettin's overall classroom climate was his eagerness to involve students in decision making processes about the issues concerning the whole class. When new lockers were brought to the classroom, he started a classroom discussion in which students shared their opinion of how to rearrange the classroom so that the use of space could be optimized. As different suggestions were made, the teacher reminded them the drawbacks of each solution. As Şemsettin later explained in the interview, he was genuinely interested in the solutions that were proposed by the students as he expected to hear at least one or two solutions that could well be worth considering. Furthermore, he believed that "...as educated individuals, they were meant to have some opinion about the changes affecting their immediate environment and take responsibility..." (Şemsettin, 12.05.2005). This was parallel to Şemsettin's perception of the purpose of education as preparing students to become individuals to make informed decisions.

The atmosphere prevailing in Zehra's class was at variance with that in Şemsettin's in several ways. First, in this class, only one student sat at each desk of the three rows, giving the teacher the opportunity to establish control over the class with relative ease. Next, Zehra believed that students of this age were still children and they needed a highly structured environment to be able to concentrate and be intellectually productive as she frequently referred to in the interviews as one of the tenets of her teaching approach. Therefore, she controlled their physical environment rigidly, particularly at the start of the lessons and she checked the way they sat at their desk and the way they used their desktop several times throughout the lessons. She also monitored each student closely in the lessons and as soon as she noticed that the attention of one of them was drifting to something else than the point the class was working on, she warned him/her to pay attention to the lesson.

While managing the problems that were due to a student's inappropriate behavior, she was not reluctant to involve the student's parents by writing a note

in student's notebook. However, she did not resort to any authority other than herself in the school while working towards the solution of a problem in the classroom.

The structure that Zehra wanted to flourish in her class was not only in the physical environment but also in the way communication was maintained. Noise was intolerable and she constructed such a tradition in the class that even a momentary overlap between the speeches of two students was a rare incident.

Just as Şemsettin did, Zehra presented justification for her decisions whether they were questioned by the students or not. In fact, Zehra did not leave much room for her decisions to be questioned as she, at the start of each lesson or at the start of each new stage of the lesson, provided students with explanations concerning the aims of the tasks. Every action of hers had a purpose which she took seriously and she conveyed the same message to her students. To exemplify, homework check, a relatively mechanic procedure in a different class, was one to which both Zehra and the students attached importance. Zehra checked students' homework by moving from one desk to another and putting her signature on students' notebooks as would typically be done by any teacher. However, homework check did not simply mean seeing whether it had been done or not but it meant reading the content and having an overall idea of what the answers were like, what difficulties students had encountered or what they misunderstood about the homework.

When she gave individual feedback to students to change a specific behavior, such as talking too fast or writing illegibly, she gave reasons to persuade the students to see the fault in their behaviors and when doing this she always based her comments on objective criteria. For example, she listed the descriptors of good handwriting first and then showed the student what was missing in his handwriting.

In the interviews, Ayşe mentioned classroom management as the biggest challenge she faced in her teaching. The seating arrangement of her class was similar to that of Şemsettin and noise was a problem in her class, too. The lessons were disrupted by outside factors, such as the noise in the corridors,

students coming for announcements of events to be held in the school or asking for items such as a piece of chalk or a book for another teacher. Inside the class, noise was persistent due to students' talking to others around them. Ayşe intervened to reduce the noise by shouting angrily, thus causing it to stop temporarily.

Unlike the other two teachers, Ayşe referred to outside authority in managing the problems. When it became harder for her to deal with a student, she threatened him/her to send to the assistant principal's office or one of the male fourth grade teachers in the school. A striking example of the teacher's calling for help from outside took place in the management of crisis when one of the students started to steal things from other students in the classroom. The teacher had hard times identifying the student doing this. To stop the student from continuing to do this, the religion culture teacher came to the class and made a long speech discussing the consequences of having a guilty conscious and preaching the students the benefits of staying away from committing sins. However, this incident stayed as an isolated extreme case during the whole semester, not succeeded by other similar events.

The teacher punished the students when they failed to do the homework or disturbed other students in the class using the same means repetitively such as having them write the school and classroom rules on their notebooks.

4.3.2 Teachers' Perception of Their Realm of Influence

In Zehra's class, family as an institution had immunity in the discussions. In many instances, she meticulously withdrew herself from touching upon issues related to family. Nevertheless, as family occupied a significant place in students' lives, they were inclined to bringing up issues concerning family. Provided that these did not incorporate controversies, she allowed them to refer to their families. In such cases, one of the family members was cited as the source of some information or some opinion. When students gave examples about their families while clarifying concepts, Zehra also allowed them to do so. However, the line between the family and the school became apparent when

students wanted to discuss the issues that emerged in their families. A noteworthy example to this happened in one of the lessons when the class was discussing democracy. The teacher asked the following Socratic question to start a class discussion: "Is democracy always a good system? Are there any drawbacks of democracy?" This question came at the end of a lesson about the merits of democracy and what it changed in the country. The teacher in one respect played devil's advocate and aimed to have them see an issue from a different perspective. As the discussion continued, they came to a point where they decided that democracy did not have drawbacks by and on its own but it had when it did not function properly. To clarify this, some of the students referred to the attitude of some adults they met in various contexts, such as shops, and mass transport vehicles and some mentioned the relationships in their families between adults and children. These comments received a lot of attention from the rest of class and students enthusiastically raised their hands to speak. They claimed that under the disguise of being democratic, adults sometimes treated them unfairly and that they were criticized or silenced when they straightforwardly expressed their opinions in family discussions. In the decision making process, they reported that everyone's, including grandparents, opinions were valued but they did not have a say. They also criticized parents for being inconsistent from time to time although they were the decision makers in many situations that also affected them (about the times to play computer games or study lessons). All this piled up to their annoyance with the lack of democracy in their lives although their parents pretended that there was a democratic environment at home.

This was obviously not an easy situation to deal with for the teacher considering the fact that she avoided interfering with family matters. Therefore, she prematurely stopped this session of stating the problem before it developed into a discussion in which the problem was analyzed by taking into consideration the assumptions and premises of the parties involved that shaped their actions. She said that this was not supposed to be a "complaining about the parents" lesson, which frustrated the students (Zehra's students, 26.10.2005).

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Zehra concluded by settling the problem in a manner that oversimplified it and said that by talking with their parents and adults just like they did in the class, they would get them to understand their problem. She wanted to proceed by dealing with the same topic in a more distant context and asked students what they thought about the way some members of the parliament used their democratic right of speaking in the parliament sessions by making rude remarks and sometimes fighting each other. This, however, did not arouse much student comment. Later in the interviews, one of the students who actively participated in the lesson, expressed his opinion by saying:

> Sometimes we really suffer in the society as we are considered as only children who don't know much. Complaining about parents is wrong but the same happens in many places. When we are buying something in the market or waiting in a queue. We don't have as many rights as the grown-ups have (Zehra's students, 26.10.2005).

In fact, students' sensitivity to the issue became more obvious in the break as they continued talking and sharing with each other.

On the teacher's front, as was revealed by the interview conducted in the following week, there were different concerns that interacted to the termination of the session too early. Firstly, Zehra was also aware of the need her students felt about talking about this topic. She was glad to have asked a good question that raised so many issues. As for the reason why she avoided starting a discussion in which they could have analyzed the matter deeply, she referred to her principle of not interfering with family affairs. This brought an important principle of Zehra to the surface. To her, there existed a territory where she thought she was more potent than anyone else, including the school administration and parents. In the decisions she made in the classroom she felt completely independent of all kinds of pressure. In return, she did not consider herself in a rightful position to get involved in family affairs. What happened in the family was parents' concern unless it had an undesirable effect on the students' being in the school (Zehra, 9.11.2005). Therefore, though not stated in explicit terms, she expected her students to exist in these two contexts (family and school) with separate identities. However, there were limits to this approach.

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When students' intellectual interests were concerned, she was willing to have them bring it into the classroom.

Consistent with this approach, in the selection of topics from the course book, she made a preference in favor of those that did not bear a relationship with students' life outside the school. To illustrate, when they were studying the concept of leadership, the book presented two alternative topics through which the attributes of a leader would be determined. One of the alternatives required hypothetical thinking as it entailed students' assuming the role of Mustafa Kemal in the war of independence and list the courses of action they would take in order to deal with the scarcities of the time. The second option, on the other hand, was about describing a situation in which their family solved a problem together by taking a series of actions. Here, the teacher's choice was to have the students work on the former topic. Again, she attributed this decision to her considerations about the consequences of discussing issues related to family in class. She regarded this topic as a delicate one and did not favor it as an appropriate one. However, after the lesson the class shared their answers to the question about the war of independence, Zehra admitted the unrealistic challenge she posed to them by asking them to work out solutions well beyond their capacity considering the circumstances afflicted with war.

The sensitivity developed by Zehra towards non-academic issues was reflected in some other domains as well. Obviously, she considered some aspects of life to be totally irrelevant to the lessons, if not inappropriate for the students, thus expressing her displeasure whenever they came up, even at times they were relevant to the topic at hand. When the teacher asked students who knew an architect, they gave answers such as, "my mother," "my aunt," "one of my father's friends," "our neighbor," all of which were approved by the teacher with a nod. When a student said "my uncle's girlfriend," the teacher replied "We'd rather not invade people's privacy." In another exemplary case, when they were thinking of examples for idiomatic use of metaphors, the teacher asked them to work out the meaning of one that meant to fall in love. When a student gave the correct answer, she rectified the student's already correct answer by making use

of euphemism in order to avoid using the word "love." A similar attitude was prevalent about student generated examples (relevant to the situation) involving alcohol or death. Zehra's close watch of students' words and limiting them as was depicted with some examples here conveyed messages about her assumptions about basic concepts of life and relationships.

She was also critical of the students' word choice when they expressed their sincere feelings about Atatürk's voice on a recording of his address to the nation. Instead of discussing the reasons why his voice could be perceived as weird on this recording, she reprimanded the student for making such a comment.

All in all, Zehra had some taboo topics that she did not want to have a place in her lessons no matter how well meaning they were for the students. Her explanation for her withdrawal from the mention of these aspects of life, let alone their handling in discussions, was that students were not mature enough to deal with them and that they could always come up with different examples excluding those that were not really appropriate for them. By choosing this route, Zehra seemed to ignore the fact that students were already mature enough to make comments or give examples incorporating aspects of life that she considered to be inappropriate for them.

Zehra was not alone in her consideration of some topics to be sensitive but both the extent of the topics she considered as sensitive and her treatment of such topics differed from that of the other participating teachers. Şemsettin, parallel to his general inclination towards creating a liberal atmosphere in his class, did not give much room for similar experiences. Still, an exceptional situation occurred when a student implied a disfavor towards a group of people based on their ethnicity. The student said that it would not be a good idea for the teacher to go to a particular town because of its ethnical composition. Quick to discern the bias involved in the student's statement (Şemsettin, 2.5.2005), Şemsettin reminded that the boy's mother also came from the town in question. Then, he asked the student if it would be right to draw the conclusion that his mother's ethnic origin was the same as the people for whom he displayed an

implicit disfavor. The boy gave a negative answer and the dialogue came to its end.

This dialogue was noteworthy in that the teacher did not want the boy to maintain a biased attitude towards people on the basis of their ethnic origin as he later disclosed in the interview. However, as he later explained, Şemsettin found the way he dealt with the problem weak and inadequate as he did not focus on the source of the problem (student's misconception). In fact, Şemsettin's reasoning while handling the issue can even be said to have contributed to the retention of the bias by that particular student and even to its spread to the other students lending an ear to this dialogue at the moment since what Şemsettin's argument ultimately proved was that the boy's mother coming from the same town as the ethnic minority which the boy disfavored did not require his mother to be of the same origin. What Şemsettin unintentionally did here was to construct an argument that could well lead the student(s) to the conclusion that people cannot be labelled with the same ethnicity merely because of the place they come from. Then, the least that he caused was to assure that it was acceptable to label people based on their ethnicities unless the ethnicity of a specific group of people was not generalized to all the people living in a particular place. By doing so, the reason why the teacher should not go to the town, which initiated the discussion, remained to be explored.

Şemsettin attributed his not taking a confrontational attitude towards the bias embedded in the student's remark to his unwillingness to discuss such sensitive issues in class. Although he saw it as part of his duties as a teacher to get his students to think about significant issues about life (Şemsettin, 14.04.2006), this issue emerged as one he preferred to be cautious about. Still, compared to those of Zehra, Şemsettin's taboos for classroom discussion appeared to be fewer. As for the treatment of inconveniences that were caused by students' trespassing on the topics considered illegitimate for the teachers, another difference between Zehra and Şemsettin was that Şemsettin employed pretending not to hear as a strategy to cope with such situations, whereas Zehra

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always chose to be in control of what was going on in the class by making some comment over all types of student responses.

4.3.3 Metacognition

In Alvino' s "Glossary of Thinking Skills Terms" (1990), the entry for metaconition reads "the process of planning, assessing, and monitoring one's own thinking; the pinnacle of mental functioning" (p.53).

In Zehra's class, a poster hanging over the blackboard could catch the eyes of anyone who walked into the class for the first time with an interest in critical thinking. The most conspicuous elements on the poster were the six hats, each with a different color (white, red, black, yellow, green, blue). Under each hat was a paragraph explaining what the hat represented. Briefly, it read that the white hat represented the thinking focusing on data available, red on intuitive thinking, black thinking about the bad points of the issue at hand, yellow positive thinking, green creative thinking, and blue thinking about the process to control it. In fact, the idea of six thinking hats is the contribution of De Bono to critical thinking literature with which he aimed to foster metacognition. Zehra referred to this poster from time to time for a variety of reasons. One occasion where the poster was most effectively used was in a post reading task. Having read a text on the causes of environmental degradation and deforestation, Zehra wanted students to put on the green hat and think creatively to find solutions to the problem of deforestation. There were no restrictions on the solutions they would come up with, so they were allowed to use their imagination. In other situations in which Zehra made a reference to the six thinking hats it was to tell students how to think. "Wear the yellow hat and think positive" was a common instruction she gave. As the term proceeded, Zehra used only the yellow hat at times when students felt pessimistic about a matter.

Another outstanding characteristic of Zehra's class when metacognition was concerned was students' familiarity with such terms as concept map or brainstorming. When Zehra set them on a task, they would ask the teacher if what they were doing was brainstorming or not.

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She regularly guided students' thinking process and checked their awareness of their learning with her feedback. For example, before they got started to doing something, e.g. drawing a picture, she asked them what their plans were about their drawings or what kind of pictures they were visualizing. She wanted them to form the habit of planning their actions before getting started. Sometimes, she asked each student in the class what he/she would do before the student started doing something. Similarly, at the end of any substantial segment of teaching she asked students to verbalize what they had learnt. In such moments, contrary to what she would normally do, she did not intervene when students said similar things as she did not see this as redundancy. In the interviews, she explained her willingness to hear from each and every student his/her gains out of the lesson as follows:

> When they articulate what they have learned in their own words and hear others' expression of what they have learned, they gradually develop an idea about how to learn or what to learn from a lesson. It is as if when they know what they have learned, their learning is more real. Sometimes, when I ask them what the benefit of knowing what they have just learned would be for them, some of the students, sometimes the ones that you would least expect, share such interesting things that had never crossed your mind that you derive a real sense of satisfaction (Zehra, 5.12.2005).

As this excerpt from an interview with Zehra reveals, the metacognitive tasks did not only benefit the students but also the teacher. As Zehra stated here, students came up with such different gains from the same lesson or task that it always proved to be interesting to listen to what the students had to say in these sessions. Sometimes the correction of a misconception, sometimes the confirmation of a prediction, at some other times an association made with student's daily life that contributed to their understanding of something better were all listed as the gains from a lesson. Even when they referred to the same aspect of the lesson, the way they expressed their thoughts differed so significantly that listening to these metacognitive feedback served to function as reminder of the nature of knowledge, that it is personal, differing from one individual to another.

When tasks that caused some confusion or difficulty were completed, Zehra made a situation analysis in which she asked students to evaluate their performance. To do that, Zehra simply asked them if they had much difficulty or not while doing the task and the answers came in the form of "yes" or "no" without reaching the root of the problem.

An important quality of Zehra's metacognitive feedback was her tailoring the feedback according to the needs of the student. While Ayşe did not vary her feedback from one student to another and repeated the same ideas over and over such as "Think well" or "If you start talking before planning what you will say, you get stuck like this," Zehra watched her students closely and detected their individual problems and intervened to give feedback specific to the situation. She identified those who were impatient while drawing conclusions, those who were lost in their inner world with their excessive use of their imagination or those who habitually objected to opinions of their classmates as soon as they heard it. Furthermore, when a student had a difficulty in grasping a concept, she checked each phase of the student's thinking by asking questions to the student and, by doing so, identified where the problem occurred and helped the student overcome the difficulty. When they spent too much time on a difficulty, creating a sense of failure, she shifted the focus and set them on task again with a different approach and told them to do so whenever they felt that they were stuck in a dead end.

Zehra also shared her reasons for making a choice in favor of a teaching method with her students. For example, when they were learning constructive suffixes, the teacher explained them that she had two choices before her to teach them these suffixes: One was giving them the list of the suffixes that fell in this category and having them memorize all the suffixes on the list so that they could easily identify a word with a suffix in this category at first sight and the other was having them understand the very idea at the core of constructive suffixes and empowering them to decide for themselves whether a Turkish word given to them had a constructive suffix or not by asking a few questions to themselves to test the word. When students enthusiastically made their choice in favor of the

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latter, Zehra was not convinced. She asked them to list the advantages of learning constructive suffixes with the second method over those that they would benefit with the former. Only after students explained why learning the concept of constructive suffixes would be more beneficial than memorizing all these suffixes was Zehra convinced with the reliability of their choice against memorization.

At this point it would be useful to compare the situation in Zehra's class with that in Şemsettin's. In his class, rote memorization was condemned both by the teacher and the students. In many situations, Şemsettin referred to the shortcomings of memorization as a mode of learning in very broad terms and students agreed. However, there did not take place any specific case where students had a chance to see the merits of understanding concepts instead of memorizing them as happened in Zehra's class in the incident cited above. Therefore, the attitude against memorization did not go beyond being a cliché. Şemsettin was carried away by this cliché too. He associated teaching any grammar subject explicitly with memorization. Although he knew that first defining the concept of "adjective," for example, and having students learn this concept by heart was to be named memorization, he did not exhibit any alternative way of teaching a concept that could replace memorization in his lessons. Only when teaching descriptive discourse, he showed efforts to have them experience the discourse first hand by writing the students descriptive essays or essays in which description was employed at some point himself and implicitly raising their awareness of this discourse and then having them write sentences in which they had to use descriptive discourse without knowing that they were doing so. He achieved this by creating the context in which they were made to use this discourse, e.g. by setting a writing task in which they were instructed to describe the sea to a person who had not seen it before in writing. However, once they wrote it in descriptive discourse, he did not let students know that what they wrote was a descriptive paragraph. When the purpose of his skipping this step (labeling the product with the target concept) was asked, Şemsettin stated that they did not need to know the label to say that they have

learned it, claiming that learning the label (Turkish equivalent of descriptive "betimleme" is not a high frequency word in the language) would confuse their minds. Furthermore, unlike what Zehra did, Şemsettin did not raise students' awareness of his instructional choice. He did not let them know that the way he introduced the concept was an alternative to memorization, which would require them to learn how to define the concept first and then study the uses of it on paper without experiencing it. Therefore, Şemsettin can be said to have used constructivist instructional methodologies to ease his students' academic lives without letting them see how this mode of instruction facilitated their learning.

4.3.4. Creating a Common Frame of References

In Zehra's class, as the term proceeded and as more and more texts were read and concepts were added to students' repertoire, both students and the teacher started to refer to the common knowledge that had accumulated until then to understand and explain the world/events surrounding them. For example, when the teacher wanted a student not to use gestures that conveyed a different message than what she had intended to pass verbally, she referred her back to the text, the main idea of which emphasized the importance of using the culturally agreed upon language of the body in a way that was consistent with the verbal message to avoid conveying false messages and disrupting communication. Whenever the teacher addressed to this common knowledge, she achieved to be understood by the target student and this kind of feedback was also exchanged between students. In the same manner, students showed a growing tendency towards becoming aware of the language they used by analyzing it using the linguistic tools they had learnt. After they studied metaphoric use of the language, they acknowledged metaphors both in their own and others' speech and shared it with their classmates. Once the meaning of the word "genius" was negotiated in a heated class discussion and an agreed upon definition was set, they referred to that definition when using the word in a later discussion. Creating a common frame of reference which became richer as they learned more, the quality of the language used by students improved and both the

teacher and the students got more cautious while choosing the right word to describe a situation since the students became more sensitive to the accurate and precise use of the words. In this class, each piece of knowledge learnt became a part of classroom life and language instead of being forgotten.

In Şemsettin's and Ayşe's lessons, on the other hand, reference to previously covered material was not as frequent as in Zehra's lessons. The content of the texts in these classes was not referred to by students unless it was reminded by the teachers.

4.3.5. Challenge

Teachers' observance of standards of thought such as clarity, accuracy, precision, and relevance as were identified by Paul et al. (1990) in their students' answers seemed to have an effect on the challenges they posed to their students.

Zehra's concentration on standards of thought, although she did not name it exactly like this, was unique to her since neither Şemsettin nor Ayşe made an effort as vigorously as Zehra to seek the fulfillment of these standards in their students' answers. Therefore, it would not be far from the truth to state that they did not pose much challenge to their students by applying criteria to their thoughts.

Zehra posed challenge to her students in a variety of forms. One of this was her demand from her students to improve their answers in a way that corresponded to meeting Paul's standards of thought. Paul discriminated nine standards, when pursued, would help the thinker to enhance the quality of his/her thoughts. Of these nine standards (clarity, accuracy, precision, relevance, depth, breadth, logic, significance, fairness), Zehra consistently made efforts to have her students improve their thinking particularly in clarity, accuracy, precision and relevance.

Clarity: Of these four standards, Zehra can be said to have focused on clarity and relevance more than the others and considered these two standards as the cornerstones of her teaching. The following excerpt from an interview

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reveals the importance that Zehra attached to the standard of clarity and her reasons for this:

> One thing I am sure of is that if you don't push a student to express himself better, he gets used to speaking in a way that makes you put forth efforts in order to understand him. Once this pattern sets in, then it becomes the teacher's duty to interpret what the student has said and once the teacher takes over the task of interpreting the students' answers, it becomes more and more difficult to see whether what the student has originally said was true or was it you who recreated the answer in a way that has become the correct answer (Zehra, 5.12.2005)

As can be seen in her statement, although Zehra does not use the same terminology as Paul used, she referred to the idea of clarity in her own words. The connection between them can be better traced when the questions that Paul recommended for teachers to use in order to enhance their students' thinking in terms of clarity and some of the questions that Zehra directed to her students are compared directly.

Paul et al. (1990) suggested the use of such questions as "Could you elaborate further?" "Could you give me an example?" "Could you illustrate what you mean?" for demanding clarification from students.

The following segment from a lesson that was conducted at a time closer to the beginning of the semester typifies her style. In this lesson, in a task involving the generation of a concept map for the characteristics of a leader on the blackboard with the contributions of the whole class, the following dialogue between Zehra and one of her weakest students took place:

> Student: A leader should be strong!
> Zehra: You mean physically?
> Student: Both ways
> Zehra: What is the second way?
>   ...(The student looks puzzled. Silence) ....
> Student: I don't know. (quietly)
> Zehra: You can't get away by saying you don't know. I can't accept "I don't know" as an answer.
> Student: ..(in fragments) In terms of his feelings.
> Zehra: That's better.   (Zehra, 2.11.2005)

In fact, in the interview while reflecting on this specific segment of the lesson, Zehra explained that the answer that came after her challenging the student to be more clear was not up to a level that would meet her criterion of a good answer. However, she attributed her ceasing the questioning at that point to her expectations from this particular student. The student's coming up with a better answer after the teacher's challenge was interpreted as a sign of improvement for that student by Zehra. She believed to have passed the message that unclear answers were not acceptable in her class and that it was a good start for that student. As Zehra had foreseen in this lesson, the student cited in this dialogue showed substantial improvement in the rest of the semester (Zehra, 26.12.2005).

Relevance: Zehra was also a keen pursuer of relevance in the lessons. She expected students to attend the lesson closely and not to lose the track of what was going on in the classroom. Answers or comments that were not directly related to the topic being discussed met with Zehra's reprimand. In cases where students went off topic while developing an idea, she warned them to turn to the topic no matter how interesting their answer was. In relation to this, redundancy in use of language was not tolerated either. This enhanced the quality of the lessons and kept students focused. When a student answered a question by paraphrasing another student's answer and thought that his answer was different from the previous answer, Zehra informed the student about the repetitive nature of his answer. As the term proceeded, her meticulous observation of students' answers proved to create a classroom atmosphere in which all the words were uttered with care.

However, her adherence to the standard of relevance sometimes caused her to lose the valuable opportunities that arose from students' curiosity about other significant aspects of the topic being discussed. One striking example to this came in a lesson when students were sharing their homework with class. As part of the routine, they took turns to read their answers for the questions. In relation to an answer, when the teacher reminded them their visit to Ataturk's

Mausoleum and asked them in which language information was available about the things on display, they shouted out "English!". Inspired by this, a student went off topic and posed the following question "Why do all the world speak English?". This question received considerable attention from the other students and at that time an unusual event happened in the class and the teacher had to leave the class for a few short minutes as she was called by someone from outside. In the meanwhile, students took turns to share what they knew about English being such a widespread language all over the world. The knowledge of some students about the issue and the examples they provided to explain their friends their points created a moment of enlightenment for the others. When the teacher entered the class, the discussion continued for a short moment and she disrupted this discussion by stating that she did not know much about this issue and they could learn more from their English teacher.

Later, observing the students in the break still discussing this issue despite the time lapse between this short sharing session and the break can be interpreted as a sign of their interest in the topic. On the other hand, in the interview with her, Zehra's comment about the student's raising this issue showed that she was also positive about the question but she did not agree with the timing of the question as they were in the middle of something else at the time and she also felt insecure as she did not know much about the topic. Her general tendency, as was evidenced in some other similar occasions, was for keeping the discussions under her control at the expense of losing worthwhile contributions of her students that sounded irrelevant to the topic at hand.

An important characteristic of Şemsettin's teaching that distinguished it from Zehra's in terms of relevance was his treatment of spontaneous off topic questions that came from his students and the issues they raised when the class was working on something else. He wanted to focus his students' attention on the lesson but he almost always prioritized their questions about the events surrounding them outside the school. For example, when a student inquired the truth of the speculations that some coins in circulation contained gold, he did not hesitate to divert attention from the lesson to deal with this question. Events of

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this nature were not a rarity in Şemsettin's class. His attention to such questions that originated from life outside the class held the potential of starting to discuss on significant issues deeply; however, instead of involving students' participation by having them reason to work out answers, Şemsettin provided them the answer or shared with them his point of view of the issue without challenging the students to think over the issue themselves. Therefore, his sensitivity towards questions coming from students and prioritizing them over the lesson caused the disruption of the processes without the compensation of this loss with the introduction of critical discussions into the classroom.

Precision: By the same token, Zehra was attentive to the precision of knowledge. When students came up with imprecise language, she asked them to be more specific. To illustrate, when a student was sharing his research finding about the olive production in a region of Turkey, he stated the amount of production as one million. Zehra asked the student to tell the class the unit of production and gave options to the student as one million olives, one million grams, kilograms or tons of olive. When she found out that this information was missing in the student's answer, she had the students reason together as to what the unit of production might be based on their knowledge of the world.

Accuracy: Her observance of accuracy could be exemplified in many segments of her lessons. In one striking example, Zehra spent a considerable amount of time for a student to notice her misconception of the word "side." The student's answer to a question about a line in a poem revealed that she understood the phrase "to be surrounded on four sides by trees" as "to be surrounded by four trees." To Zehra, misunderstandings like this were intolerable and she seized every opportunity to capture and correct them.

When Zehra's posing a challenge even to the weakest student of the class is taken into consideration, the differences between the atmospheres prevailing in these classrooms become clearer. Both Şemsettin and Ayşe referred to challenge as a type of threat to the students that could well lead them to feel

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alienated from the course and to withdraw themselves from sharing their answers with the rest of the class.

4.3.6 Reading Critically

In the planning stage, Şemsettin put a lot of effort to make his reading lessons more effective by writing his own texts and preparing pre-reading tasks that could activate students' schemata as was discussed in response to the first research question. When it came to the implementation of these plans in his actual practice, the picture of the class was as follows:

After the implementation of the pre-reading tasks, Şemsettin read the text aloud once before distributing the reading texts to the students. As he was reading the text, he paused with intervals to pose students questions. This contributed to students' listening to the text very carefully and whenever he asked a question, they enthusiastically raised their hands to answer. At this stage, the classroom was noisy; however, all the students were on task. Therefore, this was not like the kind of noise that Şemsettin perceived to be destructive to learning. In fact, he seemed to be pleased with the noise caused by students' active involvement in the lesson. At such times, Şemsettin would sit at a desk next to a student and read the text, creating a warm atmosphere in the classroom. The creation of such an atmosphere was a contributing factor to an active listening process. As Şemsettin was reading the text in this first exposure, although students were acting as listeners rather than readers, this could still help students develop an idea about how active reading should occur, that is, interacting with the text by asking and answering the questions.

However, Şemsettin would not make it explicit for his students that as they are reading texts they should also be asking questions to themselves and constantly keep their minds active. This deprived his reading training of its metacognitive aspect. This is also parallel to the discussion of Şemsettin's instruction under the title of metacognition of this chapter.

When the questions in this stage are considered, despite the fact that Şemsettin did not prepare them prior to the lesson but rather spontaneously

asked them, some of the questions drew parallels with those that were recommended for enhancing thinking in a reading classroom. To exemplify, he would ask them to think of solutions to a problem that the main character got stuck in before reading the solution in the text or when a major event took place in the story line, he would pause and ask them what the implications of this would be on different characters in the story and after eliciting answers from the students, he would proceed with the implications stated in the text. At times, he would ask them recall some knowledge from another subject matter. When viewed from the quality of the questions, dealing with reading in this manner can be regarded to be productive with its relevance to reading critically. On the other hand, when viewed from how the process was carried out, the effect of the questions was reduced as the answers given to them by the students were squeezed in relatively short periods of time. When Şemsettin posed a question, he quickly elicited answers. Knowing that they had little time to provide an answer as the teacher would continue reading the text after a while, students raised their hands as soon as they heard the question. Therefore, some of the answers were not really well-thought of even when they came from the better thinkers due to the short wait time. Furthermore, Şemsettin did not intend these question-answer cycles to be interactive in nature (Şemsettin, 26.5.2005). In the rush of the moment, students only focused on their answers, ignoring what the others had to say. Rarely were answers supported or refuted by others. As for Şemsettin, in this noisy atmosphere, he gave almost no feedback to the students unless an answer seriously contradicted the information in the text. An important opportunity that arose in these tasks was questioning students' assumptions underlying their answers since the same set of data evoked different reactions from different students. Asking questions to have them elaborate their answers or justify their answers would have served to bring these assumptions to the surface.

To relate this rather theoretical discussion of the process to the actual classroom practice, the following vignette might be useful:

Şemsettin:(reading the text)   "...The man stopped making fun of the situation and started to think how marshes could be used effectively." Well, what can be done in the marshes?
Student 1: A factory can be built
Student 2: A place for animals can be made

Şemsettin continued calling on different students without asking the second student why she thought that in a marsh a place for animals could have been made. If he had, he would have pinpointed the false premise upon which the girl had based her answer. The interview with this student revealed that the girl had thought that a marsh was a large green field where cattle could graze. Thus, she predicted that the people mentioned in the text could use it for animals. In fact, Şemsettin had described how a marsh would look like or smell like at the beginning of the text by saying ".....Once upon a time, there used to lie marshes along the beaches. Since people could not use this land for agriculture, these places were thought worthless. These marshes were such that there was mud all around it, clouded by flies and bugs of all kinds..." However, before being exposed to the definition of marsh in the text, this student had a false definition of marsh in her mind. She thought that a marsh was a large green field. When asked if she had heard the definition at the beginning of the text, she stated that she had heard it. However, her account of the situation revealed that she had falsely inferred that all the qualities mentioned in the text were peculiar to the marsh in the text, thus she concluded that the marshes in different regions could have been different. All this faulty line of reasoning had led her to the answer she gave.

By inquiring why the student gave such an answer, Şemsettin could have found out the source of the problem. However, he did not benefit this opportunity. His role was to choose the students to answer the question. The way he moved his finger from one student to another to point to the one who would be answering the question created a sense of urgency on the students. Şemsettin's interpretation of the process, when he was asked why he rushed the process was as follows:

I believe I spend enough time to meet my objectives. This is just the first time students hear the text and I help them listen to it actively. You can't see a student sleeping when I am asking questions as I am reading the text.This shows that the task is reaching the target (Şemsettin, 26.05.2005)

Then, his interpretation of the situation was consistent with his opinions about teaching reading.

However, another issue arose concerning Şemsettin's dealing with the questions in this stage in a relatively short period of time without giving feedback to students. As these turned out to be the only questions that Şemsettin would ask to the students about the text (no post-reading comprehension questions followed), how he dealt with the questions in this interactive session gained greater importance when considered from the point of view of effective reading instruction. In the later stages, with few references to the text, Şemsettin carried out post-reading tasks that had the students expand on an aspect of the text. Even for those questions, the answers of which depended on the text, thus requiring justification from the text, the teacher accepted prefabricated cliché answers which did not directly come from the text. This approach was observed to cause students to develop the habit of depending on their recall of the text and knowledge of the world while answering the questions instead of helping them to develop their close reading skills. Then, when the whole reading process is viewed together, the time actually allocated for the text seemed to be inadequate. In the way Şemsettin organized the class reading time, he seemed to fail to exploit the texts fully.

At this point, an outstanding lesson of Şemsettin deserves special attention as in this lesson he dealt with the actual reading stage more intensely than he would typically have done in his lessons as described above. In this lesson, Şemsettin brought an article from a newspaper for analysis in the class. The text was about an invention, sky cars. In her article, the writer's intention was to inform the reader about this futuristic vehicle. Therefore, the text could be labeled informative considering its discourse. The text was loaded with a lot of information about this vehicle. In addition to this, the writer also included the

critical comments of the experts about various aspects of the sky car. Although sky car is not the vehicle of our present time, the students were quite familiar with the idea of it from science fiction books and movies. Due to the presence of prior knowledge about the topic, they did not experience much difficulty with the terms used for describing the parts and functions of the sky car. In fact, in the interview, Şemsettin explained that he had chosen this article to study in the classroom according to the feedback he received from his students in a pre-reading task they did the week before. In this task, Şemsettin had wanted them to describe in pictures or writing what they understood from the concepts of change and development. Students' products showed that most of them associated change with technology. This gave the teacher the idea of bringing a text about technology to the class. Students' motivation while reading the text about sky cars can be attributed to the relevance of the topic, proving the appropriateness of Şemsettin's choice.

Still what distinguished this lesson from the others was Şemsettin's treatment of the text and the reading process that followed (Şemsettin, 26.5.2005). In the planning of the lesson, Şemsettin had prepared questions for interactive reading stage in a detailed fashion. Starting from the title till the last line of the text, he placed numbers at intervals on his copy of the text indicating the points he would pause while reading the text. At the bottom of the page, he listed sixteen questions, each corresponding to the enumerated points of pause (Appendix F). While reading the text aloud for the first time in the class, he paused at each number and asked one of these questions. Of the questions, there were those that aimed to have the students predict, make inferences, guess the meaning of the words from the context and discuss the implications of an event. The precision of the questions and their being written in the lesson plan reflected Şemsettin's careful analysis of the text. When asked to explain the source of the difference in his treatment of this text, Şemsettin explained:

> The idea of sky cars appealed to me...I first read the news because of my interest in the topic. When I was reading it, I realized that it lent itself to drawing questions. There was a lot of information; maybe that's why

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preparing questions from it was easy. As the text was already there, I only had to write the questions (Şemsettin, 26.05.2005).

The interactive process was also more intense. Each question was answered differently, almost all somewhat relevant to the context. Compared to the other lessons, in this one, Şemsettin gave more feedback to individual student answers.

Therefore, it is meaningful to discuss the sources of this remarkable difference in the quality of the reading process that emerged in this lesson to isolate the components that were responsible for this quality. Initially, different from the texts written by Şemsettin, the text coming from a newspaper was very rich in factual information. As the texts written by Şemsettin had a similar style, this text from a different source can be said to have created a novelty effect, which made it more appealing both for the teacher and the students. Compared to the other texts that had been studied so far (one from the course book and the others written by Şemsettin to be used in the classroom), this one was the only authentic text in that it targeted a real audience instead of students. Secondly, as Şemsettin was not the author of the text, he seemed to analyze the text more closely, stripping himself of the writer identity and wearing the reader's hat. As he had mentioned in the earlier interviews, creating the texts to be used in the lessons was a time consuming and challenging task for him though he found the process quite rewarding. In this particular case, as he diverted all his efforts from writing the text to writing the questions, the quality of the resultant questions was much better. In addition to this, as all the questions had been written on paper prior to the lesson, he was able to have more command on the interactive process, focusing more on the answers coming from the students.

Despite some common aspects of their planning, Şemsettin and Zehra differed significantly from each other in the way they handled reading process in their actual teaching practice.

As was discussed in her planning process, Zehra had a clearer picture of the reading process in her mind before implementation. She had very specific questions to direct to her students. Some of these questions did not vary from

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one reading text to another. The questions such as "If you were the writer of the text, what would be your title?" and "What is the main idea of the text?" were asked for all the texts studied. In addition to this, students were asked to identify the characters, place and time of the event in the text. However, these questions showed some variance depending on the text. On the other hand, there were some questions that were specific to the text in question. Identifying the cause-effect relationships, discussing the author's perspective are examples of such text-specific questions.

