USING GRICE'S COOPERATIVE PRINCIPLE AND ITS MAXIMS FOR ANALYZING COHERENCE: A STUDY ON ACADEMIC WRITING

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ABSTRACT

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Coherence in written discourse is considered to be a complex and a fuzzy concept but it is, at the same time, a crucial feature of any well-written text. The present study aims to contribute to the field of the teaching of the concept of coherence by proposing an approach to analyzing coherence in students' essays in the context of the Department of Modern Languages (DML) at Middle East Technical University (METU) and to the teaching of the concept. The study suggests an approach involving Gricean maxims for analyzing coherence in freshman student argumentative essays at DML at METU.

In order to achieve this aim, 50 essays were rated for coherence by two raters and the same essays were analyzed by the researcher for maxim violations. Next, the correlation between the raters' judgments and the number of maxim violations in each essay and the correlation between raters' judgments and the number of violations for each maxim in each essay was calculated. The findings revealed a significant negative correlation between the variables and a negative correlation between the violation of Quantity maxim most frequently and the raters' judgments. The findings suggest that Gricean maxims can be used as a tool for analyzing coherence in student argumentative essays. The implications of this finding for the analysis of the essays, for the teaching, learning and assessment processes are discussed.

Keywords: coherence, writing, Gricean maxims

ÖZ

GRICE'IN İŞBİRLİĞİ İLKESİNİN VE ONUN ALT İLKELERİNİN BAĞDAŞIKLIK ANALİZİNDE KULLANIMI: AKADEMİK YAZI ÜZERİNE BİR ÇALIŞMA

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Yazılı metinde bağdaşıklık, karışık ve belirsiz bir kavram olarak düşünülür fakat aynı zamanda iyi bir metnin önemli bir özelliğidir. Bu çalışma, bağdaşıklığın Ortadoğu Teknik Üniversitesi (ODTÜ) Modern Diller Bölümü (MDB) öğrencilerinin kompozisyonlarında incelenmesi ve bu kavramın öğretilmesine yönelik bir yaklaşım sunarak, bağdaşıklık konusuna katkıda bulunmayı amaçlamaktadır. Bu çalışma, ODTÜ MDB ilk sınıf öğrencilerinin tartışmacı kompozisyonlarındaki bağdaşıklık özelliğini analiz etmek için, Grice'ın İşbirliği ilkesini ve onun alt ilkelerini içeren kapsamlı bir yaklaşım sunar.

Bu amaca yönelik, 50 kompozisyon iki değerlendirici tarafından değerlendirildi ve aynı kompozisyonlar araştırmacı tarafından alt ilkelere uyulmadığı durumların belirlenmesi için incelendi. Ardından, değerlendirmecilerin yargıları ile her bir alt ilkenin kompozisyondaki uymama sayısı arasındaki orantı ve değerlendirmecilerin yargıları ile her bir alt ilkenin her kompozisyondaki ihlal sayısı arasındaki orantı hesaplandı. Sonuçlar, bu değişkenler arasında önemli bir ters orantı olduğunu ve en fazla Nicelik alt ilkesi ile değerlendicilerin yargıları arasında ters bir orantı olduğunu gösterdi. Sonuçlar, Grice'ın İşbirliği İlkesinin ve onun alt ilkelerinin, öğrencilerin tartışmacı kompozisyonlarındaki bağdaşıklığı analiz etmede bir araç olarak kullanılabileceğini göstermektedir. Çalışmada, sonuçların kompozisyon analizi, öğretme, öğrenme ve değerlendirme süreçleri için ne gibi çıkarımları olduğu açıklanır.

Anahtar kelimeler: bağdaşıklık, yazı, Grice'ın İşbirliği İlkesi ve onun alt ilkeleri

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CHAPTER I

INTRODUCTION

1.0 Presentation

In this introductory chapter, first a background to the study is given. Next, the problem the study aims to focus on is explained as well as the purpose and the significance of the study. The limitations of the study that may rise from the topic at hand or the methodology used are also stated.

1.1. Background to the Study

Applied linguistics has been concerned with the development of writing skills for at least the past 50 years. One of the research areas in this field of study is writing in English L1 contexts. Moreover, another research area is writing in English L2 contexts because the writing needs of a diversity of L2 student groups create a research area itself (Grabe and Kaplan, 1996, p.24). Since the writing needs and student profiles as well as the EFL contexts are very different, L2 writing theory and practice turns out to be a complex research area.

As Grabe and Kaplan state in their discussion of issues in writing research and instruction (1996, p.27), research in L2 writing began in the late 1960s and early 1970s in the USA and the UK and in L2 research, applied linguistics gave attention to the writing needs and problems of students. Applied linguists studied the organization of discourse and text construction processes and they examined the social contexts in which students learn to write. Recent research on text organization includes "the study story structure, the comparative study of text corpora and the textual co-occurrence patterns of lexico-syntactic features" (Grabe and Kaplan, 1996, p.28).

The same authors in their discussion of the relation of theory and practice hold that only recently teaching of writing started to benefit from the research findings in this field and with the emerging theories of writing of the 1980s, there have been changes observed in writing instruction. Some of these changes took place as a result of research on the various aspects of textual organization such as "topic progression, information structuring, discourse mode variation, logical relations among discourse units, the role of inferencing and patterns of lexico-syntactic usage" (Grabe and Kaplan, 1996, p.33).

Discourse analysis received considerable attention from various researchers (e.g. Brown and Yule, 1983; Givon, 1983; Halliday and Hasan, 1976, 1989; Mann and Thompson, 1988, 1992; van Dijk, 1985; Grabe, 1993; Coulthard, 1994; Halliday, 1994 in Grabe and Kaplan, 1996, p.39) and the researches carried out in this field provide a better understanding of text and the techniques used to examine the nature of text.

A text is defined as "a structural equivalent of language in real use which conveys meaning in all four senses of Hymes's communicative competence (whether a text is: possible, feasible, appropriate and performed), and which suggests a topic of discourse" (Grabe and Kaplan, 1996, p.40). Moreover, Halliday (in Grabe and Kaplan, 1996, p.40) adds that the fact that a text has a formal opening and closing is not enough to make it a text but the beginning and end of texts need to be determined according to the social and semantic context rather than a formal structural organization.

Many studies on text analysis examined cohesion and coherence of texts. Although there are numerous studies on cohesion analysis in texts, these studies do not appear to give a complete answer to understanding writing development.

However, the connection between cohesion and coherence is an issue that has been questioned for several times. While some researchers argue that cohesion is a feature necessary for coherence in a text, others claim that cohesion is not a contributing factor in coherence.

Coherence is considered to be a complex, abstract and a fuzzy property of a text, which is accepted to be a "*sine qua non"* in written discourse (Bamberg, 1983, p.417). Pedagogical interest in coherence began in the nineteenth century with Alexander Bain's first rule of the paragraph in his manual for students in English composition and rhetoric in 1866: 'The bearing of each sentence upon what precedes shall be explicit and unmistakeable" (Bamberg, 1983, p.417). Now, 138 years later, coherence continues to be an issue discussed in writing instruction with few bridges built between the theory and practice.

