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Critical discourse analysis and critical thinking: An experimental study in an EFL context

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Abstract

The present study investigated the impact of critical discourse analysis (CDA) on TEFL students' critical thinking (CT) ability in *Reading Journalistic Texts* classes. In so doing, the study utilized an experimental design with 24 participants in the control group and 29 participants in the experimental group. The results of a pretest indicated that the participants of the two groups were homogenous with regard to their proficiency level as well as their critical thinking ability. The participants in the experimental group were instructed to critically analyze teacher-distributed articles and devise follow-up presentations based on CDA. The results of the posttest indicated that CDA has a positive and significant influence on learners' critical thinking ability. CDA was also found to have the highest impact on two components of CT, *interpretation* and *recognizing unstated assumption*. The discussion and conclusions of the research are further presented with reference to the earlier findings.
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Keywords: Critical discourse analysis; Critical thinking; Reading course; Journalistic texts; Experimental design

1. Introduction

Critical thinking (CT) has been long viewed as a skill for a lifetime of complicated choices which individuals have to make in their personal, academic and social lives. In this fast-paced and ever-changing world we live in, CT is not a mere luxury; it has been considered by many scholars a basic survival skill (Facione and Facione, 1996; Wright, 2002; Moon, 2008). Philosophers of education contend that CT is the fundamental goal of learning and particularly central to higher education (Paul, 1987; Ennis, 1996). In an L2 context, ways in which CT might be interpreted and taught have become highly debated questions for L2 learning scholars and practitioners more recently (Thompson, 2002a). A shift has occurred from viewing learning primarily as rote training to conceptualizing learning as a constantly evolving process of discovering, questioning, and reformulating hypotheses (Pennycook, 1994).

CT skills have also increasingly gained attention in research related to student achievement and attitudes and a diverse body of educational research has reported the importance of promoting higher-order thinking skills and the positive influence of CT on learners' achievement in EFL contexts (among them are Davidson and Dunham, 1997;

MacBride and Bonnette, 1995). Key to this discussion is that higher-order thinking skills enhance higher-order learning skills which in turn facilitate attaining higher levels of language proficiency (Renner, 1996; cited in Liaw, 2007).

In a similar vein, an emerging body of theoretical and empirical research now exists that demonstrates the association of CT skills with other constructs and facets, such as metacognitive abilities (Ghanizadeh, 2011) and the affective domain (Ghanizadeh and Moafian, 2011). Due to the potent role of learner's CT ability in academic success and its association with factors which are conducive to learning, it seems crucial to explore the strategies, recourses, and approaches which may contribute to its development. Critical discourse analysis (CDA) — analyzing discourse to find hidden meanings and to uncover the relationship between discourse, ideology, and power — seems to be one of such techniques an EFL teacher may have at his/her disposal to better equip learners with a lifelong ability in CT. To empirically examine this assumption, the present study sought to investigate the impact of introducing and integrating CDA in *reading journalistic text* classes on the CT skills of TEFL university students in Iran.

2. Review of the literature on CDA

Critical discourse analysis (CDA) appeared in the 1980s as an approach toward the amalgamation of language studies and social theory (Fairclough, 1992). Fairclough (1995), a pioneer in modern CDA, defined it as:

> The kind of discourse analysis which aims to systematically explore often opaque relationships of causality and determination between (a) discursive practices, events and texts, and (b) wider social and cultural structures, relations and processes; to investigate how such practices, events and texts arise out of and are ideologically shaped by relations of power and struggles over power; and to explore how the opacity of these relationships between discourse and society is itself a factor securing power and hegemony. (pp. 132-3)

To incorporate the above definition in his proposed framework for analyzing discourse, Fairclough (1995) posited that there are three dimensions in CDA: 1) text, 2) interaction, and 3) social context. As a result, he convincingly argued that no text can be analyzed in isolation from the context where it was produced. The first dimension — discourse as text — comprises the linguistic features (vocabulary and grammar) and organization of discourse (cohesion and text structure). The second dimension — discourse as discursive practice — refers to rules, norms, and mental models of socially accepted behavior, reflected in text production and interpretation. Fairclough's third dimension — discourse as social practice — pivots around the larger social context that acts upon the former two dimensions. Central at this stage is the concept of ideology. Fairclough (1992) maintained that ideology is located both in the structure of discourse and in the discourse practices themselves.