A significant characteristic of Zehra's management of the reading process was that she perceived the text as the target of the reading process. Unlike Şemsettin, her primary concern was the analysis and comprehension of the text. This was evident in many aspects of the classroom procedures. Firstly, from the first task till the last task, students always had their books open on their desks. Before starting the lesson, Zehra briefly summarized the text to refresh students' knowledge of the text or she had them read it aloud. Sometimes, students collaboratively remembered the plot, each student contributing one or two elements of the text. From the outset, Zehra built an atmosphere in the classroom that communicated the significance of the text to the students. Secondly, whenever the students or she was doubtful about an answer, she referred the students back to the text so that they could read the lines relating to the question. Therefore, both the students and Zehra considered the text as the primary source of reference. She asked for evidence from the text when she wanted justification from the students. This was such a well-established practice in the reading lessons that it was not infrequent that when Zehra demanded an explanation from a student about his/her answer, without Zehra's request, the student automatically referred to the relevant part of the text to justify his/her answer. Students were well aware of the fact that their answers and discussions were expected to be text-bound.

Another outstanding feature of her reading lessons was that Zehra was very careful about the progression of the tasks. She usually started with the tasks that had the students comprehend the text, such as discussing the meaning of the

unknown words, paraphrasing the text, analyzing the cause-effect relationships in the text. In the later stages, she proceeded by asking questions that gave the students the opportunity to incorporate more of their subjective understanding of the text such as what their title of text would be if they were the writer. These later stages encouraged the students to expand on the text. However, this expansion, when compared to Şemsettin's, was limited. Unlike him, Zehra was conservative about her understanding of expansion of the topic. The farthest she could go in this direction was engaging students in a task in which they were made to form an imaginary environmentalist group, inspired by a similar foundation mentioned in the text they had read. In most other cases, she did not attempt to have students relate one or more aspects of the text to their own lives. In this respect, the approach of these two teachers towards reading instruction can be positioned at the two opposing extremes of a continuum. On the one end of the continuum is Şemsettin with an extremely text-free approach and on the other end is Zehra with a totally text-bound handling of the reading process.

While dealing with the reading texts in class, Ayşe had a set of questions that she directed to students which did not vary between texts significantly. In this respect, she differed from Şemsettin, who did not specifically attend text analysis. The primary objective of her classes was reading. She had her students find the meaning of some of the words in the text, find the topic, the main idea and the supporting ideas, analyze the cause-effect relationships. Similar to Zehra, Ayşe asked questions regarding the identification of the time, place and characters of the story on a regular basis. The questions that followed the reading texts in the course book basically asked questions about the topic rather than the text; therefore they acted as expansion questions rather than comprehension questions. Therefore, in terms of the question types, Ayşe's handling of the reading process can be likened to that of Zehra. However, as far as the processes were concerned, they differed significantly. In Ayşe's case, reading the texts aloud occupied a remarkable portion of the class time. Then, in the question-answer process referring to the text to justify answers was a rarity. In fact, this mostly occurred when Ayşe asked basic comprehension questions

from the text by converting some factual information in the text into questions. While answering such questions, students relied on their memory of the text despite the fact that their books were open on their desks. When their memory did not prove helpful, they compensated for the gap in their memory by filling in it with their prior world knowledge about the topic of the text.. For example, after the class studied a text on healthy nutrition, the teacher asked students to find the supporting ideas. Although the text did not provide any information about the role of exercise for a healthy life, when one of the students stated that one of the supporting ideas of the text was about regular exercise, Ayşe did not give any corrective feedback and accepted the answer as it was. She did not seem to notice that the student had referred to his knowledge about the topic to answer a question directly related to the text rather than the topic of the text. Throughout the term, in many lessons, such incidents where the answers came from students' previous knowledge instead of the text were observed. In the interviews, when she was reminded of such situations, she underlined the fact that this was not due to her acceptance of such answers as correct. She attributed this to her carelessness at the moment.

Ayşe's occasional references to the texts also revealed an important misconception as to the boundaries of the texts, that is, where their effect starts and ends. As was evidenced in the example above, she accepted extra-textual information, which could by no means be inferred from the text, in response to questions seeking answers directly from the text. On the other hand, she showed a tendency to viewing the information presented in the texts as the ultimate truth without taking contextual factors into account. To illustrate, in a text that the class studied, the main idea that they reached was that all professions, regardless of their requirements and content, are valuable; therefore, the performers of these professions deserve equal respect. As they put it, "there is no such thing as a good or a bad profession". In the post reading stage, students were asked to make sentences using some of the words that they focused on in the text analysis, one of these words being "profession". When one of the students made the following sentence: "In my opinion, the best profession in the world is that

of a lawyer. I want to be a lawyer in the future." The teacher responded to this sentence referring to the text. She stated that there was no good or bad job. Her reaction was influenced significantly by the text. In the text, as the main character was ashamed by the profession of his father, who was a sanitation worker. In relation to this, the lesson that his father gave to the boy involved a call for equal respect for all professions. Whereas, in this context, this message made sense, when the teacher generalized the message of the text to all contexts, including the student's context, the message lost its value. For a girl to have higher esteem of a profession for her own future plans could be considered legitimate and Ayşe's spreading the message of the text to all contexts, though contradictory to her lack of emphasis on textual information mentioned earlier, was an indication of her misconception about where the influence of texts started and ended.

Finding the Main Idea of the Text: In the reading lessons of these three teachers one common task was finding the main idea of the text. One commonality in their guidance of their students to the main idea was that they all distinguished between the topic of a text and its main idea. While searching for the main idea of texts, they reminded their students that the topic was expressed in a phrase, whereas the main idea had to be stated in a sentence. Another approach that Zehra and Ayşe shared in common was that they all defined the main idea as the message that the readers derived from the text.

Of the participating teachers Ayşe and Zehra always had a clear expression of the main idea in their minds while posing the question to their students. However, because of the way they asked the question (from the point of view of the readers), they led to different answers from the students. While Ayşe accepted some of the subjective answers as correct, Zehra sought precision in the answers and guided her students to the statement of the main idea from the perspective of the writer of the text. Then, the discrepancy that created difficulty for Zehra's students was between the theoretical definition of a concept and its operationalized use.

However, Şemsettin moved from a different definition from both Ayşe and Zehra. To him, main idea meant the purpose of writing the text. According to this definition, identifying the main idea required determining the writer's purpose. However, when they put this information into practice, Şemsettin's orientation changed. To illustrate, after reading a text on life in villages and cities, the teacher asked the students what the main idea of the text was. Before eliciting the answers, he reminded them that all texts, be they articles in the newspapers, stories or longer forms of texts, had a main idea and that despite the presence of many ideas and messages in a text, there was always one idea that made the author write the whole text. After this brief explanation, students came up with various answers and the teacher showed his dissatisfaction with each answer. This helped students refine their sentences and as a result, some very insightful answers came. Then, the teacher stated that all the answers were to some extent correct without sharing with the students the main idea of text in his mind. In the interview following this lesson, when he was asked what the main idea of the text was (In fact, as Şemsettin was also the author of the text in question, he was the primary source of information in this case.), his answer was as follows:

> In fact, there was no main idea because I just asked the questions to have them think and come up with some ideas. There wasn't a direct main idea there. As I told them too, what each student said had something to do with the main idea." (Şemsettin, 12.05.2005)

Although Şemsettin defined the main idea from the perspective of the author, when it came to putting his definition into use, he saw the main idea from the viewpoint of the readers rather than the writer.

In some other texts he wrote, he intricately interwove intense ideas in a way that obscured the main idea for the reader. Intentionally or not, Şemsettin created good exercise for thought by asking the main idea questions from these texts that engaged the students in search of these ideas deeply embedded in the text. However, his liberal attitude toward the identification of the main idea in the class undermined the value of this task.

Treatment of Unknown Words in a Text: The way teachers had their students deal with the unknown words that appeared in the reading texts seem to deserve attention as the mental processes involved in this task can be likened to problem solution. Unless the teacher explicitly provided the definition of an unknown word, students had to choose from a set of strategies or employ a combination of strategies to make plausible predictions about the meaning of the unknown words.

Zehra stated that she genuinely saw this task as problem solution and avoided giving away the answer before having students reason the meaning for themselves most of the time. In this process, dictionary was not considered as a source at students' service because students were made aware of the value of their using their minds to work out solutions for the unknown words. Therefore, referring to the dictionary while working out the meanings of the unknown words was regarded as cheating. In any given text, after several readings of the text, Zehra allowed the students to underline the words, the meanings of which were not clear to them. By asking the students to determine the unknown words after a couple of times of reading, she gave them time to form an overall idea about the text and facilitate their use of contextual clues. She believed that giving them time helped students limit the number of the words they would underline as unknown words since they would have inferred some of the words from the context. At the same time, according to Zehra, the time given would contribute to the quality of the inferences they would make while handling the unknown words (Zehra, 14.11.2005). However, despite Zehra's awareness of the benefit of resorting to contextual clues to facilitate the inference of the meaning of words, in practice, she did not get them to exploit these clues fully. As Zehra conceded in the interviews, she employed other strategies more effectively than having students infer the meaning of the unknown words from the text. It was the teacher's guiding questions which would navigate the students through the text that seemed to be missing in the process of helping students come up with acceptable inferences about the words grounded in the text.

However, once efforts were made to infer the meaning from the text and they failed, Zehra used other strategies, that she felt herself more competent, effectively. She provided alternative familiar contexts that the word was used. Sometimes, she let the students analyze the word grammatically by dividing it into its root and suffixes.

An outstanding strength of Zehra while dealing with the unknown words was her perceptiveness about seeing the value in some words that distinguished them from others because of their relevance to people's thought processes and the value embedded in them to help create a common ground for classroom discussions. One such word that received special attention from Zehra was the abstract concept of "consistent." When it appeared in a text as part of the main idea, Zehra spent almost half of a lesson explaining the meaning of the word to the students. In a later interview, when asked why she emphasized the word "consistent" in the lesson, she mentioned the importance of the concept in guiding good behavior and added that the examples she gave to explain them the word would help them form an opinion about the significance of consistency in their behaviors.

Despite the value that can be attributed to this decision from a pedagogical point of view, Zehra's effort may not be said to have achieved its purpose fully as the examples that she provided for the students to comprehend the meaning of the word seemed to fail to reflect the relativity of the concept depending on the context. To illustrate, she gave the example of a teacher who gave permission to a student to go to the toilet at one time and declined permission to another at a different time. As she did not distinguish the contextual factors that could have led the teacher to such seemingly inconsistent behaviors, students picked up a neutral idea of "consistency" from the teacher. Therefore, when she wanted to evaluate students' comprehension of the concept by asking them to use the word in situations, answers that failed to capture the essence of the concept came. For example, one of the examples was about a boy who gave one of his pet fish less food than the other. Most of the other examples that followed this reflected a similar misconception. Zehra rectified these

mistakes by explaining that if the food is given according to the needs of the fish, then it would not be considered inconsistent to feed them with different amounts of food. However, the interviews with the students in the break reflected the continuation of such misconceptions. The oversimplification of some other complex abstract concepts caused similar misconceptions in other lessons of Zehra.

In Şemsettin's classes, few incidents in which the meanings of the words were questioned observed. This was not due to the fact that the texts that Şemsettin used in class did not present unknown words. Not surprisingly, some of the words, such as "genius," appeared in texts both Şemsettin and Zehra used in their classes. However, it did not receive attention from Şemsettin. This was primarily caused by Şemsettin's not valuing discussion about words as exercise for thought. He preferred not to see the words as problems to be pondered about (Şemsettin, 12.5.2005). As he stated several times his approach to the words in the texts was rather pragmatic. He considered the overall message of the text more important than its individual words and as long as the words did not create an obstacle in front of comprehension, he did not direct students' attention to words. As he expected the same from his students (not to focus their attention to the words), they asked fewer and fewer vocabulary questions as the term proceeded.

Ayşe stood at a different point from both Zehra and Şemsettin in her treatment of unknown words that appeared in the reading texts. Unlike Şemsettin, she spared time for finding the meaning of the unknown words. In her lessons, studying the unknown words was more common than it was in Şemsettin's lessons. Having read each text, students carried out a study of the unknown words. However, this was significantly different from the way Zehra's students did it. Firstly, it was not the students but Ayşe that identified which words would be studied in the text. The words that she chose were those that were the key words from the text rather than being those that were supposed to be unknown by the students. For example, in one text, Ayşe determined the words "profession, job division, work" as the unknown words. However, these

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were the words that her students were already familiar with from their social sciences course. Furthermore, she did not consider this as a problem solution process and expected students to use their dictionaries to find the definition of the words. Then, when compared to Zehra, who had the students construct the meaning of the words from the text, from their experience of the world and from their grammatical knowledge of the word, Ayşe saw the whole process as one of using a source (dictionary) to reach a prefabricated definition, which lacked the personal meanings attached to the word by students' experience.

In another exceptional lesson in which the class was working on a text about noise pollution, Ayşe asked them to define the word noise. As they were not using their dictionaries, students spontaneously got involved in a dialogue where each student made a contribution to the formulation of a generic definition of the word. In this process, different from the usual process that they followed, students made use of their experience with noise to distinguish its attributes. The definition which they came up with involved the critical attributes of the word just as a dictionary definition would do. As an additional bonus, through their discussion for providing a definition, they discussed the concept of noise with its causes and its implications and noticed the different reactions of people to it. In their search for the reasons why people reacted differently to noise, they came to realize the context-bound nature of the concept. With all this, they fulfilled one of the requirements of critical thinking which was about analyzing deeper meanings underlying concepts and noticing the challenge in defining abstract words. At the same time, the process served to activate students' schemata for the text about noise and helped them understand the conflict that arose between the characters in the text.

In many other occasions where she found an opportunity to construct a similar atmosphere to this, Ayşe chose not to pursue it by terminating the process prematurely by providing a dictionary definition herself.

4.3.7 Making Predictions

In Zehra's teaching, tasks that involved students in prediction occupied an important place. She used such tasks particularly while introducing a new text or a new topic. Her effective management of tasks involving prediction was mainly due to her perception of these tasks as an extended process rather than as a guessing game squeezed in a short time. She planned such tasks carefully and as she emphasized in the interviews, she visualized the atmosphere that would prevail in the classroom and determined the guidelines of action she would take and the nature of the feedback she would give to get the students to think better in order to make better predictions. Zehra used pictures as clues which the prediction process would be based on. She hung up one picture at a time and after each picture she elicited the predictions asking questions such as "Looking at this picture what do you think our topic is today?" or "Who do you think this picture is about?" After the first picture, she expected diverging predictions from the students. She allowed them to spread their predictions over a range of topics. In this step, she did not warn the students to be careful about their predictions or demand justification for the prediction unless students gave it upon their own will. An important element that contributed to this process was her indifference toward the predictions by concealing her reaction to all the predictions. When students were reasoning, she did not intervene and give clues to them. Instead, she patiently waited for them to make their own inferences. Then, as the pictures came one after the other, she got more and more demanding about consistency of predictions, asking students to think over those predictions which did not fit all the pictures presented. When a student made an important discovery that could be a clue towards the target, she repeated what the student said so that all the others could hear and told them to keep it in mind while making their predictions. When the clues added up to a certain level, Zehra provided a quick summary of what they had gathered so far. She also ensured that students listened to each others' predictions and their justifications by criticizing them sharply if they repeated a prediction already made by another student. In this highly interactive process, it was strictly forbidden to jump on conclusions

without taking smaller steps, each of which could be justified with the given clues and the teacher's feedback. Sometimes, making plausible predictions with the given clues required that students make use of their knowledge from a variety of subject matters. Still another outstanding characteristic of her management of the process was that Zehra rewarded the students who made important contributions to the process by changing the direction of the predictions with their inferences as much as she rewarded the student who made the final prediction that successfully ended the process. This task also served to arouse students' interest to the new topic or to the text as well as proving to be a good exercise for thought.

Şemsettin also used prediction in his classes in several situations. He wrote the title of the text to be read on the blackboard and asked the students to make predictions about the topic. He used this task when the title seemed to sound somewhat puzzling or mysterious to the students. Another situation where Şemsettin resorted to this type of reasoning was in the interactive reading tasks where he paused at certain points of the text and asked students to guess what would happen next. He also employed prediction tasks when he wanted the students to think extensively about a specific topic. For example, in one lesson, he brought a small box to the class that he could hold in his palm and asked students to guess what was inside the box. The only clue was that it was an object that played a vital role for people to be able to live in a society. Unlike Zehra, Şemsettin did not organize this process in a way that allowed students to work collaboratively while making predictions. His was quite an individual process where students were expected to draw the picture of the object they thought was in the box and explain in a few sentences why it was so important for the people to live together on a paper. When students were sharing their predictions with the class, Şemsettin did not demand justification from the students as to why they considered it as the object in the box. Then, all the predictions were accepted by the teacher without being discriminated according to the degree to which they were justifiable with sound reasons.

When compared to the way Zehra conducted the same process, Şemsettin's lacked the criteria against which the quality of the predictions were evaluated. In fact, almost all the tasks that involved prediction were carried out in Şemsettin's class in this manner. Therefore, despite their initial similarity, the procedures followed in these classes differed significantly from each other.

Ayşe used prediction tasks at the same stage of the lesson as Zehra and Şemsettin did. However, as she was not convinced by the rationale of using them before reading texts, she changed the process into one in which students wrote the main idea of the text in the form of a prediction sentence. Both the teacher and the students pretended that they did not know the content of the text and they filled in the gap in the prediction format with the main idea of the text. When some students came up with sentences sounding like main idea statement, the teacher had them change the format of their sentences to sound like a prediction. Therefore, throughout the semester, there never occurred a prediction process in its true sense. Ayşe perceived students' being able to formulate sentences sounding like prediction sentences as achievement of an objective, disregarding the objectives related to this process, i.e., students' making inferences based on clues gathered by previewing the text.

4.3.8 Distinguishing Thoughts and Feelings

When the topics were loaded in terms of feelings, Şemsettin did not demand rational justification for choices made and he sought mere expression of feelings, which yielded results of higher quality. For example, when he asked his students to explain what the meaning of life was to them, the students employed a highly emotive language and they struggled to discriminate their feelings and to express them clearly.

However, for both Ayşe and Zehra, expressing feelings did not suffice in face of questions that inquired about students' feelings. When they asked their students which part of a poem was more emotional, for example, they expected them to come up with the part/s in their mind and did not expect variation in the answers. The explanations they considered acceptable were those that included

objective elements such as the mention of the emotionally loaded words from the text. They did not encourage or allow students to give explanations that incorporated more subjective aspects, such as the impression a specific word created on them or the personal associations of words with some feelings or memories and so on. When a student found a different part of a text more emotional from the one that was in the teacher's mind, instead of asking the student to elaborate on their feelings, Ayşe and Zehra tried to change the student's answer. To illustrate, while they were working on a poem about forests, Ayşe posed the question which part of the poem they found the most emotional. When a student made a preference about a stanza in which the cheerful atmosphere of the forest was depicted with the liveliness brought to the forest by the animals, Ayşe did not accept it as an answer and repeated her question stressing the word emotional. She explained that the word emotional meant sad. When the student wanted to justify her answer claiming that happiness and enthusiasm were also emotions, Ayşe objected to the student and asked her to reconsider her answer. Therefore, in Ayşe's and Zehra's classes, investigating feelings did not have a place.

4.3.9 Argumentation

As Walton (2006) states, identifying, criticizing and evaluating arguments forms the basis of critical argumentation and he defines argumentation as reaching conclusions based on reasons. In the observed lessons, many examples of argumentation were spotted. However, the cases that involved the introduction of an obstacle blocking the argumentation one way or the other were observed to outnumber those cases that involved the fully developed arguments.

As he stated in the interviews, Şemsettin adopted a relatively liberal attitude to issues that he raised through his texts and his questions. He stated his disbelief in persuading the students to adopt a certain point of view as he thought this would only make them pretend to have assimilated to that view without radically and permanently changing their opinion about that matter. He expected

major changes to take place over time. As a result, whenever he brought up an issue, he did not attempt to side with one of the view points and gave the students the opportunity to decide on an opinion themselves. Although this rather democratic attitude may look conducive to an atmosphere in which arguments could easily be developed, some other factors interfered with the emergence of arguments in the classroom. Whenever there was a dispute in the classroom over an issue between the students, he showed a strong tendency to settle it before it was fully exploited by the students. In many cases, when a student challenged another by asking for justification for an answer, Şemsettin adopted an overprotective attitude by taking over the task of providing the justification himself. The emergence of this situation can partially be attributed to his overall perception of thinking process that is best depicted in his own words:

> As a teacher, my responsibility is to give them a chance to confront issues that they should be thinking about as the individuals of this society and the world. It is important that they think. The rest is at their discretion. They can end up anywhere they want to (Şemsettin, 5.5.2005)

Parallel to the belief expressed in this interview, Şemsettin thought that any dispute over an issue in the class was inappropriate. As long as his students thought about the issues he raised, there was no point in discussion. In a pre-reading task involving prediction described under the title of making predictions (students predict what the object in the box which made it possible for people to live together), when a girl thought that the object in the box was an article of jewelry, some students expressed their objection claiming that such an object could not be essential for people to live together. Şemsettin, without allowing the girl to explain her reasons, took over the task of defending the girl. He reminded the students their visit to a museum in which many jewelry articles belonging to the earlier civilizations were displayed and used this as the proof that even in those times jewelry occupied a distinct place. Then, he showed his disapproval of the students for raising objection to the girl's answer.

A typical example of Şemsettin's dimming the sparkle of argument with his intervention can be detected in the following vignette from a lesson. In this lesson, the class read a text about an old man who lived in a big city missing the life back in his village. The text basically reflected the life in the city and the life in the village through the old man's eyes, not doing much justice to the former. As Şemsettin stated in the interview before the lesson, he did not intend to question which way of living was better than the other by writing the text but he would be glad if students reacted positively or negatively to the choice of the old man. Yet, his primary concern was to expose his students to descriptive discourse and he set this context in order to depict the village from this old man's point of view and create ample opportunity to use descriptive language. However, as it turned out, the potential of the text for comparing and contrasting the life in two different settings got the students to voice their own preference by giving reasons. Spontaneously, this made some students question the differing preference of their classmates:

> Student 1: I think if my parents ever decided to move to our village, I would slide into a depression. I would not find anything to do there. There would not even be the internet.
> Student 2: But there would be other things that you cannot find here...
> Teacher: Alright everyone is free to think whatever he wants to. We can't judge other people's choices.

When Şemsettin intervened and ceased the discussion, many other students had shown their willingness to join the discussion by either raising their hands or shouting out their comments or both. Şemsettin attributed his avoidance of argumentation here to the inappropriateness of the topic. His avoidance of such discussions was exemplified in many other cases where the topic lent itself to argumentation, e.g. whether money should be a goal in life, whether change should take place over a short or long period of time.

In Zehra's class, students engaging in arguments were more frequently observed than Şemsettin's class. This was mostly attributable to students' tendency to support their answers with reasons and Zehra's urging them to do so. In this class, both the teacher and the students forced each other to make their case clear by supporting them with good reasons. In many situations, Zehra did

not perceive argumentation as a waste of time and even if arguments arose in an unplanned fashion, she did not try to cease the process. A very striking example of her pursuit of arguments came in a lesson in which the students were explaining what they understood from the word "architect" and which qualities of architects they found in themselves. One of the students boldly and genuinely stated that he considered himself an architect. Almost a period was spent on an argument in which almost all the students participated. In response to the boy's argument stating that he was an architect, all the students and the teacher came up with the counter- argument that he was not an architect. Despite, at first, the boy's argument may sound like an assertion, in further analysis, as he attempted to base his conclusion on some reasons, he can be said to have developed an argument, no matter how illogical it may sound. In this discussion, as was observed in other similar cases, Zehra participated as a party (defender of the counter argument) siding with the rest of the class against the boy claiming that he was an architect. Zehra's role here was to support the counter-argument by providing evidence from various sources ranging from argument by analogy to argument from popular belief. She acted as the presenter of new evidence that the other students followed by paraphrasing. In a sense, she took over the task of reasoning herself. She took more turns and dominated the argument much more than the other students. In the final analysis, Zehra's aim here was to be successful in the argumentation and to change the viewpoint of the student rather than to use this case as an opportunity to have her students experience argumentation (Zehra, 5.12.2005). Zehra admitted her domination over the whole argumentation and in defense of her active participation stated her disbelief in students' ability to get their friend to change his opinion. In fact, it became evident that Zehra herself was influenced by the rather provocative assertion of the boy when she came to a point where she uttered the following question to the class: "Tell me who is right? Him or me?" As the question suggests, it was neither Zehra nor the student who won the argument as neither was able to change the viewpoint of the other about the matter.

In her class, students contributed to the generation of arguments by problematizing the knowledge they were given. For example, after reading a poem telling the story of an olive tree which was left alone in an urban area, for several lessons the class discussed the issue using a rather emotive language. Only when one of the students harshly criticized people's negative effect on their environment by calling the cutting of trees as "disgrace" did it become possible for another student to view this complicated issue from another perspective: How would it be possible to construct homes for people if the trees were not cut in urban areas?

In general, Zehra's attitude to such comments that highlighted other aspects of significant issues proved positive. Yet, she did not always allow students to support their claims with evidence by taking over the burden of proof, as was named by Walton (2006), from the students.

In Ayşe's case, the emergence of arguments was rare compared to Zehra. In almost all situations observed, the move to start arguments came from the students, generally the same students. The source of the inspiration of these students to start arguments was the texts they read in the classroom and their effort to evaluate the information presented in the texts against their knowledge about the topic. Despite the neutral tone of many of the texts that did not lend themselves to argumentation, some students showed the sensitivity to problematize some aspects of the information in the texts and attempted to raise arguments. As was discussed in response to the research question about the planning stage, Ayşe was not in anticipation of much difficulty in the reading process as she thought that the texts in the course book did not pose much challenge to the students. Therefore, Ayşe's initial reaction to students' questioning the text or their making critical comments was hastily putting an end to such processes before they developed into fully fledged arguments. Her primary strategy was to reconcile the view of the reader (critical student) with that of the writer without leaving the room for negotiation of meaning by the reader. One such incident was observed in a lesson when the class was working on a text about the construction of a tarmac road connecting a small village with

the city, leading to a lot of developments to occur such as the construction of a factory and a school in the village. One of the students with a predisposition to problematize the issues made a critical comment about the picture next to the text saying that the school and the factory were too close to each other that could reduce the quality of the education in the school. This comment that came spontaneously as the class was silently answering the post reading questions that called comprehension skills into action, changed the classroom atmosphere drastically. Many students shouted out their answers as they waved their hands in the air to be called on by the teacher. They were in an apparent need of sharing their reactions to their classmate's rather controversial comment. This comment evoked other comments from the rest of the class both agreeing and disagreeing with it. The teacher seemed to be worried by the state of affairs prevailing in the class at that moment (Ayşe, 23.5.2006). After her initial effort to silence the students, she managed to make her voice heard to make a comment: "When we think like that, you are right (addressing to the boy who initially made the comment); it doesn't look like a good decision. However, it is still good for the villagers that they have got both a factory and a school in their village." By reaching a conclusion herself prematurely and having the students agree with her by enjoying her status as the teacher, Ayşe put an end to a potentially lively discussion.

In some other similar situations, Ayşe's reaction was basically the same. She did not take a negative attitude but nor did she allow the students to present their reasons leading to their conclusions.

In retrospect, in her evaluation of the situation described above, Ayşe praised the student who made the comment due to his careful attention to details but she pointed out that a classroom discussion was not even an option to her at that particular time and that even if she had allowed the students to talk, that would not have taken them anywhere. She emphasized the importance of their comprehension of the text and she saw no benefit of their raising such issues for their better comprehension of the text. One striking comment of Ayşe in another interview in response to a similar situation to the one described here was that

being the teacher, she considered being able to respond to such comments herself as her duty rather than having the other students make comments on it.

Another impediment to argumentation in both Ayşe's and Zehra's classes was about teacher talk time. When these two teachers were inspired by a thought provoking comment of a student on an issue, they tended to over elaborate the comment, stripping it off its critical essence. Therefore, they did not leave much room for the other students to discuss the issue at length with each other.

4.3.10 Critical Thinking Fallacies

Hughes (2000) likens the act of developing an argument to making a promise: Each argument makes two claims, one about presenting true premises (reasons) and one about the ability of the premises to support its conclusion. Therefore, to him, assessing an argument is like checking whether it is able to keep its promise. In the query for assessing arguments, Hughes cites two common approaches to the process, namely, fallacies approach and criterial approach. The former requires testing an argument against a set of fallacies. If the argument is free from all the fallacies, then it is a good argument. The latter, on the other hand, requires evaluating an argument against all the criteria (standards) that a good argument should satisfy. If an argument meets all the criteria, then it can be regarded as a good argument. Basically, either way helps the person who attempts to evaluate an argument to reach his/her aim.

In the data collected from these three settings, it was found out that the development of arguments was obstructed due to various reasons discussed under the previous heading of argumentation. However, when the classes embarked on the discussion of an issue, other problems that weakened the strength of the arguments were also observed. These problems corresponded to the fallacies that were described in the literature of informal logic. The efforts of logicians to form comprehensive lists of fallacies (weaknesses or errors that detract from the soundness of an argument as was defined by Hughes [2000]) have continued since the time of early Greek philosophers. This yielded lists that referred to the same type of weakness with different labels. In the discussion of

logical fallacies here the labels that were used in Warburton's (1996) book on critical thinking were chosen, as Warburton himself states, the labels in the book were chosen among alternatives for being memorable. Therefore, it is always possible to find each fallacy discussed below with different names elsewhere including their equivalents in Latin.

Oversimplification: The most common fallacy that was observed to threaten the quality of the discussions in three of the settings was oversimplification which is also addressed as black-and-white thinking or false-dichotomy. As Warborton puts, this fallacy "...occurs when you try to make the world fit very simple preconceived categories" (Warburton, 19996, p. 28).

This fallacy was mainly observed in situations where teachers tried to introduce new intricate concepts to students. Coincidentally, all participating teachers at some point in the semester in which their classes were being observed dealt with the concept of discourse and various discourse types, or text types as they chose to refer to. The basic discourse types that they mainly focused on were descriptive, informative, and persuasive. Although the handling of all three teachers of discourse involved some degree of oversimplification, the most illustrative example came in the case of Şemsettin. After Şemsettin briefly explained the students what each text type was about, he reflected a text on the overhead projector for the students to decide its type. The answer in Şemsettin's mind, as he later revealed in the interview, was descriptive. In fact, the text included long descriptions of the setting in which the event took place. However, students came up with different answers such as persuasive and informative as well as descriptive, which were considered as the only correct answer by Şemsettin. As students were also able to present evidence from the text in support of their answer, a chaotic atmosphere set in. Şemsettin avoided imposing the answer in his mind and allowed students to explain why their answers were correct. Then, the discussion ended without reaching an agreed upon answer.

In the interview, Şemsettin stated his confusion about the situation saying that he was also partially convinced by the explanations put forward by the

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students. Though he had thought that the text type was descriptive initially, the points students raised claiming that it was persuasive or informative had also made sense to him.

However, a detailed analysis of the text would prove all answers correct as one or another discourse was evident in different paragraphs of the text. Therefore, looking for a single answer that would explain the discourse type of each and every line of the text would be unrealistic. Therefore, Şemsettin's expectation that such an answer would be possible was illusionary. Only when considered in relation to the writer's intent to write the text would it be possible to come up with a single correct answer and that would be persuasive in the case of the text in question.

Therefore, Şemsettin's regarding the choices for text type in this example as exclusive can be interpreted as his willingness to simplify the concept of discourse. With instructional concerns, he might have felt tempted to conclude that the discourse type was descriptive. In fact, as he stated, he was preoccupied with the idea of introducing examples of descriptive discourse to his students as he thought that they had difficulty in understanding it. This seemed to lead him to commit the fallacy of false dichotomy as well as his creating artificial purity in his mind about the discourse types of texts.

Similar situations were also observed in the other two cases particularly in the introduction of abstract concepts such as "homonym".

Getting Personal: Warburton (1996) defines this fallacy as "attacking the character of the person with whom you are arguing rather than finding fault with his or her argument" (p. 64). Detecting the fallacy of getting personal, also named ad hominem move, in an argument requires exercising caution because if an arguer sets his/her argument on a relevant aspect of his/her opponent's character, then this would not be labeled as a fallacy.

In the observed lessons, in cases where arguments related to topics in which students were not directly involved, such as the causes of destruction of nature, the problems that Turkish soldiers were confronted with in the war, were

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in question, the teachers rarely committed this fallacy. However, when arguments which were directly related to the students were in question, teachers tended to resort to getting personal as a strategy to make their case stronger. To exemplify, while choosing the students to form an environmental committee, when the teacher wanted to choose those who were already in other committees, some students objected on grounds that it would be fairer if those who were not already in a committee would have joined the new one. The teacher argued against this proposal stating that "First improve your handwriting and then volunteer to become members of committees." Here, if the quality of the handwriting were somewhat relevant to students' being more eligible for an environmental committee (as the teacher later admitted in the interview that it was not), then Ayşe's supporting her choice in favor of the students already in a committee (provided that their handwriting was better than the other candidates) on the basis of the quality of handwriting would have been justified. However, in view of the irrelevance of handwriting as a condition to become a member of an environmental committee, Ayşe's move could well be categorized as a fallacy.

As was stated above, the occurrence of such incidents was generally limited to issues that directly involved students. Yet, there were other less frequent cases where the fallacy of getting personal impinged on the arguments, the conclusions of which were not related to the students. For example, when a student started an argument against the opinion promoted in a text in their course book about the missions of an environmental organization, Zehra attempted to undermine the student's argument by claiming that as the student came from the United States and was trained in their educational system, he failed to see the bigger picture and he showed a tendency toward shallow thinking. In fact, although the student's argument needed some clarification and improvement in the way it was expressed, it was free from the accusation directed by Zehra since the argument basically focused on another significant aspect of the topic. What the student had done was seeing a rather complicated issue from another perspective. Even if this was not the case, the student's educational background had nothing to do with his curiosity about different aspects of the issue. In a later

interview, while reflecting on this incident and her reaction to this student's Zehra admitted that the very same comment could have been made by many other students in the class.

Absurd Consequences Move: Warburton (1996) enlists absurd consequences move not as a fallacy but as a "common and highly effective method of refuting a position" (p. 1). When the arguer can detect a contradiction in the opponent's argument, he/she can ridicule the argument by revealing the absurd consequences of the proposal if it is put into practice. Although this way of refuting an argument is legitimate, Warburton warns, if the consequences considered to be absurd by one prove to be logical and desirable outcome of an argument for the other party, then the use of this move can seriously harm the person using it.

In the observations, all three teachers were found to use this strategy, sometimes rather effectively, to persuade the students whose argument, in the long term, run the risk of yielding unfavorable results. However, the reason why it appears under the title of logical fallacies here is that teachers also resorted to this strategy in order to finish argumentation prematurely.

To illustrate, in one of Zehra's lessons, student made a claim that in the war of independence it was fair to steal the arms of the enemies to win the war as the Turkish army was suffering from serious scarcities of weapons at that time. The student's seeing stealing as a solution to a problem annoyed Zehra. While some students supported the boy's argument, others stated that they were against it on the grounds that stealing was wrong under any circumstances. When students from both parties were raising their hands to provide reasons to prove their claim, Zehra ridiculed the student's claim by asking students to imagine the consequences of stealing at war. As all the soldiers would become engaged in stealing to the degree of obsession, they would get used to stealing and start viewing it as a profession. As a result of this, they would forget about their being soldiers and consider themselves as thieves. This caused students to laugh and forget about the argument.

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As Zehra later explained in the interview, she was well aware of the fact that she was not being fair to the student claiming that stealing was not wrong in the war by exaggerating the results of his argument. Furthermore, she also stated that the boy's argument had truth. Still, as she did not want to say herself as a teacher that stealing was acceptable under certain circumstances, she preferred to put an end to the argument in a fun way.

4.3.11 Summary of Implementation

In the implementation stage, the teachers showed some variance not only in the extent they incorporated some methods, strategies and tasks into their instruction but also in whether they incorporated these methods, strategies and tasks or not. Table 4.2 summarizes the data about these teachers' implementation stages. Parallel to their differences that appeared in the planning stage, there were some expected differences in their implementation. On the other hand, in certain cases, despite similarities in their approaches to teaching that appeared in their planning stage, they showed unexpected differences in the way they put their philosophies of teaching into action.

An important aspect of the analysis that added to the value of the discussion in this part is that even at times teachers were observed to do similar things in their lessons, their rationale or reasons that led the way to these similarities in their actions differed.

This particularly renders worthwhile the discussion in the next part about their own reflections on their teaching since by talking about their teaching and making comments on it teachers still continued to shed light on what had already been observed.

Table 4.2

Summary of data on teachers' integration of critical thinking into teaching and learning process

Integration of Critical Thinking into Teaching and Learning Process
Classroom Climate and Management

Şemsettin	Seats students in rows (two students at each desk).
	Has a noisy classroom atmosphere.
	Provides a relatively free atmosphere for the students.
	Poses an autonomous profile in decision making, avoiding resorting to authority.

Table 4.2 (continued)

Şemsettin	Is tolerant to students who demand justification for the decision he has made.
	Involves students in decision making process for the classroom events.
	Uses humor to criticize undesirable behaviors.
Zehra	Seats students in rows (one student at a desk).
	Has a quiet classroom atmosphere (students' speeches do not overlap).
	Has a highly structured classroom environment.
	Closely monitors students to get them to be attentive.
	Resorts parental authority in classroom management.
	Provides justification for her decisions without students' demands.
	Judges students' behaviors on the basis of criteria.
	Has a clear purpose in her mind for every action she takes in the classroom.
Ayşe	Seats students in rows (two students at each desk).
	Has a noisy classroom atmosphere which is also disturbed by distracters coming out of the classroom.
	Resorts outside authority to resolve conflicts.
Teachers' Perceptions of Their Realm of Influence	
Şemsettin	Considers few topics brought up by students as taboo.
	Ignores the topics he does not want to deal with in the classroom.
Zehra	Avoids all types of non-academic topics in the class.
	Avoids the discussion of topics she regards as taboo.
Metacognition	
Şemsettin	Discourages students from memorizing at a superficial level.
	Employs certain instructional methodologies without their rationale with students.
Zehra	Encourages students to think more positive.
	Familiarizes students with terminology related to modes of thinking.
	Encourages students to plan the steps before taking action.
	Encourages students to verbalize what they have learned and to evaluate their own handling of the tasks.
	Gives feedback to students according to their individual thinking habits.
	Justifies her reasons for choosing specific teaching methods and encourages students to learn using these methods.
Creating A Common Frame of References	
Zehra	Aims to transfer knowledge learned in the texts and the subjects covered to help students understand the world surrounding them and understand the way they use language.
Challenge	
Şemsettin	Perceives challenge as a threat to students and avoids.
	Prioritizes students' curious questions over applying the standard of relevance.
	Provides the solutions for challenging questions himself without involving students in the process.
	Does not involve students in tasks requiring thinking deeply on a topic.
Zehra	Poses challenges to students by applying standards of thought, namely, clarity, accuracy, precision and relevance to evaluate students' answers.
	Adjusts the level of challenge according to students' abilities.
	Sometimes misses the opportunity of discussing significant issues brought up by students due to her adherence to her principle of relevance to the topic at hand.
	Does not involve students in tasks requiring thinking deeply on a topic.