1.2 The Problem

Receiving incoherent papers from students continues to be a very frustrating experience for many teachers and it is equally frustrating not to be able to understand why students are unable to produce coherent texts or to see why their papers are incoherent. It is not only the teachers who are frustrated but also the students since after spending a lot of time writing and rewriting their papers, they cannot see any problem with coherence in their papers but their teachers do. What is more, many writing textbooks do not provide the students or the teachers with effective and efficient information on coherence but only with a very limited sense of coherence and there are very few studies that provide useful approaches to the teaching and learning of this concept. Therefore, neither the textbooks nor the instruction in classes seem to be successful in dealing with the coherence related problems because if they were successful, students would not be turning in papers that are incoherent.

Many writing instructors encounter the problem of coherence in their students' essays since for some reason or another many of these essays lack coherence. Many of the writing instructions in classrooms dedicate some time to the teaching of coherence as a feature of good essays and many writing textbooks also have sections where coherence in writing is explained. As a result of this emphasis, there is often a coherence section on instructors' checklists for assessment of students' essays or instructors have coherence criterion in mind during this assessment process. Moreover, many students are accustomed to getting feedback from their instructors on the coherence problems in their essays. However, students and instructors still continue to encounter problems related with coherence.

There are various reasons for this problem but the most important of all is the insufficient and misguiding instruction in classrooms and in the textbooks on coherence which is followed by the insufficient assessment criteria and feedback to students for coherence in the essays. Although many instructors may have some comprehensive intuitive judgments of coherence in mind, the instruction in classrooms as well as the instruction in many textbooks is insufficient for the reason that coherence is taught to be achieved only through the use of some cohesive devices that connect the sentences on the surface level in this instruction. For instance, in many textbooks and in classroom practices, some features of a text such as repetition of key words, transitionals, synonyms, and reference words are regarded as the only contributing factor for coherence in the text. For instance, in their textbook *Tapestry Writing 4*, Qxford and Pike-Baky (2000) state that a writer can achieve coherence in writing by "using tran sitions, repeating key words and ideas, and using parallel grammatical structures" (p.158). Similarly, another textbook on writing, *Refining Composition Skills* (5th ed.) focuses on coherence as "smooth and logical flow of ideas" which can be achieved throu gh the use of transitionals in the list provided (Kozyrev, Ruetten and Smalley, 2001, p.294). Moreover, Lee (2002, p.136) also supports the fact that the emphasis in many of the writing textbooks is on sentence-level coherence rather than on coherence in a broader sense by giving two course books as an example: *College Writing Skills* by

Langan (1996) and *Writing Academic English: A writing and sentence structure handbook* by Oshima and Hogue (1991).

As a result of this, the assessment criteria include these linguistic markers by which coherence in students' essays is graded. Therefore, the feedback students receive on coherence also involves these linguistic markers. The main problem, in fact, lies behind the fact that creating a comprehensive model of text construction is rather a complex task. Moreover, though there are numerous studies on coherence and cohesion in writing, the researchers provide different theories which do not seem to coincide with other theories and "little consensus has emerged which would allow for significant advances in writing instruction" (Grabe and Kaplan, 1996, p.37). Moreover, these studies do not contribute much to the solution of the problem in terms of practical applications because many of these studies deal with the theoretical issues concerning coherence.

Another problem is that the specific ways in which aspects of coherence associated with readers' or instructors' judgments of writing quality have not been made clear, and, thus, writing instructors as well as the textbooks continue to define coherence in some vague manner. According to Phelps (in Henson, 2001, p.3), this vagueness can be explained with the fact that coherence involves many paradoxes because it is at once "subjective and objective, receptive and productive, mental and textual, experience and object, process and product…". This being the current state of affairs, research has to clearly show "what aspects of a given text are directly associated with readers' judgments of writing quality" (Henson, 2001, p.3) .

Still another problem is that majority of the studies done on coherence and writing focused largely on coherence in texts produced by native speakers of English. This approach, however, is problematic because findings of research on native speaker writing cannot be applied to the analysis of the texts written by foreign language writers due to the differences between these two groups of writers in relation to factors such as their cultural backgrounds or the rhetorical communities they belong to. Therefore, the need exists for more studies on foreign language writers of English who belong to different cultures and rhetorical communities.

1.3 Purpose of the Study

Since there are few studies with practical classroom and assessment applications that help teachers and students deal with this complex and demanding concept in writing, this study aims to contribute in building the bridge between the theory and practical applications of coherence in the classrooms as well as in the assessment process. The present study aims to contribute to the field by proposing an approach to analyzing coherence in students' essays and to the teaching of the concept and by investigating the implications of this approach for the teaching, learning and the assessment processes.

The theoretical framework to be used while analyzing coherence is the Grice's Co-operative Principle and its associated maxims of Quantity, Quality, Relation and Manner which were developed to define effective and efficient communication (Grice, 1975). Since Gricean maxims seem to explain the features of a coherent text, by taking Grice's Co-operative Principle and its associated maxims as the theoretical framework, the researcher hypothesizes that Grice's Co-operative Principle and the maxims can be a useful model to apply in the analysis of coherence in students' essays.

The present study, in particular, aims to investigate the specific relationship between instructors' coherence judgments in METU freshman students' argumentative essays and the adherence to Gricean maxims in the same essays. Gricean maxims, in particular, are used in the study since Grice's Cooperative Principle and the maxims have potential to provide a solution to the problems encountered concerning coherence. Although Grice developed these maxims to explain the principles of communication, the submaxims of Gricean maxims are found to relate very much to the features of a coherent text identified by many researchers who examined the concept from different perspectives. Moreover, Gricean maxims will bring a more concrete background to the study of coherence which is considered to be a subjective and a complex phenomenon causing problems to the students and the instructors alike. Among the assumptions the study is based on is that textual features in a text contribute to the coherence in the text, the rhetorical organization of a text type plays a role in readers' judgments of coherence in the text and the discourse community a reader belongs to is influential on coherence judgments of the readers.

In relation with the purpose of the study, the study questions whether Gricean maxims can be used as a tool for coherence analysis in METU freshman students' argumentative essays. For this, the study particularly examines whether there is a correlation between the number of maxim violations in the essays and two raters' judgments of coherence in the same essays and the study questions what kind of a correlation there is, if there is any, between these variables. To provide answers for the research questions, two raters from the Department of Modern Languages were asked to rate 50 essays by using a 5-point-scale and the researcher analyzed the same essays for maxim violations. Next, the correlation between the data from the raters and the number of maxim violations and the correlation between the violation of each maxim in each essay and raters' judgments was calculated.

1.4 Significance of the Study

As mentioned earlier, although there are a number of studies done in the field of writing and coherence, very few of them have proposed new perspectives on practical applications particularly for contexts where English is taught as a foreign language. Lack of coherence continues to be a problem in student writing and teachers are not very successful in guiding students achieve coherence. The textbooks that are written to guide students do not seem to achieve anything more than confusing students about what coherence is and how it can be achieved. Therefore, there is a genuine need for further studies with more practical applications in the field.