In the light of the above discussion, it can be concluded that CDA endeavors to incorporate the text (micro level) and social context (macro level) via discursive practices (meso level) (Thompson, 2002b). Accordingly, the major aim of CDA is to "to unmask ideologically permeated and often obscured structures of power, political control, and dominance, as well as strategies of discriminatory inclusion and exclusion in language in use" (Wodak, 1992, p.8).

In other words, CDA seeks to illuminate the relations between discourse, dominance, marginalization, social inequality, ideology and hegemony. Situated deeply within social practices and due to its interdisciplinary nature, CDA has the potential to be applied in a variety of disciplines and areas, such as: law, politics, business, and education; to name just a few. In the domain of education, an emerging body of research has set out to explore the possible relationships between language and society. Rogers et al. (2005) reviewed a total of 40 articles published between 1980 and 2003 and targeted toward CDA studies set in educational contexts. They found that CDA has pertained to various aspects of education, attempting to explore issues such as spoken and written interactions in the class, to analyze the societal and institutional context of learning and teaching, to investigate the subtleties of power and privilege, and to examine knowledge construction in different classes. What they concluded revealed that most CDA studies associated with education demonstrated the ways in which power is reproduced in educational settings; accordingly, they contended that what is absent in almost all these studies is exploring how power is changed, resisted, and transformed toward liberatory ends. In other words, these studies primarily criticized educational agendas rather than providing educators with empowering practices.

In a similar vein, during the past two decades CDA has found its way to L2 studies. Wallace (1992) has been among the first to bring to attention a serious gap inherently present in most EFL classes. She contended that "EFL students are often marginalized as readers; their goals in interacting with written texts are perceived to be primarily those of language learners" (p. 62). She argued that this is partly due to the prevalent practices in EFL reading classes: the principal focus on

propositional content at the expense of losing sight of the ideological assumptions that underlie texts. Conventional reading classes, according to her, are deficient in three important ways: 1) an attempt to link reading activity and texts to the broader social context; 2) the use of more provocative texts; 3) a methodology for text interpretation that helps uncover both the propositional content and the ideological assumptions behind the text (Wallace, 1992, p. 62). The argument adequately demonstrates that reading between the lines or challenging the ideological assumptions of texts cannot be effectively attained without teachers' scaffolding of activities and skills which would enable students to approach texts more critically. Wallace (1992) herself admitted that many readers are not in a position to attain critical awareness of texts by themselves. More recently, believing that a sound critical approach to language study is almost absent in EFL programs, Cots (2006) proposed a complementary model for implementing CDA in EFL classes. He concluded that this model is in harmony with "a view of education which prioritizes the development of the learners' capacities to examine and judge the world carefully and, if necessary, to change it" (p. 336).

2.1. Review of the literature on CT

The notion of critical thinking is by no means new; indeed, Socrates introduced this approach of thinking about two thousand years ago (Fisher, 2001). Despite the long history of CT tradition, there is no single and agreed-upon definition for what constitutes CT. Dewey (1933), the father of modern CT, defined it as: "active, persistent, and careful consideration of a belief or supposed form of knowledge in the light of the grounds which support it and the further conclusions to which it tends" (p. 9, cited in Fisher, 2001). More recently, Paul (1988) viewed CT as learning how to ask and answer questions of analysis, synthesis and evaluation and "the ability to reach sound conclusions based on observations and information" (p. 50). A review of the literature on CT adequately demonstrates that the proposed definitions of CT encompass many dimensions. To pose a more consistent definition for CT, the American Philosophical Association undertook a two-year Delphi project and conceptualized CT as purposeful, self-regulatory judgment leading to interpretation, analysis, evaluation and inference (cited in Giancarlo and Facione, 2001). The major influence of the Delphi report resides in its emphasis on *disposition toward CT*. Facione et al. (1995) contended that any comprehensive conceptualization of CT focusing solely on skills is deficient in nature; rather, it must incorporate a dispositional component; i.e., the individual's inclination to use CT when needed. In their views, the disposition toward CT is an aspect of intrinsic motivation to solve problems and make decisions by using thinking. In other words, a high degree of disposition toward CT is a reliable guarantee of the application of CT skills. Although most scholars have agreed that CT engages both skills and dispositions, the most common measures and models of CT are skill-based, conceptualizing it as a higher-order thinking skill and pivoting around devising appropriate learning and instruction processes (Frijters et al., 2007). For example, Watson and Glaser (2002), the designers of the world's most widely-used measure of CT, associated it with the following abilities: discriminating among degrees of truth or falsity of inferences; recognizing unstated assumptions in a series of statements; interpreting whether conclusions are warranted or not; determining if conclusions follow from information in given statements, and evaluating arguments as being strong and relevant or weak and irrelevant.