Table 4.2 (continued)

| Ayşe | Perceives challenge as a threat to students and avoids. |
| | Does not involve students in tasks requiring thinking deeply on a topic. |

Reading Critically

Şemsettin	Trains for active reading by posing questions while reading the text himself aloud.
	Does not use expository teaching while teaching reading.
	Has students employ critical thinking skills such as thinking of solutions for problems in a text or establishing cause-effect relationships while reading.
	Does not give feedback to students' answers involving sound thinking or faulty thinking.
	Does not question the assumptions on which students base their answers.
	Does not require students to justify their answers based on the text.
	Does not permit students to interact with each other in question-answer cycles.
	Gives short time to students to think of their answers.
	Is not clear with the main idea of the text in his own mind.
	Defines main idea from the author's viewpoint but accepts answers from students that formulate the main idea from their own viewpoint.
	Does not apply criteria on the main idea stated by students.
Zehra	Perceives the comprehension and analysis of texts as primary aim of reading instruction.
	Studies the questions to be posed to students and anticipates the answers to be given by them beforehand.
	Gets students to refer to the text for justification of their answers frequently.
	Does not vary her question types from one text to another much.
	Has a clear main idea in her mind for each text and seeks precision in the way it is expressed by students.
	Defines main idea from the reader's viewpoint but accepts those answers that see it from the writer's viewpoint.
Ayşe	Allocates extended periods of time for reading aloud tasks.
	Does not vary her questions from one text to another.
	Poses factual comprehension questions.
	Does not seek justification of the answers from the text.
	Overgeneralizes the messages of the texts .
	Has a clear main idea in her own mind for each text.
	Defines main idea from the author's viewpoint but accepts answers that see it from reader's viewpoint.

Treatment of Unknown Words In A Text

Şemsettin	Does not consider studying the words in a text as an exercise for thought or learning the language.
Zehra	Allows students to choose the unknown words.
	Likens predicting the meaning of unknown words to problem solving.
	Gives the time to students to get them to predict the words better.
	Does not consider dictionary as a source.
	Gives priority to words that contribute to the development of critical thought.
	Tends to oversimplify some abstract words.
Ayşe	Chooses the unknown words herself.
	Has students use their dictionaries as a main source for finding definitions.

Making Predictions

Şemsettin	Uses prediction tasks to activate students' schemata.
	Sets prediction tasks that have students work individually.
	Does not judge the validity of students' predictions.

Table 4.2 (continued)

Zehra	Allocates extended periods of time for prediction tasks and emphasizes the process (talking about the reasons for accepting or rejecting a given prediction) over the product (the final prediction). Uses visuals effectively while setting prediction tasks. Manages the interaction among students carefully during prediction tasks. Manages transition from diverging answers to converging answers carefully. Demands justification for each prediction made. Acts as a facilitator in the process.
Ayşe	Does not have a clear idea of the role and use of prediction tasks in reading.
Distinguishing Thoughts and Feelings	
Şemsettin	Gives students the opportunity to express their feelings as well as their thoughts about matters.
Zehra	Imposes restrictions on students while using emotive language. Does not focus on the analysis of feelings as much as the analysis of thoughts.
Ayşe	Imposes restrictions on students while using emotive language.
Argumentation	
Şemsettin	Creates a democratic atmosphere in which students can choose what to think/ believe for themselves. Shows a tendency toward settling down issues before they are exploited by students. Displays a protective attitude when a student challenges the other with counter-evidence. Avoids extended discussions over issues.
Zehra	Creates opportunities for students to engage in extended arguments. Allows students to problematize issues and create opportunities for argumentation. Allows students to challenge each other and to get each other to support their claims with evidence. Demands supports for the claims made by students. Shows a tendency toward dominating the arguments by presenting her own evidence and taking over the burden of evidence herself.
Ayşe	Perceives comprehension of the text as the primary aim of reading ignoring the potential of the text to raise issues for discussion. Does not create opportunities to engage students in arguments. Interferes with students' efforts to problematize the information in the text by reconciling the conflicting opinions herself. Ends the arguments prematurely.
Critical Thinking Fallacies	
Şemsettin	Oversimplify abstract concepts to help students comprehend them better.
Zehra	Show a tendency toward attacking the argument of students using irrelevant evidence related to the person of the students in some cases.
Ayşe	Use absurd consequences move frequently as an effective strategy of refuting illogical arguments.

4.4 Teachers' Reflections about the Aspects of Their Teaching Regarding Critical Thinking

Unlike the data collected from the analysis of planning stage and implementation stage, it was necessary for the researcher to exercise more

caution while evaluating the data collected in the reflective thinking stage. This is because the teachers tended to be more sensitive while reflecting back on their teaching after implementation. Therefore, the questions that were posed to them in this stage had to be prepared with more sensitivity. When any problem or weakness that called for attention was observed, the researcher avoided asking questions about that part or chose to ask them very indirectly. To elicit interpretations of such incidents in a less threatening way, the interviews for this stage started with more general questions such as "What aspects of the lesson do you find particularly strong? Are there any aspects of the lesson that you would like to do differently if you had to teach this lesson again?" To create an atmosphere in which the teachers could feel secure, this frame was retained as part of interview routine and the teachers at the outset, that is, in the first interview, was informed that these two questions would always be asked. Still, the possibility of their feeling intimidated and thus projecting feelings of self defense while answering the questions that form the basis of the data presented in this part had to be taken into consideration.

Teachers' reflections about the individual cases cited in the previous parts while answering the research questions on planning and implementation were immediately presented in that part to make the data more meaningful. In this part, however, the overall nature of teachers' reflection in relation to critical thinking will be discussed.

4.4.1 Discrimination of Thinking Concepts

While reflecting on their instruction, the language that the teachers used differed considerably. Şemsettin's command of instructional terminology was better than both Zehra and Ayşe. While explaining his instructional decisions and actions, he also referred to the literature more frequently than the other two teachers. However, when it came to the terminology related to thinking and mental processes involved in certain tasks, his language did not show the same degree of variation. He placed a lot of emphasis on "thinking" in the interviews, considering it as the primary purpose of his teaching. When evaluating his

teaching in terms of its contribution to the development of students' thinking skills, however, he did not discriminate between different modes of thinking. When questions such as "In what ways do you think the reading text was useful for the students?" or "What was your purpose for asking this question?" were posed to Şemsettin, he gave very general answers coming to the effect that he wanted the students to think.

As for Zehra's thinking vocabulary, a larger variety was detected in her interpretation of the classroom events. She frequently referred to such concepts as "giving justification, making cause-effect relationships, making predictions, supporting predictions, making inferences, thinking from multiple perspectives, creating concept maps, brainstorming, expressing thoughts clearly." She was also well aware of the differences between these and other mental operations she referred to.

Similar to Şemsettin, the range of Ayşe's active vocabulary regarding thinking during reflections was not wide. However, different from Şemsettin, she did not emphasize thinking while interpreting the teaching events that occurred in her class. Furthermore, the concepts of relatively higher frequency such as prediction, drawing conclusions and main idea were not used with their accurate meaning in critical thinking terminology. She did not seem to have internalized these concepts when she was using them.

4.4.2 Sensitivity to Situations Involving Critical Thinking

In the reflection sessions following the lessons in which some elements of critical thinking were captured by the researcher, the teachers were asked to make comments about these events. At such moments, the researcher did not share with the teachers why she had pinpointed these events among the others. The participating teachers were only asked to comment on these aspects of their teaching. In fact, this type of questioning took place when the teachers did not refer to these outstanding events in the lessons spontaneously in response to the broader questions posed to them at the beginning of the interviews. The

participating teachers' reactions to such events with some degree of relevance to critical thinking constituted another source of difference among them.

Şemsettin, particularly when he was dealing with the reading questions, created opportunities for his students to exercise critical thinking. At times when he did not end the process too early, some of the students managed to get involved in higher order thinking processes. At the beginning of the interviews, Şemsettin did not refer to these segments as the most striking moments of the lesson in question. Later, as the interviews proceeded, when he was asked to share his opinion of such incidents, his answers revealed that his perception of the process was different from that of someone observing the same process from critical thinking paradigm. Therefore, the potential seen in these processes for someone viewing it through this paradigm was not perceived by another as an opportunity. Even when some potential was detected by Şemsettin in such processes, it was in different arenas from critical thinking such as collaboration among students or increase in motivation.

The same lack of awareness of critical thinking opportunities was also observed in Ayşe's reflections. The frequency of such opportunities was much lower in her case. On the other hand, she initiated some other processes that could have well turned into events with gains in critical thinking if she had chosen to proceed with. In her reflection to such segments of the lessons that were characterized with a totally different approach from her usual way of teaching, similar to Şemsettin, she cited other strengths like higher concentration level or active participation of the class in the process, ignoring the benefits in terms of the development of critical thinking skills. She also had difficulty in recognizing the actualization of some processes that she referred to in theory.

Zehra generally showed awareness of the opportunities that she had created in terms of critical thinking. She sometimes referred to such moments while answering the question related to the most outstanding aspects of the observed lessons at the beginning of the interview before it was directed as a question by the researcher. When she missed this opportunity, she seized it again when she was asked to comment on the segments involving critical thinking.

4.4.3 Teachers' Perception of the Problems in Their Teaching

What seemed to be problems for Şemsettin were about the materials and the organization of the content. When reporting the problems that negatively affected the quality of his lessons, Şemsettin frequently referred to the difficulties that were introduced by the texts. Rather than viewing these difficulties as challenge that had to be overcome by students, he considered the difficulty of concepts, the difficulty of the sentences or the length of the text as problems. Therefore, after the lessons that students experienced some difficulties in reaching the objectives in Şemsettin's mind, he made mental notes with which he wanted to remind himself to make the content and the tasks less challenging.

When he spotted a problem in the lessons and felt dissatisfied with the outcome, Şemsettin shared this in the interviews by stating the problem. For example, after one of the lessons in which he asked students to write short stories using four key words, he reported students' coming up with very similar stories in response to a task like this addressing their creativity as a problem. While implementing the task, he expected more diversity in the answers. Although he was able to state the problem clearly, he did not try to pinpoint the source of the problem. At times when he built a hypothesis to account for the problem, Şemsettin did not test it in the classroom by applying a similar task with modifications. In Şemsettin's reflective verbal accounts there was not much room for cause analysis of the problems.

In retrospect, Zehra stated problems regarding students' misconceptions and poor thinking habits. She cited rash generalizations, self deception, difficulty in evaluating the long term effects of events and decisions, ego-centric thinking, recurring logical problems specific to individual students as problems that reduced the quality of her classes. An aspect of her students' mental processes that Zehra seemed to be particularly concerned about was weakness in seeing the "larger picture." As she observed that some of her students were too much involved in the immediate implications of events that affected them rather than those that could also affect other people in the long run, she cited this as an area that called for attention.

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Zehra, though she was able to hide it in the lessons, expressed strong intolerance to self-deception. For example, she criticized students who tried to manipulate the information given in the texts in order to justify their inferences more severely than she reflected in the lessons.

Ayşe cited problems related to classroom management as the most serious problems in her class. In all her reflections, events related to this issue occupied an important place though the topics slightly changed. After many lessons, she focused on the level of noise as the most significant challenge affecting the quality of instruction; after some other lessons, she referred to students' not doing the homework or lack of participation of different students in the lessons as problems. Ayşe did not attempt to analyze the deeper problems that might underlie these classroom management problems in her reflections.

4.4.4 Teachers' Perception of the Strengths of Their Lessons

In their reflections, the teachers' perceptions about the strengths of their lessons also differed. The points of satisfaction that Şemsettin referred to with highest frequency were students' genuine motivation, the high level of their interest in the tasks designed by him, their long attention span or the extent they seemed to enjoy the lesson. Also remarkable in the interviews was his mention of the variety in students' output. As was discussed in the implementation part, Şemsettin introduced tasks that made various ways of dealing with them possible. He did not enter the class with a correct answer or a set of correct answers in his mind. In tune with this, the lessons in which students came up with answers and approaches reflecting diversity were reported to be the most worthwhile lessons by him. Some unexpected answers from the students that represented a totally different approach to the issue in question attracted Şemsettin's attention. When making comments on students' products, he particularly remembered answers that were considerably different from the other answers. Without exception, he appreciated different answers more than logical and thoughtful answers and he made longer comments on such answers. Another point that deserves attention in Şemsettin's reflections on such lessons is that the

answers given by students on which he placed great emphasis during the interviews seemed to go unnoticed in the lessons in which they were uttered by them by them. Depending merely on the observations of his lessons, one could claim that Şemsettin did not think high of these answers, whereas, in the interviews, the accuracy with which he recalled them and the way he referred to them proved the value he attached to such answers. Based on the frequency of such incidents, it can be concluded that although Şemsettin discriminated students' answers in his mind (those reflecting divergent thinking were valued more and received more attention), this kind of discrimination did not return as feedback to the students. It would also be true to conclude that Şemsettin's understanding of successful lesson incorporated more affective dimensions (attention, motivation, interest) than cognitive dimensions.

Zehra's perception of the strengths of her lessons was consistent with her perception of the source of the problems in the lessons. Just as she considered faulty thinking and students' poor thinking habits as problems, she cited the incidents in which she challenged them to improve their thinking as the strongest aspect of her teaching. Many times she repeated one-to-one dialogues with her students verbatim. These dialogues were those in which she guided a particular student to discover the problem with his/her thinking by directing questions to him/her. In comparison with Şemsettin, her memory was biased in favor of events involving cognitive aspects rather than those that involved affective aspects. Here, it is worth mentioning that Zehra also remembered and mentioned some segments involving humor from time to time but the humorous events that she remembered had one thing in common, which was that they were all relevant to the topic at hand or they established a relationship between a past topic and the present topic in a creative manner.

In her reflective comments about the strengths of her lessons, Ayşe cited the situations in which students gave relatively longer answers to the questions or turned their answers into coherent paragraphs by establishing connections between them. Ayşe prioritized answers which employed rhetorical language that sounded impressive over those that directly answered the question using

elegant language. She was not very accurate in the way she recalled such answers. She chose to describe the effect that such answers created on her using such adjectives as "impressive", "proper", "like a grown-up" rather than trying to recall the exact answer of the student in such situations. The answers that she mentioned in the interviews as strong ones were those that she also praised in the lessons for other students to consider as models. In addition to this, what Ayşe found impressive in her lessons was about the way students used their knowledge of the world to explain a situation under discussion. Although Ayşe talked appreciatively about students' breadth of knowledge, she emphasized lack of ownership in the emergence of such situations in her lessons. She did not consider her role to be essential in having them refer to their knowledge of the world.

4.4.5 Evaluation of Students' Learning

In the reflective sessions, the weight of teachers' comments judging their students' learning compared to their comments in other areas varied considerably. In her comments, Zehra made frequent references to the specific instances in the observed lessons which indicated students' level of understanding to her.

In fact, in Zehra's teaching checking students' understanding particularly after she introduced a new linguistic concept existed as a distinct step. Just as she demanded clarity from her students as was discussed in implementation stage, she also made efforts for her explanations to be clear. Therefore, she asked students directly whether there was anything requiring more explanation or she presented new examples and judged students' comprehension from their reactions to the examples. Another way of her checking learning was making tricky misleading comments and observing students' responses. Parallel to this tendency, in her reflective thoughts, her evaluation of the students' learning occupied a remarkable place. She interpreted and relied on students' verbal comments to reach conclusions about their learning. While planning the following lessons, this judgment played an important role.

In her meticulous analysis of students' learning Zehra was distinct from the other participating teachers. Neither Şemsettin nor Ayşe invested much in their reflections to their students' learning. While making comments about their learning, Şemsettin's language incorporated imprecise expressions such as "They must have understood what the message of the text was." He did not make an attempt to base his final judgment on more concrete evidence from the students in the interviews.

In Ayşe's reflections, consideration of students' learning was rare and did not depend on evidence.

4.4.6 Assumptions Underlying Students' Thinking

When students shared their thoughts about a topic by drawing conclusions, they naturally relied on a set of unstated assumptions. Zehra usually checked students' assumptions underlying their reasoning in the lessons by asking those questions that aimed to get them to state their assumptions. A representative example of Zehra's tracing back students' line of reasoning emerged in a lesson in which the students tried to find out in which city the mosque in the picture was located. The following dialogue took place between Zehra and a student:

> Student: The mosque might be in Samsun.
> Teacher: Samsun? How did you make a relationship between Samsun and the mosque?
> Student: Atatürk's stepping foot in Samsun
> Teacher: Why do you think all this is related to Atatürk?
> Student: The title of the text we are going to read is Atatürk and Mimar Sinan.
> Teacher: But it is Mimar Sinan who built the mosque, not Atatürk.
> Student: I know.
> Teacher: So, why would Mimar Sinan build a mosque in Samsun? Do you know that they lived in different centuries?
> Student: ---(quiet)
> Teacher: Mimar Sinan lived in the 15th and the 16th centuries. Atatürk lived in the 19th and 20th centuries. So can you say that Mimar Sinan built a mosque in Samsun because Atatürk landed in there?
> Student: No. (Zehra, 14. 11.2005)

In this vignette, a student's rather unexpected answer (unexpected in a context in which all other answers were somewhat related to the period Mimar Sinan lived in: Istanbul, Bursa and other cities that were important in the times of the Ottoman Empire) caught Zehra's attention. By questioning an irrelevant answer like this to reveal the faulty assumption underlying it (that Atatürk and Mimar Sinan were contemporaries), Zehra rendered questions related to the student's line of thinking unnecessary in the follow-up interviews.

On the other hand, the way Şemsettin and Ayşe approached such answers in their lessons necessitated questions to the teacher inquiring what made them to accept unexpected answers like this. Therefore, both teachers were regularly asked questions in the interviews about how they interpreted their students' answers. When a student made an unexpected comment or gave an answer that was different from the others in the observed lesson, later in the interviews the teacher was asked what his/her interpretation of students' opinions was. However, the interviews with the students about the same segments of the lessons revealed differences between students' thinking and teachers' interpretation of their thinking. To illustrate, in a lesson, Şemsettin wanted to move from the metamorphosis of the caterpillar into a butterfly to the transformation of Ottoman Empire into the Turkish Republic to help the students see the underlying concept of change in different contexts by way of analogy. However, during the lesson, he did not ask any questions or make any comments to guide the students to try to see the transition of the lesson from one to another. While reflecting on this lesson after implementing it, in response to the question inquiring whether the students were able to grasp the point that he wanted to make, Şemsettin assumed that most of the students had noticed the connection. By making a comment like this, he revealed his lack of expectation that all the students would see the connection. Furthermore, although he did not check it during the lesson, he assumed that most of the students would see the connection. However, in the interviews, when the students were posed the question "Why do you think the teacher started the lesson with the butterfly presentation and then continued with a poem about the April 23?" they were

unable to explain the relationship in the way Şemsettin intended it to mean. The most common answer was that the butterfly presentation was about change, which was related to the new theme "change and development" that they had started that day. The poem, however, was there as they were celebrating the April 23 Children's Day that week. After this initial spontaneous answer, when the students were asked follow-up questions to trigger their thinking ("Do you think there might be some connection between these two topics when both are considered under the theme of change and development?"), some of them were able to see and explain the connection. For the others, further questions were needed to elicit the answer that Şemsettin had expected.

Therefore, it can be concluded from similar events that Şemsettin's assumptions about his students' thinking failed to capture the real picture. In his implementation, Şemsettin overestimated their reasoning and thought that they could reach conclusions without guidance. As he made clear in the interviews, he thought that guiding students thought processes by asking questions to them would be equal to imposing them the answers in his own mind. Therefore, by expecting them to come to think on their own, Şemsettin thought that he liberated his students' thinking from pressure.

4.4.7 Threat Posed by Students

In their reflections, all three teachers expressed their admiration to their students' knowledge base. Ayşe made the following comment in an interview:

> When I compare the students' today with those in the past when I first started teaching, I can claim with confidence that the biggest change can be seen in their knowledge. In the past, we, as the teachers, were their only source of knowledge. All they knew was what we taught them. Those who had educated mothers, which was rare at that time, would sometimes know a little bit more than the others. Today, this has changed drastically. Even the weakest student can know something you don't know as a teacher. They are knowledgeable in a variety of subjects. I am really impressed by their knowledge ...They have got many resources to learn from. Television programs, especially documentary channels like Discovery Channel, and of course the internet. (Ayşe, 17.05.2005)

As is revealed in this interview excerpt and as was discussed under the heading of teachers' perceptions regarding the strengths of their lessons, Ayşe

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was aware of the extent of her students' knowledge and appreciated this. However, she also stated her concerns as to how to cope with this state of affairs as she felt she lost control of the things when students knew more than she did. The same concern, though not stated as explicitly as Ayşe did, was also shared by Zehra. However, Zehra also emphasized her efforts to expand her knowledge about various subjects to deal with this situation.

Şemsettin, on the other hand, did not express any concern related to students' knowledge base in reflective sessions.

4.4.8 Summary of Reflection

An important contribution of the data collected to answer the research question about teachers' reflections on the aspects of their teaching involving critical thinking was that the way teachers interpreted their teaching in the classroom differed from each other even at times their teaching had aspects in common. This was parallel to the differences that appeared in the ways teachers implemented their plans in their classes even when their plans had commonalities.

Basically, the language teachers used to talk about their teaching, the problems they spotted in their classrooms, the ways they dealt with the problems in reflective stages as well as the strengths of their lessons as perceived by them showed considerable differences. Table 4.3 briefly displays the underlying issues that emerged in three teachers' interpretations of their teaching.

Table 4.3
Summary of data on teachers' reflections about the aspects of their teaching regarding critical thinking

Teachers' Reflections about the Aspects of Their Teaching Regarding Critical Thinking	
Discrimination of Thinking Concepts	
Şemsettin	Lacks the vocabulary to talk about differences between thinking processes.
Zehra	Discriminates between certain processes involving different modes of thinking.
Ayşe	Uses terms referring to different modes of thinking inaccurately.
Sensitivity to Situations Involving Critical Thinking	
Şemsettin	Lacks awareness of the value of certain events in his teaching that lend themselves to critical thinking.
Zehra	Shows awareness of the opportunities that are created in her lessons to foster critical thinking.
Ayşe	Lacks awareness of the value of certain events in her teaching that lend themselves to critical thinking.

Table 4.3 (continued)

Teachers' Perceptions of the Problems in Their Teaching	
Şemsettin	Considers any difficulty experienced by students in terms of language while reading his texts as a problem. Describes the problem in the lessons without pinpointing the possible sources of the problem. Does not make modifications in the techniques he uses depending on his observations of the previous applications of the same technique.
Zehra	Considers problems in students' habits of thinking, such as self-deception or ego-centric thinking, and their misconceptions as problems.
Ayşe	Focuses on problems on classroom management and sees them s the source of her problems.
Teachers' Perceptions of the Strengths of Their Lessons	
Şemsettin	Defines strengths of his lessons mostly in affective aspects (high student motivation, high level of interest in tasks designed by himself, long attention span, students' enjoying the lesson). Considers variety in students' output as an indicator of success of his tasks.
Zehra	Considers more cognitive aspects of her teaching (the challenge she poses to her students by asking questions or demanding better answers to improve their thinking) as strength of her teaching.
Ayşe	Considers the extent to which she can get long answers loaded with rhetoric from students as an indicator of success for the lessons. Tends to attribute the good aspects of the lessons to the students.
Evaluation of Students' Learning	
Şemsettin	Checks students' understanding roughly.
Zehra	Checks students' understanding in the lessons meticulously and considers the feedback she receives from them to evaluate her lessons and plan for the following lessons.
Ayşe	Checks students' understanding roughly.
Assumptions Underlying Students' Thinking	
Şemsettin	Does not check students' assumptions in class and forms a false picture of students' thinking and the assumptions they base their thinking on.
Zehra	Checks students' assumptions regularly in class.
Ayşe	Does not check students' assumptions in class.
Threat Posed by Students	
Şemsettin	Considers students' rich knowledge base as a strength.
Zehra	Feels students' rich knowledge base as a threat and tries to expand her own to be able to cope with it.
Ayşe	Considers students' rich knowledge base as a threat to her control in the classroom as a teacher.

4.5 Students' Perceptions and Reactions with Regard to Critical Thinking in Class

As was the case with the research question concerning participating teachers' reflective thoughts about the implementation stage, the findings about students' perceptions and reactions with regard to critical thinking were also disclosed in the discussion of the implementation stage to some extent. To explain the classroom events from multiple perspectives (from that of the

teachers and of the students) reactions of the parties to the event or situation under discussion immediately followed the description of the observed event or situation. While analyzing and presenting the data in that section, what stood salient were the commonalities among the events and situations observed. Under this heading, however, the commonalities among students' responses to the life in their classroom to the extent that they are relevant to critical thinking will be studied in the light of the emerging themes. Therefore, the key issues that appear in this part represent the salient elements from students' point of view.

The data analyzed and presented in this part come from three sources: observation of students' classroom behaviors, the interviews made with them after the lessons and their written logs answering some questions concerning classroom events and situations. While the first was used to collect data about their behaviors, the second and the third instruments were employed to shed light on their perceptions and their own explanations of their behaviors.

4.5.1 Interactive Patterns

In this research, the observation of the three classes implied that the participating teachers did not opt for collaborative learning in their teaching as most of the time students were observed to work individually. In the observed lessons, interaction among students was not encouraged through the incorporation of pair work or group work activities into the lessons. When a question was posed or when students were engaged in a task, they were not expected to talk to each other before they shared their answers. However, this did not lead to the complete exclusion of interaction.

The way students in these three classes interacted with each other and the teacher showed some similarities and differences.

As was discussed earlier, in Şemsettin's classes, the periods that students worked individually outweighed those in which students shared their products with their peers, leaving less time for purposeful interaction. As was the case with Ayşe's class, students showed a tendency to make comments about each others' answers. However, Şemsettin was observed to prevent this interaction by

interfering with their communication. Şemsettin did so particularly to defend a student whose argument was under the attack of his/her peers. The atmosphere prevailing in Şemsettin's class was such that the teacher considered himself as the recipient of all messages coming from the students; thus, he tried to answer the questions or responded to the comments coming from the students to their peers.

In Ayşe's observed lessons throughout the semester, interaction among students was not hindered by the teacher in most cases. When a student made a comment, others freely responded to it with or without raising their hands for permission. Provided that the comment was relevant to the discussion at hand, Ayşe did not interfere. This was observed to result in students' challenging each other for their answers. In cases where the teacher did not demand justification from the student, as it frequently happened, other students compensated for this missing aspect by directly posing questions that sought reasons to their classmate. Although this did not lead to extended discussions, it contributed to the emergence of moments in which students exercised thinking.

Of the three teachers, Zehra seemed to have created the most restrictive environment for her students as she paid close attention to structuring the environment and having students follow classroom routine strictly. This same attitude manifested itself in the way Zehra managed the interaction in the classroom. In her class, talking without permission and interrupting someone's talk were strictly forbidden. Furthermore, when the permission was given by the teacher, the students were expected to fulfill a set of criteria while talking. They knew that they had to keep their answer as concise and clear as possible without repeating what the other speakers had already said. That the answer had to be completely relevant to the topic at hand was a rule that all the students in the class respected. However, Zehra's close observation of these guidelines in her management rendered her classroom environment more interactive than that in the other two observed classes. Students listened to each other more carefully and the answers turned out to be more precise. Despite the distance between the students that was caused by their sitting at their desk alone, students were able to

listen to each other more carefully. In this interactive atmosphere, one problem that affected communication seemed to be the long teacher talk. Zehra tended to give relatively long explanations. However, unlike Şemsettin who interfered to answer questions or respond to comments directed from one student to another, Zehra gave the opportunity to respond to the students. Furthermore, when a student asked a question inquiring Zehra's opinion about an issue, she gave the priority to answer it to the other students first. Therefore, she paved the way for direct communication between students that contributed to the emergence of intense dialogues among students. Another element that enhanced the quality of discussions was that Zehra did not refrain herself from allotting enough time for exploiting the opportunities embedded in the discussion. However, she was the chooser of the aspects on which such dialogues would be started. When students genuinely got inquisitive about a topic, she did not allow them to pursue it most of the time.

Parallel to these observations from three classrooms, the data collected from the students outside the classroom showed variance among the cases. As students in Şemsettin's class did not have much opportunity to get engaged in purposeful talks in the lessons, the questions directed to them about their products (the acrostic they wrote, the pictures they drew, the paragraphs they wrote) in the interviews or in the logs revealed new information about their thinking. The reasons underlying students' conclusions or decisions were brought to the surface through these channels.

Although Ayşe allowed for more interaction in the class time, the data collected from the students outside the class always brought forth new aspects as Ayşe did not investigate students' deeper thinking in the class time by asking probing questions. In the case of Zehra, the outcome differed remarkably. By fully benefiting from the advantage of her small class size but, more important than that, by providing the environment for purposeful interaction, Zehra made it possible for her students to make their thinking processes explicit during the lessons, not leaving much for outside the class investigation.

4.5.2. Curiosity

In the observed lessons, most of the time action was initiated by the teacher. However, there were cases, though rare, in which students initiated purposeful dialogues and one common motive for students to start a dialogue was observed to be satisfying their intellectual curiosity about an aspect of the topic being discussed and, in some cases, about an irrelevant subject. In the interviews made with the students, the theme that manifested itself most conspicuously was again curiosity. Students particularly displayed curiosity about the subjects of the reading texts. To illustrate, when the topic of a text was the invention of the telegraph, they indicated their desire to find out more about its inventor, whose life story was the main subject of the reading text. Or, after reading a text about Kure Mountains in a lesson, they downloaded information about the mountain range from the internet although this had not been assigned by the teacher. Of the questions that were posed to be answered in the logs, the one that received most attention from the students was the question that inquired what they would like to know more about the topics covered in the lessons. Both in terms of quantity and quality, the answers to this question were outstanding. Although not all the questions that were asked received answers in the logs, the students constantly provided answers for this question.

The content analysis of the answers to this question revealed valuable information about students' perceptions regarding the topics covered in the lessons. One outstanding finding is that although in the lessons while studying the text with the teacher, neither the teacher nor the students raised questions regarding the credibility of the information presented in the texts, some students (not always the same students) indicated their concerns and doubts about some parts of the texts in the interviews and logs. In such situations, the students cross checked the information in the text against their background knowledge about the topic and when they spotted an inconsistency, they cited this as a point of further inquiry. The following log entry of a student typifies this situation:

> In the text, Ahmet Andiçen (the main character) is said to have made 85 blood donations in his lifetime and the amount of his blood that he has

donated is said to add up to a total of 35 liters. But in a documentary I had watched, I learned that human body consists of approximately 6 liters of blood. If so, how could this be possible? (log entry,18.04.2006)

It is noteworthy that the student did not question the truth of information in the text during the lesson. However, when he was asked if he was curious about anything that happened or talked about or studied during the lesson, he came up with this line of reasoning that put him in a position in which he questioned the truth of something that had been presented as a fact (statistics from Ahmet Andiçen's life) in the text. It was not an opinion that was questioned but a fact.

Another interesting incident related to curiosity is also worthy of mention here since in all the feedback received from the students in this research, this turned out to be the one that triggered the strongest reaction from the students. Following a lesson in which Zehra introduced the concepts of simple words, derived words and compound words in an inductive fashion, she posed a probing question that called for thinking divergently. The question was for what possible reasons people needed to derive new words from the existing words such as the word "fishery" from the word "fish." What followed this question was answers such as "to have more words," "to make shorter sentences; instead of saying where the fish are caught, we can say fishery, which is shorter." After eliciting these and some other speculative answers, Zehra made her comment which aroused a lot of surprise among the students that was evident in their exclamations. She stated:

> These are the answers we gave depending on our own judgement. You can't find an answer to this question in books. I just wanted to ask this question because when I was preparing this lesson, it puzzled me (Zehra, 30.11.2005).

Although this question had been directed to the students at the beginning of the lesson, they started talking about it among each other as soon as the teacher left the classroom for the break. They continued to build hypotheses attempting to explain the emergence of derived words enthusiastically. Parallel to this, in the interviews carried out with the students about that week's lessons, they cited this question as the most curious one. When they were asked to

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explain what made them feel so curious about this question, they invariably referred to Zehra's comment saying that she did not know the answer to this question and that the answer to this question was not available anywhere. Therefore, an implication of this can be that students tended to be more inquisitive when they were asked genuine questions.

Based on the findings obtained from the interviews and logs from three classes, a relationship between the depth and breadth with which the texts were studied during the lessons and the emerging level of curiosity was also detected. In the lessons in which the class discussed the topic of the text more extensively by answering questions inviting higher order thinking, students listed more questions for which they wanted to seek answers. On the other hand, when texts were studied superficially in the class due to various factors such as time concerns, the number of the questions that students asked decreased and they repeated themselves over and over.

4.5.3 Interest

When students were asked to list what they had learned in a lesson through interviews and logs, they tended to refer to the factual information in the texts as new knowledge. They cited information about institutions, concepts, places as the new things they learned from the lesson. The question inquiring what they found the most striking in a lesson again was answered with reference to the new factual information presented in the texts. This finding becomes more meaningful when it is interpreted with students' attitude towards different courses offered in the curriculum. In all three groups of students studied, a vast majority referred to math, and science and technology courses as their favorite. This was followed by social sciences course. Turkish was regarded as the favorite course only by a minority. When students were asked what attracted them most about their favorite course, their responses concentrated on the fact that they learned many new things in that course.

All this might imply that when learning is associated with learning new facts, then it might not be surprising that Turkish, with its texts that do not introduce much new information to the reader, is not a very popular course.

They also preferred to share their science projects and portfolios from other courses than Turkish. Turkish portfolios usually included sheets that were filled with the information about outside readings. However, when students were asked questions about the books that they had read from the beginning of the year until then in their free time, the majority of them had a vague memory of the books.

4.5.4 Summary of Students' Perceptions and Reactions

As opposed to the findings for the previous research questions, the findings related to students' perceptions and reactions to critical thinking in class showed similarities rather than differences among the students in three classes. Only in terms of interactive patterns were there differences; however, this was again mainly caused by teachers' choices rather that students'. Table 4.4 summarizes the data regarding this research question.

Table 4.4
Summary of data on students' perceptions and reactions with regard to critical thinking in class

Students' Perceptions and Reactions with Regard to Critical Thinking in Class	
Interactive Patterns	
Şemsettin' Class	Students are engaged in individual work rather than group work in a considerable amount of class time. Students show willingness to share their ideas with their classmates. The teacher interferes with the direct interaction between students by taking over the task of responding to comments.
Zehra's Class	There exists a highly interactive atmosphere due to teacher's management of interactive processes closely by setting strict rules. Students have the opportunity of reacting to each others' comments. The teacher's rather extended talks sometimes interfere with students' direct interaction with each other.
Ayşe's Class	Students can at times react to each others' comments directly and challenge each other without teacher's interference, creating opportunities for reasoning together.
Curiosity	

Table 4.4 (continued)

Şemsettin' Class	Students show a tendency toward checking the truth of the knowledge
Zehra's Class	presented in the texts when they are encouraged to do so.
Ayşe's Class	Students constantly feel curious about the topics they read in the lessons.
	Genuine questions without certain answers arouse more curiosity.
	The more the time and attention allotted to a text in the lesson, the more curiosity the topic arouses among students.
Interest	
Şemsettin' Class	Learning is expressed in terms of newly learned facts and interest is
Zehra's Class	shown in new factual knowledge.
Ayşe's Class	Turkish is not considered as a course in which they learn much.

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CHAPTER V

CONCLUSIONS AND IMPLICATIONS

This research study aimed to investigate how teachers integrated the development of students' critical thinking skills into three phases of their instructional process, namely, their planning, implementation and reflection. It also aimed to investigate the impact of instruction involving elements of critical thinking on the students. Since the three teachers participating in the research were not selected among those for whom adjusting their instruction to incorporate critical thinking skills was a particular concern, they were not expected to be fully aware of the instructional aspects of critical thinking nor were they expected to have a clear concept of critical thinking in their minds. As they did not have such claims about critical thinking in the first place, the research modestly endeavored to analyze the traces of critical thinking in the three classrooms. It was assumed at the outset that the way teachers taught Turkish would offer opportunities for the development of students' critical thinking abilities as well as pose obstacles to its progress. In light of these initial expectations from the study, the findings discussed in the previous chapter will be interpreted with respect to their potential for being opportunities for or obstacles to the enhancement of students' critical thinking in the present chapter. These opportunities and obstacles will be dealt with parallel to the research questions that the study aimed to shed light on: teachers' integration of critical thinking into planning stage, teachers' integration of critical thinking into teaching and learning process, teachers' reflections about the aspects of their teaching regarding critical thinking and students' perceptions and reactions with regard to the practice of critical thinking in class.

5.1 Teachers' Integration of Critical Thinking into Planning Stage

The themes that emerged from the data regarding teachers' planning process, such as their sense of autonomy, their search for relevance or their methodological stance, all suggest that teachers made endeavors to make their teaching more meaningful to themselves at varying degrees. In fact, meaning making can be said to stand as an overarching theme that cuts across the themes that come from the data.