This study is an attempt to respond to the need and to provide new insights into the teaching and learning of coherence. By bringing Gricean maxims and coherence in writing together, the study aims to shed some light on coherence which will clarify the "fuzzy" nature of the concept and will propose a new perspective that will have pedagogical implications.

1.5. Limitations

One of the limitations of this study concerns the nature of "coherence" in texts. Coherence is defined by a variety of researchers in different ways and these researchers attribute the coherence in texts to different features from different perspectives. For instance, while some researchers argue that topic development in texts is a factor that affects coherence from an information-oriented perspective, others from a textual perspective claim that cohesion is an important factor contributing to coherence. Still others from a pragmatic perspective maintain that a text is interpreted as coherent to the extent that the reader can understand the writer's cohesive plan and the illocutionary intention.

This nature of coherence brings a limitation to the study because though many researchers have similar definitions for coherence, the term needs to be clearly defined for the study. This study aims to identify whether there is a correlation between the number of maxim violations in student argumentative essays and two raters' judgments of coherence in these essays. Therefore, for the study, it is important to show how Gricean maxims are related with coherence features and how the discourse community, including the raters who grade student essays for coherence, in which this study is carried out perceives coherence because raters' judgments of coherence in student essays highly depend on how they perceive coherence which will be influenced from a variety of factors such as individual beliefs, or the discourse community the rater belongs to. The raters in this study as well as the researcher belong to the same discourse community, thus, sharing similar experiences and context as well as similar institutional principles and procedures. Therefore, the findings of this study may not be easily generalized to other settings where institutional principles, student profile, social context and the discourse community which the instructors teaching writing belong to are different.

Similarly, another limitation concerns the subjectivity of Gricean maxims. The problem here is that the results of the analysis of discourse carried out by using Gricean maxims may show differences due to different discourse communities in which the analysis is conducted. That is, people sharing different discourse practices may not analyze the same essays in the same manner because how a group of people perceives the maxim of Quantity, for instance, may be different than how another group of people in a different discourse community perceive the same maxim. As a result of this, as mentioned earlier, the results of this study may not be generalized to other discourse communities.

CHAPTER II

REVIEW OF LITERATURE

2.0 Presentation

In this chapter, some key concepts and research findings central to the study are presented. First, the terms "cohesion" and "coherence", " local coherence" and global coherence" are discussed referring to the definitions of the terms by some researchers. Next, different approaches to coherence as a linguistic property and a non-linguistic property are presented with different viewpoints related with each approach. Lastly, Gricean pragmatics is explained with its possible applications for the present study.

2.1 Cohesion versus Coherence

Interest in coherence research has grown in the past several years and there have been many studies done in this field. In the last 20 years, however, in order to understand how readers interpret a text as coherent and how writers use language to convey a coherent message, researchers in psychology, linguistics and applied linguistics have begun to explore this notion (Grabe and Kaplan, 1996, p.67). These studies focused on several perspectives of the issue and some researchers do not agree on the definition of the term "coherence". Therefore, many researchers developed their own viewpoints of coherence with different categorizations. However, to be able to describe what coherence is, many researchers have differentiated between coherence and cohesion as a first step.

It is generally accepted that cohesion and coherence are two different concepts which do not have synonymous meanings though they are related.

Cohesion is defined by many researchers as referring to the syntactic and semantic connectivity of the linguistic forms on the textual surface (Connor & Johns, 1990; Crystal, 1991; Halliday & Hasan, 1976 in Jin, 1998, p. 2). However, coherence is defined as "principle of organization postulated to account for the underlying functional connectedness or identity of a piece of spoken or written language" (Crystal in Jin, 1998, p.2). In other words, cohesion is the connectivity on the surface or sentential level and coherence is the connectivity in terms of content and organization and on a broader level such as paragraph or discourse level (Jin, 1998, p.2).

According to Steven Witte and Lester Faigley (1981) coherence defines those underlying semantic relations that "allow a text to be understood in a real-world setting" (p.199) and "coherence conditions are governed by the writer's purpose, the audience's knowledge and expectations, and the information to be conveyed" (p.202). Moreover, Widdowson (1978, p.31) states that there may be no instance of cohesive tie in a text but it may still be coherent. Therefore, he concludes, cohesion is "the overt, linguistically-signalled relationship between propositions". Similarly, de Beaugrande and Dressler (1981) maintain that cohesion "concerns the ways in which the components of the surface text, i.e. the actual words we hear and see, are mutually connected within a sequence". However, they argue that coherence "concerns the ways in which the components of the textual world, i.e. the configuration of concepts and relations which underlie the surface text, are mutually accessible and relevant" (in Hoey, 1991, p.11). In other words, like many other researchers, they also claim that cohesion is related with the features on surface or sentential level whereas coherence refers to the relations and meanings at a deeper level.

Similarly, Celce-Murcia and Olshtain (2000, p. 125) define coherence as "the quality that makes a text conform to a consistent world view based on one's experience and culture or convention" and they state that coherence is an interactive process involving the writer, the written text and the reader. As far as cohesion is concerned, they maintain that it is achieved through the use of cohesive ties that explicitly link all the propositions in a text together (p.7).

Numerous studies have been done on cohesion and coherence to explore the two concepts and the most influential publication on the study of cohesion is the publication of Halliday and Hasan's Cohesion in English (1976). With the publication of this book, a refined analysis of cohesion was provided. According to these researchers, coherent texts have two characteristics: cohesion and register. They defined cohesion as a semantic concept referring to "relations of meaning that exist within the text and that define it as a text" (p. 4) and added that cohesion is "the continuity that exists between one part of the text and another" (p. 299). Register is defined as the coherence with a context; that is, it refers to the variety of language which is appropriate for the situation of the speech event. These researchers spoke of the term "texture" for the kind of text property that is commonly referred to as "coherence". They stated that "...there will be certain linguistic features present in that passage which can be identified as contributing to its total unity and giving it texture" (1976, p.2). Thus, they claimed that coherence, or texture, is created by the linguistic features, which implies that there must be some linguistic property of the text that contributes to coherence. They stated that there are two types of cohesion that contribute to this coherence, one being grammatical cohesion and the other being lexical cohesion. Grammatical cohesion is achieved through devices such as reference, substitution, conjunction and ellipses, and lexical cohesion is achieved through such devices as synonyms and collocations.

Shortly after the publication of Halliday and Hasan's book, several other studies began to appear on cohesion. In one of these studies, Witte and Faigley (1981) examined the relationship of coherence, cohesion and writing quality. After the analysis on the essays for cohesive ties that received the highest and the lowest scores in a holistic scoring, researchers noticed that high-rated essays included more cohesive ties and more lexical ties. Therefore, researchers concluded that cohesion analysis in essays "may be potentially useful in distinguishing between stages of writing development" and that cohesion analysis gives some information about the differences between good and poor writing samples of the students (p.199). In another study by McCulley (1985), it was concluded that lexical cohesive features of synonym, hyponym and collocation were influential in the judgements of writing quality and coherence (in Henson, 2001, p. 16).