All proponents of CT skills have argued that developing thinking skills must be a compelling priority for educationalists. The prominence granted to higher-order thinking skills reflected in current approaches to education originates in the writings of John Dewey (1933) who contended that nurturing reflective thinking must be at the core of education (cited in Giancarlo and Facione, 2001). Brookfield (1987) pointed out that educational systems should make any endeavor to "awaken, prompt, nurture and encourage the process of thinking critically and reflectively" (p. 11). In a similar vein, Meyers (1986) argued that teachers can foster CT through the activities they assign, the tasks they set, and the feedback they provide. Scholars in the field of higher education contend that CT is a standard of intellectual excellence required for full and constructive participation in academic, individual and social lives of students (Scriven and Paul, 2004).

Likewise, more recently, the tenets pertaining to CT in attaining academic objectives have become a paramount inquiry for EFL and ESL researchers and practitioners. What has emerged from these studies is compatible with the aforementioned contention that CT skills are teachable and can be reinforced via different techniques and activities implemented in the classroom setting. For instance, Dantas-Whitney (2002) indicated that the use of reflective audiotaped journals enhanced ESL university students' CT. Yeh (2004) studied the effect of a computer simulation program on improving student teachers' reflective thinking. The findings revealed that computer simulation is an effective instrument for teaching general CT skills. Similarly, Liaw (2007) study demonstrated that the implementation of content-based approach promotes EFL learner's CT skills.

In summary, the findings of these studies confirmed Davidson and Dunham (1997) argument that CT skills could be taught as part of EFL instruction. Furthermore, the abovementioned studies conclusively demonstrate the influential role EFL teachers can play in scaffolding activities and procedures which nurture and foster EFL learners' CT abilities. Besides, as Davidson (1998) noted, since "part of the English teacher's task is to prepare learners to interact with native speakers who value explicit comment, intelligent criticism, and intellectual assertion" (p. 121), introducing learners to CT is even more essential for L2 teachers than L1 teachers (Davidson, 1998). He believed that "if we do not, our students may well flounder when they are confronted with necessity of thinking critically, especially in an academic setting" (p. 121).

Because of the salient role of CT skills in the teaching and learning processes, it seems essential to investigate any procedures or techniques which may nurture its development in EFL contexts. In the present study, CDA is hypothesized to positively influence EFL learners' CT ability. The researchers of this study postulated the effectiveness of CDA in enhancing EFL learners' CT abilities based on Wallace (1992) contention that one of the strategies contributing to EFL learners' critical thinking is exposing learners to texts such as news stories and reports that contain ideological assumptions and whose interpretation depends on the wider context, as well as on the sociocultural and political aspects. To empirically examine this assumption, the following research questions were posed and investigated in the present study:

1) Does CDA have any significant impact on EFL learners' CT ability?
2) Does CDA have any significant impact on EFL learners' Inference Making, Recognizing Unstated Assumptions, Deduction, Interpretation, Evaluation of Arguments as components of CT ability?
3) Does CDA have any impact on EFL learners' selection of journalistic materials for class presentation?

3. Method

3.1. Participants

The participants of the present study comprised fifty three TEFL university students studying at a university in Mashhad, Iran. The majority were fifth semester students attending a *Reading Journalistic Texts* course. Out of 53 participants, 38 students were female and 15 were male. Due to the administrative restrictions, the intact groups design (Hatch and Lazaraton, 1991) was utilized with 24 participants in the control group and 29 participants in the experimental group. To meet the main requirement of experimental research and to ensure that the learners were homogenous with respect to their English proficiency level and their CT ability, the Test of English as a Foreign Language (TOEFL) administered by Educational Testing Service (ETS) in October 2003, along with the "Watson–Glaser Critical Thinking Appraisal" (CTA) (Watson and Glaser, 2002) were administered as pretests.

3.2. Instrument

The "Watson–Glaser Critical Thinking Appraisal" (CTA) (Form A), which has been shown to be both valid and highly reliable, comprises 80 items and consists of 5 subtests as follows (see Table 1):

Table 1
The subtests of CTA along with the corresponding descriptions.