Şemsettin's outstanding sense of autonomy which was also supported by his teaching context (school culture, the facilities available at his service) led the way for him to design the course in ways that made his teaching more meaningful to himself; a similar sense of autonomy or the feeling of ownership allowed Zehra to eliminate the aspects of the course book that she found to be trivial or repetitive, again rendering her teaching more sensible to herself. although her teaching environment was not as supportive of her autonomy as that of Şemsettin. As Ayşe hesitated to develop a similar sense of autonomy while planning her lessons, she found herself in situations where she complained about the outcome of her teaching, admitting that she found some of what she did meaningless. However, the lack of parental participation as well as that of administrative pressure had given her the opportunity to exercise some autonomy.

In fact, with their sense of autonomy, Şemsettin and Zehra made their teaching sensitive to their teaching contexts, which eventually rendered it more meaningful to themselves.

Feldman (2002) refers to "teaching as a way of being" as a new all encompassing perspective that has been developed to account for the behaviors of teachers. This perspective suggests that teachers are "meaning makers immersed in educational situations." As well as the situations in which they are teaching, their experiences, interactions with others within or out of their teaching contexts, their past, present, moods, expectations and intentions all affect their teaching. This perspective of teaching is one that goes beyond

viewing teachers as computers that rely solely on their knowledge base, or viewing them as individuals that make decisions for themselves merely on the basis of their own reasoning or as individuals whose actions are determined only by their social contexts. According to this perspective of teaching, for teachers to be effective while implementing a method or curriculum, they need to consider it to be sensible to themselves. When teaching is viewed in this way, Şemsettin and Zehra created their own opportunities of making sense out of their jobs as teachers. In the same way, they took an important stride toward establishing a framework for their students in which they could be involved in meaningful learning experiences.

The search for meaning also manifested itself in Şemsettin's approach to methodologies. Şemsettin made use of different methodologies such as multiple intelligences and discovery learning to have his students think as he planned his lessons. Yet, he rendered himself free from the use of any specific methodology parallel to his sense of autonomy. In Zehra's teaching, however, multiple intelligences occupied a significant place. Although Şemsettin did not plan his lessons within the framework provided by a particular methodology, Zehra planned all her lessons within the frame of multiple intelligences. However, when their end products, i.e., their lesson plans, are compared, Şemsettin can be seen to address different types of intelligences with a richer variety of tasks persistently, whereas Zehra seemed to emphasize verbal intelligence more than the other forms of intelligence. These two teachers' individual ways of talking about multiple intelligences and of putting theory of multiple intelligences into action can be evaluated against the position of multiple intelligences to critical thinking.

According to Elder (2007), the development of students' critical thinking skills is predicated on teachers' practices aiming at cultivating these skills and there is no way that students can acquire them without direct guidance. In Elder's statement, direct guidance entails the use of certain methods that aim to enhance critical thinking skills. However, when it comes to the use of multiple intelligences to promote critical thinking, she demonstrates some degree of

skepticism: On the one hand, Gardner provides teachers with a frame with which they can structure their lessons in ways that interest students with different abilities and, by doing so, he emancipates the field from the tyranny of verbal-mathematical intelligence that has been the most commonly acknowledged type of mindset. On the other hand, prioritizing the interests of students in designing the lessons may mislead the teachers to exclude or neglect the primary obligation of education that is, enabling learners to gain control over their intellectual power in its entirety. According to Elder, such control is possible only when learners are trained to use their minds to apply a set of criteria to their own thoughts; however, doing this requires one to reach beyond his/her individual dispositions. Therefore, the rigor with which Elder requires students to shape their thoughts and evaluate both their own and others' thought in the company of a set of criteria (involving accuracy, fairness, relevance, clarity, logic etc.) is not guaranteed, even not promised by Gardner's multiple intelligences model.

Kincheloe (2004) also raises criticism against the model by noting that it falls short of addressing the significant issues such as what the purpose of education and schooling should be and that it promotes "abstract individualism," while it ignores the contextual factors such as society, politics, economy, culture which contribute or hinder the formation of the individual differences in intelligence. However, all these do not entail the divorcing of MI from critical thinking; such considerations only caution the teachers against the misconception that framing their teaching on the basis of multiple intelligences does not free them from their responsibilities regarding the nurturing of intellectual skills of their students.

When considered in light of such criticism, Zehra's prioritizing verbal logical intelligences in her planning appears to be a reasonable choice due to the fact that a course on language should primarily engage learners' verbal intellect. Considering the mutual relationship between language and thought in that words provoke thoughts and thoughts can be shared using words, the need for emphasis on verbal abilities for any group of learners with different abilities can be better

justified. By the same token, Zehra saw a lesson plan based on multiple intelligences only as a reminder of students with different abilities; writing a lesson plan was only the starting point of her planning. By putting the emphasis on verbal-logical aspects of students' intelligence, she avoided the risk mentioned by Elder. In addition to that, by not limiting her efforts to develop students' thinking skills only to the use of multiple intelligences as a frame for her lesson plans and making further steps to enhance thinking in her classes, she also seemed to stay away from the drawbacks of sticking merely to the multiple intelligences frame stated by Kincheloe.

Relevance also emerged as another aspect that teachers took into consideration at different levels. Şemsettin wanted to make his lessons relevant both to himself and to his students, whereas Zehra could not particularly pay attention to relevance as much as Şemsettin did, partially due to the fact that she was not as free while designing her lessons. Yet, she made efforts to make her examples more relevant to her students in concept formation. Ayşe's lessons, on the other hand, were relevant to her students only to the extent the course book allowed so.

Research in critical thinking reveals that there is a positive relationship between motivation and critical thinking (Brookfield, 1987; Garcia & Pintrich, 1992). The attainment of motivation for improving students' involvement in cognitive tasks is one of the formidable challenges to which teachers need to respond. One study that thoroughly uncovers the variables affecting the formation of motivation is Keller's ARCS Model (1987). In this well-established model based on already existing research on psychological motivation, relevance stands as a key component of motivation together with attention, confidence and satisfaction. According to Keller, relevance as a condition of motivation requires that students see the relation between the topic and their wordly experience. Therefore, by choosing examples and issues that were relevant to their students' life, both Şemsettin and Zehra sought to motivate their students and set the ground for them to form new concepts and/or to get involved in discussions.

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The problems associated with the *texts* introduced in the course books were another aspect that teachers thought to create barriers in the way to the enhancement of thinking. The concerns of teachers about texts were that they were not always interesting for the students, that they were about trivial issues, and that they did not serve as springboards to start class discussions.

Recent studies that have been conducted on fostering critical thinking in the classroom all underscore the significance of input to initiate critical thinking. In the four-step model of critical thinking that was developed by Garrison et al. (2001) the presence of a triggering event was considered to be essential to activate the critical thinking process. To them, only in the presence of such an event is it possible to proceed with the other steps of exploration, integration and resolution. The triggering event was characterized as one that involved a dilemma or a controversy and in educational situations they considered it as the teacher's responsibility to define or identify one such event for students to be able to think critically. Therefore, the fact that texts did not introduce such triggering events, leading to lack of discussions in the classrooms, seems to have impaired the development of the ability to think, which is parallel to the findings of Garrison et al.

Similarly, in the research conducted by Perkins and Tishman (1998), subjects were involved in three different tasks requiring "sensitivity," that is, awareness of situations where critical thinking is needed, "inclination," that is, feeling motivated to think critically and "ability," that is, being capable of following steps that would lead to critical thoughts. When the performance of the subjects in these three tasks were compared, it was found out that they scored the highest in the task that demanded ability, whereas they scored significantly lower in the task requiring inclination. However, the lowest score came with the task that necessitated sensitivity. Thus, compared to their ability to think critically, they found that people had less sensitivity and inclination to think critically. Then, identifying that call for critical thinking proved to be more challenging than thinking critically upon demand. As, in all three cases, the texts did not clearly introduce situations and events that called for critical thinking,

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expecting students to have the sensitivity to recognize the situations for critical thinking was not realistic.

To stimulate the students to think, Schmoker (2007) places the emphasis on the use of good texts to create catalysts for inquiry. He lists a section in a textbook, an article or a book chapter as possible sources of good texts. On the other hand, he also recognizes the contribution of literary texts to start discussions. In fact, truly critical textbooks would not only expose students to the writings of authors arguing for a specific issue but also bring them in contact with diverse opinions regarding an issue. As Shanahan (2003) proposes, using multiple conflicting texts that put the readers into a situation in which they will need to analyze different points of view concerning an issue and evaluate what to believe or think taking diverse opinions into account would serve most effectively to the fulfillment of goals regarding critical thinking.

In this respect, by writing his own texts in order to expose his students to more significant questions about life and to get them to contemplate such issues, Şemsettin attempted to fulfill an important demand of teaching for critical thinking. Mayers and Field (2004) considered posing existential questions such as "How should we live together?" and raising arguments around such questions as a premise of critical thinking education. In his texts, Şemsettin also changed the informative tone prevailing in the texts of the course book. By replacing the abstractions in the informative discourse with a story discourse, he aimed to contextualize the issues, corresponding to the direct experience component of critical thinking described by Fazio. For critical thinking to occur, and more importantly, for attitudes associated with thinking critically to be retained in memory for their successful transfer from one context to another, five determinants were compiled from the related literature by Fazio (1995, cited in Leader and Middleton, 1999): direct experience, sensory experience, emotional reactions, freely chosen behavior and attitude rehearsal. Of these, direct experience and sensory experience are relevant to the present discussion about the role of reading texts on critical thinking and what Şemsettin aimed to achieve with his texts. By direct experience, Fazio refers to those experiences which

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have the individuals commit themselves to an issue. To illustrate, whereas an informative text that describes recognizing bias, an important critical thinking skill, does not provide direct experience opportunities for the readers, reading a story in which one of the characters (preferably one that the learners can identify with) act upon his/her biases in an authentic situation (the ordinary practice of the culture) creates opportunities for direct experience. Then, providing direct experience is, in fact, creating situations simulating those in life. By writing on his real life experiences and dilemmas in a story like fashion, Şemsettin also wanted to respond to this aspect of critical thinking instruction and compensate for the problems in the course book in this respect.

Rafferty (1999) distinguishes between two categories, namely, narrative literacy and expository literacy, under traditional text-based literacy. Both being prose formats, she associates the former with "learning to read" and the latter with "reading to learn." She emphasizes the significance of narrative literacy in teaching students to make sense of what they read and in equipping them with the skills that they will use while they are reading to learn. In this respect, too, Şemsettin's preference for real-life stories of his own that he used in his texts may be concluded to be a contributing factor to students' ability to read for meaning.

In the list of 35 dimensions of critical thought developed by Paul et al. (1990), *making interdisciplinary connections* appears as a constituent of macro cognitive skills. This skill requires that when thinking critically, one views the issue from the perspectives of various academic subject areas to the extent that they offer relevant input for the issue. To illustrate, in analyzing the root causes of some environmental problem, instead of limiting the problem to the realm of environment, viewing the issue with its historical, economic and politic dimensions enhances the breadth of thinking. Many studies have investigated the connection between interdisciplinary thinking and critical thinking. In a research study that aims to examine the effects of interdisciplinary cooperation on fostering critical thinking, Downing and Lander (1997) go as far as unifying mind and body by integrating physics into a weight training unit and detects the

positive influence on the development of critical thinking. However, when its comes to the way that the teachers perceived and made use of interdisciplinary thinking in the present study, it was possible to detect a significant difference between the place of this skill in critical thinking and the way it was perceived by the teachers. In the former, the skill is called into action in order to add to the quality of critical thinking processes, e.g. to facilitate the problem-solution process or to evaluate an issue with depth and breadth. In critical thinking terms, although making interdisciplinary connections requires recalling information from another discipline, doing this is considered as only the first step of successfully employing this skill. Once the relevant information is recalled, then students should be made to revisit their opinions in light of the information from the other disciplines to enhance the quality of their thinking. The participant teachers, however, understood making interdisciplinary connections not as a skill which their students should acquire to be able to think more extensively but as an organizing principle for their own planning that provided opportunities for revision of previously learned subjects.

As for their *approach to reading* in planning stage, all participating teachers had certain aspects in common. They all structured their plans in three stages: pre-reading, while-reading, post-reading. In their planning for pre-reading, Şemsettin and Zehra had much in common. They designed tasks through which they aimed to activate students' prior knowledge of the topic of the text before they got started to read. In fact, by doing so, these teachers were making use of the aspects of schemata theory that turns reading into a more active process. Schemata are defined by Halpern (2003) as knowledge structures in our mind. Whenever we learn a new piece of information, we try to fit it into the already existing knowledge structures in our mind. At times when the new information is not consonant with the present structures in our mind, we adjust, or, in extreme cases, rearrange the available structures in a way that they can inhabit the new information. When learning is defined in this way, it becomes more evident that it is an individual process. A fact that exists as an objective entity in the world can have various mental representations in the minds of

different people. In learning a new concept, the existing schemata are important facilitators. When schemata theory is applied to language, Kern (2000) distinguishes between linguistic and cultural schemata. Cultural schemata are the representations of our knowledge of the world. When reading a text, readers fill in the blanks in the text with their background knowledge of the world related to the topic. If their topical knowledge guides correctly, then they can construct meaning out of the text and make sense of it. Therefore, the rationale of supporting the reading process with pre-reading tasks is to facilitate the activation of this background knowledge. When it comes to the convergence of schemata theory with critical thinking, research shows that understanding the text at higher levels (analysis, synthesis, evaluation) requires the use of adequate schema with which to associate new data. If the reader does not have the schema, his/ her comprehension of the text is likely to be very limited, hindering analysis, synthesis or evaluation almost impossible. Thus, instructors need to assist students in activating schema (Davis, 1986).

When reading is considered as an individual process as viewed in schemata theory, Şemsettin's involving students in individual pre-reading tasks can be anticipated to have a positive impact on students' subjective meaning-making process of the reading texts.

As opposed to Şemsettin and Zehra, Ayşe's underestimating the role of pre-reading stage in helping students to comprehend the texts better in the reading stage can be attributed to her lack of exposure to the recent reading theories due to lack of in-service training as she stated too.

As for the *writing approach* of these teachers in planning, being the only text-writer among the participant teachers, Şemsettin wanted to change the idea of writer and writing in his students' mind. He wanted them to experience writing as an outlet for their thoughts and emotions. He demonstrated how writing could be a natural medium of expression just like oral expression by writing about matters that has puzzled him, sharing his writings with his class and talking about his writing process. Furthermore, he regularly used writing as a post-reading task through which students could have an opportunity to express

their opinions and feelings about the topics in question. As Ray (2006) puts it, a thinking curriculum cannot exist unless it is also a "doing" curriculum. By doing, she refers to the act of writing through which ideas can be developed and refined in the best possible way. Therefore, it can be concluded that Şemsettin created a valuable opportunity for the students to refine their thinking by getting them to write to express their thoughts.

Barton (1994) mentions a shift from "just acquiring skills" to knowing about literacy" in the way reading and writing are taught in primary schools in Britain. He also observes that literacy is taught by giving a central, active role to the child (p. 210). As writing is a complex task which involves many skills such as planning, gathering information, retrieving information from memory, making notes, and editing (Harris et al., 2002), learning it by analyzing other writers´ texts is not a promising process in teaching writing. At this point emerge the effects of lack of experience in writing on reading. As Ray asserts based on her literacy research in a first grade writing class, if students don't have a writing life, they cannot understand the choices that writers make. Students not practicing writing as a creation process whereby they learn that the choices that they make (word choice, choice for punctuation, level of complexity of the sentences) convey messages to the audience other than those they want to convey through the content of their writing, they cannot be expected to read the texts written by others with a critical eye that discerns and evaluates messages intended by writers with their each and every choice. When this symbiotic relation between writing and critical reading is taken into account, what Şemsettin does, by designing writing tasks for students, gains even more importance. He not only paves the way for them to practice refining their thoughts through writing but also contributes to their critical reading skills.

5.2. Teachers' Integration of Critical Thinking into Teaching and Learning Process

The findings about *classroom climate and management* showed that in his management of class, Şemsettin was flexible with the rules and left much to

students' discretion (arranging their desk tops, deciding when to leave the classroom etc.). The way he attempted to cope with the noise in his class (fishbone activity), which he sometimes considered to be a problem, showed that he wanted to get his students to analyze the underlying causes of a problem themselves and suggest solutions for them based on these causes. He also made efforts to involve students in decision making process by bringing the issues affecting them into their attention and asking their opinion. When doing all these, he also managed to create a warm classroom atmosphere in which students were comfortable enough to question teacher's decisions. Zehra, despite her choice for a much more disciplined classroom environment which she thought to be conducive to better learning outcomes, also gave her students the opportunity to ask questions about her decisions and she felt herself responsible for justifying her decisions to them.

In fact, the influence of classroom climate on the enhancement of critical thinking has been taken into consideration in many validated thinking skills programs. These programs involve classroom activities emphasizing open, stimulating, supportive climates (Cotton, 1991). However, the author draws the attention to the fact that the impact of classroom climate on thinking skills cannot be directly supported through research. Thacker (1990), based on his investigation of a model for teaching critical thinking skills implemented in four schools successfully, endorses a classroom environment in which students feel free to take risks while participating in an orderly classroom discourse. In this respect, Şemsettin's warm climate atmosphere in which students had confidence in the teacher to the extent that they shared some of their undesirable behaviors with him without hesitation gave the chance to the students to share their opinions and beliefs in a given issue. On the other hand, thanks to her belief in discipline and the need for a structured environment (both physical environment and the classroom discourse such as turn-taking rules) for students at this age, Zehra provided an atmosphere in which students were able to listen to each other, discuss in an orderly fashion without lapsing into chaos, for which Şemsettin struggled throughout the semester constantly as he knew the

importance of students' listening to each other to enhance the quality of the discussions.

Orr and Klein (1991) underline the importance of school culture as well as classroom culture on promoting critical thinking skills. In this respect, in Ayşe's case, the noise in the corridors during the lessons, frequent interruptions caused by students coming to her classroom to make announcements or to pass messages from other teachers, students' participation in extracurricular activities like preparations for ceremonies can be said to be counter-effective for enhancing critical thinking skills. Ayşe's concern regarding the difficulty in keeping students focused on the material is parallel to this.

Apart from the elements of freedom and structure, another aspect of teaching that presented opportunities for promoting critical thinking in terms of their classroom climate was the way they posed themselves as models for their students. In addition to the components of their instruction incorporating critical thinking, the teachers, through their own behaviors, conveyed messages loaded with aspects related to critical thinking. When viewed with an eye to the potential of these behaviors in modeling critical thinking dispositions, they can be said to be of value for discussion. Şemsettin displayed the most autonomous teacher behaviors in making the classroom decisions. While making decisions, he did not resort to the school principal or did not communicate the problems to the parents. He used his own judgment while making decisions.

Furthermore, he valued the students' opinions while making decisions that would influence them as was discussed earlier. Zehra also displayed the behaviors of an autonomous adult in her decision making process. However, she sometimes utilized the power of parents on students to make things work more smoothly in the classroom, such as eliminating students' bad manners. Ayşe's decisions contrasted with these teachers' due to her frequent appeals to authority in conflict resolution and classroom management. Therefore, it would not be wrong to conclude that they conveyed different messages as to who they were as well as how they perceived their students. However, interpreting these teachers' messages by focusing on a certain set of behaviors would be misleading. In fact,

when viewed from the portrait described above, of the three teachers, Şemsettin may be considered as the teacher who posed the best model to his students with an autonomous profile. To some extent, the effect of his decision to give latitude to his students was observable in his students' confidence in themselves in solving their problems with each other among themselves.

The point deserving attention here is the degree of the teachers' awareness of the significance of such behaviors to model their students the dispositions of critical thinkers. Did Zehra know that her appeal to students' parents (through her notes written to parents in students' notebooks) in order to create a favorable learning atmosphere was a choice she made at the expense of enhancing autonomous behavior? Or was Şemsettin aware of the fact that when he did not report the events that took place in the classroom to the parents, he was giving the message to his students that they stood as individuals in his class responsible for their own behavior and that they had to continue to be so in other contexts other than school?

Teachers' awareness of the potential embedded in their behaviors to serve as models for their students so that they could acquire the dispositions to become critical thinkers from their classroom environment were not well documented in the interviews. However, in the literature, teachers' posing a model for their students by displaying critical thinking dispositions themselves has its own place.

Tishman et al. (1993) propose the enculturation model to replace transmission model as they see it offer more opportunities for developing critical thinking dispositions. By enculturation, they refer to the creation of a classroom culture that cultivates good thinking dispositions. The components of their model involves cultural exemplars, interaction, and instruction (instruction is the stage at which enculturation intersects with transmission). Of these three components, exemplars are particularly of relevance to the present discussion about the participating teachers modeling behaviors. According to the writers, if the teacher wants his/ her students to develop a critical thinking disposition, say reflective thinking, he/she could start by finding ways of exposing them to

exemplars of reflective thinking. The writers identify artifacts and people in the environment modeling or exemplifying culturally meaningful activities and values as two important cultural exemplars. If a teacher decides to be an exemplar for the students, he/ she should deliberately model the desired behavior. In the example of reflective thinking, teacher's talking aloud as he/ she is reflecting on his/her thinking while solving a math problem or making a decision contributes to the formation of a culture of thinking in the classroom.

Then, in the creation of an environment supporting the enhancement of thinking dispositions, Tishman et al. emphasizes the importance of teachers' modeling behaviors.

Moving from the enculturation model described by the writers to the ways teachers set models for their students in the observed classes, what seems to be deviating in the latter from the model is the lack of intentional effort of teachers to expose their students to exemplars. Teachers' not mentioning the potential of their behaviors to pose models for their students in the interviews implied that they did not intend them to serve as models for their students.

In line with this, the second source that Tishman et al. referred to as cultural exemplars in the classroom were artifacts. However, in the observed classrooms artifacts did not seem to exist as part of the classroom culture as was exemplified in the peripherals representing the six thinking hats in Zehra's classroom.

When all this is evaluated in terms of their being obstacles or opportunities for the enhancement of critical thinking in the classrooms, teachers' unintentionally displaying good thinking dispositions has an undeniable potential to be exploited as an opportunity once they acknowledge the value in them. However, in the absence of awareness among teachers (intentional modeling), their potential to model their students thinking dispositions can also backfire (e.g., in case of a teachers' displaying a bad thinking disposition).

Another important finding of this research is the teachers' reservations about the public discussion of certain topics in the classroom in a way that

restricted their *realm of influence*. Despite their willingness to render their lessons more relevant to the needs of their students and to address to the issues in students' lives through their teaching, these teachers also wanted to stay away from the "private life" of their students. It might be useful to remember that Zehra too hastily ended a discussion of unfair treatment that some of her students claimed to have undergone in places out of school or Şemsettin avoided having one of his students question his assumptions that made him utter a biased remark against an ethnic group. When a student's divorced parents caused another student to make humiliating remarks to her, making her cry, Ayşe did not evaluate it as an option to bring up the issue in some form of a class discussion to turn it into a lesson on tracing bias or identifying ego-centric thought or developing empathy.

Zehra justified her preference for this route (not handling some sensitive issues in the class) by stating that the students were too young to talk about such topics.

In fact, the relationship between students' maturity and their critical thinking skills has long been a controversial issue in the literature. There are several programs that aim to initiate children to critical thinking like Lipman's Philosophy for Children Program. Paul also incorporated critical thinking skills into the existing curriculum from K-4 to K-9 as was discussed in the review of literature. Adrian and Sriraman (2004) see it as a requirement that critical thinking be "connected to real life and should enable the student to understand the cultural and instructional influences on accepted thought" (p. 97). For these course designers and authors, it is rewarding for young children to develop critical thinking skills by starting to use their immediate interests, their own lives as the focus of their thinking.

However, in their fears, worries or other feelings that might possibly have caused them to exclude the critical scrutiny of the institutions such as family, education or politics from their classrooms, these teachers were not alone. There have always been those who are against teaching young children

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questioning traditions, values, moral codes related to basic institutions as this would cause cynicism, nihilism or despair (Goldman, 1984).

When these arguments both in favor of and against involving children in discussions of critical issues are considered in view of the findings of the present research, teachers' choice against discussions touching upon sensitive issues is understandable. However, by censoring the topics of discussion in the classroom and creating a compartmentalization in students' world as "life in school" and "life outside the school," the participating teachers missed the opportunity of making use of children's genuine interest in the life surrounding them and their willingness to question it.

Although not stated by participating teachers explicitly in relation to the talks over their avoiding some topics in the classroom, one might speculate on the parental influences on the emergence of this situation based on evidence about the relationship between parents and these teachers. Zehra was previously reported to be in a situation in which she felt the parental pressure. In several occasions, as the research proceeded, Ayşe mentioned her concerns about getting involved in family affairs although she wanted their involvement in school affairs and her teaching decisions.

In his argument about the possible negative effects of parental involvement or empowerment on critical thinking, Carbone (1997) warns against parental opposition to Paul's strong sense critical thinking approach involving reason-seeking, open- to-alternatives, skeptic examination of self and others since parents, coming from a society in which some critical thinking virtues and dispositions are in short supply, are not likely to have much desire to see these cultivated in new generations. However, Ennis (1997) objects to Carbone arguing that the conflicts and incompatibilities between a critical thinking curriculum and parents' established ways of thinking are not as serious as Carbone warns.

Despite the similar rationale among participating teachers regarding the taboo subjects for classroom discussions, Zehra's handling the situation when such a taboo topic was raised by students finds support from the research in the

field. Despite her reluctance to discuss these sensitive issues, once they were brought up, Zehra always made a quick comment before achieving closure instead of ignoring what had been said. Thacker (1990) lists acknowledging every response as one of the qualities of classroom climate that contributes to the promotion of critical thinking. On the other hand, when compared in terms of the number of taboo subjects, within the period the present study was conducted, Şemsettin and Ayşe had much fewer compared to Zehra. By increasing the number of such subjects, Zehra restricted her realm of influence, causing her to miss more opportunities for critical discussions than the other teachers.

Metacognitive skills are frequently referred as a constituent of critical thinking skills in the literature (Beyer, 1990; Facione, 1990; Jones et al., 1995; Nisbet, 1990; Paul et al.,1990; Presseisen, 1987). Metacognitive perspective, which is defined as thinking about thinking, was found by Bransford et al. (1986) to enhance skill transfer in several fields including reading comprehension and writing.

De Bono (1985) aimed to categorize thinking particularly in environments where discussions and collaborative decision making processes would take place. To help the participants view the issue under discussion from different points of view than theirs and to come to understand those perspectives that do not match theirs and finally to contribute to the making of a salient decision, six thinking hats as a tool was developed. Today, even in the meeting rooms of big companies it is reported to be used. Therefore, parallel to De Bono's initial purpose, a classroom where students are initiated to thinking together, negotiating ideas dialogically and seeing the value in the process of decision making to enhance the quality of the ultimate decision to be made can be considered the ideal place to see such a peripheral.

Zehra's use of De Bono's six thinking hats as a peripheral and as a tool for having students think imaginatively and often think positively is an endeavor for fostering metacognitive skills although, by using these hats in this manner, Zehra missed the opportunity of fully benefiting from this framework as it was originally developed to help students determine how to choose the right

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hat according to the situation (Zehra always decided which hat to wear in a given situation) and, more significantly, she did not have them wear different hats simultaneously to the solution of a problem so that they could see different aspects of the matter.

Zehra encouraged students to plan the steps before taking action, informed them about the nature of the cognitive task they were involved in (brainstorming, concept map, etc.), asked them to evaluate their thinking in retrospect, gave students individual feedback (as opposed to the general feedback of Ayşe) about their thinking processes (to let them see the problems or the strengths), demanded students' critical evaluation of different learning methods (as opposed to acceptance of certain methods as superior without judgment in Şemsettin's case) and what they learned in a given lesson.

By doing all these, she contributed to her students metacognitive development. Pintrich (2002) cites knowledge about cognitive tasks as a type of metacognitive knowledge as different cognitive tasks may require different cognitive strategies. Kincannon et al. (1999) acknowledge deliberating on how to select the methods of learning, planning the activity, and evaluating what is learned as basic metacognitive strategies. Collins et al. (1996) cite interaction (providing feedback to students' responses and how to do a task) as a factor that induces the social construction of metacognition.

In addition to the strengths of her instruction with her emphasis on metacognition, Zehra also contributed to the refinement of students' word choice and awareness of language by *creating a common frame of references* for the students. As the class learned more abstract concepts from the reading texts, she brought the previously learned concepts to students' attention continuously and by doing so encouraged students to do the same and this created a classroom environment in which abstract concepts were recycled, rendering the quality of language higher than the other two observed classes. Sternberg and Bhana (1986), in their evaluation of a thinking skills program, Odyssey, targeting upper elementary and secondary students, mention the stress of this program on

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developing students' use of language, words and verbal skills as its strength over other programs.

As for their understanding and treatment of *challenge*, participating teachers took different approaches. While Zehra chose to challenge all students in accordance with their abilities, Ayşe, and particularly Şemsettin, refrained from challenging students, especially the weaker students. Zehra's regularly challenging the weaker students provided positive results as these children improved in their reponses requiring thinking as the term proceeded.

Carrol (1989) recognizes students' resistance to intellectual effort when they encounter instructional situations in which they may have to use some mental energies. In like manner, she observes problems on teacher front as to challenging students to come up with higher order responses since such instruction may cause delays in the progress of a lesson, with low success and completion rates in the short run. Yet, the author regards all this effort of both students and teachers worthwhile since this is the only way of changing from ordinary thinking to good thinking. By the same token, Garcia and Pintrich (1992) regard challenge as a significant, positive predictor of critical thinking.

Zehra posed challenges to students by observing the standards of thought proposed by Paul et al. (1990) closely. As was discussed earlier in the review of the literature, Paul's conceptualization of critical thinking involves the standards of thought such as clarity, accuracy and relevance. Beyer (1990) suggests the use of criteria like accuracy, worth and truth while evaluating critical thought.

In her application of the intellectual standard of relevance in her lessons, that is, the connectedness of the ideas and answers to the topic or issue in question, Zehra's devotion to the standard sometimes led her to ignore important, though irrelevant, questions raised by students which contributed to the enrichment of Şemsettin's classes significantly. In some cases, despite the appropriateness of their observance of relevance in general, teachers' encouraging students to think spontaneously and independently of adult authority is considered to be central to the development of critical thinking (Riesney et al., 1991, cited in Dixon et al., in 2004).

As was stated earlier, *reading* occupied the most important part of the lessons. The teachers differed significantly in their approach to reading and in their understanding of instructional value of this skill. Şemsettin used pre-reading activities very effectively to evoke students' interest in the text and activate their prior knowledge. As Varaprasad (1997) puts it, the strategies for turning conventional pre-reading activities into critical pre-reading activities are asking critical questions such as the reason the author is writing about the topic, the meaning of the topic for the reader, the genre of the text or the other information about the period when the text was written. It can be said that Şemsettin met the criteria for designing critical pre-reading tasks and questions to some extent, which later contributed to his students' showing interest to the issues raised in the text.

In the while reading stage, he first exposed students to the texts by reading texts aloud himself and having the students listen to him. By pausing to ask questions in this first exposure about what was coming next, he gave the opportunity of speculating on the rest of the text to his students. This process of speculation can, in fact, be considered as a good exercise for continuous hypothesizing and testing which is considered by Underbakke et al. (1993) as a classroom experience necessary to foster critical thinking. They quote a research study conducted by Quinn (1975) in which the researchers identified a minimally acceptable hypothesis for sixth graders as one that met at least one of the following criteria: It makes sense; it is empirical; it is precise; it states a test (p. 140).

When students in Şemsettin's class were hypothesizing about the rest of the text, Şemsettin did not set such criteria. Therefore, when some answers involved hypothesis that contradicted what had already been read in the text, Şemsettin did not reject them.

In her handling of the while-reading stage, Zehra created many opportunities for her students to read the texts closely by having them reread the texts to answer different categories of questions (comprehension, inference, analysis, etc.) in a disciplined climate in which students listened to each other

carefully. Pope (2003) sees rereading compulsory for critical literacy to develop as it "allows us to retrace and analyze our first reading responses , relating them back to the text's generic and cultural features, but also to the assumptions, biases, and experiences that we bring to the text" (p. 5). As for the pedagogical implications of rereading, the author underlines the necessity for carrying out this process collectively and comparatively in classrooms. By having students negotiate questions and meaning as a class instead of doing it individually, the risk of making too subjective interpretations of the text is reduced. If this process becomes a regular part of reading classes, according to Woodlief, students learn to develop stronger interpretations of the texts.

Varaprasad (1997) suggests *annotating* to render while-reading stage more effective. One strategy of annotating is underlining. As students reread, they are asked to underline difficult words and phrases in order to figure out their meanings later.

In this respect, by having students underline the *unknown words* and giving them the opportunity to work out their meaning, (instead of letting them look up the words in their dictionaries as Ayşe did and ignoring the words in the texts as Şemsettin did) Zehra made use of annotating successfully. However, one roadblock to her employing this while-reading strategy was the lack of constant input to guide students in the process as suggested by Varaprasad. Instead of facilitating the process by guiding students to use contextual clues, she provided them with new sentences in which the unknown word was used, distracting them from the text.

Kern (2000) considers reading as a cognitive process in which elements like knowledge of language, of texts and of content areas and of the world interact with each other at the right degree to construct meaning out of a text. He perceives reading more than a mere act of deciphering written symbols but rather as an act which involves "prediction, inference and synthesis of meaning". Furthermore, to him, the act of reading is not isolated from the reader's values, attitudes, and beliefs. In the process of meaning making from a text, the reader employs all these resources. The interplay of textual information and extra

textual information to construct a coherent interpretation that explains the sentences in a text is acknowledged in several reading models (Hirsch, 1987).

In this conceptualization of reading, an important point that is worth attention is his inclusion of the phrase "at the right degree." This implies that although there are many elements that are interacting in the reading process that are at readers' service to help them construct meaning, the readers are not free in their choices to make use of these elements. Although they come to read a text with their values, they cannot rely on this source to interpret the text. There are boundaries drawn by the text and it is not at readers' discretion to violate them to accommodate their values. Therefore, the fine line between the realm of reader and that of the writer should be observed carefully while reading.

In the light of what Kern (2000) says about reading, it can be concluded that both Şemsettin and Ayşe fell short of striking a balance between the use of textual resources and resources such as the knowledge of the world .When they dealt with the while-reading stage, they ignored students' making interpretations that transcended the boundaries of the text and could not be justified from the text. This by no means served to the enhancement of thinking skills (Schumm and Post, 1997). In fact, Hayes and Alvermann' s (1986) research on a coaching program for improving teachers' critical reading instruction cited in the literature review aimed to increase the proportion of text connected talk, considering it as a desirable goal for reading critically. In this respect, in Zehra's reading classes, students were given ample opportunity to practice reaching justifiable conclusions on the basis of reasons. To Zehra, unless a comment was justified with evidence and verbalized clearly, it was not considered acceptable as an answer.

On the other hand, by giving the opportunity to students to relate the topic to their own lives and expanding on it as a post-reading task, Şemsettin contributed students' thinking in a different way. Then, in his case, texts seemed to serve to be a springboard for generating ideas for examining values and opinions rather than to be a unit of analysis as they were in Zehra's case.

By having students read the texts aloud as a major while-reading task, Ayşe cannot be reported to have fostered reasoning through reading since this implied seeing the activity of reading as deciphering written symbols in Kern's words.

Finding the main idea is one of the most commonly used thinking strategies; yet, there is confusion among K-12 teachers as to its underlying construct (Marzano, 1993). The findings from the present research were in line with this observation. The participating teachers' understanding of the concept differed from each other and involved inconsistencies in themselves, sometimes causing confusion in students' minds.

Another thinking skill that was observed in the classes of the three teachers as an instructional process was *making predictions*. In the list of Paul et al. (1990), micro cognitive ability of making plausible predictions, inferences and interpretations is taken as a single entity because of their connectedness. In other frames of critical thinking as in that of Jones et al. (1995) some of the sub-skills described under the generic skill of inference correspond to the skill of making prediction as was referred to by the participating teachers in line with the use of the concept in the curriculum. However, although they were bound by the same curriculum, eventual use of this skill in the form of an instructional process showed major differences between teachers. Ayşe was observed to act on a misconception of making predictions as a pre-reading task When she thought she was having students make predictions about a text, she was in fact having them find the main idea of the text. This finding is parallel to what has been shown in previous studies. Teachers have problems in differentiating between sub-skills, particularly at higher levels of thinking (Ennis, 1987). In Şemsettin's and Zehra's handling the process, the presence of criteria against which the predictions based on a set of evidence were judged and the presence of criteria for collecting reliable evidence in the latter contributed to the emergence of a high-quality prediction process as well as products of higher quality, i.e., justifiable predictions. Furthermore, as was stated earlier in the chapter in the discussion of favorable conditions for hypothesizing, Zehra's handling this process as an

interactive one made positive contributions. Şemsettin's engaging the students in the same process individually (he only had them share their final predictions with the class instead of letting them build on one another's reasoning) prevented him from making interventions to help improve students' reasoning.

Distinguishing thoughts and feelings, which is considered as a critical thinking disposition, did not receive much attention from the teachers although Şemsettin gave relatively more opportunities to students to express their emotions. Still, he did not help them work on these emotions extensively and examine them deeply to see their impact on their thoughts, decisions and behaviors. Talking about emotions did not have as much priority as talking about ideas and opinions that came into existence as a result of the exercise of cognitive abilities such as inferring, analyzing or interpreting. When there was any mention of the emotions in the class, it was done very superficially. This emphasis on cognition at the expense of emotions can well remind some the criticism against critical thinking due to its overrating rationality and ignoring bodily knowledge and emotions (Siegel, 1988).

In the discussions over the components of critical thinking, *argumentation,* without any exception, appears as an indisputable aspect of critical thinking (Mingers, 2000). In the lessons of the three participants, many instances of argumentation were observed. In these situations, some aspects of teachers' and students' handling arguments contributed positively to the process, whereas others impeded it.

Şemsettin provided a democratic environment in which students did not seem to have much reservation as to revealing their opinions. Endres (1996) refers back to the work of Habermas (1990) who sets the rhetorical level of processes as one of the general levels of presuppositions of arguments. According to this presupposition, in order for participants in an argument to critically examine claims, what they need are situations free from repression and *inequality*. For genuine arguments to take place, participants must be able to enter the arguments freely and with their genuine opinions.