In addition to the findings related with positive correlation between number of cohesive ties and the writing quality and coherence, there are also studies which demonstrated that the number of cohesive ties used in essays is not a determining factor of the writing quality or coherence in the essay. Henson (2001, p. 17) cites some of these studies. A study by Tierney and Mosenthal in 1981 showed no significant relation between the use of cohesive ties and coherence. Therefore, it was concluded that cohesion analysis is not a predictor of coherence in a text. Similarly, Haswell in 1989 conducted a study on coherence and the conclusion was that using more pronouns, repeating key words or using transitional devices does not necessarily make a text coherent.

Another researcher who strongly disagrees with the idea that use of cohesive ties makes a text coherent is Carrell. She stated that cohesion theory does not take the contributions of the reader into account and thus, fails to account for coherence of a text. She criticizes the view held by Halliday and Hasan that "coherence is created by the linguistic resources of the language" and that if a text is coherent, this is because of certain linguistic features in the text. She holds that cohesion is not the cause of coherence and adds: "..if anything, it is the effect of coherence" (1982, p. 486). Therefore, like many other researchers, Carrell points out the fact that a coherent text will likely be cohesive but that bringing pieces of a text together will not make the text coherent but only cohesive.

Other similar cohesion analysis studies focused on the relation between frequencies of cohesive ties and coherence in a text and the results of these studies have, for the most part, shown that there is little or no correlation between the use of cohesive ties and coherence of a text (Connor, 1984; Connor and Lauer, 1985;

Lindsay, 1983; Neuer, 1987; Pritchard; 1980; Scarcella, 1984 in Frodesen, 1991, p.16).

2.2 Local Coherence versus Global Coherence

The term "coherence" is studied under two general categories: local coherence and global coherence. Local coherence is defined as "(pairwise) relations between sentences of a textual sequence" (van Dijk, 1978). In other words, local coherence refers to the linguistic markers in a text that show the underlying relations in the text. Local coherence is very frequently used to refer to the "micro -structure" of a text. This micro -structure of a text involves the "explicit indicators of relations between concepts and ideas in the text (e.g. connectives, argument overlap, pronominal reference)" (McNamara and Kintsch, 1996, 252). Thus, local coherence is achieved through establishing relations between sentences at the surface level.

On the other hand, global coherence is defined "in terms of (operations on) whole sets of sentences, e.g. for the discourse as a whole" (van Dijk, 1978). In other words, global coherence refers to the underlying relations between the propositions of a text and it is often used to refer to the "macro -structure" of a text. The macro-structure of a text is the global organization of a text and "can be cu ed directly in the text via topic headers and topic sentences" (McNamara and Kintsch, 1996, p.252).

2.3 Linguistic Conceptions of Coherence

The linguistic perspective of coherence is internal to the text. According to the linguistic interpretation of coherence, which can also be referred to as text-based coherence, coherence is defined in terms of the formal properties of the text. Although research in pragmatics and conversational analysis has suggested that "at least some part of coherence is constructed by the reader's interpretive systems regardless of the text structure itself", there is now evidence which indicates that the structure of the text itself contributes to the coherence of the text (e.g. Beck et al., 1991; Britton and Gulgoz, 1991; Martin, 1992; Singer, 1990 in Grabe and Kaplan, 1996, p.61). However, there are several different approaches to coherence as a linguistic feature of the text and these different approaches can be categorized according to the features they focus on in the text that create coherence: textual perspective, pragmatic perspective, communicative perspective, information perspective, cognitive perspective.

2.3.1 Textual Perspective

Linguistic studies of coherence became popular with the publication of Halliday and Hasan's Cohesion in English (1976) since they were the first researchers to present a systematic analysis of cohesion from a textual perspective. According to Halliday and Hasan, cohesion is a semantic concept referring to "relations of meaning that exist within the text and that define it as a text" (p. 4) and they added that cohesion is "the continuity that exists between one part of the text and another" (p. 299). In other words, cohesion occurs if an element in the discourse can be interpreted depending on the interpretation of another element and they argue that cohesion is the factor that makes a text a text distinguishing it from a non-text.

In their study of cohesion, they present a taxonomy of cohesive ties such as reference, substitution, ellipsis, conjunction and lexical cohesion. According to Halliday and Hasan, reference cohesion occurs when one element in a text points to another for its interpretation, as shown in Example 1 with *they*:

1. a. Three blind mice, three blind mice.
   See how *they* run! See how *they* run!

Substitution cohesion occurs when an item is used instead of a particular item to avoid repetition as shown in Example 2 with *one*:

2. a. My axe is too blunt. I must get a sharper *one*.

Ellipsis cohesion occurs when there is substitution by zero. That is, in ellipsis, the reference is to "sentences, clauses, etc whose structure is such as to presuppose some preceding item, which then serves as the source of the missing information" (Halliday and Hasan, 1976, p.143). In the Example 3 below, "brought" is left out in the second clause:

3. John brought some carnations, and Catherine some sweet peas.

Halliday and Hasan categorize conjunctive cohesion into five: additive, adversative, causal, temporal and continuative and the last class of cohesive ties is lexical cohesion which, Halliday and Hasan state, depends on some "patterned occurrence of lexical items" (1976, p.288) and reiteration and collocation of words within the text establish cohesive ties. Reiteration may be of the same word, eg: pie..pie; of a synonym, eg: ape-monkey; or of a superordinate, eg: blackbird..bird. Collocational cohesion can be seen in the following pairs of examples: king..queen, dish..eat.

After Halliday and Hasan, some other researchers also focused on cohesion and coherence from a textual perspective. For instance, Hoey (1991) examined how lexical cohesive features combine to organize a text and according to him, cohesion facilitates coherence. Among the cohesive ties that facilitate coherence is lexical repetition which creates cohesive networks in a text.

Much in the same way, Grabe and Kaplan (1996, p.70) in their discussion of contribution of linguistic features to text coherence argue that although coherence is more than cohesion, with the help of cohesive ties, writers guide the readers to achieve a coherent interpretation of the text. Therefore, linguistic signals and markers of cohesion help to establish a coherent understanding of a text. They reject the contrary idea by saying:

> To assert otherwise would be to argue that the many signaling mechanisms in texts are essentially arbitrary and meaningless bits of convention and stylistic options. The research in cognitive psychology and educational psychology on text comprehension clearly does not support the arbitrariness of structural signaling in text.