Subtest	Description	Items
Test 1. *Inference*	Discriminating among degrees of truth or falsity of inference drawn from given data.	1–16
Test 2. *Recognizing Unstated Assumptions*	Recognizing unstated assumptions or presuppositions in given statements or assertions.	17–32
Test 3. *Deduction*	Determining whether certain conclusions necessarily follow from information in given statement or premises.	33–48
Test 4. *Interpretation*	Weighing evidence and deciding if generalizations or conclusions based on the given data are warranted.	49–64
Test 5. *Evaluation of Arguments*	Evaluation of Arguments: Distinguishing between arguments that are strong and relevant and those that are weak or relevant to a particular question at issue.	65–80

In this study, the total reliability of the questionnaire was calculated via Cronbach's alpha which was found to be .79. This test was administered to both control and experimental group twice, once as pretest and the other as posttest.

3.3. Procedure

The present study was conducted over thirteen sessions between September and December 2010. The following four steps determined the delivery and the sequence of the study: 1) proficiency pretest with the control and experimental groups, 2) critical thinking pretest with the control and experimental groups, 3) integration of CDA into classroom activities and raising students' awareness to hidden aspects of language in the experimental group, and 4) critical thinking posttest with both groups.

The two classes were conducted by the same teacher who was one of the researchers in the present study. The course book *Reading English Newspapers* (Shams, 2007), and the instructional materials (journalistic articles extracted from newspapers), as well as the procedure were identical for the participants of the two groups. In both groups, about 45 min of the class time was devoted to working with the course book, 20 min to reading and discussing the news story distributed by the teacher, and the rest to two students' presentation of self-selected journalistic texts.

The course book comprises 8 units, out of which 7 units were covered. The book intended to promote the university students' skills in reading English journalistic texts. In so doing, it elaborates on different parts of a newspaper and a news article. Through this book the students are briefly initiated to critical aspects of reading newspapers, such as different forms of biases and ideologies reflected and realized in reporting news stories, but it does not require students to be involved in reflective, critical and in-depth analysis of the materials covered in the book. The students in the experimental group, however, were engaged in conducting CDA and formulated the follow-up activities based on it. To instruct students in the experimental group how to critically analyze the articles, the teacher drew upon Fairclough's (1989) three-dimensional model. Fairclough identified the three stages of CDA as follows:

- Description is the stage which is concerned with the formal properties of the text.
- Interpretation is concerned with the relationship between text and interaction — with seeing the text as a product of a process of production, and as a resource in the process of interpretation.
- Explanation is concerned with the relationship between interaction and social context with the social determination of the processes of production and interpretation, and their social effects. (1989, p. 26)

The model also incorporates a suggested list of ten main questions and a number of sub-questions for addressing a text. The ten questions encompass vocabulary, grammar, and textual structure, investigating aspects such as, agency, voice, modality, mood, foreground/background, ideological orientation, metaphor, euphemism, and so on.

To get a better view of the procedure the teacher applied, several news stories distributed by the teacher along with the teacher's approach in pinpointing how language is manipulated in order to attain specific ideologies are presented and discussed in the appendix. In so doing, instances of linguistic and rhetorical devices used in news stories were analyzed and reflected upon to present and familiarize students with ideologically slanted or biased manifestations of language in the media, which may not be observable for ordinary readers.

In addition to working on teacher-distributed articles, the students in both groups were required to deliver a presentation on their self-selected articles. In selecting the news stories, the teacher assured the students that the journalistic materials they were going to present may not need to be confined to any specific topic or genre. She also assured them that diversity was welcome and that they were free to follow their own tastes and preferences to select the materials, whether from broadsheets or tabloids, from hard news stories (reporting breaking serious news) or soft news stories (containing entertaining and celebrity stories).

4. Results

Independent samples *T*-Tests were used, with the alpha level set at .05.

4.1. Results of the pretest

Mean TOEFL scores for the experimental and control groups were 420 and 414, respectively. The independent samples *T*-Test demonstrated that there was no statistically significant difference between the two groups with respect to their proficiency level before the treatment (t(51) = .481, p = .632).

To check the homogeneity of participants regarding their critical thinking ability prior to instruction, the "Watson–Glaser Critical Thinking Appraisal" (CTA) was administered to the participants of each group. Mean scores for the experimental and control groups were 43.03 and 42.91, respectively. The independent samples *T*-Test demonstrated no statistically significant difference between the two groups with respect to their CTA scores (t(51) = .057, p = .955).