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Despite his success in establishing a classroom atmosphere in which students were able to express their opinions freely without fear and in providing them with thought-provoking input through his texts, he set up some barriers in the way of arguments by trying to put an end to arguments before students exploited the opportunity to argue. One can speculate that behind his motive to terminate arguments prematurely was his avoidance of conflict and perceiving thinking as an individual process. That he considered his job as a teacher to be confronting students with significant issues and leave them alone to find their own way about what to believe is well documented in his interviews.

Hidden in this line of reasoning was a serious threat to the thriving of students' capacity to develop and evaluate arguments, which is regarded as the backbone of critical thinking. As Walton (2006) warns, an argument without dialogue is out of question. He sees dialogues as "conventional frameworks that make rational argumentation possible." Dawes et al. (2000) designed their program *Thinking Together* around the rationale that developing the ability to think dialogue was only possible through dialogue and they set dialogue as the pedagogy of the program. Lipman's *Philosophy for Children* is based on a similar presupposition. When the relation between dialogue and argument is established in this way, it becomes evident that by hindering dialogue in the class, Şemsettin also retarded the development of arguments in the class. Therefore, he reduced reasoning in argument development to an individual act rather than a social act. In this manner of dealing with thinking, students could not find the platform to voice their thoughts and missed the opportunity to check their arguments against those of their peers.

As for Şemsettin's avoidance of conflict in the classroom, even at times the issue at hand did not threaten the teacher in terms of its association with tradition, family or other sensitive topics, Carrol (1989) reminds teachers of the need to be more tolerant of conflict, or confrontation, in the classroom. She views teachers' ability to create dissonance in their classes as strength. In fact, Şemsettin had this initial strength. However, Carrol also underscores the

importance of letting students debate and resolve problems, which is the point Şemsettin can be said to be less resourceful.

Zehra did not hesitate to let students discuss conflicting opinions in rather extended periods of time. However, she tended to dominate the communication, hindering students from interacting with each other. In critical argumentation terms, Zehra violated the principle of civility (Walton, 2006). Zehra's increasing her talk time, particularly in cases where students voiced particularly well-thought of arguments in an articulate manner, Zehra joined in the discussion with enthusiasm and talked more. Dixon et al. (2004), in their study of gifted students, observe such a tendency among teachers of the gifted. They acknowledge the difficulty in encouraging students to participate in discussions but not managing the discussion themselves particularly in classes made up of able students. In the program they developed for enhancing arguments, they assigned teachers the role of activating the students by providing essential questions and trained them not to engage in discussions as a party but to monitor the thinking of the students.

The teacher-centeredness of discussions in these three classrooms is evident in the seating arrangement as well (Students sat in rows facing the teacher's desk).

Teachers were observed to commit *informal fallacies* as they taught such as oversimplification, getting personal and absurd consequences move. As interviews held later revealed, they were sometimes aware of these fallacies but they had to commit them to serve other purposes they had in mind at that time. In some other cases, they did not interpret what they had said as a logical fallacy. In fact, Dumke (1980, cited in Lazere, 1987) while setting the minimal requirements for calling someone a critical thinker, stated the ability to understand the formal and informal fallacies of language and thought together with some others in a short list of basic critical thinking abilities. Wolf (1967, cited in Underbakke et al., 1993) reports beneficial effects of teaching logic involving detecting fallacies to elementary students. Therefore, it can be said that teachers' awareness of the basic informal fallacies that anyone can commit

or encounter in everyday life is necessary so that they can educate their students to develop arguments free from these fallacies and recognize those involving them, which was found by Wolf to be an ability that can be attained as early as elementary level.

5.3 Teachers' Reflections about the Aspects of Their Teaching Regarding Critical Thinking

The interviews made with the teachers after the lessons helped gain better insight into their thinking as they were teaching.

The interviews revealed that teachers' command of the *thinking vocabulary* had some impact on the way they executed the tasks in their classrooms. When they discriminated between different modes of thinking and had clearly defined concepts of thinking in their minds, they guided their students through these modes of thinking more skillfully and demanded more from their students in return.

When teachers judged the quality *(strength)* of their teaching in terms of its cognitive aspects, they tended to pose more cognitive challenge to their students, creating more opportunities for them to be involved in higher order thinking. When they were carried away with their accomplishments in affective aspects, such as creating a warm atmosphere in the class or promoting enthusiasm to take part in activities, they tended to neglect the cognitive objectives. In the same way, when teachers focused their attention on the *problems* in their students' thinking processes (rather than those problems related to the curriculum, materials and the implementation of the tasks, classroom management) and constantly observed the cognitive development of the group with an eye to the progress of individual students, they managed to produce some observable positive results in students' thinking in the long run.

The cross-examination of data from teacher and student interviews, on the other hand, had implications for instruction for critical thinking. The findings indicate that *checking the assumptions* that underlie students' answers is a prerequisite as it helps to shed light on the thinking processes of students. When

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teachers showed a tendency toward interpreting students' statements based on their experience as teachers and familiarity with their students' habits of mind instead of regularly checking students' assumptions by asking questions to them, they ran the risk of misunderstanding the students. In the situations where they checked the underlying assumptions, they had access to the inner mental processes of their students. By doing so, they seized the opportunity to show them the fallacies in their thinking and/or challenge them to express their ideas more clearly, accurately or precisely.

Parallel to the emerging need for the teachers to uncover the assumptions of their students in order to obtain a more realistic picture of their reasoning and act accordingly, it also seems to be necessary to check their understanding of the material throughout the lesson in a variety of forms (as Zehra constantly did) rather than to assume that they have understood all the messages passed by the teacher. The findings from the interviews with teachers and their students suggest that without teachers' verbal (as opposed to non-verbal) *evaluation of students' learning,* there is no short cut way to confirm students have achieved the objectives of the lesson. The research conducted by Webb and Luft (1997) also show that interpreting non-verbal behavior in order to assess student comprehension may yield inaccurate judgments particularly for nonexpert teachers.

The need to check assumptions and evaluate learning both indicates the signifance of feedback that come from students when the mental tasks are in question.

5.4 Students' Perceptions and Reactions with regard to Critical Thinking in Class

Interaction, interest and curiosity emerged as themes in data related to students' classroom behaviors.

As for *interaction*, Vygotsky (1978) argues that working collaboratively results in higher intellectual performance than working individually. In line with this, the research conducted to compare the enhancement of critical thinking in a

collaborative environment with that which occurred in an individual learning environment also supports this argument (Gokhale, 1995). In this respect, teachers' preference for tasks requiring students to work individually can be said to be a loss for the development of more social aspects of their intelligence. However, as it was the case in Zehra's class, teacher's posing questions to whole class and managing the interaction between students carefully instead of allowing students to interact with each other freely (as in group work) may also produce a classroom atmosphere that gives students the opportunity to be engaged in thinking. This is because when such an environment is constructed, students take turns to speak and they listen to each other actively, which are the two essential components of effective discussions. However, the formation of such an environment depends on the presence of other factors like students' motivation to participate as well as teacher's concentration on the student talk and her skill to moderate the classroom discussion.

As for students' *interest*, Turkish was not among students' favorite courses. The reason for this was partially attributed to conceptualization of knowledge. As students tended to evaluate courses according to what they learned from them and their definition of learning was based on learning facts, Turkish was not considered as a fruitful course among others. The texts studied did not lead students to reason either as was discussed under the heading of texts in this chapter. To complicate the situation even more, students were not introduced to many new concepts related to the mechanics of language with the new curriculum. As a result, there was not much content to be covered in the lessons.

In fact, the lack of this kind of content can be considered as a characteristic of Turkish course in general. The content of Turkish is defined by the skills to be learned: reading, writing, listening and speaking. When its content is formed like this, as the findings revealed, the course did not appeal much to students' interests. This finding from the research draws a parallel with what Goodlad (1984) found in his study in the early 1980s. His research was based on visits to more than 1000 classrooms in seven regions of the United

States and it revealed that Turkish as traditionally taught had usually been students' least favorite class. However, he also found out that when the Turkish curriculum was enhanced with the inclusion of discussion to the basic skills of reading and writing, it became students' favorite class. The findings of Goodlad from his extensive research are supported by the evaluative findings from the implementation of curriculum designed in this manner as was reported by Schmoker (2007). Schmoker introduces two curricula implemented in two different schools in the United States. Both curricula had certain common aspects: Almost all of the class time was allotted to reading powerful texts and then discussing and writing about the issues encountered in these texts. The writer describes the content as "abundant amounts of reading, writing, and discussing" and "reading and discussing thousands of pages of high-quality text". The main tasks that students were engaged in were "analyzing, arguing, agreeing, disagreeing with the ideas they encountered, evaluating the ethics of various characters' actions, displaying logic and clarity while doing these, making inferences, doing character analysis, discerning an author's bias or perspective." The methods that were employed were "asking good provocative questions and providing a structure through which students will respond in written and oral form" (p. 64).

All in all, what the curricula in these two schools centered around was critical thinking through reading and writing or "argumentative literacy" as was labeled by Graff (2003).

When curricula of this sort were implemented, students' scores from standardized tests rose dramatically and more importantly Turkish was reported as the favorite course by the vast majority.

Although the curricula cited here were intended for grade levels nine to twelve, the basic principles are shown to be suitable even for grade level one by Schmoker. This kind of a working Turkish curriculum can be thought to be well-suited to serve the needs of the classes studied in the present research.

In the present study, the way teachers used questions in their teaching was found to be of critical importance due to its relation to the mental processes

they evoked. The findings showed that learners tended to raise questions about the materials presented to them but kept many things to themselves unless they were prompted in some way. When they were asked questions by the researcher that invited them to reflect on the readings, such as what they found to be doubtful or contradictory or interesting in the readings, as was discussed in the previous chapter, they came up with answers that were indicative of the fact that they were questioning the information presented to them in the texts rather than passively absorbing it. An alternative explanation could be that these questions posed by the researcher engaged them in thinking critically about the material. Whether it be the former or the latter, the students signaled the presence of a disposition to reading the texts actively. The teachers tapped into this resource from time to time but such incidents seemed to be occasional, mostly by chance, far from being systematic. What seemed to be lacking in the classrooms was the questions that had the students reflect on the material, to think and interpret on it at a more personal level. Observing similar situations in different contexts, Paul (1984), in his pursuit of defining the problem, states that for teachers learning to ask questions to nurture thinking is difficult. "... because they have learned to insinuate, often quite unwittingly, their own favored answers in so many ways that children are typically discouraged from suggesting or considering their own" (p. 63).

Then, the problem with asking the right questions to make the students think may be related to teachers' reluctance to deviate from their predetermined routes (the answers they expected to hear). A similar approach can be traced in teachers' treatment of the information gap in their teaching.

In the classrooms of the three teachers, the interviews with the students and their observed classroom behaviors showed that there was an information gap in the classrooms- a genuine gap unlike those that were artificially created by teachers to have the students communicate with each other for instructive purposes. As each of the students in the classroom had access to information through the internet and/ or through documentary TV channels, as they commonly referred to, they had some information about the topics covered in the

lessons. If students are not taken as one single entity but as a large group composed of individuals, the variety of knowledge they brought to their classrooms can be imagined better. Therefore, it should be acknowledged that the information gap was not only between the teacher and the students but also among students themselves. The texts served as springboards to introduce the topic of discussion. However, students did not feel themselves bound by the knowledge presented to them in the texts they read. When they were given the outlet (through the logs or the interviews), they shared their knowledge of the topic. There were also situations in which they shared their knowledge with the class in the lessons. These situations emerged when teachers came up with questions that allowed this.

5.5 Implications for Practice

The findings from this research may provide insight for the enhancement of elementary school teacher training programs in terms of their thinking skills instruction component. Underbakke et al. (1993) assert that, with training, teachers can become competent to make use of the indicators of teaching for higher order thinking. The present research draws on the assumption that when knowledge base for critical thinking instruction is researched and developed within the contexts that it is intended for use, its implementation is more likely to contribute to the enhancement of instruction. In light of this, the findings of the research imply the following for practice:

1. In the formation of the sense of autonomy among teachers, factors such as their confidence in their education and in-service training, their willingness to make their job meaningful for themselves, that is, their seeing teaching as a way of being seemed to play a significant role. In addition to these rather intrinsic factors, the findings showed that a school culture (particularly school administraion) that is supportive of teacher autonomy is essential to the emergence of the sense of autonomy among teachers. As teachers' sense of autonomy seems to have a positive effect on teachers' making adjustments to better suit their teaching to their context (a must for critical thinking instruction),

teachers should be supported to develop a sense of autonomy by providing them with education and in-service training that they can rely on as well as a supportive school culture.

2. Although in the literature, certain methodologies are associated with instruction for critical thinking, the findings from the research suggest that teachers' individual interpretations of the methods cause variation in their practice and that it is not the isolated use of the methods that pave the way for the integration of critical thinking into instruction but it is the way that these methods are interpreted and put into practice by the teachers that emerges as a factor which determines the extent to which critical thinking is integrated into teaching. Therefore, in teacher training programs for critical thinking, teachers can be provided not only with theory and practice with these methods but they can also be given opportunities to internalize how these methods are connected to critical thinking.

3. A very significant obstacle that stands in the way of critical thinking instruction in Turkish lessons seems to be the nature of texts used in these lessons. Teachers' efforts to circumvent the problems introduced in the texts in the course books by writing their own texts or bringing authentic texts to the classrooms have been observed to bring about their own complications. As Schmoker (2007) observes, for a powerful critical thinking instruction, there should be school guidelines to determine the criteria for choosing the texts. As the findings from the present research imply, texts should lend themselves to exploitation in a critical sense by helping raise significant issues in an interesting context that eventually inspire genuine classroom discussions.Texts should also involve elements of triggering event, direct experience and sensory experience, which suggests the use of narrative texts rather than expository texts.

4. The findings from the research showed that within the framework of Turkish lessons, teachers made endeavors to make interdisciplinary connections, which was facilitated by the thematic curriculum that they all followed. However, teachers tended to perceive making interdisciplinary connections as recalling knowledge from other courses in a timely fashion rather than as a skill

that helps one to add depth and breadth to his/her thinking. This result may suggest that teachers' awareness of making interdisciplinary connections should be raised through training programs in which this skill is presented as a sub-skill of critical thinking, which involves seeing issues from multiple perspectives. Making interdisciplinary connections, when perceived in this way, goes beyond merely recalling knowledge from other courses to enhance the learning of some knowledge.

5. Schema activation through pre-reading tasks which involved visual aids and/or preparation questions which helped students relate the topic to their lives was found out to have a beneficial effect on the emergence of a more critical approach by students in the while-reading stage and also discussions involving students in the post-reading stage.

6. Without intentional efforts to help teachers develop a critical thinking vocabulary to enable them to discriminate between various modes of thinking and to verbalize their thoughts about their teaching incorporating aspects of critical thinking, it seems unlikely to expect them to improve their teaching with its critical thinking dimension. Despite their articulation of their teaching philosophy or teaching goals in terms of developing their students' thinking, the teachers failed to maintain their focus on teaching thinking skills in the implementation stage. The gap between the two (the ideal as expressed by them and their practice) was observed to become smaller when teachers were able to use specific words describing mental processes and the effect of their teaching on these processes. Then, it can be said that teachers seem to be in need of metacognitive language to further their teaching in terms of thinking abilities.

7. In the classrooms, withholding help to students in their facing the matters that perplexes them by taking shelter in the idea of creating a secure environment for them or by developing an understanding of schooling that divides matters of life as those concerning school and those that do not concern it does not eliminate the option of students' doing the questioning inside their minds. Transforming these inner talks into real dialogues promises a more meaningful content for education on the one hand (particularly rewarding in the

absence of such content in the textbooks) and creates opportunities for teaching how to think dialectically and dialogically in a genuine context on the other hand. If these opportunities are not used for indoctrination of any kind but rather as helpings students "to get to the heart of matters through mutually supportive questioning and dialogue" (Paul, 1984, p. 63), fragmentalization may be prevented. Still, if teachers choose not to benefit these opportunities, they should be willing to find ways of persuading their students to the appropriateness of schooling to meeting their needs.

8. The introduction of argumentation into the classrooms through reading texts and reinforcement of critical reading and writing skills can offer a solution for Turkish to make key contributions to the overall curriculum.

9. Restricting students' channels through which they can express their ideas to oral language emerges as a significant constraint on thinking. In Turkish classes students should be given abundant opportunities to think through writing and experience writing as a complex problem-solution, decision-making and creation process which in turn can help them view the texts written by different authors as a complex decoding process that requires the recognition of a variety of layers embedded in the texts.

10. Teachers can learn to think information gap between themselves and their students as a given of the information age. The traditional image of the teacher as the professional adult who knows more than the students in every topic can be replaced by, to the comfort of today's teachers, a modern teacher image who acknowledges the fact that students can well be more knowledgeable than herself/ himself in some topics and contribute to classroom reasoning with their knowledge. This seems to be a promising potential that exists in the classrooms, the actualization of which may contribute to development of critical thinking and to gaining insight into the complex nature of knowledge.

5.6 Implications for Research

In this part, the implications of the present research for future research will be discussed primarily with the intention of facilitating the planning of the

research for future researchers who will contemplate embarking on research with a similar design.

1. As Kane et al. (2002) contends based on their analysis of research conducted among college teachers, research that studies only what teachers say about their practice without incorporating direct observation of their practices "is at risk of telling only half the story" (p. 177). Therefore, research that aims to shed light on teaching in any given subject area or topic should employ both observations and interviews together if it really wants to tell the whole story. The authors' argument that research relating teacher thinking to observation of teaching is scarce underscores the need for studies similar to the present one in terms of data collection.

2. Interviews with the teachers in which they reflected on the observed lessons proved to be highly rewarding in understanding their approach to critical thinking. However, since sometimes the teachers did not have the vocabulary that discriminated mental processes with accuracy, the researcher had to be very careful as she listened to the teachers to ensure that their comments were correctly understood by her. It proved to be a helpful strategy to paraphrase what teachers told the researcher and then to ask for their approval of the paraphrased version in order to eliminate misunderstandings that were very likely to emerge and once emerged would threaten the validity of the research remarkably. Therefore, researchers studying thinking should meticulously develop ways of communicating with teachers accurately.

3. That communication of ideas regarding thinking posed a difficulty in the interviews with the teachers (as was discussed in the previous item) has a significant implication for future research. If teaching thinking is studied without classroom observations, it might be challenging for the researchers to design tools (questionnaires, interviews) that make it possible for them to collect valid data not affected by distortions caused by a gap in communication between teacher language for talking about thinking and that of the researcher. In the lack of consensus about what many thinking concepts refer to, it might prove to be

highly risky to collect inferential data without seeing the concepts operationalized in the field, i.e., the classroom.

4. It should be noted that research of this type is highly demanding for the participating teachers as qualitative research extending over relatively longer periods of time is not a process that teachers and school administrations are quite familiar with. Therefore, when choosing the sites to be studied, researchers should not only seek participating schools' and teachers' informed consent but also try to ensure as much as possible that the participants are totally willing to participate the research for their own reasons. In addition to this, teachers with some experience of having observers in their classrooms, e.g., the observations made by school administrations, should be preferred since this was found out to be a factor that made the presence of an observer less tense for both the teacher and the researcher.

5. Particularly in cases in which researchers are outsiders to the research context, it is highly recommended that in analyzing the data from one group of sources, assistance from other data sources be sought unless, of course, this would raise issues regarding confidentiality. In this research, for example, as the researcher was an outsider in three of the settings in which research was carried out and she was not familiar with fourth grade teacher and learner population, in her analysis of data that came from the students, she confirmed the validity of her analysis with the teachers. However, students were always reminded that the information that they would share with the researcher would also be shared with their teacher unless they wanted otherwise. In very few cases students said that they would not prefer their teacher to know what they shared with the researcher, the confidentiality of the data was secured with utmost care.

6. Despite the fact that this research study was primarily concerned with the aspects of critical thinking related to teaching rather than learning (three of the research questions centered around teachers, only one around learners), the data that originated from learners contributed significantly both for the researcher to gain insight into the impact of instruction on learners, thus understanding the nature of instruction better and for the participating teachers

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gain access to the minds of their students as teachers' choice of interaction patterns in the classrooms did not create opportunities for them to do this. Therefore, future research on critical thinking may be designed in ways that rely more on student originated data to have access to the inner world of students.

REFERENCES

Accorinti, S. (2000). Philosophy for children. *Encyclopedia of Philosophy of Education.* Retrieved on July 25, 2007, from http://www.vusst.hr/ ENCYCLOPAEDIA/main.htm

Adrian,H. & Sriraman, B. (2004). The use of fiction as a didactic tool to examine existential problems. *The Journal of Secondary Gifted Education, 15* (3), 96-106.

Akınoğlu, O. (2001). *Eleştirel düsünme becerilerini temel alan fen bilgisi ögretiminin ögrenme ürünlerine etkisi.* Unpublished doctoral dissertation. Hacettepe Universitesi, Ankara.

Alvino, J. (1990). A glossary of thinking-skills terms, *Learning 18* (6), 50-55.

Atkinson, P. & Hammersley, M. (1998). Ethnography and participant observation. In N.K. Denzin & Y.S. Lincoln (Eds.), *Strategies of qualitative inquiry* (110-136). Thousand Oaks: Sage Publications.

Bailin, S., Case, R., Cooms, J.R. & Daniels, L.B. (1999). Common misconceptions of critical thinking. *Journal of Curriculum Studies*, 31 (3), 269-283.

Bailin, S. (2003). The virtue of critical thinking. *Philosophy of Education*. Retrieved on May 5, 2007, from http://www.ed.uiuc.edu/EPS/PES-yearbook/2003/bailin.pdf

Barton, D. (1994). *Literacy: An introduction to the ecology of written language*. Cambridge, MA: Blackwell.

Beyer, B.K. (1990). What philosophy offers to the teaching of thinking. *Educational Leadership*, *47* (5), 55-60.

Bogdan, R.C. & Biklen K.S. (2007). *Qualitative research for education: An introduction to theories and methods.* Boston: PearsonEducation, Inc.

Boyatzis, R.E. (1998). *Transforming qualitative information*. Thousand Oaks: Sage Publications.

Bransford, J. D., Burns, M. S., Delclos, V. R. & Vye, N. J. (1986). Teaching Thinking: Evaluating evaluations and broadening the data base. *Educational Leadership, 44* (2), 68-70

Brookfield, S.D. (1987). *Developing critical thinkers*. San Francisco: Jossey-Bass Publishers.

Burbules, N.C. & Berk, R. (1999). *Critical thinking and critical pedagogy*. In T.S.

Popkewitz & L. Fendler (Eds.), *Critical theories in education*. New York: Routledge, 1999.

Carbone, P.F.J. (1997). Two cheers for parental empowerment: A politically incorrect analysis. *Philosophy of Education.* Retrieved on September 12, 2007 from http://www.ed.uiuc.edu/EPS/PES-Yearbook/97_docs/carbone.html

Carey, R. F., McKechnie, L. E. F., & McKenzie, P. J. (2001). Gaining access to everyday life information seeking. *Library & Information Science Research, 23*, 319-334.

Carrol, T.M. (1989). Critical thinking: Promoting it in the classroom. (ERIC Document. Reproduction Service No: ED306554).

Cem, İ. (1971*). Türkiye'de geri kalmışlığın tarihi*. İstanbul: Can Yayınları.

Clark, C.M. & Peterson, P.L. (1986). Teachers' thought processes. In M.C. Wittrock (Ed.), *Handbook of research on teaching* (3rd. ed.) (255-296). New York: Macmillan.

Clark, C.M. & Yinger, R.J. (1979). Teachers' thinking. In P.L. Peterson & H.J. Walberg (Eds.), *Research on teaching: Concepts, findings, and implications* (231-263). Berkeley: McCutchan Publishing Corporation.

Coffey, A. & Atkinson, P. (1996). *Making sense of qualitative data*. Thousand Oaks: Sage Publications.

Collins, V.L., Dickson, S.V., Simmons, D.C., Kameenui, E.J. (1996). *Metacognition and its relation to reading comprehension: A synthesis of the research*. National Center to Improve the Tools of Educators. Retreived on February 25, 2003, from http://idea.uoregon.edu/~ncite/documents/techrep/tech23.html

Cotton, K. (1991). *Close-Up #11: Teaching thinking skills.* Retrieved on March 3, 2005, from Northwest Regional Laboratory's School Improvement Research Series Website: http://www.nwrel.org/scpd/sirs/6/cu11.html

Couros, A. (2002). *Critical thinking: The value and teaching of this objective in the information age.* Retrieved on November 17, 2006, from http://www.educationaltechnology.ca/couros/publications/unpublished papers/paper-criticalthinking-journal.pdf

Cuban, L. (1984). Policy and research dilemmas in the teaching of reasoning: Unplanned designs. *Review of Educational Research, 54* (4), 655-681.

Damji, S., Dell'Anno, M., McGrath, M. & Warden, J. (2001). *What is critical thinking and how can it be promoted by adult educators?* Retrieved on October 12, 2007 from http://www.wier.ca/~daniel_schugurens/faqs/qa10.html

Davis, K.A. (1986). Teaching critical thinkinng on the college campus: An across the curriculcum approach. (ERIC Document Reproduction Service No: ED270732)

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Dawes, L.M. & Wegerif, R. (2000). *Thinking together: A programme of activities for developing thinking skills at KS2.* Birmingham: Questions Publications.

Dayıoğlu, S. (2003). *A descriptive study on the critical thinking levels of the students at the unit of english preparatory school at hacettepe university.* Unpublished master thesis. Middle East Technical University, Ankara.

De Bono, E. (1985). *Six thinking hats.* Boston: Little Brown.

Denzin, N.K. (1978). *The research act,* New York: McGraw-Hill.

Denzin, N.K. & Lincoln, Y.S. (1998). Introduction: Entering the field of qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Strategies of qualitative inquiry* (1-34). Thousand Oaks: Sage Publications.

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process.* Boston: D.C. Heath.

Dixon, F.A., Prater, K.A., Vine, H.M., Wark, M.J., Williams T., Hanchon T. Shobe, C. (2004) Gifted children. *Journal for the Education of the Gifted, 28* (1), 56-76.

Dominowski, R.L. & Dallob, P. (1995). Insight and problem solving. In R.J. Sternberg & J.E. Davidson (Ed.), *The nature of insight* (33-62). Cambridge: The MIT Press.

Downing, J.H. & Lander, J.E. (1997). Fostering critical thinking through interdisciplinary cooperation: Integrating secondary level physics into a weight training unit. *NASSP Bulletin, 81* (591), 85-94.

Eğitim Reformu Girişimi. (2005). Öğretim programları inceleme ve değerlendirme-I. Retrieved on February 5, 2008, from http://www.erg.sabanciuniv.edu/

Eisner, E.W. (1998). *The enlightened eye: Qualitative inquiry and the enhancement of educational practice.* New Jersey: Prentice Hall.

Eisner, E.W. (2003). Preparing for today and tomorrow. *Educational Leadership* 61 (4), 6-10.

Elder, L. (2007). *An interview with linda elder: About critical thinking and gifted education.* Retrieved on April 17, 2007, from http://www.criticalthinking.org/page.cfm?PageID=476&CategoryID=72#300

Endres, B. (1996). Habermas and critical thinking. *Philosophy of Education.* Retrieved on January 29, 2007, from http://www.ed.uiuc.edu/EPS/PESyearbook/96_docs/endres.html

Ennis, R. H. (1987). A taxonomy of critical thinking dispositions and abilities. In J.B. Baron & R.J. Sternberg (Eds.), *Teaching thinking skills: Theory and practice* (9-26) New York: W.H. Freeman and Company.

Ennis, R.H. (1997). Accentuating the positive in critical thinking. *Philosophy of Education.* Retrived on September 12, 2007, from http://www.ed.uiuc.edu/EPS/PES-Yearbook/97_docs/ennis.html

Erwin, T.D. (2000). *The national postsecondary education cooperative sourcebook on assessment , volume 1: Definitions and assessment methods for critical thinking, problem solving, and writing.* Washington, D.C. : US Government Printing Office.

Facione, P.A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assesment and instruction. The delphi report.* Millbrae: The California Academic Press.

Falzon, C. ((2002). *Philosophy goes to the movies: An introduction to philosophy.* London: Routledge.

Feldman, A. (2002). Multiple perspectives for the study of teaching: Knowledge, reason, understanding, and being. *Journal of Research in Science Teaching, 39* (10), 1032-1055.

Finke, R.A. (1995). Insight and problem solving. In R.J. Sternberg & J.E. Davidson (Eds.), *The nature of insight* (pp. 255-280). Cambridge: The MIT Press.

Freebody, P. (2003). *Qualitative research in education: Interaction and practice.* London: Sage Publications.

Freire, P. (1970). *Pedagogy of the oppressed.* New York: Seabury Press.

Fromm, E. (1959). The creative attitude. In H.A. Anderson (Ed.), *Creativity and its cultivation,* (pp. 44-54). New York: Harper & Row.

Garcia, T. & Pintrich, P.R. (1992). *Critical thinking and its relationship to motivation, learning strategies, and classroom experience.* Presented at the Annual Meeting of the American Psychological Association, in Washington, DC, USA. (ERIC Document Reproduction Service No: ED351643).

Garrison, D.R., Anderson, T. & Archer, W. (2001). Critical thinking and computer conferencing: A model and tool to assess cognitive presence. *American Journal of Distance Education*, 15 (1), 7-23.

Gelen, İ. (1999). *İlköğretim okullari 4. sinif ögretmenlerinin sosyal bilgiler dersinde düşünce becerilerini kazandirma yeterliklerinin değerlendirilmesi.* Unpublished master thesis. Çukurova Universitesi, Adana.

Gillard, D. (2007). *Education in England: A brief history.* Retrieved on October 1, 2007, from www.dg.dial.pipex.com/history/

Gokhale, A.A. (1995). Collaborative learning enhances critical thinking. *Journal of Technology Education, 7* (1). Retreived on March 13, 2006, from http://scholar.lib.vt.edu/ejournals/JTE/v7n1/gokhale.jte-v7n1.html

Goldman, L. (1984). Warning: The socratic method can be dangerous. *Educational Leadership 42* (1), 57-62.

Goodlad, J.I. (2004). *A place called school*. New York: McGraw-Hill.

Graff, G. (2003). Clueless in academe. New Haven: Yale University Press.

Guba, E. (1981). Criteria for assessing the trustworthiness of naturalistic inquiry. *ECTJ (2)*, 75-91.

Guba, E. (1996). What happened to me on the road to Damascus. In Heshusius, L. & Ballard, K. (Eds.), *From positivism to interpretivism and beyond: Tales of transformation in educational and social research*, (pp 43-50). New York: Teachers College, Columbia University.

Gürkaynak, İ., Üstel, F., Gülgöz, S. (2003). Eleştirel düşünme. Retrieved on February 5, 2008 from http://su-erg.advancity.net/page.aspx?nm=Eleştirel_Düşünme

Halpern, D.F. (2003). *Thinking critically about critical thinking*. Mahwah, N.J.: L. Erlbaum

Harris, T.L. & Hodges, R.E. (1981). *A dictionary of reading and related terms*. Newark, NJ: International Reading Association.

Harris, K.R., Graham, S., Mason, L.H. & Saddler, B. (2002). Developing self-regulated writers. *Theory into Practice, 41* (2), 110-115.

Hayes, D.A. & Alvermann, D.E. (1986). Video assisted coaching of textbook discussion skills: Its impact on critical reading behavior. Paper presented at the Annual Meeting of the American Research Association, San Francisco, USA. (ERIC Document Reproduction Service No: ED 271734).

Hayran, I. (2000). *İlköğretim öğretmenlerinin düsünme beceri ve islemlerine ilişkin görüşleri (Uşak ili örneği).* Unpublished master thesis. Afyon Kocatepe Üniversitesi, Afyon.

Hirsh, H. (1987). Explanation-based generalization in a logic-programming environment. *Proceedings of the Tenth International Joint Conference on Artificial Intelligence* (IJCAI87), 221-227.

Hughes, W. (2000). *Critical thinking. An introduction to the basic skills (3rd ed).* New York: Broadview Press.

Huitt, W. (1998). *Critical thinking: An overview.* Paper presented at the Critical Thinking Conference, Barnesville, GA. in March, 1993. Retrieved on December 27, 2006, from http://chiron.valdosta.edu/whuitt/col/cogsys/critthnk.html

İrfaner, S. (2002). *Implementation of the components of critical thinking in an English 101 course in the first year English program at Bilkent University* Unpublished master thesis. Bilkent University, Ankara.

Jones, E.A., Hoffman, S., Moore, L.M., Ratcliff, G., Tibbetts, S., and Click, B.A. (1995). *National assessment of college student learning: Identifying college graduates' essential skills in writing, speech and listening, and critical thinking (NCES 95-001).* Washington, DC: U.S. Government Printing Office.

Joyce, B. (1985). Models for teaching thinking. *Educational Leadership*, *42* (8), 4-7.

Kagan, D.M. (1990). Ways of evaluating teacher cognition: Inferences concerning the goldilocks principle. *Review of Educational Research 60* (3), 419-469.

Kane, R., Sandretto, S. & Heath C. (2002). Telling half the story: A critical review of research on the teaching beliefs and practices of university academics, *Review of Educational Research 72* (2), 177-228.

Kaya, H. (1997). *Üniversite öğrencilerinde eleştirel akıl yürütme gücü.* Unpublished dissertation.İstanbul Üniversitesi, İstanbul.

Keller, J.M. (1987). Strategies for stimulating the motivation to learn. *Performance and Instruction, 26* (8), pp. 1-8.

Kern,R. (2000). *Literacy and language teaching.* Oxford: Oxford University Press.

Kincannon, J., Gleber, C., Kim, J. (1999). The effects of metacognitive training on performance and use of metacognitive skills in self-directed learning situations. In K.E. Sparks & M. Simonson (Eds.), *Proceedings of selected research and development papers presented at the national convention of the association for educational communications and technology [AETC],* (pp. 171- 186). (Eric Document Reproduction Service No: ED436128).

Kincheleo, J.L. (2004). Multiple intelligences and critical thinking. In J.L. Kincheloe and D. Weil (Eds.), *Critical thinking and learning: An encyclopedia for parents and teachers,* (pp. 197-201*).* Westport, Conn.: Greenwood Press.

Kleinsasser, A. (2000). Researchers, reflexivity, and good data: Writing to unlearn. *Theory into Practice 39* (3), 155-162.

Kürüm, D. (2002). *Öğretmenler adaylarinin eleştirel düşünme gücü.* Unpublished master thesis. Anadolu Üniversitesi. Eskişehir.

Lazere, D. (1987). Critical thinking in college English studies. (Eric Document Reproduction Service No: ED284275).

Leader, F.L. & Middleton, J.A. (1999). From ability to action: Designing instruction for critical thinking dispositions. In K.E. Sparks & M. Simonson (Eds.), *Proceedings of selected research and development papers presented at the national convention of the association for educational communications and technology [AETC],* (pp. 413- 422). (Eric Document Reproduction Service No: ED436128).

LeCompte, M.D. & Goetz, J.P. (1982). Problems of reliability and validity in ethnographic research. *Review of Educational Research , 1* (3) 1-60.

Lewis, A.& Smith,D. (1993). Defining higher order thinking. *Theory into Practice, 32* (3), 131-137.

Lipman, M. (1988). Critical thinking: What can it be? *Educational Leadership 46* (1), 38-43.

Liston, D.P. & Zeichner, K.M. (1991). *Teacher education and the social conditions of schooling.* New York: Routiedge.

Margison, E.J.H. (2003). Failure of critical thinking. *Philosophy of Education.* Retrieved on May 5, 2007, from http://www.ed.uiuc.edu/EPS/PES yearbook /2003/hyslopm .pdf

Marshall, C. & Rossman, G.B. (1989). *Designing qualitative research.* Newbury Park: Sage Publications.

Martin, D.S., Craft, A.R., Tillema, H.H. (2002). Developing critical and creative thinking strategies in primary school pupils: An inter-cultural study of teachers' learning. *Journal of In-Service Education, 28* (1), 115-134.

Marzano, R.J. (1993). How classroom teachers approach the teaching of thinking. *Theory into Practice, 32* (3), 154-160.

Mayers, M. & Field, J.C. (2004). Hermeneutics for the classroom. In J.L. Kincheloe and D. Weil (Eds.), *Critical thinking and learning: An encyclopedia for parents and teachers,* (pp. 235-238*).* Westport, Conn.: Greenwood Press.

Mcalpine, C., Weston, C., Berthiaume, D. & Fairbank-Roch, G. (2006). How do instructors explain their thinking when planning and teaching? *Higher Education, 51* , 125-155.

McCutcheon, G. (1982). How do elementary school teachers plan? The nature of planning and influences on it. In W. Doyle & T.L. Good (Eds.), *Focus on Teaching: Readings from The Elementary School Journal* (260-279). Chicago: The University of Chicago Press.

McPeck, J. (1981). *Critical thinking and education*. New York: St. Martin's Press.

Mecit, Ö. (2006). *The effect of 7E learning cycle model on the improvement of fifth grade students' critical thinking skills*. Unpublished dissertation. Middle East Technical University, Ankara.

Mingers (2000). What is it to be critical? Teaching a critical approach to management undergraduates. *Management Learning, 31* (2), 219-237.

Munzur, F. (1999). *Türk dili ve edebiyati ders kitaplarinda eleştirel düsünme eğitimi üzerine bir değerlendirme.* Unpublished master thesis. Ankara Universitesi, Ankara.

National Commission on Excellence in Education (1983, April). A nation at risk: The imperative for education reform. Retrieved on September 29, 2007, from http://www.ed.gov/pubs/NatAtRisk/index.html

Nisbet, J. (1990). Teaching thinking: An introduction to the research literature. Spotlight 26, *The Scottish Council for Research in Education*. Retrieved on March 12, 2007, from http://www.scre.ac.uk/pdf/spotlight/Spotlight26. pdf

Norris, S.P. (1985). Synthesis of research on critical thinking. *Educational Leadership, 42* (8) 40-45.