Still another study that focuses on coherence from textual perspective is carried out by Fahnestock (1983). Fahnestock holds that coherence in written discourse depends on the semantic and lexical properties present in the text. The semantic relationship between clauses can be established without any transition word, which is a "fundemantal principle of coherence" (p.402) and some of these possible relations that can exist between sentences are sequence, restatement, exemplification, conclusion, similarity, addition, which form the list of relations that show the expected or continuative connections between sentences. Discontinuative relations are often signaled by an explicit transition word "to help a reader across an unexpected synapse or turn in the meaning" (p.406) and some of these are replacement, exception, concession, contrast, and alternation. Fahnestock concludes that explicit linkages are not enough to create coherence in a text but the semantic relation between the sentences should be present.

2.3.2 Pragmatic Perspective

One of the researchers who studied coherence from a pragmatic perspective is Widdowson (1978). According to Widdowson, propositional and illocutionary developments lead to cohesion and coherence in a text and the speaker has to choose sentences appropriate for the context paying attention to what the listener wants to know. Widdowson refers to cohesion as the overt links between propositions whereas he refers to coherence as the relationship between illocutionary acts as in the following example (in Jin, 1998, p.13):

A. What are the police doing?
B. I have just arrived.

Although there is no overt link between the utterances, the dialogue is coherent in the sense that "B's remark can be interpreted as an explanation for his inability to answer A's question" (Jin, 1998, p.13). Therefore, B is performing an illocutionary act.

Widdowson perceives reading as a dialogue between the reader and the writer and successful interaction requires the reader to understand the illocutionary intention of the writer such as persuasion, and suggestion. In other words, writing will be structured to communicate writer's intentions and purposes within certain accepted principles and the reader's task is to understand these intentions and purposes.

Schiffrin (1987) studied coherence from a communicative perspective and claims that a hearer interprets the meaning of a text by using the propositional connections underlying the utterance. Therefore, cohesive devices help the reader to find the meaning underlying the surface utterance. Schiffrin holds (1987, p.22):

> Coherence, then, would depend on a speaker's successful integration of different verbal and nonverbal devices to situate a message in an interpretive frame, and a hearer's corresponding synthetic ability to respond to such cues as a totality in order to interpret that message.

Green (1989) also states that coherence is established through reader's understanding of the writer's cohesive plan. Therefore, the writer acts estimating the beliefs and the inferencing ability of the reader (in Jin, 1998, p.16). In other words, coherence derives from attributing a communicative intention to writing. Therefore, these researchers also made a connection between utterance interpretation and coherence.

According to Sperber and Wilson (1986) coherence is interpreted from a pragmatic perspective in the light of theory of Relevance. This theory emphasizes the fact that human beings seek relevance in texts and if relevance is found, the text is received as coherent. A reader compares the text to the other information and this comparison results in "creation of new information, the contradiction of old information, and/or the confirmation of one's commitment concerning something" (Grabe and Kaplan, 1996, p.68). According to this theory, an assumption is relevant "in a context to the extent that its contextual effects in this context is large" and "in a context to the extent that the effort required to process it in this context is small" (Sperber and Wilson, 1986, p.125).

The following example from Blakemore (2002, p.169) illustrates how a single utterance can be interpreted in different ways:

A: What did Sue say, then?

B: Our train is leaving in thirty seconds.

In this example, B's utterance has two interpretations. Blakemore states that a coherent interpretation is that B is reporting what Sue said and is answering A's question but an incoherent interpretation is also possible in which B is telling A that their train is leaving in thirty seconds and, thus, is not answering A's question. Blakemore raises a question at this point: "What context does B intend the hearer to interpret in?" According to a coherence approach, Blakemore states, the answer is "whatever context yie lds a coherent interpretation", which shows that the first interpretation is possible. However, in natural discourse, the second interpretation is equally possible and acceptable. According to relevance theory, the hearer will choose an interpretation of the utterance that is consistent with the principle of relevance; that is, the hearer will interpret the utterance "in the context that yields an optimally relevant interpretation" (Blakemore, 2002, p. 169) Therefore, the incoherent interpretation of B's ut terance is also relevant because "there are situations in which B's utterance might itself trigger an immediately accessible context which yields cognitive effects which will not be derivable for very much longer: the train will not wait; however A and B can always discuss what Sue said later (for example, on the train)" (Blakemore, 2002, p. 170).

2.3.4 Information Perspective

According to researchers who studied coherence and cohesion as information management process (Grimes, 1975; Lovejoy, 1991 in Jin, 1998, pp.17-20), the speaker has to decide how much of the content the hearer can take in and has to organize information accordingly. The speaker arranges information in units known as "information blocks" (Jin, 1998, p.17). According to Grimes, each information block has a center where new information is presented. For instance, in the following example, words in capital letters (used for words that are intonationally prominent) show the center of information and convey new information:

THIS/ is the FIRST TIME/ we have EVER/ DONE/ anything like this.

In his discussion, Grimes claim that cohesion is the result of grouping of information into larger units and as a result of this grouping, coherence can be achieved (in Jin, 1998, p.18)

Jin exemplifies how information management contributes to coherence by explaining Lovejoy's study of written discourse. In his study, Lovejoy shows (in Jin, 1998, p.18) that applying concepts such as theme-rheme, topic-comment, given-new, marked-unmarked and information focus helps the writer manage information. According to Lovejoy, "theme is the 'point of departure for the presentation of information' " and "rheme 'constitutes the information the writer wishes to impart about the theme' " and topic -comment and given-new work in a similar way. In other words, these concepts are used to describe how clauses are organized to present information.

In a given-new analysis, given is the information that has already been mentioned as illustrated in the following example taken from Grabe and Kaplan (1996, p.50):

> *Most people* realize that *wolves* have to kill deer, moose caribou, elk and other large animals to survive. *The predators* live in family groups called

packs, usually containing 6-12 members, and it takes a lot of meat to feed them. *The* pack is well organized…

"Most people" at the beginning of the first sentence as an indefinite general noun phrase indicates that new information will follow which is not likely to be related to the topic in the first sentence. In the second sentence, "predators" which is signaled by the definite article "the" refers back to "wolves". "Pack" in this sentence is introduced as a new information and then it is defined. In the next sentence, however, "pack" becomes part of the given information sign aled by the definite article "the".

Many of the studies on topic development and topical relations are based on the Prague School's theory of Functional Sentence Perspective (FSP), initially developed by Mathesius (1928) and later by Firbas (1964, 1974, 1986) (in Frodesen, 1991, p.18). Vande Kopple (in Grabe and Kaplan, 1996, p.49) describes the orientation of the people who developed this theory as follows:

> As their name indicates, Functional Sentence Perspectivists take a functional approach to language. … They … investigate what language does, how people use it in various ways to achieve various purposes. Thus, their focus is primarily on connected texts, not on isolated or randomly connected sentences, since people rarely use the latter for communicative purposes. And in much of their work they proceed by examining the relationships between the structure and the meaning of a text, the extralinguistic situation the text exists in and for, the communicative function the text apparently has, and the writer's or speaker's apparent assumptions about the state of his or her addressee's motivation, knowledge and consciousness.