4.2. Results of the post-test

To investigate the effect of CDA on CT ability, the CTA was administered to the participants of the two groups at the end of the term. Table 2 presents the results of the independent samples *T*-Test run on CTA and its five subscales. As the table suggests, there is a statistically significant effect of CDA on the learners' critical thinking ability (t(51) = 3.186, p = .002). It also demonstrated that CDA had a significant effect on three components of CT as follows: *inference* (t(51) = 2.126, p = .038); *recognizing unstated assumptions* (t(51) = 2.654, p = .011, and *interpretation* (t(51) = 4.598, p = .001). However, no significant influence was found on two components: *deduction* (t(51) = 1.449, p = .153) and *evaluation of arguments* (t(51) = 1.144, p = .258).

The effect size, calculated via Cohen's *d*, was found to be .86, which is a large value according to Cohen's index value.

To see how the teacher's implementing CDA in the experimental group was going to be manifested in students' class activities and preferences, the teacher required the students in both groups to deliver a presentation on their self-selected journalistic stories, with no restriction on topic selection. It was revealed that the students in both groups were initially more inclined to present news stories which were not controversial in nature on scientific, technological, or entertaining themes. They also demonstrated reluctance to engage with controversial issues such as politics, and commentaries. The students in the experimental group, nevertheless, increasingly tended to select articles which were more controversial and were characterized by elements of ideological assumptions, value judgments, opinions and biases.

The point of difference in article selection did not lie in topic specificity, rather in the degree of controversy pertaining to each news story, or in Wallace's (1992) words, provocativeness associated with texts. In other words, the students in both groups selected journalistic materials with different range of topics, such as, science, politics, current events, entertainment, arts, and social issues. Yet, the students in the experimental group opted for materials which offered greater scope and opportunities for considering values, ideologies, and ethical questions. So, in order to compare the two groups regarding their selection of journalistic materials, the researchers of the present study assessed whether the text was provocative in nature or not. For instance, one of the students in the experimental group presented an article which, on the surface of it, could be classified as a current event, but it contained elements of ideological assumptions and distortion of reality. Besides, its interpretation required an awareness of intertexuality, sociocultural context, and concurrent events (in this case the invitation by a church to burn the Quran on the ninth anniversary of the September 11, 2001). The news story is presented below to illustrate the case:

Insurer uses Quran to deny car crash claim

Table 2
Differences on CT ability between control and experimental groups.

	Mean difference	t	df	p
CTA	6.55	3.186	51	.002
Inference	1.08	2.126	51	.038
Recognizing unstated assumptions	1.72	2.654	51	.011
Deduction	.90	1.449	51	.153
Interpretation	2.19	4.598	51	.001
Evaluation of arguments	.69	1.144	51	.258

By Daily news- September 29.2010

> A German insurance company found itself in hot water after one of its executive refused to cover maid costs for an Algerian immigrant injured in a car crash after interpreting the Quran as saying that Muslim husbands "don't run a household".

> "His relationship with his wife can't be assumed to resemble a German marriage", she wrote. The man's wife, 26 years younger, will likely perform the housework, and she's not the claimant, the executive noted. In fact, the wife reportedly has a career and her 79 year-old husband does most of household chores.

> Gothaer company officials have announced they will apologize to the customer. "Something like this simply must not happen", said a spokesman, citing the worker's unacceptable tone and failure to adhere to the firm's anti-discriminatory policy.

Classifying the presented journalistic materials of both groups based on the provocativeness criterion, the researchers found that almost all articles presented by the students in the control group were uncontroversial or non-provocative, while 20 out of 29 presented news stories in the experimental group were provocative. In addition, the students in the control group based their presentation and analysis of the presented news stories on propositional content of the text, whereas the students in the experimental group attended to the propositional content as well as to the underlying ideological assumptions, i.e., they approached the texts with critical eyes in the course of their presentations, and attempted to go beneath the surface of texts.