Norris (1992). Bachelors, buckyballs, and ganders: Seeking analogues for definitions of "critical thinker". Article retrieved 08 March, 2004 from http://www.ed.uiuc.edu/EPS/PES- yearbook92_docs/Norris.HTM.

Onur, B. (2005). *Türkiye'de çocukluğun tarihi*. Ankara: İmge Kitabevi.

Organization for Economic Cooperation and Development (2003). Programme for international student assessment. Retrieved on October 12, 2007, from http://www.pisa.oecd.org/document

Organization for Economic Cooperation and Development (2006). Programme for international student assessment. Retrieved on February 5, 2008, from http://www.oecd.org/dataoecd/51/27/37474503.pdf

Ornstein, A.C. & Hunkins, F.D. (1998). *Curriculum: Foundations, principles, and issues (3rd ed.).* Boston: Allyn and Bacon.

Orr, J. B., and Klein, M. F. (1991). Instruction in critical thinking as a form of character education. *Journal of Curriculum and Supervision. 6* (2), 130-144.

Osana, H.P. & Seymour, J.R. (2004). Critical thinking in preservice teachers: A rubric for evaluating argumentation and statistical reasoning. *Educational Research and Evaluation, 10* (4-6) 473-493.

Patton (1990). *Qualitative evaluation and research methods (2nd ed.).* Newbury: Sage Publications.

Paul, R. (1982). Teaching critical thinking in the "strong sense": A focus on self-deception, world views and dialectical mode of analysis, *Informal Logic Newsletter, 5* (2), 2-7.

Paul, R. (1984). The Socratic Spirit: An answer to Louis Goldman. *Educational Leadership, 42* (1), 63- 64.

Paul, R.W, Binker, A.J.A., Jensen, K., Kreklau, H. (1990). *Critical thinking handbook: 4th-6th grades. A guide for remodelling lesson plans in language arts, social studies, and science.* Santa Rosa: Foundation for Critical Thinking.

Paul, R. & Elder, L. (2006). Critical thinking: The nature of critical and creative thought. *Journal of Developmental Education, 30* (2), 34-35.

Perkins, D.N. & Tishman, S. (1998). *Dispositional aspects of intelligence.* Presented at the 1998 Winter Symposium of the College of Education, Arizona State University, Tempe. Retrieved on July, 25, 2006, from http://learnweb.harvard.edu/alps/thinking/docs/Plymouth.pdf

Peshkin, A. (2001). Angles of vision: Enhancing perception in qualitative research. *Qualitative Inquiry, 7* (2), 238-253.

Pintrich, P.R. (2002). The role of metacognitive knowledge in learning, teaching, and assessing. *Theory into Practice, 41* (4), 219-225.

Pope, M.C. & Woodlief A. (2003). The rereading/ rewriting process: Theory and collaborative, on-line pedagogy. In M. Helmers (Ed.), *Intertexts: Reading pedagogy in college writing classrooms* (153-172). Mahwah, NJ: Lawrence Erlbaum Associates.

Portelli, J. (1994). The challenge for teaching for critical thinking. McGill *Journal of Education, 29* (2), 137-151.

Presseisen, B.Z. (1986). *Thinking skills: Research and practice.* Washington, D.C.: NEA Professional Library.

Pring, R. (2005). *Philosophy of educational research.* London: Continuum.

Rafferty, C.D. (1999). Literacy in the information age. *Educational Leadership*, *57* (2), 22-25.

Ray, K.W. (2006). What are you thinking? *Educational Leadership, 64* (2), 58-62.

Rossman, G.B. & Rallis, S.F. (1998). *Learning in the field: An introduction to qualitative research.* Thousand Oaks: Sage Publications.

Schafersman, S.D. (1991). An introduction to critical thinking. Retrieved on September 12, 2007, from http://www.freeinquiry.com/critical-thinking.html

Schmoker, M. (2007). Reading, writing and thinking for all. *Educational Leadership, 64* (7), 63-66.

Schoenfeld, A.H. (1998). *Toward a theory of teaching- in- context*. Retrieved on 04 March, 2004, from: http://wwwgse.berkeley.edu/Faculty/aschoenfeld/TeachInContext/tic.htm l.

Schumm, J.S. & Post, S.A. (1997). *Executive learning: Successful strategies for college reading and studying*. New Jersey: Prentice-Hall, Inc.

Shanahan, C. (2003). *Using multiple texts to teach content*. Retrieved on December 12, 2006, from http://www.learningpt.org/pdfs/literacy/shanahan.pdf

Siegel, H. (1988). *Educating reason: Rationality, critical thinking and education* London: Routledge.

Sternberg, R.G. & Bhana, K. (1986). Synthesis of research on the effectiveness of intellectual skills programs: Snake-oil remedies or miracle cures?, *Educational Leadership, 44* (2), 60-67.

Strauss, A. & Corbin, J. (1998). Grounded theory methodology: An overview. In N.K. Denzin & Y.S. Lincoln (Eds.) *Strategies of Qualitative Research* (158-183). Thousand Oaks: Sage Publications.

Streib, J.T. (1992). *History and analysis of critical thinking*. Unpublished dissertation. The University of Memphis, Memphis.

Şahbat, A. (2002). *Din kültürü ve ahlak bilgisi öğretmen tutumlarının öğrencilerin eleştirel düşünme becerilerine etkisi*. Unpublished master thesis. Selçuk Üniversitesi, Konya.

Şahinel, S. (2001). *Eleştirel düşünme becerileri ile tümleşik dil becerilerinin geliştirilmesi*. Unpublished dissertation. Hacettepe Üniversitesi, Ankara.

Tanilli, S. (2006). *Uygarlık tarihi*. İstanbul: Alkım Yayınevi.

T.C. Milli Egitim Bakanligi İlkögretim Kurumları Yönetmeliği (2003). *Resmi Gazete* 27.08.2003- 25212.

Thacker, J.L. (1990). Critical and creative thinking in the classroom. *ERS Spectrum, 8* (4), 28-31.

Tishman, S., Jay, E. & Perkins, D.N. (1993). Teaching thinking dispositions: From transmission to enculturation. *Theory into Practice, 32*, 147-153.

Underbakke, M., Borg J.M., & Peterson D. (1993). Researching and developing the knowledge base for teaching higher order thinking. *Theory into Practice, 32* (3), 138-146.

Uysal, A. (1998). *Sosyal bilimler öğretim yöntemlerinin eleştirici düşünme gücünün geliştirilmesindeki rolü.* Unpublished master thesis. İnönü Üniversitesi, Malatya.

van Gelder, T.J. (2005). Teaching critical thinking: Some lessons from cognitive science. *College Teaching, 45* (1), 1-6.

Vandermensbrugghe, J. (2004). The unbearable vagueness of critical thinking in the context of anglo-saxonization of education.*International Education Journal, 5* (3), 417-422.

Vansieleghem, N. (2005). Philosophy for children as the wind of thinking. *Journal of Philosophy of Education, 39* (1), 19-35.

Varaprasad, C. (1997). Some classroom strategies: Developing critical literacy awareness. *Forum, 35* (3), 24-33.

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge: Harvard University Press.

Walters, K.S. (1990). How critical is critical thinking? Clearing House, 00098655 64 (1), 57-60.

Walton, D. (2006). *Fundamentals of critical argumentation.* New York: Cambridge University Press.

Walton, D.N. (1989). *Informal logic: A handbook for critical argumentation.* New York: Cambridge University Press.

Warburton, N. (1996). *Thinking A to Z.* London: Routledge.

Webb, J.M. & Luft, P. (1997). Influence of pedagogical expertise and feedback on assessing student comprehension from nonverbal behavior. *Journal of Educational Research, 91* (2), 89-97.

White, W.F. (1990). Divergent thinking vs. convergent thinking. *Education 111* (2), 208-213.

Wilson, S. (1977). The use of ethnographic techniques in educational research. *Review of Educational Research 47* (1), 245-265.

Wolcott, H. (1994). *Transforming qualitative data: Description, analysis & interpretation.* London: Sage.

Wolf-Gazo, E. (1996). John Dewey in Turkey: An educational mission. *Journal of American Studies of Turkey 3* (1), 15-42.

Yıldırım, A. & Şimşek H. (2000). *Sosyal bilimlerde nitel araştırma yöntemleri.* Ankara: Seckin.

Yinger, R.J. (1982). A study of teacher planning. In W.Doyle & T.L.Good (Eds.), Focus on teaching: *Readings from the elementary school journal* (239-259). Chicago: The University of Chicago Press.

APPENDICES

APPENDIX A

OBSERVATION FORM

<u>Pre-Observation Notes</u>

Teacher : _____   Date   :_____

Class Period: _____

Teacher's goals for the class being observed:

-   -

-   -

Description of the Classroom:

_____

_____

_____

<u>Observation Notes</u>

Time: _____   Stage of the lesson: _____

Materials / Teaching Aids Used in This Stage:_____

_____

TASK	CONTENT	INTERACTION	NON-VERBAL BEHAVIOR
Description of Non-Instructional Events:			
Description of Students' Products (notebooks, worksheets etc.):			

Time: _____   Stage of the lesson: _____

Materials / Teaching Aids Used in This Stage:_____

_____

TASK	CONTENT	INTERACTION	NON-VERBAL BEHAVIOR
Description of Non-Instructional Events:			
Description of Students' Products (notebooks, worksheets etc.):			

Post Observation Notes

Specific questions that can be directed to the teacher in the interview:
-
-

Specific questions that can be directed to the students in the interviews and logs:

-
-

QUESTIONS FOR THE FIRST INTERVIEW WITH THE TEACHERS

İlk görüşmemizde size yönelteceğim sorular bir öğretmen olarak sizin portrenizi oluşturmayı amaçlamaktadır. Bu nedenle bu görüşme, daha sonra yapacağımız, gözlemlenen dersler üzerine konuşulacak haftalık görüşmelerden farklılaşmaktadır. Bu ilk görüşme şu ana başlıklar çerçevesinde gerçekleşecektir:

a. bir eğitimci olarak kariyeriniz

b. eğitim felsefeniz

c. eleştirel düşünmeye genel bakışınız

d. eğitimde eleştirel düşünmeye bakışınız

e. Türkçe dersleri çerçevesinde eleştirel düşünmeye bakışınız

Sorular yalnızca içinde bulunduğumuz zaman dilimine değil geçmişe de yönelik olacaktır. Ayrıca sorular oldukça genel bir çerçevede oluşturulmuştur. Bu nedenle, bu görüşmede aklınıza gelmeyen ancak görüşmeden sonra hatırlayacağınız noktaları daha sonraki görüşmelerimizde yeri geldikçe de telafi edebileceğimizi hatırlatmak isterim.

A. <u>Kariyer</u>

1. Eğitim yaşantınızı (öğrenciliğinizi) sizce dönüm noktası oluşturan olaylarıyla anlatır mısınız?

2. Meslek yaşamınızı sizce dönüm noktası oluşturan olaylarıyla anlatır mısınız?

3. Mesleğinizle ilgili geleceğe yönelik planlarınız nelerdir? Orta ve uzun vadede kendinizi nerde görüyorsunuz?

B. <u>Eğitim Felsefesi</u>

4. Bir eğitimci olarak eğitim sizce neyi/ neleri başarmalıdır?

5. Bir öğretmen olarak öğrencilere aktarmak istediğiniz en önemli özellikler nelerdir? Öğrencilerininizin bir yetişkin olduklarında nasıl kişiler olmalarını istersiniz?

6. Bir öğretmen olarak sizi etkileyen, model aldığınız kişiler oldu mu? Bu kişilerin hangi yönleri bunu sağladı?

C. Eleştirel Düşünmeye Genel Bakış

7. Eleştirel düşünme becerilerine sahip insan deyince aklınızda nasıl birisi canlanıyor? Böyle bir kişinin ne gibi özelliklere sahip olduğunu düşünüyorsunuz?

8. Günlük yaşamınızda eleştirel düşünme becerilerini kullanmanızı gerektiren durumlara birkaç örnek verebilir misiniz?

D. Eğitimde Eleştirel Düşünmeye Genel Bakış

 9. Sizin öğrenciliğinize dönecek olursak:

   a. Eğitim yaşantınız boyunca size eleştirel düşünme becerilerini kazandırmaya çalışan öğretmenleriniz oldu mu?
   b. Eğer olduysa bunu ne şekilde yapmaya çalıştıklarını anlatır mısınız?
   c. Bu sizde nasıl bir etki yarattı?

10. Derslerde öğrencilerinizin eleştirel düşünebildikleri durumlar gözlüyor musunuz? Bu durumları ayrıntılı olarak tarif edebilir misiniz?

11. Öğrencilere eleştirel düşünme becerilerini kazandırma konusunda en uygun ortamı hangi dersin sağladığını düşünüyorsunuz?

E. Türkçe Dersleri Çerçevesinde Eleştirel Düşünmeye Bakış

12. Türkçe dersi kapsamında öğrencilerinize kazandırmak istediğiniz en önemli beceriler nelerdir?

13. Türkçe derslerini eleştirel düşünme becerilerini geliştirmek konusunda ne kadar elverişli buluyorsunuz?

14. Türkçe dersinde hangi tip etkinliklerin öğrencileri eleştirel düşünmeye sevk ettiğini düşünüyorsunuz?

15. Türkçe derslerini planlarken nasıl bir süreç izliyorsunuz?

16. Türkçe derslerini planlama aşamasında eleştirel düşünme becerilerini sürece katmak için çabalarınız var mı?

17. Müfredatı, ders kitaplarını, ders planlama ve uygulama süreçlerini ve öğrencilerinizi bir bütün olarak göz önünde bulundurduğunuzda:

   a. Eleştirel düşünme becerilerini Türkçe derslerine taşımanın önünde engeller olduğunu düşünüyor musunuz?
   b. Engeller varsa bunlar nelerdir?

APPENDIX C

QUESTIONS FOR SUBSEQUENT INTERVIEWS WITH THE TEACHERS

Stage 1: <u>Questions Concerning Planning</u>

Bu haftaki dersleri planlarken;

1. a. Öğrencilerin kazanımları ile ilgili hedefleriniz nelerdi?

b. Bu kazanımları nasıl belirlediniz?

2. Kullanacağınız metni seçme sürecinizi anlatır mısınız?

3. Kullanacağınız metni okuma sürecinizi anlatır mısınız?

a. Metnin kazanımlara ulaşmanızda ne şekillerde katkısı olabileceğini düşündünüz?

b. Metni okurken öğrencilerinizin karşılaşacağını ön gördüğünüz güçlükler var mıydı?

c. Eğer böyle güçlükler belirlediyseniz bunların üstesinden gelebilmeleri için başvurmayı planladığınız yöntemler nelerdi?

d. Metnin hangi yönlerinin/bölümlerinin öğrencileri düşünmeye sevk etmede etkin olabileceğini düşündünüz?

4. Metinle ilgili okuma öncesinde, okuma sırasında ve okuma sonrasında uygulayacağınız etkinlikleri nasıl belirlediniz?

5. Metinle ilgili okuma öncesinde, okuma sırasında ve okuma sonrasında yönelteceğiniz soruları nasıl belirlediniz?

Stage 2: <u>Questions Concerning Implementation</u>

Bu haftaki dersleri işlerken,

6. Kazanımlara ne derece ulaşıldığını düşünüyorsunuz?

7. Metnin uygulmadaki etkisini göz önünde bulundurduğunuzda:

   a. Metin kazanımlara ulaşmanızda ne şekilde katkıda bulundu?
   b. Metni okurken öğrenciler hangi noktalarda güçlük yaşadılar?
   c. Bu güçlükleri aşmaları konusunda sizin yaptıklarınızı değerlendirir misiniz?
   d Metnin hangi yönlerinin/bölümlerinin öğrencileri düşünmeye sevk etmede etkin olduğunu düşündünüz?

8. Öğrencileri düşünmeye sevk etmekte en etkili bulduğunuz etkinlik/ etkinlikler hangileriydi?

9. Metinle ilgili okuma öncesinde, okuma sırasında ve okuma sonrasında yönelttiğiniz soruları öğrencilerin metni anlamlandırma sürecine katkıları yönünden değerlendirir misiniz?

10. Öğrencileri düşünmeye sevk etmekte en etkili bulduğunuz soru/ sorular hangileriydi?

11. Derslerde öğrenciler tarafından size ya da arkadaşlarına yöneltilen sorulardan önemli bulduklarınız oldu mu?

12. Ders dışı konularda öğrenciler için eğitici/ düşündürücü bulduğunuz durumlar söz konusu oldu mu? Böyle durumlar olduysa bunların bir değerlendirmesini yapar mısınız?

13. Dersi işlerken ya da işledikten sonra bu dersleri tekrar işleme şansınız olsaydı farklı yapmayı aklınızdan geçirdiğiniz bölüm ya da bölümler oldu mu?

14. Bu haftanın derslerinden hareketle önümüzdeki haftanın ders planlama süreci için kafanızda oluşan fikirler varsa bunları paylaşır mısınız?

APPENDIX D

ADDED QUESTIONS FOR SUBSEQUENT INTERVIEWS WITH THE TEACHERS

1. Bu haftanın derslerini planlama sürecinizi paylaşır mısınız?

2. Bu haftaki derslerin öğrenci kazanımlarının ne derece gerçekleştiği yönünde bir değerlendirmesini yapabilir misiniz?

3. Bu haftaki dersleri düşünme süreçleri açısından gözden geçirdiğinizde derslerde yaşanan önemli bulduğunuz durumlar, diyaloglar, yorumlar var mıdır? Bunların değerlendirmesini yapar mısınız?

APPENDIX E

SAMPLE LESSON PLAN

Şemsettin's Sample Lesson Plan

Ders: Türkçe   **Sınıf:** 4   **Tema:** Yenilikler ve Gelişmeler
Süre : 4+2 Saat   **Tarih :** 09-13.05.2005
Kazanımlar: 1.Dinleme Kurallarını Uygulama
                 2.Dinlediğini Anlama
                 3. Tür, Yöntem ve Tekniklere Uygun Dinleme
                 4. Konuşma Kurallarını Uygulama
                 5. Kendini Sözlü Olarak İfade Etme
                 6. Tür, Yöntem ve Tekniklere Uygun Konuşma
                 7. Okuma Kurallarını Uygulama
                 8. Okuduğunu Anlama
                 9. Anlam Kurma
                 10. Kelime Hazinesini Geliştirme
                 11. Tür, Yöntem ve Tekniklere Uygun Okuma

İŞLENİŞ
I. HAZIRLIK

Etkinlikler

1. Anahtar Kelimelerle Çalışma

Çk 1 verilerek yönergeye uygun yapmaları istenecek. Tamamlana çalışmalar sınıf ortamında paylaşılacak.

2. Okumadan Önce

Metin bir sefer örnek olarak okunacak. İkinci sefer sadece dedenin köyü anlattığı kısım yavaş yavaş okunacak. Okunan kısmın resmi yaptırılarak betimleyici anlatım buldurulacak.

3. Metinden Hareketle

Metinde yer alan eş sesli, eş anlamlı, zıt anlamlı kelimelerin anlamları üzerinde durulacak. Metinde en inanılmaz olan yer, en çok beğendikleri yer nedenleri ile belirlenecek. (ÇK2)

Metinde yer alan yeniliğin ne olduğu yeniliklerin her zaman gelişmeyle eşdeğer olup olmadığı, her yeniliğin güzel olup olmadığı tartışılacak. Betimleme tarzında bir yazı ile bir yeniliği yazmaları istenecek.

4. Nobel Ödülü

Köyden şehre yaşama geçişte yaşanan yeniliklerin bir dramatizasyonla anlatılması istenecek.

5. serbest Okuma

Okul Kütüphanesinde öğrencilerin serbest okuma yaparak, okumalarını süre elverdiğince paylaşmaları sağlanacak.

Zehra's Sample Lesson Plan

Sınıf: 4   Tarih: 31. 10. 2005- 02. 11. 2005
Dersin adı: Türkçe
Süre: 40' x 4
Ünitenin adı/no: Geçmişimi Öğreniyorum / 2
Kaynaklar ve Materyaller: " Kurtuluş Savaşı' mız " Öğretmen Klavuz Kitabı
sf: 68, Kurtuluş Savaşı resimleri
Yöntem ve teknikleri: Okuma, anlama, sözlü anlatım, soru- cevap

Öğrenci kazanımları
1. Dinlemeye hazırlık yapar.
2. Dinleme amacını belirler.
3. Dinlediği metinde Atatürk' ün Milli Mücadele' de karşılaştığı güçlükleri belirler.
4. Atatürk' ün Milli Mücadele' de karşılaştığı güçlüklerden birine çözüm üretir.

ÖĞRETME-ÖĞRENME ETKİNLİKLERİ:

Sözel/Dilsel (2)	Sosyal/ Kişilerarası (1)
Okuma metnini kurallarına uygun olarak okunması ve okuma parçası ilgili olarak sözel bilgilendirilmelerin yapılması.	Metnin başlığından ve tahtaya asılan görsellerden yola çıkılarak öğrencilerin metnin içeriği ile ilgili tahminlerde bulunmaları.
Doğacı (6)	Mantıksal/Matematiksel (4)
Çevresinde Kurtuluş Savaşı dönemini yansıtan eserleri inceleyerek izlenimlerini arkadaşlarına aktarması.	Metinden yola çıkılarak öğrencilerin 5N 1 K çalışmasını yapmaları.
İçsel/Bireysel (7)	Görsel/Uzamsal (5)
Metne ilgili tüm etkinlikleri yapabilmesi.	Metinden öğrencilere ilginç gelen bir bölümün resmini çizmeleri.
Müziksel/Ritmik (8)	Bedensel/ Kinestetik (3)
Anıtkabir ziyaretiniz sırasında savaş canlandırma sahnelerindeki sesleri duymak sizlere ne hissettirmişti?	Öğrencilerden metindeki anlamını bilmediği sözcükleri tahtaya yazmalarının istenmesi.

DEĞERLENDİRME

1. Metnin konusu nedir?

2. Metnin ana fikri nedir?

3. Mustafa Kemal' neden başkomutanlık yetkisi verilmiştir?

4. Savaş sırasında karşılaşılan güçlükler nelerdir?

Atatürk' ün karşılaştığı güçlükleri düşün. Sen olsaydın bu güçlükleri yenebilmek için neler yapardın? Düşüncelerinizi ve yapacaklarınızı aşağıdaki boşluğa yazınız.

APPENDIX F

SAMPLE SUPPLEMENTARY MATERIALS

Şemsettin's Sample Supplementary Materials

Kaptan Müsait Bir Yere Konar mısın?(1)

Mühim bir iş toplantınız veya randevunuz var ve sadece yarım saatiniz kaldı.(2) İş sadece kontağı çevirmekle bitmiyor. Trafiğin yoğun olmaması gerek. Hâlbuki kontağı çevirseniz ve havalanıp çok kısa bir süre zarfında randevunuza yetişseniz fena mı olurdu. NASA'dan trafik çilesinden bıkanlara iyi bir haber var; trafik sorununa "havalı" bir çözüm bulundu. (3) NASA insanların kendi hava taşıtlarıyla bir yerden bir yere gitmelerine imkân sağlayan ve "Gökyüzünde Otoyol" adı verilen bir bilgisayar sistemi tasarladı. (4) Sistem sayesinde pilotlar, tıpkı bir video oyunu izler gibi diğer hava taşıtlarıyla arsındaki mesafeyi görebilecek ve gidilecek noktaya kadar diğer hava taşıtlarıyla çarpışma önlenecek.

Sistem ulaşım araçlarının teknolojisi açısından yeni bir çığır açarken, mucitler bu alt yapıyı kullanacak kişisel hava araçlarını geliştirmeye başladı bile. (5)Bu mucitlerin arasında en dikkati çekeni hiç şüphesiz Paul Moller. Moller, dikey olarak iniş yapabilen ve uçabilen "Skycar"(6) (uçan araba) üretiyor. Araç, spor bir araba ve küçük bir jet arası bir şeye benziyor. Basit bir helikopter mantığıyla çalışıyor. (7)

Moller'in bu projeyi hayata geçirmesi 30 yılını almış. (8) Sonunda skycar tüm test sürüşlerini geçerek gerçeğe dönüşmüş. Seri üretime geçildiğinde aracın orta fiyatta bir BMW'nin maliyetine sahip olacak. (9)Paul Moller, "Bizim niyetimiz bu sitemin tamamen otomatik bir ulaşım sitemine dönüşmesi, yani sizi pilot değil yolcu yapmak." diyor. (10)

Moller, hava arcı üretimindeki tek isim değil elbette. Minnesota'da yapılan "S20"ler var sırada. Aracın 4 kişilik kabini neredeyse bir ailenin oturma odasına benziyor. Woody Norris'in de "AirScooter"(11) adı verilen hava taşıtını bu yıl içerisinde satışa sunması bekleniyor.

Bu yeni hava araçlarının bir güzelliği de kolaylıkla öğrenilebilir olması. Virgina Havacılık Bürosu koordinatörü "Bu gelişmeler uçuşu öyle bir hale getirecek ki, herhangi bir kukla bile bunu yapabilecek." şeklinde iddialı bir çıkış yapıyor. (12) Debriyaj, vites veya pedal derdi yok bu araçlarda. Kısa bir brifingden(13) sonra 12 yaşındaki bir çocuk bile uçuş ve iniş yapabiliyor. (14)

Uzmanlar hava taşıtlarının 10- 15 yıl içerisinde piyasaya sürüleceğini belirtirken, bu araçların öncelikle ordu, polis ve sınır güvenlik birimleri tarafında kullanılması bekleniyor.(15) Ancak şimdiden ilgili firmalara yoğun talepler geliyor. Örneğin; Japonya, Endonezya, Yunanistan, Brezilya, Şili, Çin, Rusya, Alaska ve Suudi Arabistan gibi 40 ülke Moler'in firması ile irtibata geçmiş durumda.(16)

Elif KURU
15 Mayıs 2005 Tarihli
Zaman Gazetesi Turkuaz ekinden alınmıştır.

Sorular

1. Başlıktan ne anlıyorsunuz? Neden?
2. Bu durumda siz ne yaparsınız? Neden?
3. Havalı çözüm nasıl olabilir? Neden?
4. Bilgisayar sisteminin ulaşıma nasıl bir etkisi olur? Neden?
5. Kişisel hava aracı nasıl olabilir? Neden?
6. Scycar ne demek olabilir?
7. Helikopter mantığı ne demek?
8. Bu size herhangi bir bilim adamını hatırlattı mı? Neden O kişiyi hatırlattı?
9. Bu maliyet sizce yüksek mi alçak mı? Neden?
10. Yolcu ile pilot arsındaki fark nedir?
11. AirScooter ne demek olabilir?
12. İddialı Çıkış ne demek olabilir?
13. Brifing ne demek olabilir?
14. 12 yaşındaki çocuğun kullanması doğru olur mu? Neden?
15. Neden öncelikle belirtilen kişilerin bu araçları kullanması bekleniyor?
16. Bu ülkelerin içinde Türkiye var mıdır? Neden? Devletin başında sen olsaydın irtibata geçer miydin? İrtibata geçersen ne yapardın?

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İHMALKÂRLIK

Arda, cuma en sevdiği gün olmasına rağmen bir türlü eve gitmek istemiyordu. Cuma en sevdiği gündü; çünkü hafta sonu başlıyor, evde bilgisayar oynamaya çok vakti oluyordu. Ama bugün hiç keyfi yoktu.

Fen ve Teknoloji dersi sınav sonuçları açıklanmış ve çalışmış olmasına rağmen düşük bir not almıştı. Şimdi babasını inandırmak için çok dil dökmesi gerekiyordu. Bunu düşündükçe de, tadı iyice kaçıyordu. Ne yapmalı, ne etmeliydi babasını inandırmak için? Bildiği tek bir şey vardı; babasını ikna etmek için dilinde tüy bitecekti. Söylediği her şeye bir bahane bulunacak ve sonunda sevmediği cezalardan birini alacaktı. Çok mu zordu çocuk olmak, bilemiyordu.

Eve geç gitmek için o kadar uzun yolu yürümeyi bile göze almıştı. Yarım saattir düşünüyor, fakat bir çözüm bulamıyordu. Belki annesi ona yardım ederdi, oğluna hiçbir zaman toz kondurmamıştı ne de olsa. Ancak bunun annesi için de önemli bir konu olduğunun farkındaydı. Ne düşünse boşa kürek çekmiş oluyordu.

Evet, yol bitmiş evin kapısına varmıştı. Annesi ve babası gelene kadar çözüm bulmak için düşünecek biraz daha vakti vardı. Aslında her zaman bu kadar düşük notlar almazdı Arda. Ancak bu kez ders çalışmayı ailesinin tüm uyarılarına rağmen hafife almıştı. Kendi de suçluluğunun farkındaydı. Açıklayabileceğine de inanmaktaydı, ama sorumluluklarını yerine getirememenin ezikliğini yaşıyordu.

Eline evin anahtarını almış kapıyı açmak üzereyken, kapının kendiliğinden açıldığını fark etti. Bir de ne görsün! Karşısında anneannesi. Arda adeta havalara uçmuş, sınavın sarsıntısını bir anlık unutmuştu. Hemen içeri girdiler, sarılıp öpüştüler, hasret giderdiler.

Ardından Arda, anneannesine içindeki sıkıntısını ve düşündüklerini anlattı. Anneannesi Arda' ya böyle bir şeyi ihmal etmemesi ve bir daha ailesinin sözünden çıkmaması gerektiğini anlattı. Arda zaten suçluluğunu kendi kendine de kabul etmişti. Annesi ve babası gelince, durumu anneannesi onlara güzelce anlattı. Ailesi Arda' yı bu kez affetmişti, tabi ondan bir daha böyle bir davranış beklemediklerini söyleyerek

Artık bizim yaramaz çocuk gönül rahatlığı ile uyuyabilirdi.

Bir daha böyle bir ihmalkarlık yapmamaya söz vererek.

SAMPLE QUESTIONS FOR STUDENT LOGS

(in the Earlier Stages of the Research)

(After Şemsettin's Lessons Dated April 25,26,27, 2005)

Sevgili Enes,

Aşağıdaki sorular bu haftaki Türkçe dersleri ile ilgili. Bu soruları yanıtlarken el yazısı kullanmak zorunda değilsin.

Soruları yanıtlamayı kabul ettiğin için teşekkür ederim.

Melek

1. Bu haftaki Türkçe derslerinde neler öğrendin?

2. Kelebek çalışma kağıdında kelebeğin kanatlarındaki "yenilik" ve "gelişme" bölümlerini neye göre doldurdun?

3. Kelebek sunusunun gelişme ve yenilik ile bir ilgisi var mıdır? Varsa nedir?

4. Kelebek sunusunda öykünün gelişme ve yenilik ile ilgili aktarmaya çalıştığı mesaj sence neydi?

5. Sence öğretmen neden kelebek sunusundan sonra "23 Nisan'ın Anlamı" başlıklı şiire geçti?

6. "23 Nisan'ın Anlamı" şiirinin sence anlatmaya çalıştığı düşünce nedir?

7. Öğretmen sizden 23 Nisan'ın getirdiği yenilik ve gelişmelerle ilgili bir şiir yazmanızı istedi. Eğer konuyu sen seçseydin yenilik ve gelişmeyi anlatmak için hangi konu üzerine bir şiir yazardın?

8. Bu hafta Türkçe derslerinde işlediklerinizle ilgili daha fazla neler öğrenmek isterdin?

SAMPLE QUESTIONS FOR STUDENT LOGS

(in the Later Stages of the Research)

(After Şemsettin's Lessons Dated May 16, 17, 18, 2005)

Sevgili Semih,

Daha önce sormuş olduğum soruları tam olarak yanıtladığın için teşekkür ederim. Ayrıca defterini vaktinde getirmen de beni mutlu etti.

Şimdi sırada bu haftaki dersle ilgili sorular var. Bu kez yanıtlarını el yazısı ile yazarsan sevinirim. Bu derste "Kaptan Müsait Bir Yere Konar mısın?" başlıklı metni çalıştınız. Soruları metni bir kez daha kendi kendine okuduktan sonra yanıtlamayı unutma. Ayrıca soruları lütfen metne bakarak yanıtla.

Melek

1. Bu haftaki Türkçe derslerinde neler öğrendin?

2. Metinde uçan arabaların kaç olumlu etkisinden bahsediliyor? Bunları tek tek yazar mısın?

3. Bu metinle ilgili daha fazla neler öğrenmek isterdin?

4. Sence öğretmen neden sizin de çalışma kağıdınıza ulaşımla ilgili bir araç tasarlayarak çizmenizi ve anlatmanızı istedi?

SAMPLE FIELD NOTES

28.11.2005 /3. ders ve 4. ders arası

Zehra'nın sınıfı - tenefüste

Biraz önceki derste dilbilgisi yaptılar. Zehra inductive bir presentation yaptı ve öğrencilerin kuralları örneklerden kendilerinin çıkarması işe biraz bilmece çözme havası verdi.

Zehra sınıftan çıktıktan sonra bugün her zamanki gruba ek olarak 6 öğrenci daha sınıfta kaldı. Yani yalnızca 3 öğrenci tenefüs için sınıftan çıkmış oldu.

Hepsi de yerinde oturuyor, Can hariç. Birbirleriyle konuşarak daha çok eşsesli sözcük örneği bulmaya çalışıyorlar. Örnekleri birbirleriyle paylaşmıyorlar. Sadece o ana dek toplam kaç tane bulduklarını söylüyorlar. İdil 13 dedi. Hepsi de doğru mu diye merak edip baktım çünkü bu kadar kısa sürede oldukça iyi bir sayı. Evet hepsi de doğruydu. Bu işi nasıl yaptığını sordum. Beyin fırtınası yapıyorum dedi. Kendine "doğa" gibi limitleyici bir kavram veriyormuş sonra bununla ilgili sözcükleri aklından geçiriyormuş mutlaka bir eşsesli çıkıyormuş. Eğer çıkmazsa sözcüğü değiştiriyormuş.

Deniz bu arada ciddi bir yorum yapıyor:

Arda: Bir türlü bulamıyorum.

Deniz: Oğlum sen buna şükret. Şimdi benim eski okulumda olsak şu karşıdaki
        Atatürk'ün gençliğe hitabesini ezberliyor olurduk

Arda: Niye ki?

Deniz: Öyle işte. O okul öyleydi. Ezbere dayalı bir eğitim vardı.

Arda ve diğerleri de yorum yapmadılar.

Herkes kendi kendine defterine bulduklarını yazıyor. Birlikte bulmaya çalışmıyorlar. Kimse de kimseye sen ne yazdın diye sormuyor. Sadece toplamı söylemeleri ve kendi sayılarını arttırmak için mücadele etmeleri aslında bir rekabet unsuru. Sakince birbirlerini geçmeye çalışıyorlar. Ama bu arada düşmanlık da yok. Gözucucuyla bakmak da yok. Kimse diğerlerine hangi sözcükleri bulduğunu sormuyor. Zil tekrar çaldığında skorlar tekrar paylaşılıyor: S1: Öğretmeninkiler hariç 15. S2: Öğretmeninkiler hariç 16...

APPENDIX I

LIST OF CODES FOR DATA ORIGINATING FROM
CLASSROOM OBSERVATIONS

ASPECT	CODE
Cognitive Aspects of Critical Thinking	CT-COG
Metacognition	CT-COG-META
Reading Critically	CT-COG-REA
Writing Critically	CT-COG-WRI
Argumentation	CT-COG-ARG
Inference	CT-COG-INF
Prediction	CT-COG-PRE
Developing Analogies	CT-COG-ANA
Clarifying Meaning	CT-COG-CLA
Analyzing Implications	CT-COG-IMP
Analyzing Cause-Effect	CT-COG-CAU
Analyzing Assumptions	CT-COG-ASS
Making Connections with Other Subjects	CT-COG-OTHER
Use of Reference	CT-COG-REF
Critical Thinking Fallacies	CT-COG-FALL
Affective Aspects of Critical Thinking	CT-AFF
Intellectual Humility	CT-AFF-HUM
Perseverence at Complex Tasks	CT-AFF-PERS
Curiosity	CT-AFF-CUR
Tolerance to Ambiguity	CT-AFF-AMB
Collaboration	CT-AFF-COLL
Open-Mindedness	CT-AFF-OPEN
Challenge	CT-AFF-CHAL

Instructional Aspects	INST

Methods	INST-MET
Interaction	INST-INTER
Feedback	INST-FEED
Questions	INST-QUE
Teacher Roles	INST-TEA
Teaching Aids	INST-AIDS

Classroom Climate	CLI

Power Issues	CLI-POW
Routine	CLI-ROU
Attitude	CLI-ATT
Distraction	CLI-DIST
Teacher intervention	CLI-INTER

Content	CONT

Real-life experience	CONT- EXP
Reference to background knowledge	CONT-BACK
Limitation	CONT-LIMIT
Extension	CONT-EXT
Critique of authority	CONT-AUT
Critique of tradition	CONT-TRA
Critique of knowledge	CONT-KNOW

Text	TEXT

Discourse Type	TEXT-DIS
Connections with Other Subjects	TEXT-OTHER
Dilemma	TEXT-DIL
Language	TEXT-LANG

List of Second Layer of Codes for Data Originating

from Classroom Observations

ASPECT	CODE
Cognitive Aspects of Critical Thinking	CT-COG

Reading Critically	CT-COG-REA
Analyzing author's point of view	CT-COG-REA-AUT
Analyzing language	CT-COG-REALANG
Detecting bias	CT-COG-REA-BIAS
Detecting persuasion	CT-COG-REA-PERS
Asking questions	CT-COG-REA-ASK
Previewing the text	CT-COG-REA-PRE
Analyzing text organization	CT-COG-REA-ORG
Analyzing discourse	CT-COG-REA-DIS
Suspending judgement	CT-COG-REA-SUS
Being skeptical	CT-COG-REA-SKE
Awareness of intertextuality	CT-COG-REA-INTER
Distinguishing general and specific	CT-COG-REA-GEN
Finding the main idea	CT-COG-REA MAIN
Paraphrasing	CT-COG-REA-PARA
Distinguishing between fact and opinion	CT-COG-REA-FACT
Checking against the text	CT-COG-REA-CHEC

APPENDIX J

LIST OF CODES FOR DATA ORIGINATING FROM INTERVIEWS WITH TEACHERS

ASPECT	CODE
Planning	PLAN
School	PLAN-SCH
Curriculum	PLAN-CUR
Aims	PLAN-AIM
Perception of knowledge	PLAN-KNO
Methods	PLAN-MET
Tasks	PLAN-TASK
Language	PLAN-LANG
Reading	PLAN-REA
Writing	PLAN-WRI
Materials	PLAN-MAT
Roles assumed	PLAN-ROLE
Students	PLAN-STU
Affective Aspects	PLAN-AFF
Reflection	REF
Curriculum	REF-CUR
Aims	REF-AIM
Knowledge	REF-KNO
Methods	REF-MET
Tasks	REF-TASK
Language	REF-LANG
Reading	REF-REA
Writing	REF-WRI
Materials	REF-MAT
Roles Assumed	REF-ROLE
Students	REF-STU
Change	REF-CHA
Achievement	REF-ACH
Failure	REF-FAI
Limitation	REF-LIM
Affective Aspects	REF-AFF

APPENDIX K

LIST OF CODES FOR DATA ORIGINATING FROM STUDENT LOGS

ASPECT	CODE
Reaction to instructional processes	REAC-INST
Affective reaction	REAC-INST-AFF
Cognitive reaction	REAC-INST-COG
Affective reaction	REAC-CONT-AFF
Cognitive reaction	REAC-CONT-COG
Use of critical thinking skills	CT
Metacognition	CT-META
Reading critically	CT-REA
Argumentation	CT-ARG
Inference	CT-INF
Clarifying meaning	CT-CLA
Making connections with other subjects	CT-OTHER
Analyzing implications	CT-IMP
Analyzing cause-effect	CT-CAU

A 10-MINUTE SEGMENT FROM A LESSON TRANSCRIPTION

<u>Date:</u> 16.11. 2005   <u>Teacher:</u> Zehra   <u>Class period</u> : 1

<u>Materials Used:</u> Task 1 from the Study Book for the text entitled
                        "Atatürk ve Mimar Sinan" (p. 40)

<u>[The underlined parts come from the observer's running accounts to supplement
the recording.]</u>

T: Birinci etkinliğe dönmek istiyorum. Birinci etkinlik bana mimar, deha,
usta, sanatçı ve aydın sözcüklerini veriyor. Ama bu sözcüklerin anlamını
Iistememiş benden. Anlamını bildiğimi düşünmüş ve demiş ki aşağıdaki
kelimelerin taşıdığı özelliklerden hangisine sahip olduğunuzu düşünüyorsunuz
ve niçin? İlk önce benim bunu yapabilmem için benim bu 5 sözcüğün anlamını
bilmem lazım. Değil mi? Herkes bu 5 sözcüğün anlamını biliyor mu Nil?