According to this theory, "each meaningful utterance springs from a topic which serves as the point of departure for the discussion" and these topics are developed in such a way that they are linked to the general message of the text (Waleign, 1996, p.21). This theory studies the cohesive ties syntactically and semantically and the function of these cohesive devices in the discourse. This theory divides the sentence into two parts: theme, which is defined as what the speaker is talking about and rheme which is defined as what is being said about the theme. Firbas (in Frodesen, 1991, p.18) states that theme presents old information and new information, rheme, is conveyed through the theme. In addition, while theme does not have a strong communicative function, rheme advances the communication.

Based on the principles of FSP, another type of analysis was developed by Lautamatti (1978) in an attempt to describe coherence. This type of analysis was called Topical Structure Analysis (TSA). TSA attempts to examine the development of discourse topics through sequences of subtopics that are ordered hierarchically. According to Lautamatti, subtopics can be ordered in different ways such as parallel progression, sequential progression and extended parallel progression. Parallel progression occurs when the theme of a sentence is the same as the theme of the preceding sentence. Sequential progression refers to the progression where the theme of a sentence is the same as the rheme of the preceding sentence. Extended parallel progression, on the other hand, occurs when a parallel progression is interrupted by a sequential progression (in Frodesen, 1991, p.22). Lautamatti applies her analyses to written discourse and she shows that "certain patterns of topical progression may be more readable than others". For instance, texts with "fewer competing subtopics, fewer complex sequential progression (A-B, B-C, C-D) and more series of parallel topic progressions (A-B, A-C, A-D) appear to be more readable" (Lautamatti in Grabe and Kaplan, 1996, p.52).

TSA was used by many researchers to analyze texts and to identify coherence problems in the essays. Witte, in one of his studies, indicates that whereas lower ranked essays did not provide appropriate and enough given information and forced the reader to make many inferences, higher ranked essays have a greater proportion of parallel topics. Some other studies show that higher rated essays have more sequential topics (Schneider and Connor in Frodesen, 1991, p.23). As there have been different results, these researchers recommend further studies on different kinds of progressions.

2.3.5 Cognitive Perspective

Two of the researchers who studied coherence from a cognitive perspective are Gernsbacher (1990) and Givon (1995). According to these researchers, text comprehension is achieved through "structural mental representation of the text" (Givon, 1995, p.64). Givon takes coherence as grounding and claims that a "mentally-represented text has some sequential-hierarchic network structure". Therefore, one should have some nodes in the network of mental text and these nodes should be connected to some other nodes within the mental text-structure. If the node has more connections, it becomes easier to access that node. This connectivity or grounding in the mentally represented text has two directions: anaphoric and cataphoric. Anaphoric grounding occurs when new information is connected to some existing mental representation of the text or of other mental entities. On the other hand, cataphoric grounding involves "clues the speaker gives the hearer at a particular point in the discourse as to how to ground it vis-à-vis the following discourse, particularly in terms of thematic/topic importance" (Givon in Jin, 1998, p.21). The following examples illustrate two types of grounding:

a. The man I told you about is not here yet.
b. The man, who had no shoes on, came into our office.
c. A man who had no shoes on came into our office.

When the speaker utters the example (a), s/he assumes that the event in the relative clause is mentally accessible to the hearer because the proposition in the relative clause is shared by the speaker and the hearer. Moreover, Givon states that this mentally activated event anaphorically tracks the head noun referent and limits its domain of reference for the hearer. However, the use of non-restrictive relative clause in example (b) gives some parenthetical information rather than conveying any shared proposition or limiting the domain of reference of the head noun "the man". In example (c), there is a restrictive relative clause with an indefinite head noun "a man". Therefore, the relative clause function s as a descriptive clause introducing new information. In both examples (b) and (c), the head nouns are cataphorically tied to the relative clause. In oder to develop a coherent conversation, the speaker has to use anaphoric and cataphoric grounding.

Much in the same way, Fox and Thompson (in Jin, 1998, p.27) study English relative clauses in terms of the syntactic roles of the head noun and the relative clause. They found out that when nonhuman subject heads occur with relative clauses where the head noun functions as the object in the relative clause, there is an anaphoric grounding function of the relative clause. However, when object heads occur with relative clauses where the head noun in the relative clause functions as the subject in the relative clause, relative clause only performs a characterizing function (cataphoric grounding). The examples below illustrate these functions (Jin, 1998, p.23):

a. The car that she borrowed had a low tire.

b. He's got a spring that comes way up.

The function of the relative clause in example (a) is anaphoric grounding. The subject head (the car) functions as the object of the relative clause. However, the function of the relative clause in example (b) is cataphoric grounding because the relative clause has a descriptive function and the object of the sentence is the subject of the relative clause.

Similarly, Chafe (in Jin, 1998, p.25) focuses on the importance of cognitive perspective to coherence and states that coherence is achieved through smooth flow of information from the speaker to the listener. According to Chafe, this information flow takes place if active information in both the speaker's and the listener's minds is shared by both sides and if new and semiactive information in the listener's consciousness is acti vated. Therefore, Chafe claims that coherence can be achieved through information flow from given to new and through the development of topics and subtopics.

Another viewpoint to explain discourse coherence from a cognitive perspective is about what Sanders and Noordman calls "coherence relations" (2000). They maintain that according to many theories of discourse coherence, coherence relations explain the coherence in cognitive text processing (Hobbs, 1979; Mann and Thompson, 1986; Sanders, Spooren and Noordman, 1992, 1993 in Sanders and Noordman, 2000, p.38). Coherence relations, according to Sanders and Noordman, are "meaning relations that connect two text segments" and some examples for these relations are cause-consequence, list and problem-solution. Moreover, these relations can be made explicit with the use of linguistic markers. In their study on coherence relations and linguistic markers, Sanders and Noordman investigate whether the type of coherence relation has any role on text processing and whether linguistic marking of these relations influences processing. The results of this study indicate that problem-solution relations rather than any other type of relation have positive effects on text processing as there was faster processing and better recall of this type of relations. Moreover, they found that linguistic markers like connectives and signaling phrases guide the reader toward a coherent text representation.

2.4 Non-linguistic Conceptions of Coherence

While the linguistic or textual properties of texts contribute to coherence in the written discourse, there are many researchers who have been increasingly concerned with non-linguistic elements that contribute to coherence. In this view, coherence is perceived as not a text-bound feature but as a feature that is achieved through some non-linguistic elements outside the written discourse. Non-linguistic conceptions of coherence can be examined from the perspective of reader and writer relationship.

2.4.1 The Writer and the Reader

Traxler and Gernsbacher (1995, pp.215-237) argue that writers also negotiate for coherence. They state that writers often fail to convey their intended messages. One way to achieve successful communication in written discourse for the writers is to form mental representations of the ideas the writer wants to convey, of the text as it is written and of the their readers as they will build from the text. The writers must compare their own mental representations of the ideas they want to convey and the reader's representations from the text. If these two representations do not match, the writer must revise the text until they match.