5. Discussion & conclusions

The present study set out to investigate the impact of implementing CDA in EFL classes on students' CT ability. The results substantiated the positive and significant influence of CDA on CT. In other words, the integration of CDA in *Reading journalistic text* classes tends to foster TEFL university students' CT. It can be plausibly argued that the enhancement of learners' CT abilities in turn may lead to the development of other emotional, motivational, and met-acognitive factors, on the grounds that CT has been found to be associated with motivational variables such as goal orientations, self-efficacy beliefs and effort (Leung and Kember, 2003). It has also been reported that the development of CT will contribute to tolerance of ambiguity, responsibility taking, confidence and self-efficacy enhancement (Kuiper, 2002). In an EFL context, situating critical thinking within the framework of self-regulation, Ghanizadeh (2011) indi-cated that critical thinking ability has a facilitative role in enhancing self-regulation over time. Furthermore, Ghanizadeh and Moafian (2011) study substantiated a dynamic interplay between CT and emotional intelligence. Taken together, it can be concluded that promoting learners' CT abilities may better equip students with the abilities and constructs which are conducive to effective learning.

Viewing from a broader perspective, a substantial theoretical and empirical base now exists in the literature to demonstrate the association of CT with students' academic and life success (among them are Lee and Loughran, 2000; cited in Phan, 2010; Kealey et al., 2005). In particular, in the domain of university education, educational scholars agree that the development of students' higher-order thinking skills such as CT is the principal task of higher education (Jarvis, 2005). These skills underpin students' reflective and rational decisions as well as their perception of the world.

As indicated earlier, CDA was found to have the highest impact on two components of CT, i.e., *interpretation* and *recognizing unstated assumption*. The impact of CDA on interpretation — weighing evidence and deciding if generalizations or conclusions based on the given data are warranted (Watson and Glaser, 2002) — is hardly surprising in view of the fact that interpretation is an indispensable component in almost all theories and models of CDA. For instance, Fairclough's (1989) three-dimensional model incorporated interpretation — the relationship between text and interaction — as one of the main stages of CDA. Fairclough and Wodak (1997) also demonstrated that one of the main tenets of CDA resides in its interpretive nature. The context of the present study may highlight the significance of this finding. Studying in higher education is associated with reflectivity and multiplicity of voices which entail assessing the information that students may receive in the course of their university education.

The impact of CDA on recognizing unstated assumptions or presuppositions in given statements or assertions seems plausible given that one of the objectives of CDA is enabling students to read between the lines and to uncover and challenge ideological assumptions of texts. In the light of the results of the present study it is expected that students' ability to question or evaluate the validity of ideas and premises residing in the texts, along with their ability to go

beneath the surface of texts and find hidden meanings, might be transferred and extended from the realm of texts to wider educational and life contexts where identifying and assessing diverse arguments and coming into contact with multiple perspectives are indispensable. In other words, by introducing and instructing EFL learners to CDA practices, teachers can move beyond text analysis and make CDA an educational endeavor whereby learners are equipped with a lifelong ability in CT. In so doing, the teachers are indeed ensuring liberal pedagogies which seek to make a difference in students' education and their lives by helping them work toward reflective and creative thinking (Shor, 1992).

As stated earlier, the results also substantiated the researchers' hypothesis that a teacher's implementing CDA in EFL classes is reflected in students' class activities and attitudes. In other words, not only did the teacher's practices help the development of critical thinking abilities, but they also aided the students to empower themselves with critical awareness through their choice of provocative texts as well as their approach in detecting and responding to discursive aspects of texts. Furthermore, this finding may plausibly demonstrate students' positive attitude toward CDA.

Taken together, the findings of the present study are compatible with Leontiev's (1981) activity theory and Brunner (1976) model of scaffolding. According to activity theory, what we do determines the development of our cognition; hence, if we engage in higher-order thinking activities, we are indeed becoming better critical thinkers which would be reflected in our actions and thoughts. This initially requires guidance and instruction on the part of teachers. Brunner (1976) contended that for learning to take place, explicit instructions by teachers are needed to help learners reach their full potentials. As the learner develops, the amount of instruction or teacher scaffolding will shrink.

The significance of the present study, though small-scale and experimental in nature, lies in the fact that the findings are compatible with the theoretical contentions in the literature indicating the contributing role of learners' exposure to texts that contain ideological assumptions in the development of their critical thinking abilities (Wallace, 1992). Moreover, the results of statistical analyses were further confirmed by the qualitative examination of students' presentations. Viewing from another perspective, the results of the second and third research questions can be plausibly interpreted as helping us gain a better understanding of the process of CT development. It was demonstrated that CDA training tends to foster CT skills by its impact on learners' abilities of *interpretation* and *recognizing unstated assumption* as well as on their choice of articles for classroom presentation.