Inst-Tea-Cla

Nil: Evet.

T: Mesela mimar nedir biliyor musun? Söyle bakalım neymiş?

Inst-Que-CT-Cog-Cla

Nil: (konuşmaya başlayacaktı)

T: Ben biliyordum ama unuttum.

T: Kime mimar diyoruz? Ya da

Nil: (Bir şeyler söylüyor ama anlaşılmıyor. Mırıltı şeklinde konuşuyor.)

T: Seni çok iyi duyamıyoruz. Hastalığın hala devam ediyor değil mi?

Nil: (Bir şey demeye çalışıyor ama)

T: Tamam. Seni çok fazla yormak istemiyorum çünkü çok halsizsin.

CLI-Att-Jus

T: Batu?

Batu: Aslında öğretmenim bir evi yapan , tek yapan değil de tasarlayan

CT-Cog-Cla

T: ha, önemli.

T: Az önce dedin ya biz de burada sana bir mesaj verelim mi? Daha devam ediyor lütfen.

<div align="right">**Inst-Tea**</div>

T: Bir şeyleri tasarlayıp belki de onu hayata geçirme işinin içinde de bulunan kişi ya da bunu işçilerine yaptıran kişi değil mi mimar? Tanıyor musunuz? Mimar olan var mı... tanıdıklarınızdan? Yakın çevrenizde?

<div align="right">**Inst-Que-Count-exp**</div>

T: Batu'nun var mı?

Batu: Benim annem mimar.

(Öğretmen güler.)

T: Doğru kişiye sormuşuz soruyu.Annesi mimarmış. Evet.

S: Benim teyzem mimar.

T: Teyzen mimar evet?

Mekin : Benim komşum mimar.

T: Komşunuz mimar. O yüzden bilebiliyorum diyorsun. Arda?

Arda: Öğretmenim benim babamın eski arkadaşı mimar.

T: Eski arkadaşı. Şimdi arkadaşı değil mi? **Inst-Que-ct-Cog-Cla**

Mekin: Küsmüşlerdir.   **CT-Cog-Inf**

Arda: Öğretmenim şimdi de arkadaşı da görmüyorlar birbirlerini fazla.

T: Evet. Başak?

Başak: Öğretmenim dayımın kız arkadaşı mimar.

<div align="right">**Cont-Limit**</div>

T: Özel hayata girmeyelim. Dayısının arkadaşı mimarmış. Berk?

Berk: Ben mimarım. Öğretmenim ben anneannemin evine gidince resim çiziyorum böyle bir sürü şeyler tasarlıyorum.

<div align="right">**CT-Cog-Arg-Ini**</div>

Arda : (tam Berk'in hizasında oturuyor. Ellerini havaya kaldırarak sorgularcasına ve heyecanla Berk'e) Peki onları gerçekleştiriyor musun?

<div align="right">**CT-Aff-Chal-OS**</div>

(Sınıfta genel olarak Berk'in "Ben mimarım" demesi üzerine bir hareketlenme oldu. Diğer bazı öğrenciler de bir şeyler söylüyorlar.)

T: Arda güzel bir şey söyledi. Biraz, (duraksadı, sanırım doğru kelimeyi aradı) böyle kükreyerek söyledi ama **Inst-Tea-encour**

S: doğru (öğretmenin sözünü tamamladı)

T: Mimar sadece tasarlamakla kalmıyor değil mi? Ona bakarsanız hepimiz mimarız diyebiliriz. Ben de neler tasarlıyorum ama bir türlü hayata geçiremiyorum. .... Ya da birilerine de yaptırtamıyorum.
CT-Cog-Arg-Coun

Ege: Ben bir keresinde araba tasarladım öğretmenim.

T: Hayır bak şimdi konuyu başka yerlere saptırma. Dinleyelim. Berk'i dinleyelim. Bakalım şimdi ne diyecek? ("şimdi" sözcüğünü vurguladı; Berk'i sıkıştırdığını düşünürek)
Inst-Tea-Rel

T: Mimar dediğin kimdir? İster büyük olsun, ister küçük olsun ama bir önceki yaptığını daha üst seviyeye çıkartmayı düşünerek tasarlayan, tam teçhizatlı deriz buna, her şeyi yerli yerinde düşünen ve bunu hayata geçiren, bir ürün ortaya çıkaran kişi. Bu bir heykel olabilir, bir ev olabilir. Anladık mı?
CT-Cog-Arg-Evi

T: Sen şimdi diyorsun ki "Ben tasarladım". Bunlar yapılıyor mu? Birilerine yaptırtıyor musun? (S: Hayır). Evet ben tasarladım. Bunun onayını da aldım , yetkili kişilerden. Bana izin de verdiler. Ben oluşturduğum küçük maketi hadi yaptırdım dediğin bir an oldu mu senin?
CT-Cog-Arg

Berk: Öğretmenim maket olursa yaparım.

T: Yaaaa.Maket demiyorum sana. **CT-Aff-Chal**

Mekin: Gerçek diyor.

T: Niye zorluyorsun beni? Kabul et, mimar değilsin.Onu demeye çalışıyorum.
CONT-Limit

T: Berk mi haklı ben mi haklıyım?

SS: Siz haklısınız. (Sınıf coşkuyla öğretmeni destekliyor.)

T: Berk neden haklı değil?Nerde yanılıyor? İdil? **Inst-Inter-Resp**

İdil: Berk haklı değil.

T: Neden haklı değil Berk?

İdil: Çünkü, öğretmenim, Berk sadece çiziyor (T: Berk) ya da maketlerini yapıyor. (T: Berk) Ama mimar onu hayata geçirir.(T: Berk) Örneğin, Berk, bu okulu çiziyor olabilir ama bu okulu yapamaz, hayata geçiremez.

T: İlerde geçirebilir. Hakaret etmeyelim Berk'e. **Inst-Tea-Aff**

(Sınıfta genel olarak büyük bir heyecanlı katılım var. Bir şeyler söylüyorlar.)

T: Ama bu yaşındayken Berk 10 yaşındayken sadece tasarladıklarınla kaldın. İlerde inşallah bir mimar olarak görebiliriz. Ama sen bir yere bağlı olarak, işçilerinle, belki daha iyi ustalarınla birlikte gerçekleştirmiş olmalısın mimar diyebilmemiz için. Okulunda da okuman lazım. Tamam mı?
CT-Cog-Arg-Count

T: Sen şu anda mimar mıymışsın?

Berk: Değilmişim.

T: Maalesef değilmişsin değil mi? Ama bence olabilirsin.

(Bu arada sınıfta konuşmalar oluyor. Berk'in biraz önünde yan tarafta oturan Başak Berk'e döndü ve aralarında özel bir konuşma geçti.)

Başak: Büyüyünce hep sana çizdireceğim. (Başak sempatiyle arkadaşına destek olmaya çalışıyor.) **Cli-att**
....

T: Evet konuyu dağıtmayalım.

T:Öyleyse mimar sözcüğünün taşıdığı özelliklerden birine sahip olan var mıymış aranızda?

S: Yok.

S: Bir şey söyleyebilir miyim? (Parmağı havada)
Cli-Inter
T: Parmak kaldırmak bir şey söylemek demek zaten. Sadece buna evet cevabı verenlerin parmağını görmek istiyorum.

T: Mimar sözcüğünün taşıdığı özelliklere sahibim diye yazanlar. Batu?

Batu: Öğretmenim şu sayılır mı mimar olmakta. Yani, annem bir evin projesini yapıyor.

T: Evet

Batu: Ben ona yardım ediyorum. O, hayata geçirecek.

CT-Cog-Hypo

T: Hım

Batu: Yani mimar denilebilir mi?

T: Berk'le az önce ne konuştuk biz?

Batu: Öğretmenim ama Berk hayata geçirmeyecekti. **Cont-Aut**

T: Ama tümünü, o projenin tümünde emek harcayan. Sen sadece fikir veriyorsun di mi?

Batu: Yani (Evet öyle de denilebilir anlamında "yani")

T: Ya da alıp eline kalemi, ben gerçekten bu projenin tamamını tasarladım ve (S: hayır) annemin işçileri de bunu ortaya çıkarttı diyebilir misin?

CT-Cog-Arg-Coun

Batu: Hayır.

T: Öyleyse mimar mısın?

Batu: Hayır.

T: Bence hepimiz bir ne olabiliriz, burada bak mecazi bir anlatım kullanacağım, düşünce mimarı olabiliriz. (Zil çalıyor.)

Inst-Tea-Conc

T: Tamam mı? Yani bazı şeyleri çok iyi düşünebiliriz. Üstün düşünebiliriz. O zaman bir düşünce mimarı olabiliriz. Ama buradaki mimar dediği şey bir meslekle bağlantılıydı. O nedenle de bir şeyleri tasarlayıp birilerine ya da kendisi içinde bulunarak yöneterek o çalışmayı gerçekleştiren 3-boyutlu hale getiren kişiydi.

(Sınıf biraz gürültülü.)

Mekin: Öğretmenim 3 boyutlu bundan daha küçük değil mi?

Mekin: 3 boyutlu dediniz ya şimdi bu bina üç boyutlu değil mi?

(Kaç boyutlu olduğu, boyutla ilgili sözler mırıldanıyor)

T: Üç boyutlu demek yüksekliği, derinliği ve genişliği olan demek. Yani her boyuttan bakmak demek

Teneffüste Berk Mekin'e güldü.

CT-Aff-Coll

Berk: Üç boyutlu olmazsa kağıt üzerinde kalır.

CT-Cog-Cla

T: Ben nöbet yerime doğru gidiyorum. Benimle konuşmak istiyorsanız benimle gelin.

(Mimar olmakla ilgili konuşmalar devam ederken öğretmen ve öğrenciler dışarıya çıkıyorlar.)

APPENDIX M
SAMPLE CODED INTERVIEW

Date: 5.12.2005 Teacher: Zehra (A segment from a 35-minute interview)

[R: Researcher / T: Teacher]

R: Atatürk ve Mimar Sinan metninin işlendiği haftayı düşünme süreçleri açısından değerlendirdiğinizde sizce önemli olaylar ya da durumlar nelerdi?

T: Genel olarak baktığımda çok önemli şeyler yaptığımız
   bir haftaydı diyebilirim. Bazı çok iyi etkinlikler vardı
   üzerinde durduğumuz. Ama onun dışında gerekli olmayan **Plan-Mat-Aut**
   benim gerekli görmediğim bazı etkinlikler de vardı. Onları
   es geçtim mesela. Yine onlar yazdırmış olmak için yazdırılan
   etkinlikler. İyi ki de atlamışım onları. Böylelikle seçtiğim   **Ref-Ach**
   etkinlikler üzerinde hakkıyla durabildiğimize inanıyorum.
   Zaten öyle boş geçen bir anımız olmadı bence. Şöyle düşününce...
   en çarpıcı bulduğum olay bence Berk'le girdiğimiz tartışmaydı**. Ref-Ach-**
   Daha doğrusu Berk'in başlattığı tartışma diyelim. Çünkü o bir   **Awa**
   iddiada bulundu ve bayağı sivri bir iddia olduğu için de hemen
   hemen herkesin ilgisini çekti ve bir şekilde herkes tartışmaya
   katılmaya çalıştı kendince.   **Ref-Lang-Disc**
R: Berk'in mimar olduğunu söylemesi ile başlayan...
T: Mimarım diye işin içine girince (gülüyor).
R: İşler biraz karıştı (gülüyoruz).
T: Evet...Aslında karışmaktan çok...Yani...tabi Berk çok net, **Ref-Stu-Ind**
   kapsamlı düşünebilen bir çocuk. Sen de fark etmişsindir.
R: Hı hı. Kesinlikle.
T: Burda kendisinin mimar olduğunu iddia etmesi...tabi bu bir **Ref-Lang-**
   iddia diyorum ama aslında bir şekilde...ikna olalım olmayalım   **Disc**
   kendince savunmaya da çalıştığı bir düşünce. Hatırladığım
   kadarıyla bazı şeyler çizdiği için ve bunu iyi yaptığını düşündüğü
   için kendisinin mimar olduğunu söylemişti. O etkinlikte gelen
   yanıtlar zaten ilginç. Beni de çok etkileyen bir şey. Ben mimarım
   diyor kalıyorsunuz öyle...Etkinlik sorusu şuydu: Beş tane sözcük
   verilmişti, metinde geçen aydın sözcüğü de vardı mesela. Siz
   kendinizde hangi sözcüğün özelliklerini buluyorsunuz?
   Yani aydını bilecek çocuk. Özelliklerinin neler olduğunu üç aşağı
   beş yukarı düşünecek ve kendinde bu özelliklerin olup olmadığına
   karar verecek!   **Ref-Task-Anal**
R: Aslında bayağı bir düşünme gerektiriyor.
T: Hı hı aynen. Bir de şimdi çocuk yaştalar tanımını bile bilseler

a ben bunu taşıyorum diyebilirler. Kendilerine göre taşıyorsun. Olabilir. Diğer grupta da öyle mesela işte ben aydınım falan. İyiliklere fikirlere açığım falan şeklinde. Kabul edilebilir bu. Yani ama aydın derken burda şey sadece ileri görüşlülükten değil hani belli bir aynı şekilde zamana ihtiyacınız var. Onu çok problem yapmadık <u>ama dehayım dediğinde çocuk hayır sen deha olamazsın... ya diyeceksiniz ya da farklı şeylerle</u> **Ref-Aff** <u>toparlayacaksınız. Yani işin bir de bu boyutu var. Cesaretlerini kırmayacaksın.</u> Neyse, Berk'in mimarlık meselesine dönersek ortaya attığı iddia ne kadar beklenmedik olursa olsun...ne biliyim.. bir şekilde öyle olmadığını isbatlamak onu ikna etmek gerekiyor. Zaten arkadaşları da katıldılar mücadeleye (gülüyor). <u>Ama bir yönden çok da iyi oldu. O ben mimarım diyip de diğerlerini tersini ispat etmeye itince mimarlık kavramını da bayağı bir masaya</u> **Ref-Ach** <u>yatırmış olduk.</u> Mesela bir yapıyı tasarlayan kişi diye tanımlasak o zaman Berk de tasarladığını söylediğine göre o da mimar sayılmış olacak (gülüyoruz). Ama orda Arda peki sen gerçekleştirebiliyor musun ki diye ...böyle işte.. hararetli bir şekilde atıldı falan (Arda'nın taklidini yapıyor gülerek bunu söylerken). Bu noktada tabi hem yapıyı tasarlamak hem de hayata geçirmek boyutu ortaya çıkmış oldu. Aslında tabi başka şeyler de var. Mesela....(duraksıyor)

R: Siz mesela bir mimarın yaptıklarını hep daha ileriye daha iyiye taşıyan kişi olduğunu eklediniz.

T: Hı tabi. Yani mesele sadece tasarlamak ya da yapmak değil aynı zamanda bir de belli ölçütler söz konusu. <u>İşte bunu da söyledim ama...sonuçta bunları benden duymasındansa arkadaşlarından da duyması gerekiyordu. Diğerleri de onu ikna etmeye çalışınca kendi anladıkları şekliyle daha etkili oldu.</u> **Ref-Role**

R: Mesela İdil'e söz hakkı verdiniz. O da okul örneğini verdi. Okulu yapıp yapamayacağını falan.

T: Evet. İşte bunu demek istemiştim. Bire bir konuştular.

R: Sonuç olarak değerlendirecek olursak Berk'in mimarım iddiasıyla başlayan tartışmayı?

T: <u>Evet, net bir problem olmadı. En sonunda da sonuçta hepimiz</u> **Ref-Role** <u>düşünce mimarıyız diyerek noktaladım.Ne kimseyi üzmüş olduk ne de yanlış bilgilendirmiş olduk.</u> Öte yandan....Bu etkinliğe bakarsak, iyi tarafı...<u>Ben söylersem çocuklara bakın mimar, deha, aydın işte</u> **Ref-Ach** <u>şudur şudur diye soyut şeyler söyleyeceğim. Yani öyle kelimeler var ki çok net olmayan şeyler. O an söylemiş olacağım ama söyleyip geçmiş olacağım. Ama en azından onu konuştururum nerelerde rastlamış, ne kadar biliyor, ne kadar doğru biliyor. İlk önce onu bir bileyim. Çıkış noktamız onların deneyimleri olduğunda, kendi hayatlarında o kavramla ilgili deneyimleri diyim...O zaman daha sağlam tartışabiliyoruz. Ayakları yere basarak. Sözlük gibi konuşarak değil.</u> İşte bu yüzden bu etkinliği özellikle seçtim sınıfta üzerinde durmak için. Mimar kimdir demiyor da

sizde hangi mimarlık özellikleri vardır diyor. Dolayısıyla...**Plan-Task** çocuk önce kendi hayatıyla bu kavramı ilişkilendiriyor. Sonra kavramın altında yatan özelliklere ulaşmaya başlıyor. **Plan-Aim**

R: Bunu ödev olarak vermiştiniz.

T: Kapsamlı düşünmelerini gerektiren şeyleri eve ödev olarak veriyorum. Çünkü mesela 10 dakikalık bir süre oluyor. Ön bilgilerini kontrol etmesi gerekebiliyor ve belki bazı   **Plan-Kno** durumlarda metni yeniden okuma gereği hissedebilir öğrenci. O nedenle biraz daha yazılı ödevlerini eve vermeyi tercih ediyorum ki daha rahat yapabilsin. Çünkü bana da öğrenciyken derlerdi hadi yap şunu, şu kadar süre içerisinde yapacaksın. Yapınca çok basit bir şeyler ortaya çıkıyor. Böyle bir süre içerisinde yapılınca tam net olarak fikirlerini öğrenemeyebilirim. Çünkü hepsi 10 dakikalık bir süre içerisinde gerçekleşiyor. 20 dakika da gerekebilir öğrenciye. O da şu anda benim dersim içerisinde 20 dakika vermem diğerleri için sıkıcı olabilir. O nedenle daha rahat iyi düşünerek kendilerini daha iyi ifade etmelerini sağlayacak bir zaman dilimi ayırabilsinler diye ev ödevi olarak verebiliyorum bu tür şeyleri.......................

SAMPLE REFLECTIVE NOTES OF THE RESEARCHER

29. Mart .2005
Salı
Bugün okula üçüncü görüşme için gittim ve sabah 7:30'dan 11:00'e kadarki süreyi okulda geçirdim. Bir hayli erken gitmiş oldum ama okulun bomboşkenki halinden yavaş yavaş dolması sürecini izlemek kendimi okula daha yakın hissetmemi sağladı. Aslında dersler 8.45'de başlıyor. Bunu daha önceki gelişlerimde öğrenmiştim. Ama müstahdemler erken geliyorlar. Özellikle bayan görevli bir hayli erken geldi. Bu sürede bana çay yapmayı önerdi ve onunla o diğer katlara bakmaya gitmeden önce biraz sohbet etme şansım oldu. Henüz sınıf içi gözlemlerim başlamadı ama araştırmamın başladığını hissediyorum. Belki de iznin biraz gecikmesi iyidir. İzin çıksa şimdi doğrudan sınıfa girip okula genel olarak dışardan bakma durumunu pek yaşayamayacaktım. Böyle kendi halinde bir araştırmacı olarak tanımadığım bir ortamda etrafı izlemek de ilginç oluyor. Görevli şimdiye kadar çalıştığı okullarla bunu karşılaştırdı ben sorunca. Şimdiki okulun huzurlu olduğunu söyledi. Bu güzel bir bilgi. Huzurlu derken kast ettiği insanlar arasında "kavga gürültü" olmaması durumu imiş. Özellikle müdürü beğendiğini sık sık ondan bahsederek konuşmasından hissettim.
....
Şu ana dek okul müdürü _____ Bey, okulun iki müdür yardımcısı _____Bey ve _____ Bey ve ve birkaç öğretmenle kısalı uzunlu sohbetlerim oldu. Aslında ilkokul bölümünden sorumlu müdür yardımcısı _____Bey olmakla birlikte _____Bey'den daha çok bilgi alabildiğimi fark ettim bugün. _____ yalnızca ikinci kademe değil, birinci kademe konusunda da cok bilgili bir yetkili. Okulun kurulduğundan bu yana, ki cok kısa bir süre olmuş, geçtiği aşamaları bana tek tek anlattı. Daha çok fiziksel koşullara odaklanan bir anlatım oldu. Binaya yapılan ekler, gelen demirbaşlar ve malzemeler, bilgisayarların tahsis ediliş şekli gibi şeyler. Aslında Milli Eğitim'de idari yapı hakkında çok az fikrim olduğu için onun kendi okullarının diğer milli eğitim okullarına göre ayrıcalıklarını anlatırken yaptığı karşılaştırmalar beni bayağı aydınlattı.
Murat Bey zaten bugün de beni akademik yönden çok bilgilendirdi. Programı detaylı bir şekilde tanıttı. Beni şaşırtan benim onunla da bir interview yapacağımı varsayıyor olması oldu. Geçen gelişlerim hariç sırf bugün yaklaşık 40 dakika konuştuk ve doğrusu totalde baktığımda benim olası bir interview'de sormayı akıl edebileceğimden fazlasını bana verdi gibi geliyor. Ama zamanla ben okulu daha iyi tanıdıkça sorularım oluşabileceğini düşünerek daha formal anlamda bir interview yapma kapısını aralık bıraktım. Okula erken gitmemin

faydası bu anlamda büyük oldu çünkü ilerleyen saatlerde Murat Bey çok meşguldu. O saaten sonra bir saniyesini bile bana ayıramazdı.

Bugünkü yaklaşık 40 dakikalık görüşmemizin bir bölümünde bir Tarih öğretmeni de bize katıldı. Zaten müdürün odasına giren herkes öğretmen, öğrenci, araştırmacı, veli büyük bir sıcaklıkla karşılanıyor. Tarih öğretmeni kendi paradigmasına sıkı sıkıya bağlı kalarak olayları yorumlayan bir kişi olduğu için tam bir karakter. Müdür de onunla sohbet etmekten son derece keyif alıyordu. Onların son günlerde okulun katıldığı etkinlikleri birbirinden farklı açılardan yorumlamalarını dinlemek inanılmaz yararlı oldu. Bu konuşmadan aldığım tüm notları tezin neresinde kullanacağım konusunda henüz net bir fikrim yok ama belki okulu anlatan profilde falan işe yarayabilir ya da belki doğrudan giremem bu kadar detaylara ama benim kafamda bulunduğum contexti anlamlandırmama katkıları da zaten yeter de artar bile. Bi de tabi böyle günlük yaşama tanıklık edişlerimin ne kadarını tezde kullanmam uygundur ile ilgili etik meseleler söz konusu olacak ama onun çözümü şu aşamada kolay. Konuşmalardan sonra onlardan bunların confidential kalıp kalmamasını istediklerini sorarım ya da şunu şunu tezde şu şekilde kullanabilir miyim derim izin verirlerse mesela yok. Zaten verseler bile benim bir sürü şeyi tezde doğrudan kullanacak kadar yerim olmayacak çünkü bu daha okul aşaması bir de sınıfa girince okul geri planda kalacak. Şu anda elimde bunlar var diye ve okula yeni yeni girdiğim ve çok şey öğrendiğim için böyle önemsiyorumdur heralde. Sonuçta müdür ve müdür yardımcısının anlattıkları bir araya gelince ve bir de okulun içinde o kadar zaman geçirince kafamda burayla ilgili önemli bir frame oluşmaya başladı.

Tüm sabah gözlediklerimi anlatacak bir sözcük bulmam istense "enthusiasm" derdim. Bu okulda insanların söyledikleri ve söylemediklerinin gerisinde okulllarına karşı duydukları büyük bir heyecan var. Çok önemli şeyler yapacaklarını düşünüyor ve buna inanıyorlar. Bu havayı özellikle inşa eden kişi de genç okul müdürü gibi görünüyor. Çok pozitif ama aynı zamanda akıllı ve hesap yapabilen bir insan. Konuşurken son derece tutarlı. Öğretmenler onun odasından gülümseyerek çıkıyorlar. Okul görevlisinin "huzur" dediği böyle sağlanıyor olabilir. Bir de bu okul bir yönetsel modeli da pilot ediyormuş. Bu model de bu ortamın oluşmasına katkıda bulunuyor olabilir. Herkesin sorumluluk aldığı, networking in çok güçlü olduğu bir yapı. Müdür okuldaki her bir öğretmenin kendisinin okulla ilgili bildiği ve söyleyebileceği herşeyi bildiğini ve söyleyebileceğini gururla ifade etti. Yani "openness" ve "teacher empowerment" söz konusu. Bir de bahsettiği pek çok şeyi kendisinin de bu okulda uygulayarak öğrendiğini ve fark ettiğini söyledi. Yani okulu onlar böyle yapıyorlar ve bir yandan da okul onlara öğretiyor. Tam "learning organization" dedikleri şey olsa gerek.

Şimdi geriye kalan tek şey izin yazım. O da gelince artık sınıf içi gözlemlerim de başlayacak.

APPENDIX O
TÜRKÇE ÖZET

Düşünmeyi öğretmek her zaman eğitimin temel hedeflerinden olagelmiştir. Bireyin entellektüel varlığını geliştirmenin tarihçesinin Socrates'e kadar uzandığı söylenebilir. Ancak eğitimin bu temel amacı konusundaki uzlaşı, bu amaca nasıl ulaşılacağının belirlenmesi konusuna gelindiğinde ortadan kaybolmaktadır: Ondokuzuncu yüzyılda klasikler ve matematik çalışmanın aklı disipline etmenin en etkin yolu olduğu düşünülürken, Bruner ve Vygotsky gibi bilim adamlarının yapısalcı (oluşturmacı) psikolojiyi geliştirmeleri ve bunu eğitim alanının kullanımına sunmaları ile bilginin oluşturulmasında bireyin sürece etkin katılımının mutlak gerekli koşul olduğu ilkesi, 1960'larda düşünmeyi öğretme yöntemlerini büyük ölçüde etkileyerek eğitimde düşünmenin öğretilmesi boyutuna damgasını vurmuştur (Nisbet, 1960). 1980'lerde başlayan eleştirel düşünme hareketi ile birlikte eleştirel düşünme, öğretim programlarının ayrılmaz bir parçası haline gelmiştir. Eleştirel düşünme hareketini destekleyen çevreler, Dewey'nin yansıtmacı düşünme ve sorgulama kavramlarını ortaya atarak eleştirel düşünmenin günümüzde kabul gören şeklini almasına öncülük ettiği konusunda genel bir uzlaşı içindedir (Ornstein ve Hunkins, 1998). Daha sonraları Ennis, McPeck, Siegel ve Paul gibi eğitim felsefecilerinin de katkılarıyla eleştirel düşünmenin tanımı, 1980'lerden günümüze kadar daha da geliştirilerek bu beceriyi bireylere kazandırmak için gerekli stratejilerin oluşturulmasına yön verecek netliğe kavuşmuştur (Streib, 1992).

Eğitim alanında yer edinmiş eleştirel düşünme tanımlamaları içerisinde Ennis'in tanımının bu alanda gelişen yazında en çok kabul gören ve atıfta bulunulan tanımlama olduğunu söylemek yanlış olmaz. Ennis (1987), eleştirel düşünmeyi "kişinin neye inanacağına ya da ne yapacağına karar vermesine odaklanmış akılcı ve yansıtmacı düşünme" olarak tanımlamaktadır. Bu tanım Dewey'nin eleştirel düşünme tanımına büyük ölçüde paraleldir. Dewey (1933) eleştirel düşünmeyi şöyle tanımlamaktadır: "Her türlü inanç ya da varsayılan

bilgi formunun, bu inanç ya da bilgi formunu destekleyen temeller ve doğurduğu sonuçlar açısından etkin, kararlı ve dikkatli bir şekilde gözden geçirilmesidir". McPeck'in (1981) eleştirel düşünme tanımı ise "herhangi bir etkinlikle yansıtmacı bir kuşkuculuk içinde uğraşmaya yönelik eğilim ve beceri" şeklindedir. McPeck'in bu eleştirel düşünme tanımıyla getirdiği yenilik, eleştirel düşünmeye eğilim gösterme ve eleştirel düşünebilme becerilerini sergileme ayrımını ortaya koymasıdır. Bu ayrım, daha sonraları geliştirilecek eleştirel düşünme tanımlarının pek çoğunda gözetilmiştir. McPeck'e göre kişinin net, makul ölçütler çerçevesinde doğrulanabilir sav geliştirebilme ve başkaları tarafından geliştirilen savları yine aynı ölçütler çerçevesinde değerlendirebilme gibi eleştirel düşünme becerilerine sahip olması kişinin eleştirel düşünebilen bir birey olarak adlandırılabilmesi için yeterli değildir. Bir kişi için böyle bir adlandırmanın yapılabilemesi için bu becerilere sahip olmasının yanı sıra bu becerileri yaşamının her alanında kullanabilmek için gerekli bir tür isteklilik ya da hazır bulunuşluk demek olan eğilime de sahip olması beklenmelidir. Öte yandan Paul ve arkadaşları (1990) eleştirel düşünmeyi diğer düşünme biçimlerinden ayırt ederken eleştirel düşünmenin kendi kendini yönlendiren, kendi kendini disipline eden, kendi kendini gözden geçiren ve yine kendi kendini düzelten doğasından bahsetmektedir. Bu yönde bir tanımlama yaparak yazarlar, eleştirel düşünebilen kişinin, kendi düşünme süreçlerini izleyen ve değerlendiren üstbilişsel yönlerini vurgulamaktadırlar.

Eleştirel düşünmeden bahsedilirken adı mutlaka anılması gereken diğer bir eğitimbilimci ise Freire'dir. Freire, yukarıda tartışılan çoğu, Kuzey Amerikalı ve Avrupalı felsefeciler tarafından geliştirilen eleştirel düşünme tanımlarına iki farklı boyut getirmektedir. Birincisi, Ennis, McPeck ve Paul gibi felsefeciler eleştirel düşünebilme becerisi ile *bireyin* aklının özgürleştirilmesini hedeflerken, diğer eleştirel pedagoji kuramcıları (Giroux ve McLane) ile birlikte Freire, merkezinde eleştirel düşünme olan eğitimin, eleştirel bilinci (conscienticizao) geliştirmek kaydıyla, farklı sosyal sınıflardan *ezilen insanları* sosyal adaletsizlikten kurtarmayı hedeflemesi gerektiğini savunmaktadır. O halde, öğrencilere eleştirel bir bakış açısı kazandırmaktaki amaç (tam anlamıyla

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Freire'nin algıladığı şekle bağlı kalındığında) kurumları, ideolojileri, gelenekleri ve ilişkileri dönüştürmek olmalıdır. Eleştirel düşüncenin toplumsal yönlerine olan vurgusu ile eleştirel pedagoji içinde biçimlenen böyle bir eleştirel düşünme anlayışının çıkış noktası, birey değil, bireyin sistem içerisindeki yeridir. Freire'nin getirdiği ikinci boyut ise 1980'lerin eleştirel düşünme hareketinin öncülerinin eleştirel düşünme anlayışından farklı olarak, eleştirel düşünmenin düşünmeyi olduğu kadar hareketi de içermesidir (praxis). Dolayısıyla, Ennis'in kişinin neye inanıp inanmayacağına ya da neyi yapıp yapmayacağına karar vermek üzere yaşadığı akılcı ve yansıtmacı düşünme süreci olarak tanımladığı eleştirel düşünme, Freire'de bu süreç sonucunda *harekete geçme* öğesinin de eklenmesiyle daha kapsamlı bir tanım haline gelir. (Burbules ve Berk, 1999). Bu bağlamda, Siegel (1988) de eleştirel düşünme tanımını oluştururken, *ilkeli bir şekilde düşünme* boyutuna *akılcı bir şekilde tasarlanmış hareket* boyutunu ekleyerek Freire ve diğer eleştirel pedagoji kuramcılarına katılmaktadır (Couros, 2002).

Eğitimi yönlendirebilecek eleştirel düşünme tanımlarıdaki bu çokluk ve çeşitlilik konunun uzmanları arasında bile eleştirel düşünmeyi meydana getiren ögeler konusunda bir anlaşmazlık olabileceği fikrini akla getirse de aslında eleştirel düşünmenin öğretilebileceği ve öğretilmesinin de gerektiği konusunda tam bir uzlaşı bulunmaktadır.

Osana ve arkadaşları (2004), düzgün akıl yürütebilme becerisinin, giderek daha karmaşıklaşan disiplinler arası problemlerin şekillendirdiği günümüz dünyasının her alanında (gündelik, akademik, mesleki alanlarda) başarıya ulaşmak için önemli bir beceri olduğunu düşünmektedirler.

Paul ve arkadaşları (1990) çoğu kişinin aklının, kendi haline bırakıldığında, "yanlı, çarpık, bilgisiz, tamamıyla önyargılı" düşünmeye doğru doğal bir eğilim göstereceğinden eleştirel düşünme eğitiminin gerekli olduğunu savunmaktadırlar. Bu yazarlara göre, akılda mükemmelik, sistematik bir şekilde geliştirilmediği sürece ürettiklerimizin olduğu kadar yaşamlarımızın da kalitesi büyük ölçüde azalacaktır.

Damji ve arkadaşları (2001), eleştirel düşünmenin pratikteki değerini bireyler için yararları ve toplum için yararları olmak üzere iki düzeyde belirlemektedirler. Yazarlar için, eleştirel düşünmenin birey için yararları dört boyuttadır:

1. Karar verme: Yaşamlarımızın yerel olduğu kadar küresel politik, psikolojik, sosyal, ekonomik, çevresel ve fiziksel güçler tarafından şekillendirildiğinin farkındalığı,

2. Genişleme: Kişinin kendisinin ait olduğu dışında kalan diğer kültürler, diller, etnik gruplar, dinler, milliyetler ve sosyal sınıflar ile etkileşimi sonucunda meydana gelen farkındalık,

3. İnsana özgü duyarlılıkları keskinleştirme: İnsanın varoluşu, sevgi, yaşam, ölüm gibi yanıtsız sorular üzerine düşünmek,

4. İnsanlık durumunu eleştirel olarak değerlendirme.

Yine yazarlara göre, eleştirel düşünmenin toplum için değeri iki boyuttadır:

1. Siyasi sömürüden korunma: Meseleleri, karşıt görüşleride düşünerek değerlendiren bir seçmen kitlesi; yanlılıklarının kararlarına hükmetmesine izin vermeyen hakimler ve jüriler,

2. Ekonomik sömürüden korunma: Piyasa eğilimlerini analiz edip yorumlayabilen, faiz dalgalanmalarının etkilerini değerlendirebilen, malların ve hizmetlerin büyük ölçekli üretim ve dağıtımını belirleyen faktörlerin potansiyel etkisini açıklayabilen insanlar (s. 4).

Eleştirel düşünmenin toplumları siyasi sömürüden koruyabileceği fikri paralelinde, Brookfield (1987), eleştirel düşünmenin önemini, bu tür düşünmenin sağlıklı bir demokrasiyi sürdürebilme üzerindeki gücüne bağlamaktadır. Brookfield'e göre eleştirel düşünme gücüne sahip bireyler, mevcut seçenekleri değerlendirerek kendileri adına düşünebilirler ve bilgi sahibi olarak kendi yargılarını kendileri verebilirler. Bu da onları, başkalarının onların yerine karar vermesine izin vermekten alıkoyar.

Yazara göre, eleştirel sorgulama yalnızca siyasi anlamda demokrasi için değil, işveren-işçi sendikası lideri, öğretmen-öğrenci, ebeveyn-çocuk, karı-koca gibi her türlü insan ilişkisinde demokrasi için de gereklidir.