Traxler and Gernbacher suggest that when writers build mental representations of how the reader will interpret the text, they can use some sources such as readers' world knowledge, linguistic conventions in that culture (how language works) and readers' "intellectual sophistication" (p.219). In that way, it will be easier for the writer to create a coherent text for the reader, which is a similar approach to Relevance Theory because in this theory, it is by building the mental representation of the hearer that the speaker can optimize the contextual effects of the utterance.

Similarly, Rosenblatt (in Frodesen, 1991, p.30) is concerned with reader and writer interactions and characterizes this interaction as "transactions" which emphasizes the idea that each participant involved in the process "conditions and is conditioned by the others". According to Rosenblatt, the writer constantly transacts with the environment which the reader is a part of. Moreover, the writer has two roles in the text production. First, the writer evaluates the text in terms of its matching his/her intentions in creating the text. In addition to this, the writer must consider the text through the eyes of the reader so that the reader can interpret the text appropriately being aware of the writer's intentions. That is, the reader must try to infer the writer's intentions. However, since the writer and the reader transact through the text, there may sometimes occur mismatches between the writer's intentions and the reader's interpretations, which causes the reader to evaluate the text as incoherent.

Another researcher who emphasizes the role of the writer and the reader in creating coherence is Nystrand (in Frodesen, 1991, p.31). According to Nystrand both the writer and the reader contribute to the meaning of the text:

> Writers gauge their intentions in terms of the expectations of their readers, and readers measure their understanding in terms of the writer's intentions. Communication between writers and readers requires that the text they share configure and mediate these respective interests and expectations. This requirement means that the skilled writer's choices and options at any point in the composing process are determined not just by what the writer wants to say

> but also by what the text has to do and, in turn, by what the reader may reasonably expect the text to do…
>
> (in Frodesen, 1991, pp.31-32)

Much in the same way, some other studies also emphasize the importance of the writer's forming a mental representation of the reader's interpretation of the text (Booth, 1970; Kroll, 1978; Sommers, 1980; Pfister and Petrik, 1980; Berkenkotter, 1981; Ede, 1984; Hayes and Flower, 1986; Gage, 1986 in Gernsbacher and Givon, 1995). All of these studies have argued that writers must consider their audiences to communicate effectively. The assumptions these studies have relate very much to the principles of process approach to writing because in this approach, particularly in the revising and rewriting stages, the writer has to consider how the reader will be affected by what the writer says.

2.4.2 Schema Theory

According to some researchers, a text becomes meaningful when a reader interacts with the text. That is, 'the reader creates the text during the interpretive process" (Frodesen, 1991, p.28). In the interactive approach to reading, coherence is reader-centered. A text is coherent if there is a successful interaction between the information presented in the text and reader's schemata or stored knowledge concerning the text structure and the information presented. Schemata is defined by Celce-Murcia and Olshtain (2000, p.126) as 'frames of reference that readers possess, structures of the world and of reality in the readers' minds, which enable them to develop scenarios to be projected onto the events predicted as part of the interpretation process". If the reader's schema matches the text, the text is found to be meaningful, easy to interpret and, therefore, coherent. In other words, coherence in the text depends on the match between the reader's schemata of context and form with the schemata presented by the writer in the text.

Among other researchers who focused on the role of the reader are Dehn and Schank (1982), Bamberg (1983), Brown and Yule (1983), and Carrell (1988) (in Lee, 2002, pp.137-138). These researchers also maintain that readers employ their knowledge of the world (content schemata) and knowledge of text structures (formal schemata) to create meaning out of the text. The reader's schemata help the reader predict the coming information in written discourse, which enables the reader to "organize the text into an understandable and coherent whole" (Bamberg, 1983, p.419). Similarly, Brown and Yule argue that the reader looks for similarities between the message the text is giving and his/her knowledge of the content and that s/he makes connections (1985, p.65).

2.4.2.1 Content Schemata

A reader's interpretation of a text as coherent depends on how much s/he knows about the content of the text. McCarthy (1991, p.26) provides the example sentence "Carol loves potatoes. She was born in Ireland" and states that this example may be incoherent to a reader who does not share the "stereotype ethnic association between being Irish and loving potatoes".

Similarly, in their study on content schemata, Kintsch and McNamara (1996) concluded that readers who know little about the subject matter in a text do not find the text coherent. Moreover, readers who have relevant background information on the subject matter find a text coherent even if the text does not have textual coherence. A similar conclusion was drawn from another study conducted by Boscolo and Mason in 2000 (in Konyalı, 2003, p.25). The results of their study indicate that if the readers have high knowledge of the content of the text and if they are interested in the topic, they have more tendency to find a text coherent than those who lack adequate background knowledge and interest in the subject matter.

2.4.2.2 Formal Schemata

In order a reader to construct a coherent representation of a text, the rhetorical structures of the discourse community the text belongs to should be familiar to the reader. That is, the reader, with his/her rhetorical knowledge of the text, needs to recognize the organization of discourse to find the text coherent. Connor (1996) claims that a reader may find a text incoherent if the rhetorical organization of the text is not familiar to him/her because of cultural differences. For instance, a reader who is not familiar with the rhetorical structure of a particular type of genre such as a narrative, an academic research report or an argumentative essay in an academic writing course in a culture, s/he will find the text incoherent as the rhetorical structure of the same genre in his/her schemata does not match with the one in the other culture.

However, there are many other studies which indicate that even in the same discourse community, there are different expectations of rhetorical organization of texts (Brown, 1991; Hewings and Hewings, 2001; Leki, 2001 in Konyalı, 2003, p.26). The results of such studies have led researchers to develop a genre-based approach to coherence, which emphasizes the knowledge of rhetorical conventions required in different genres to interpret a text as coherent.

Since the analysis of the essays in this study is done on coherent and incoherent texts, it is crucial to define coherence in more concrete terms for the study as Grabe and Kaplan (1996, p.76) stated, "defining the concept of coherence in some manageable way seems to be crucial to any understanding of how texts are constructed". Based on the literature review, the study focuses more on text-based coherence and coherence is perceived to be different than cohesion, though coherent texts might also be cohesive and cohesion will help a text be coherent. In addition, this kind of a text-based approach does not necessarily ignore the reader because many of the coherence features guide the writer to the needs of the reader and to the features of a text that will make the meaning more explicit, clear and reader-friendly. Therefore, for the purposes of the present study, the list of features compiled by Lee (2002) after a literature review is considered to be the most comprehensive definition of coherence. According to this definition, coherence includes the following five features:

1. A macrostructure (an outline of the main categories or functions of the text) that provides a pattern characteristic and appropriate to its communicative purpose (Hoey 1983; Martin and Rothery 1986): This macrostructure refers to the overall structure of a text and helps readers and writers understand how sentences are related to each other and how they contribute to the overall coherence.
2. An information structure that guides the reader in understanding how information is organized and how the topic is developed (Danes 1974; Firbas 1986): This information structure involves the principle of giving old information before the new.
3. Connectivity of the underlying content evidenced by relations between propositions (Kintsch and van Dijk 1978; van Dijk 1980): Coherence is established through the relationships between propositions (assertions). That is, propositions need to be supported and developed.
4. Connectivity of the surface text evidenced by the presence of cohesive devices (Halliday and Hasan 1976; Liu 2000).
5. Appropriate metadiscourse features (Crismore, Markkahen, and Steffensen 1993; Vande Kopple 1985): Metadiscourse markers such as attitude markers (Undoubtedly, surprisingly), direct address to the reader (you may not agree…), reminders (as noted earlier…), hedges (can, may), sequencers (firstly, secondl y) and illocution markers (to give an example…, the question is…) help readers organize, classify, interpret, evaluate and react to the information or proposition.