The present study is, nevertheless, limited in a number of ways. First, the participants were selected according to available sampling. Second, in this study random assignment requirement could not be observed, so the researchers employed intact groups design. Of course, the results of the pretest demonstrated that the two groups were homogenous with respect to their language proficiency and CT abilities. Furthermore, as with many experimental studies, the present study provided additional input to the experimental group and deprived the control group of a beneficial technique. The researchers, nevertheless, were fully aware of this ethical issue; accordingly, they asked other instructors who had taught the same course during previous semesters whether they had any structured instruction on CDA. Having been assured they did not, they set out to conduct the present study. Furthermore, viewing from recent social perspectives, the value of research should be judged in view of its "social utility, i.e., its potential for positive impact on societal and educational problems" (Ortega, 2005, p. 430), rather than through the narrow lenses of methodological rigor.

Although the present study demonstrated that CDA is effective in enhancing university students' CT abilities, there are areas that need to be studied further. Using qualitative approaches such as interviews, case studies, and observations would allow the researchers to understand not only if CDA facilitates nurturing CT, but also the processes through which CT abilities develop in the classroom context. Future research, utilizing random assignment design with an equal number of male and female participants in each group, may investigate whether the benefits of CDA would be the same for the male and female students.

Appendix.

Sample activity 1

To raise students' awareness of non-linguistic forms of bias and linguistic devices such as *agency*, *voice* and *depersonification,* two parallel news stories by two newspapers were presented. The two reports were on two identical incidents in which several people were killed or injured in a demonstration. The headlines were as follows:

Story one: **Demonstrators injured 2 police officers**.

Story two: **Police guns kill 8 demonstrators**.

The story about the injuries of the police force takes up nearly half of the front page of the newspaper and over the story there is a huge banner headline taking the full width of the page. The story on the killing of the demonstrators appears on the second page of the newspaper and takes up less than the first story. The size of the headline is also smaller than the size of the headline of the first story.

The differences in 'bias by placement' and 'bias by non-verbal structure' were discussed and reached upon through the questions posed by the teacher. They were also exposed to the fact that the headline of the second story is in active voice highlighting the agency of the demonstrators and directly accusing them of the violence. The teacher, then, had students do the same analysis for the first headline to examine how language systems are used to convey ideology. Through this analysis they asserted that contrary to the first headline, the second one indirectly accuses the police guns, not the police force.

Sample activity 2

To better familiarize students with *foregrounding* and *backgrounding* and their roles in highlighting concepts and ideologies, the students were presented with an article extracted from *Iran News*, October 11, 2010 under the following headline:

Sanction Futile in Iran Carpet Exports

The article was ornamented with an eye-catching picture of Persian carpets. Before going through the article, the students were asked to speculate about their expectation of how the article might start and proceed. They were offered three possibilities: the article will open with a history of rounds of sanctions imposed against Iran, a background of Iran's carpet exports, or a brief history of Iran's hand-woven carpets. The majority of students anticipated that the second and third possibilities would appear at the onset of the article. They were, then, asked to read the article and see whether their expectations and concerns corresponded with those of the writer. Contrary to their expectation, they perceived that the article commenced with a relatively long history of four rounds of sanctions imposed against Iran's financial and military sectors since the revolution. The article also delved into the allegations behind sanctions. Only one-third of the article dealt with the magnitude of Iran's carpet exports which have been unaffected by sanctions.

Through this activity, the students were expected to uncover the ideological and political stance of the writer and the newspaper on the grounds that they were already exposed to this feature of news stories that tends to push the most important facts and concerns to the top of the story and only then address the subsidiary points. So as they noted the history and initiatives behind the sanctions appeared more important for the writer than the good news of sanction futility on exporting Persian carpets.

Sample activity 3:

To provide the students with opportunities to analyze the articles in terms of *metaphorization* and *voice*, a news story reported by Turkish official news agency under this headline was distributed:

Kurds Slaughter Passengers

Throughout the report the Kurdish militants were referred to as *guerrillas* engaging in cruel violence and viewing the victims as having the same status as animals. The writer also used active voice to foreground the agency of the Kurds. This analysis assisted students in recognizing the role of metaphors in creating intended effects, slanting the news against one side, implying pre- specified judgments, and forming stereotypes.

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