Bu bağlamda, öğrencileri eleştirel düşünebilen bireyler olarak yetiştirebilmek konusuna verilen önemin 1980'li yıllarda ilkokullardan üniversitelere kadar eğitimin her aşamasında yeniden gündeme gelmesi haklı olarak bu zamanlama ile ilgili soruları da akla getirmektedir. Yeni kuşaklara eleştirel düşünmeyi aşılamak üzere Socrates'e kadar uzanan bir felsefeci ve eğitimci grubunun çaba göstermiş olmasına rağmen, eleştirel düşünme, ilgili ülkelerin okullarındaki rönesansını, okul değerlendirmeleri sonucunda hazırlanan pek de iyimser sayılamayacak raporlara, öğrenci başarısını değerlendirmek üzere geliştirilen standart testlerin tehlike çanları çalan sonuçlarına ve kendilerini ülkelerinin eğitim politikaları üzerine düşünmek zorunluluğu içinde hisseden bazı aydın çevrelerin eğitim sistemleri üzerine sağlam gözlemlerine borçludur.

Türkiye'de eleştirel düşünmeye verilen önemin artmasının nedenlerine gelince, tüm dünyada eğitim politikalarının oluşmasına etki eden Kuzey Amerika ve Avrupa'da bu yönde ortaya çıkan eğilimler gerekçelerden biri olarak gösterilebilir. Vandermensbrugghe'un (2004) gözlemlediği gibi eğitimin uluslararası bir durum kazanması büyük ölçüde batılı Anglo-Saxon ülkelerin (başta Amerika Birleşik Devletleri, İngiltere, Kanada ve Avustralya) etkisi altındadır. Bu da bu ülkelerin eğitim uygulamalarının evrenselleşmesine yol açmaktadır. Dolayısıyla, batılı ülkelerin öğretim programlarında uzun bir geçmişe sahip olan bir eğitim uygulaması olarak eleştirel düşünmenin Türkiye de dahil olmak üzere diğer ülkelerin eğitim sistemlerine transfer edilmesi çok da şaşırtıcı değildir.

Latince ve Yunanca gibi klasik dilleri, şiiri ve gramer kurallarını öğreten dersler aslında bu batılı ülkelerde de geçmişte büyük ölçüde ezbere dayanmaktaydı. Ancak tarih, felsefe, mantık ve batı uygarlığının ciddi edebiyat birikimine eleştirel bir bakış getiren dil dersleri sayesinde eleştirel düşünme batının öğretim programlarında önemi küçümsenemeyecek bir yer edinmiştir

(Vandermensbrugghe, 2004). 1960 ve 70'li yıllarda ekonomik rekabetin bir öncelik olarak ortaya çıkmasıyla, özellikle ABD'de eğitim, hedefini bir birey olarak öğrencinin entellektüel varlığını eğitmekten çıkarıp eğitimli bir iş gücünün ortaya çıkarılmasına yönlendirmiştir. Bu hedef değişikliği üzerine, eleştirel düşünnceyi öncelik olarak gören dersler yerini şirketler için başarılı eleman hazırlamaya yönelik pratik derslere bırakmıştır (Goodlad, 2004). Eğitim hedeflerinin belirlenmesinde yaklaşık yirmi yıllık bir süreçte piyasa güçlerinin ağırlıklı bir rol oynaması sonucunda eğitimde gözlenen sorunları saptamak üzere kurulan bir komisyon (National Commission on Excellence in Education) raporunda (A Nation at Risk: The Imperative for Educational Reform, 1983) ülkenin karşı karşıya kaldığı riski "giderek artan bir kalite düşüklüğü ile toplumun eğitim temellerinin erozyona uğraması" olarak tanımlamıştır. Komitenin sunduğu öneriler arasında İnglizce dersi ile ilgili olarak öğrencileri okuduklarını kavrama, yorumlama ve değerlendirme gibi daha yüksek düşünme becerileri ile donatma da yer almıştır. Öte yandan İngiltere'de de benzer kaygılar nedeniyle 1981'de bakanlık tarafından hazırlanan öğretim programı yerel makam ve okulların başvuruda bulunabileceği eğitim amaçları listesi hazırlamıştır. Bu listede ilk sırada yer alan amaç "Öğrencilere aktif, sorular soran bir kafa yapısı kazanmaları , akla dayalı savlar geliştirmeleri konusunda yardımcı olmak" olarak belirlenmiştir.

Yukarıdaki tartışmanın da gösterdiği gibi, her ne kadar bir süreliğine ihmal edilmiş olsa da yaygın bir öğrenme geleneği olarak eleştirel düşünmenin kökenleri batı eğitiminin tarihinde yer almaktadır. Dolayısıyla söz konusu olan batıda eğitim ise 1980'lerde eleştirel düşünme hareketinin ilk defa orataya çıkmasından çok yeniden doğuşundan söz edilebilir.

Öte yandan Türkiye'de aydın çevrelerinin ülkemizde eleştirel düşünmenin durumu ile ilgili gözlemleri karamsarlık taşımaktadır. Cem (1971) sıradan Türk insanında olduğu gibi Türk aydınlarında da araştırmacılık, yaratıcılık ve hoşgörü gibi eleştirel düşünme öğelerinin eksikliğine dikkat çekmektedir.

Bu tür saptamaların yanı sıra eğitim alanında uluslararası standart testlerde Türk öğrecilerinin elde ettiği düşük test sonuçları da ülkemizde eleştirel düşünme ile ilgili sıkıntılara dikkat çekmektedir. Ekonomik Kalkınma ve İşbirliği Teşkilatı (OECD) tarafından uygulanan Uluslararası Öğrenci Değerlendirme Programı (PISA) çerçevesinde üye ülkelerin 15 yaşına gelmiş öğrenci grupları arasında yapılan değerlendirmede Türkiye, 41 üye ülke arasında problem çözme becerilerinde 34., okuma becerilerinde 32., matematik ve fen alanlarında ise 33. sırada yer almıştır (OECD PISA 2003 Data Base). Milli Eğitim Bakanlığı, 2004-2005 öğretim yılında ilköğretim okullarında pilot edilmeye başlanan ve eleştirel düşünme becerilerinin yanı sıra problem çözme becerileri ve yaratıcı düşünme gibi hedefleri de ön plana çıkaran yeni müfredat uygulaması ile ilgili kararın gerekçeleri arasında bu uluslararası sınavda Türk öğrencilerinin istenenin altında kalan perfomansını da göstermiştir.

Türk eğitim sistemi tüm bu olumsuz koşullara rağmen tüm düzeylerde eleştirel düşünmeyi destekleyecek şekilde kendisini yenilemelidir ve bunu yapabilecek güce de sahiptir. Ancak genellikle batılı düşünme gelenekleri ile özdeşleştirilen eleştirel düşünme formunun Türk sınıflarında da geliştirilebilir hale gelmesi için ülkemizdeki eğitim koşullarında eleştirel düşünmenin geliştirilmesinin önüne engel olarak çıkan etkenler ile eleştirel düşünmenin gelişmesine destek olabilecek etkenlerin ciddi bir şekilde analiz edilmesi gerekmektedir. Türkiye'de farklı sınıf yaşamlarının ayrıntılı olarak betimlenmesi yoluyla eğitim araştımacıları program hazırlayıcılara eleştirel düşünmeye gerçekçi bir hedef olarak öğretim programlarında yer verebilmeleri için gerekli bilgi birikimini sağlayabilirler. Irfaner (2002), Kürüm (2002), Akınoğlu (2001), Hayran (2000) ve Gelen (1999) gibi araştırmacıların elde ettikleri sonuçlar, eğitim paydaşlarının (öğretmenler, öğretmen adayları, ilkokuldan üniversiteye kadar uzanan bir yelpazede öğrenciler) temel eleştirel düşünme becerilerinde eksiklikler olduğu ve öğretmenler arasında eleştirel düşünmenin ne olduğu ve sınıf ortamında nasıl geliştirilebileceği hakkında yanlış anlamalar olduğu gerçeğini işaret etmektedir. Bir eğitim felsefecisi olarak Norris (1992), eleştirel düşünme kavramı üzerine soyutlamalara gitmek yerine kavramın araştırmalarla

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netleştirilmesisinin eleştirel düşünmenin nasıl geliştirilebileceği konusunda en sağlam çözümleri getireceğini savunmakatadır. Lewis ve Smith (1993) de meslek öncesi ve meslek içi hazırlık programı tasarlayıcılarının "öğretmenlerin eleştirel düşünme de dahil olmak üzere yüksek düşünme becerilerini kendilerinin bildiklerini, bu becerileri kullanmalarının onlara öğretildiğini ve bu becerileri nasıl öğretecekelerini bildiklerini" varsaymamaları konusunda uyarmaktadırlar (p. 136). Yazarlar, araştırmacıların bu becerilerin nasıl öğretileceği üzerine çalışmalar yapmaları ve araştırma sonuçlarını öğretmen eğitim programlarına yansıtmaları gereğinin üzerinde durmaktadırlar. Bu bağlamda, sınıf gözlemlerine dayalı çalışmalar yoluyla eleştirel düşünme hakkındaki bilgi birikiminin zenginleştirilmesi ve uygulamaya yansıtılması, okullarda uygulanmaya başlanan eleştirel düşünme odaklı programlara yönelik eleştirilerin de ortadan kalkmasına katkıda bulunacaktır.

İşte bu çalışmanın da amacı öğretmenlerin öğrencilerinin eleştirel düşünme becerilerini geliştirmeye öğretim süreçlerinin üç ana aşamasında, yani planlama, uygulama ve yansıtma süreçlerinde, ne şekilde yer verdiklerini araştırmak ve bu eğitimin öğrenciler tarafından hissedilen etkilerini değerlendirmektir.

Bu amaca yönelik olarak araştırma şu dört soruya yanıt aramayı hedeflemiştir:

1. Öğretmenler eleştirel düşünmeye planlama süreçlerinde ne şekilde yer vermektedirler?
2. Öğretmenler eleştirel düşünmeye uygulama süreçlerinde ne şekilde yer vermektedirler?
3. Öğretmenler eleştirel düşünmeye yansıtma süreçlerinde ne şekilde yer vermektedirler?
4. Öğrencilerin sınıfta ortaya çıktığı şekliyle eleştirel düşünme konusundaki algılamaları ve tepkileri nelerdir?

Bu araştırma nitel araştırma deseni kullanılarak yapılmıştır. Çalışma, tüm nitel araştırma yöntemleri içerisinde karşılaştırmalı vaka çalışması olarak bilinen

yöntem kullanılarak gerçekleştirilmiştir. Bu amaçla, hepsi de Ankara'da olmak üzere, ilki yeni öğretim programının pilot olarak uygulandığı bir devlet okulu, ikincisi bir özel okul ve sonuncusu da düz bir devlet okulu olan toplam üç ilkokulun birinci kademe 4. sınıfında Türkçe derslerinde yürütülmüştür. Araştırmanın yapıldığı birinci okulda çalışma, 2004-2005 öğretim yılının ikinci döneminde toplam 36 ders gözlenerek, ikinci okulda, 2005-2006 öğretim yılının ilk döneminde toplam 35 ders gözlenerek ve üçüncü okulda 2005-2006 öğretim yılının ikinci döneminde toplam 16 ders gözlenerek gerçekleştirilmiştir. Gözlemlerin tümü araştırmacının kendisi tarafından yapılmış ve gözlenen toplam 87 dersten 58'inde katılımcı öğretmenlerin ve okul idarelerinin izniyle ses kaydı yapılabilmiştir. Katılımcı öğretmenlerden araştırmanın yapıldığı dönemde 26, 24 ve 32 yaşlarında olup mesleklerinde sırasıyla 5, 2 ve 10 yıllık deneyime sahiptiler. Bu öğretmenlerden erkek olan ilki ve kadın olan ikincisi aynı üniversitenin sınıf öğretmenliği bölümünden mezun olup yine kadın olan üçüncüsü ilk iki öğretmenin mezun olduğu okulun sanat tarihi bölümünü bitirmiştir.

Araştırma sorularına yanıt bulmak amacıyla veriler gözlemler, görüşmeler, öğrenci günlükleri ve belgeler yoluyla toplanmıştır. Gözlenen derslerden sonra gerçekleşen görüşmelerde, öğretmenler derslerin planlanma ve uygulanma süreçlerine yönelik araştırmacının yönelttiği soruları yanıtlamışlardır. İlk öğretmenle yapılan altı görüşme toplam 3,5 saat, ikinci öğretmenle yapılan toplam üç görüşme toplam 2 saat ve sonuncu öğretmenle yapılan iki görüşme toplam 2 saat sürmüştür. Araştırmada kullanılan belgeler, öğretmenlerin hazırladıkları ders planlarından, derslerde kullandıkları her türlü malzemeden (ders kitapları, kendi yazdıkları metinler, çeşitli kaynaklardan toplayarak derste kulandıkları metinler) ve öğrencilerin her türlü ürünlerinden (derslerde ve ödev olarak yazdıkları ve çizdikleri) oluşmaktadır. Ayrıca birinci okulda 5, sonuncu okulda ise 7 öğrenciden haftanın dersleri üzerine araştırmacı tarafından hazırlanan sorulara yazılı olarak yanıtlar vermeleri istenmiştir. Toplanan tüm veriler kodlar ve temalar çıkarılarak içerik analizine tabi tutulmuştur.

Araştırmadan elde edilen sonuçlar, araştırma sorularını yanıtlamaya yönelik olarak, öğretmenlerin planlama süreçleri, uygulama süreçleri ve yansıtma süreçleri ile öğrencilerin algılamaları ve tepkileri başlıkları altında düzenlenmiştir.

Öğretmenlerin planlama süreçlerine eleştirel düşünmeyi ne şekilde kattıkları ile ilgili olarak ortaya çıkan sonuçlara göre, öğretmenlerin kendilerini sınıfta neler yapabilecekleri konusunda özerk hissetme duygularının birbirlerine göre farklılıklar gösterdiği yönündedir. Özerklik duygusu arttıkça buna paralel olarak öğretmenlerin yaptıkları işi kendileri ve öğrencileri için daha anlamlı hale getirme çabalarının da arttığı gözlenmiştir. Özerklik duyguları ölçüsünde öğretmenlerin, öğrenci kazanımlarına ulaşmak için kullanılacak metinleri ve yapılacak etkinlikleri belirlemede kendi sınıflarının özel koşullarında derste oluşacak durumları hesaba katarak derslerini planladıkları bulgulanmıştır. Dersi daha anlamlı hale getirme konusunda etkili olduğu gözlenen özerklik duygusunun ortaya çıkmasında ise her ne kadar okul koşullarının etkili olduğu hissedilse de asıl belirleyici etkinin öğretmenlerin aldıkları eğitimler sonucunda oluşan bilgi birikinlerine olan güven düzeyleri olduğu ortaya çıkarılmıştır.

Eğitim yöntemlerine bakışları açısından ele alındığında planlama sürecinde öğretmenlerin benzer yöntemleri (çoklu zeka yöntemi gibi) farklı anlayışlarla birbirlerinden farklı sonuçlara gidebilecek şekilde değerlendirdikleri izlenmiştir. Çoklu zeka kuramını uygularken öğretmenlerin kimi zaman bu kurama eleştiri olarak getirilen boyutları devre dışı bırakacak şekilde değişiklikler yaptıkları da ortaya çıkarılmıştır. Öğretmenlerin daha geleneksel sayılabilecek yöntemlerden koparak farklı yöntemleri denemeye isteklilik göstermelerinde daha önce değinilen özerklik duygularının da rol oynadığı bulunmuştur. Planlama süreçlerinde etkili olduğu gözlenen bir diğer yöntem ise eleştirel düşünme öğretimi açısında da önem taşıyan tüme varımdır.

Öğretmenlerin derslerinin içeriklerini öğrencilerinin gündelik hayatlarına bağlama konusunda da farklı tutumlar içinde oldukları gözlenmiştir. Öğretmenlerin özerklik duyguları derecesinde dersi, öğrencilerinin hayatlarına olduğu kadar kendi hayatlarına da bağlama çabalarının gözlendiği durumlarda

ortaya çıkan ders planlarının eleştirel düşünme becerilerini kazandırma açısından daha yoğun bir içerik taşıdığı bulgulanmıştır.

Planlama aşamasında ders kitaplarında yer alan metinlere yaklaşımın olumlu olduğu durumlarda öğretmenlerin metinlerde bir değişiklik yapmadıkları ve metinleri eleştirel okumayı da bazı yönleriyle destekleyici bir planlama süreci yaşadıkları gözlenirken metinlerle ilgili olumsuz düşünceler taşıdıklarında öğretmenlerin, yine özerklik duygularına paralel olarak, metinleri değiştirmek yönünde ya da metinleri değiştirmeden ve etkin bir şekilde kullanamayacak şekilde ders planladıkları ortaya çıkarılmıştır. Öğretmenler metinler ile ilgili sıkıntılarını işlenen tema doğrultusunda kendi metinlerini yazarak ya da başka kaynaklardan metinler bularak gidermişlerdir. Metinler ile ilgili olarak sıklıkla ifade edilen sıkıntılar, metinlerin yaşamla ilgili ciddi soruları irdelemek yerine önemsiz konular hakkında olduğu, sınıf içinde tartışma başlatmaya elverişli olmadığı, öğrencilerin ilgisini çekecek yönler taşımadığı şeklindedir.

Disiplinler arası bağlantı kurma becerisine öğretmenler tarafından getirilen yaklaşım eleştirel düşünme yazınında bu beceriye verilen anlamla örtüşmemektedir. İlkinde bu beceri, bir alandaki bilgiyi başka bir alanda çalışırken anımsama ve dolayısıyla bilgiyi pekiştirme olarak düşünülürken, ikincisinde bu beceri, herhangi bir alanda karşılaşılan sorunu çözmeye ya da bu sorunu farklı açılardan görmeye yönelik olarak değişik alan bilgilerine başvurulması ve çok boyutlu düşünmenin sağlanması olarak düşünülmektedir.

Planlama yaparken öğretmenler okuma becerisini bir süreç olarak ele almışlar ve okuma öncesi, okuma sırası ve okuma sonrası etkinlikler hazırlayarak metinlerde okunanlar ile öğrencilerin birer okur olarak kendi hayatları arasında bağ kurmalarını sağlamaya çalışmışlardır. Bu okuma aşamaları içerisinde özellikle okuma öncesinde öğretmenlerin kullandıkları okunacak konu için öğrencilerin hazırbulunuşluk düzeylerini ortaya koyan etkinliklerin daha sonraki okuma aşamalarında metinlere eleştirel bir yaklaşım getirmelerine katkı sağladığı ortaya çıkmıştır. Bu aşamada kullanılan etkinliklerden, tahminde bulunma çalışmaları özellikle olumlu sonuçlar vermiştir. Öğretmenler, yazma becerisini okuma-sonrası bir etkinlik olarak

planlama süreçlerine katmışlardır. Böylelikle, metinde tartışılan ve öğrencilerin özellikle bireysel olarak üzerine düşünmelerini istedikleri konuları öğretmenler yazı aracılığıyla ortaya çıkarmayı planlamışlardır. Ancak yazma etkinliklerinde, öğrencilerden anlam bütünlüğü taşıyan metinler istenmesinin yanı sıra metinlerde kendilerinin konu hakkındaki düşüncelerini ortaya koymalarına izin verildiği durumlarda, ortaya çıkan ürünlerin yüksek düşünme becerileri içermeye daha elverişli olduğu da saptanmıştır.

Planlama sürecinde göze çarpan bir diğer belirleyici etken ise öğretmenlerin derslerini planlarken öğrencilerini ne şekilde algıladıkları ve onlara verdikleri öncelik sırasıdır. Bu noktada başlıca iki tip yaklaşımın ortaya çıktığı söylenebilir. Birincisinde öğretmenler öncelik olarak öğrencileri görerek dersi planlarken her adımda öğrencilerin tutum ve davranışlarının neler olabileceğini göz önünde bulundurarak ders planlamışlardır. İkinci durumda ise öğretmenlerin önceliği, dersi kendi kafalarındaki uygun yöntem ve malzemeleri kullanarak, belirli bir sürede, hedeflenen öğrenci kazanımlarına ulaşabilmeye verdikleri gözlenmiştir. İlk tutumda, öğretmenlerin öğrencilerin gerek performanslarında gerekse meselelere bakış açılarında farklılıklara daha hoşgörülü bir yaklaşım içinde oldukları ve hatta bu farklılıkları istendik buldukları, ikinci tutum içinde olduklarındaysa gerek öğrencilerin kazanımlara ulaşma yöntemlerinde gerekse meselelere bakış açılarında farklılıkları değil benzerlikleri görmeye odaklandıkları ortaya çıkmıştır.

İkinci araştırma sorusu çerçevesinde, öğretmenlerin ders planlarını uygulamaya geçirirken eleştirel düşünmeyi nerede tuttuklarına bakılmıştır. Bu noktada, sınıf iklimi ve sınıf yönetimi öğretmenlerin eleştirel düşünmeyi sınıflarına aktarabilmeleri konusunda etkili olmuştur. Öğretmenlerin öğrencileri sınıfla ilgili konularda (fiziksel koşullar, izlenecek süreçleri belirleme) karar verme sürecine dahil etme, kendilerini verdikleri kararları öğrencilere gerekçeleriyle açıklama konusunda sorumlu görme, öğrencilerin kendilerini rahat hissettikleri sıcak bir ortam yaratma, ders işlenirken öğrencilerin rahatça takip edebilecekleri ve belirli bir düzene oturmuş bir söyleme bağlı kalma gibi sınıf kültürünün parçası haline gelen davranışlarının, eleştirel düşünme

eğilimlerini kendilerinin model olarak ortaya sunması ve öğrencilerin de bu eğilimleri ortaya koyma ve alışkanlık haline getirme süreçlerine katkısı olduğu gözlenmiştir. Ancak öğretmenlerin öğrencilerinin düşünme becerilerine etki etme potansiyeli açısından sınıf iklimi ve sınıf yönetimi konularının öneminin her zaman farkında olmadıkları da söylenebilir.

Eleştirel düşünme becerilerinin sınıf içerisinde öğrencilere kazandırılması anlamında önemli bir diğer nokta da öğretmenlerin kendi etki alanları konusundaki algılarıdır. Genel olarak öğretmenlerin sınıf dışında kalan ve ailelerin alanı dahilinde gördükleri konulara ve toplum için de hassas sayılabilecek konulara (etnik, politik, hassas ahlaki meseleler) müdahale etmemek konusunda titiz oldukları gözlenmiştir. Bu tür konuların sınıf gündemine gelmemesi için konu ve etkinlik seçimlerinde dikkatli olmaları öğretmenlerin benzerlik gösterdikleri bir nokta olmakla birlikte bu konular bir şekilde gündeme geldiğinde duymazdan gelme ya da konuyu geçiştirme gibi farklı davranışlar içerisinde girdikleri fark edilmiştir. Ayrıca birtakım benzer konulardan tüm öğretmenlerin uzak durmaya çalıştıkları gözlense de genel olarak bu tür konuların sayısı ve öğretmenlerin aşmak istemedikleri çizginin yeri öğretmenden öğretmene farklılık göstermiştir.

Eleştirel düşünme becerileri içerisinde, alanda en çok vurgulanan becerinin üstbilişsel beceriler olduğunu söylemek yanlış olmaz. Alvino (1990) düşünme becerileri ile ilgili terimleri tanımlarken üstbilişsel becerileri "kişinin kendi düşünme sürecini planlaması, değerlendirmesi ve izlemesi yani zihinsel fonksiyonların doruk noktası" olarak tanımlamıştır (s.53). Sınıflarda öğretmenler açısından, tam bir farkındalıkla olmasa da, üzerinde durulan üstbilişsel beceriler, harekete geçmeden önce atılacak adımları kafada tasarlama, herhangi bir konu öğrenilirken yaşanacak bilişsel süreçler üzerine öğrencileri bilgilendirme, düşünme süreçlerindeki eksiklik ve hatalar konusunda öğrencilere bireye özgü ve net geri bildirim verme, farklı öğrenme yöntemleri lehine ya da aleyhine yapılan seçimlerin gerekçelerini öğrencilerle paylaşma olarak belirlenmiştir. Bazı durumlarda öğretmenlerin yukarıda sayılan noktaları kendileri fark etmekle

birlikte öğrencileriyle bunları paylaşmayarak öğrencilerine üstbilişsel bazı becerileri kazandırmak konusunda önemli fırsatları kaçırdıkları gözlenmiştir.

İşlenen her metin ile öğrencilerin bilgi dağarcıklarına eklenen gerek dilsel beceriler gerekse içeriksel bilgilere (dünya bilgisi ve alan bilgisi) dönem boyunca derslerde farklı şekillerde yeri geldiğinde gönderme yapma ve öğrencilere de bu alışkanlığı kazandırmanın, derslerde hakim olan dil kalitesinin artmasında, özellikle soyut kavramların doğru bir şekilde ve yoğun olarak kullanılmasına katkıda bulunmak suretiyle, etkili olduğu orataya çıkmıştır. Bu anlamda, dil ve eleştirel düşünme arasındaki organik bağ göz önünde bulundurulduğunda, sınıfta işlenen derslerin dönem içinde birikmesiyle zenginleşen ortak bir referans çerçevesi oluşturmanın eleştirel düşünmenin gelişimine katkısından bahsedilebilir.

Öğrencileri düşünüşleri ve ifade edişleri açısından daha iyiyi yapmaları konusunda zorlamanın öğrenciyi tehdit etme olarak algılanması durumunda öğretmenlerin bu tür zorlamalardan uzak durdukları gözlenmiştir. Oysa, öğrencileri, bireysel farklılıklarını göz önünde bulundurmak kaydıyla, özellikle Paul ve arkadaşları (1990) tarafından üzerinde çok durulan, evrensel düşünce standartlarını (açık ve net, adil, kapsamlı düşünce) taşıyacak şekilde düşünmeye zorlamanın kısa sürede olmasa da görece uzun zaman dilimlerinde fark edilebilir ilerlemeleri doğurduğu da bulgulanmıştır.

Dersin işlenişi sırasında okuma sürecine eleştirel bir yaklaşım kazandırma yolunda öğretmenler, özellikle sürecin içine öğrencinin etkin katılımını sağlama yolunda gösterdikleri çabalar ile önemli adımlar attmışlardır. Gerek okuma öncesi gerekse okuma sırası etkinliklerde tahminde bulunma çalışmaları bu yolda etkili olmuştur. Denence (hipotez) oluşturma ve denenceyi sınama (hypothesis testing) derin okuma (kavrama, analiz yapma, çıkarım yapma), metnin belirli bölümlerini farklı amaçlarla tekrar tekrar okuma gibi okuma becerileri bir çok kere metni mekanik bir şekilde sesli okuma alıştırmalarının yerine geçmiştir. Tüm bu süreçler zaman zaman öğrencilere, sınıf içinde kendi başlarına bireysel olarak yapacakları etkinlikler yoluyla kimi zamansa metni birlikte yorumlamaya yönelik sınıf tartışmaları şeklindeki

kollektif etkinlikler yoluyla yaşatılmıştır. Öğretmenlerin bu iki yoldan (bireysel olarak ve sınıfça metni irdeleme) farklı kazanımlar sağladıkları saptanmıştır.

Farklı anlayışlarla da olsa üzerinde sıklıkla durulan tahminde bulunma çalışmaları, sonuca değil de (yapılan tahminin doğruluğu ya da yanlışlığı) sürece odaklandığı durumlarda, öğretmen-öğrenci ve öğrenci-öğrenci etkileşimlerinde eleştirel düşünme becerilerinin gelişmesine yönelik içerikte tartışmaların ortaya çıkmasına katkıda bulunduğu görülmüştür. Bu sürece yönelik tahminde bulunma etkinliklerinde, yapılan tahminlerin yine düşünce standartları çerçevesinde değerlendirilmesi de olumlu katkılar sağlamıştır.

Duyguları düşüncelerden ayırt edebilme eğilimi de eleştirel düşünme eğilimleri arasında yer almaktadır. Bu konuda, öğretmenlerin düşünce boyutuna verdikleri önemi, duyguların ayırt edilmesi, ifade edilmesi ve sorgulanması konusuna genellikle vermedikleri sonucuna varılmıştır. Bu durumun ortaya çıkmasında öğretmenlerin duyguların düşünceler kadar önemli olmadığı şeklindeki yargıları kadar, kişilerin okudukları ya da dinledikleri karşısında içlerinde uyanan hisler açısından birbirlerinden belirgin farklılıklar göstermedikleri şeklindeki kanaatlerinin de etkili olduğu söylenebilir. Sonuç olarak, derslerin, öğrencilerin duyguları konusunda farkındalık kazanmak kaydıyla, ne zaman düşünceleri ne zaman duyguları ile hareket ettiklerini ayırt etmeyi ve nihayetinde de hangi durumda hangi kaynaktan beslenerek davranışlarını belirleyen kararları verdiklerinin farkına varmayı öğrendikleri bir ortam sunmadığı düşünülebilir.

Walton'ın (2006) da belirttiği gibi savları oluşturan unsurları belirleme, eleştirme ve değerlendirme, eleştirel sav geliştirme sürecinde önemli bir yer tutar. Walton, sav geliştirme sürecini, gerekçelere dayalı sonuçlara varma olarak tanımlamaktadır. Araştırmada izlenen derslerde, sav geliştirme sürecine yer verildiğine pek çok kez tanıklık edilse de bu süreçleri sekteye uğratan bazı engellerin de varlığı tespit edilmiştir. Öğretmenlerin, öğrencilerin doğal bir süreç olarak gelişen birbirlerinin savlarını sorgulama çabalarını, savları sorgulanan öğrenci tarafından bir tehdit olarak algılanıp üzerinde rahatsızlık yaratacağı ve hem bu öğrenciyi hem de onu izleyen diğer öğrencileri fikirlerini açıklıkla

paylaşmaktan alıkoyacağı bir müdahale olarak görmelerinin, sav geliştirme süreçleri üzerinde bir engel olduğu gözlenmiştir. Aynı kaygılarla öğretmenlerin kendileri de zaman zaman öğrencilerinin akıl yürütme süreçlerinde gördükleri sorunlara müdahale etmemişlerdir. Sonuç olarak, sorgulama gerektiren düşünme süreçlerinin içsel süreçler olarak yaşanması düşünmenin önünde bir engel oluşturmuştur. Öte yandan, öğretmenlerin kimi zaman tartışmalara kendilerinin müdahil olmaları ve öğrencilerin üstlenmeleri gereken "varılan sonuçları doğrulayan gerekçeleri gösterme" gibi etkinlikleri kendilerinin yapmaya çalışması da sürece bir katkıdan çok, bir engel olarak düşünülebilir. Öğretmenlerin sınıf içerisinde öğrencilerin sav geliştirme ve akıl yürütme süreçlerine olumlu etkide bulunan davranışlarına gelince, sınıfta farklı fikirlerin dile getirilebilmesine olanak sağlayan liberal bir ortam oluşturmaları, planlarında olmasa dahi kendiliğnden ortaya çıkan nitelikli tartışmaları durdurmak üzere müdahalede bulunmaktan kaçınmaları, konulara farklı bir şekilde bakarak daha önce fark edilmeyen noktaları problemleştirerek sınıfta nitelikli tartışmalar başlatan öğrencileri bu davranışlarından dolayı ödüllendirmeleri sayılabilir.

Hughes (2000) sav geliştirme sürecini "birine söz verme" sürecine benzetir: Her sav temelde iki iddia taşır, birincisi doğru dayanaklar sunma konusundaki iddiası, diğeri ise bu dayanakların sonucu destekleyebildiği yönündeki iddiasıdır. Dolayısıyla, Hughes için bir savı değerlendirmek bu savın sözünü tutup tutmadığını kontrol etmek anlamına gelmektedir. Savları değerlendirme yolunda Hughes iki temel yaklaşımdan söz eder: Mantık hataları (safsata) yaklaşımı (fallacies approach) ve kritere dayalı yaklaşım (criterial approach). İlk yaklaşıma göre, bir savın sözünü tutup tutmadığını anlamak için, bu savı daha önceden belirlenmiş bir dizi mantık hatasını yapıp yapmadığı yönünde değrelendirmek gerekmektedir. Eğer sav, bu mantık hatalarının hiç birisini taşımıyorsa iyi bir savdır. İkinci yaklaşım ise, savı, iyi bir savın karşılaması gereken tüm kıstaslar doğrultusunda değerlendirip ancak tüm kıstasları karşılıyorsa iyi bir sav olarak değerlendirmeyi gerektirmektedir. Aslında her iki yaklaşım da savları değerlendirme konusunda başarılı sonuç verebilmektedir.

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Bu araştırma kapsamında izlenen derslerde de, daha önceki bölümlerde bahsedildiği gibi, savların belli standartları karşılayıp karşılamadığı konusu gündeme gelmiştir. Ancak sav geliştirme sürecinde eleştirel düşünme yazınında da yeri olan bazı mantık hatalarının yapıldığı fark edilmiştir. Bunlardan en yaygın yapılan mantık hatalarının "basite indirgeme", "adam karalama/kişiselleştirme", ve "saçma sonuçlar çıkarma" olduğu saptanmıştır. Bu iki hatadan ilk ikisini öğretmenler, kendileri de fark etmeden yaparken, sonuncusunu daha çok öğrencilerine, akıl yürütme süreçlerindeki hatalarını etkili bir şekilde gösterebilmek için yaptıkları gözlemlenmiştir.

Üçüncü araştırma sorusu çerçevesinde, öğretmenlerin işledikleri dersler üzerine yansıtmacı düşünme süreçlerine eleştirel düşünmeyi nasıl kattıklarına gelince, araştırmanın en belirgin sonuçlarından birisi, öğretmenlerin düşünme süreçleri ile ilgili ince ayrımları fark edebilme ve düşünme süreçlerini betimleyen kavramları doğru olarak kullanabilme düzeyleriyle, derslerinde bu süreçleri öğrencilere etkin bir şekilde yaşatma düzeyleri arasında bir koşutluğun bulunduğudur. Ayrıca derslerinde eleştirel düşünme süreçlerinin geliştirilmesine dönük bazı olanaklar ortaya çıktığında öğretmenlerin bunları her zaman fark edemeyebildikleri de gözlenmiştir.

Derslerde ortaya çıkan ve kendilerinin problem olarak sınıflandırdıkları konular üzerine yoğunlaşmanın öğretmenlerin yansıtma süreçlerinde çok sık izlenen bir tema olduğu söylenebilir. Ancak öğretmenlerin bu konudaki yoğun düşünme süreçlerinde, eleştirel düşünmenin gelişmesine engel olarak görülebilecek bazı noktalara pek de yer vermedikleri görülmüştür. Bu noktaya yer verdikleri zamanlarda da bunun daha çok öğrencilerin düşünme süreçlerindeki eksikliklere değinmek şeklinde olduğu ve sorunu giderici çözüm üretme boyutunda bir anlayışın da bu süreci takip etmediği gözlenmiştir.

Öğrencilerinin güçlü yönlerinden bahsederken öğretmenler arasında göze çarpan bir farklılık, kimi öğretmenler tarafından duyuşsal alandaki başarıların bilişsel alandaki başarılara göre çok daha fazla önemsendiği yönündedir. Öğretmenlerin öğrencilerinin yüksek motivasyon düzeyi, dersten keyif alma düzeyleri gibi duyuşsal değerlerine odaklandıklarında derslerinin

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bilişsel boyutunda meydana gelen kimi sorunları göz ardı edebildikleri de saptanmıştır.

Öte yandan, öğretmenlerin yansıtma süreçlerini daha sağlam dayanaklar üzerine oturtabilmeleri için gerekli öğrenci geri bildirimine her zaman sahip olmadıkları da göze çarpmaktadır. Böyle durumlarda öğrencilerin kazanımlara ne kadar ulaştığı, düşünsel süreçlerinde o derse özgü problemler yaşayıp yaşamadıkları gibi önemli değerlendirme araçları yerine öğretmenler kendi deneyimlerinden yararlanarak bu bilgi açığını kapatmaya çalışmaktadırlar. Ancak öğrencilerden alınan geri bildirim, öğretmenlerin varsayımları ile karşılaştırıldığında öğretmenlerin deneyimleri ile bu bilgi açığını (geribildirim eksikliğinden kaynaklanan) gidermekte güçlük yaşadığını işaret etmektedir.

Öğrencilerin son yıllarda gerek televizyon gerekse internet gibi kaynaklardan beslenen bilgi birikimlerini sınıfa taşımaları öğretmenler tarafından olumlu bir gelişme ve dersi zenginleştirici bir unsur olarak algılanmakla birlikte bu bilgi birikimine bağlı olarak sınıfta öğrencilerin öğretmenin herhangi bir konudaki bilgisini aşan sorular sorma ya da yorumlar getirme olasılıklarının artışı öğretmenler tarafından bir tehdit olarak da algılanabilmektedir.

Öğrencilerin sınıfta eleştirel düşünme ile ilgili algılamaları ve tepkilerine gelince sınıfta öğretmen-öğrenci ya da öğrenciler arası etkileşim modelleri, öğrencilerde uyanan merak ve ilgi alanları gibi temaların etkili olduğu bulunmuştur. Öğretmenlerin öğrencilerin birbirleriyle iletişimlerine izin veren bir ortam yaratmalarının yanı sıra kendilerinin sınıf içi tartışmayı etkin ve disiplinli bir şekilde yönetmelerinin de öğrencilerin daha yüksek düşünme becerilerini sergilemelerine olanak verdiği söylenebilir. Öğrencilerin sınıf dışındaki farklı kaynaklardan (televizyon, internet, kitaplar) elde ettikleri bilgi birikimlerini sınıf içinderste edindikleri bilgileri sorgulamak amacıyla kullanmaları durumunda ortaya çıkan tartışmaların eleştirel düşünmeye en çok olanak tanıyan ortamlardan birisini oluşturduğu da belirgin bir şekilde ortaya çıkmıştır. Bu durumda, öğretmenlerin ders sırasında öğrencilerin bu tür

sorgulamaya girişmelerine her zaman olanak tanımamaları da önemli bir fırsatın kaybedilmesi olarak değerlendirilebilir.

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