2.5 Gricean Pragmatics

Human communication is based on the idea that human beings want to communicate with each other successfully and most exchanges seem to be cooperative efforts. On this premise, Grice (1975), a philosopher, developed a model called Cooperative Principle, which human beings follow to ensure successful communication. Grice points out that talk exchanges human beings are involved in do not have disconnected remarks and that everyone can recognize "a common purpose or set of purposes or at least a mutually accepted direction" in these remarks (1975, p.45). Within these remarks or cooperative efforts, participants are expected to observe a general principle which maintains the following rule:

> Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged (p.45)

Grice further describes four categories of maxims, some of which have more specific submaxims and he calls these categories Quantity, Quality, Relation and Manner. The following is a description of these maxims in more detail:

Quantity

This maxim relates to the quantity of information provided and the following are the maxims that fall under it:

1. Make your contribution as informative as is required (for the current purposes of exchange).
2. Do not make your contribution more informative than is required.

The sides of the communicative exchange expect that the contribution of one side is quantitatively right for the current interaction. More is too much and less is too little for a successful communication (Celce-Murcia and Olshtain, 2000, p.22).

Quality

This maxim relates to the truthfulness of the information provided. Under it is the following maxims:

1. Do not say what you believe to be false.
2. Do not say that for which you lack adequate evidence.

According to this maxim, participants are expected to provide information they believe to be true and they are expected to avoid providing false information as well as the information which does not have any evidence.

Relation

This maxim is related with the relevancy of the information provided and it has a single maxim under it:

1. Be relevant.

The participants are expected to make a contribution to communication that is relevant to the topic at hand and to the situation of the exchange.

Manner

This maxim relates to 'how what is said is to be said" rather than what is actually said (Grice, 1975, p.46) and there are four maxims under it:

1. Avoid obscurity of expression.
2. Avoid ambiguity.
3. Be brief (avoid unnecessary prolixity).
4. Be orderly.

The participants are expected to make a contribution which is clear and comprehensible, avoiding unnecessary repetitions.

In short, these maxims specify what the participants do to carry out the communication 'in a maximally efficient, rational, co-operative way". That is, each participant should contribute to the exchange providing sufficient information sincerely, relevantly and clearly (Levinson, 1983, p.102). However, there are some objections to this view of communication. As Levinson cites, some people argue that this view does not account for everyday communicative exchanges because not everyone speaks like that the whole time. However, Levinson states that in most kinds of everyday talks, "these principles are oriented to , such that when talk does not proceed according to their specifications, hearers assume that, contrary to appearances, the principles are nevertheless being adhered to at some deeper level" (1983, p.102). That is why an exchange as the following example illustrates can still be interpreted in a meaningful way:

A: Where is Bill?

B: There is a yellow VW outside Sue's house.

Since B's utterance seems to fail to answer A's question, it seems to violate maxims of Quantity and Relevance. If it did so, we would interpret it as a non-cooperative response. However, it is clear that the utterance is co-operative at some deeper level and we know this by assuming that B is adhering to the principles of cooperation. Thus, if Bill has a yellow VW, we can interpret the utterance to imply that Bill may be in Sue's house . Levinson holds that this is how one should understand Grice's Co -operative Principle and its maxims.

Another point Levinson attracts attention to is the fact that Gricean maxims "govern aspects of non -linguistic behavior too" as well as aspects of conversational behavior (1983, p.103). The following citation from Levinson illustrates how people adhere to maxims in their non-linguistic behavior:

> Consider, for example, a situation in which A and B are fixing a car. If the maxim of Quality is interpreted as the injunction to produce non-spurious or sincere acts .., B would fail to comply with this if, when asked for brake fluid, he knowingly passes A the oil.... Similarly, A would fail to observe the maxim of Quantity, the injunction to make one's contributi on in the right proportion, if, when B needs three bolts, he purposely passes him only one .... Likewise with Relevance: if B wants three bolts, he wants them now, not half an hour later. Finally, B would fail to comply with the maxim of Manner, enjoining clarity of purpose, if, when A needs a bolt of size 8, B passes him the bolt in a box that usually contains bolts of 8size 10.

Grice argues that a participant in an exchange may fail to fulfill a maxim in various ways such as violating, opting out, facing a clash and flouting. The following is how Grice explains the ways a participant may fail to follow the maxims (1975, p.49):

1. The participant may "quietly and unostentatiously violate a maxim". In other words, the participant does not observe a maxim intentionally for some purposes.
2. The participant may opt out of observing a maxim by indicating unwillingness to cooperate. That is, the participant does not want to contribute to the exchange the way the maxim requires.
3. The participant may be faced by a clash. For instance, the participant may be unable to observe a maxim without violating another maxim. Grice exemplifies this by saying that the participant is not able to be as informative as is required without violating the maxim that requires having adequate evidence for what one says.
4. The participant may flout a maxim. That is, the participant blatantly fails to observe a maxim with the deliberate intention of generating an implicature.

2.5.1 Cooperative Principle and Coherence in Writing

Grice's Cooperative Principle has long been discussed for talk exchanges and very few studies have analyzed written discourse from the perspective of Cooperative Principle. However, this is an approach with the potential to provide new insights into analysis of coherence in written discourse because what Grice is proposing is in fact a way for speakers to make their utterances comprehensible/coherent for the hearer. This approach is based on the assumption that written discourse is a result of the attempt to produce sequence of sentences in accordance to the maxims described by Grice. Therefore, in the written discourse, each sentence is intended to say "something necessary, true and relevant to accomplishing some objective in which (it is mutually believed) the text producer and the intended audience are mutually interested" (Green, 1989, p.103).

One of the researchers who examined the contribution of Cooperative Principle to coherence in written discourse is Green. In this approach to written discourse, coherence is perceived from the perspective of the reader as well as the text and the text producer because coherence also depends on the "extent to which effort is required to construct a reasonable plan to attribute to the text producer in producing the text. This, in turn, depends on how hard or easy it is to take each sentence as representing a true, necessary, and relevant contribution to that plan" (Green, 1989, p.103). In other words, coherence is not achieved solely through easily inferable connections between sentences.

Green states that one consequence of Grice's principle and in particular Relation maxim, that Grice never discussed is the basis it provides for an account of coherence problems of texts. Green holds that some linguistic properties that connect sentences in a text may be present but that these linguistic properties do not necessarily make a text coherent. Green further exemplifies his point with two texts:

a. Suddenly Mrs. Reilly remembered the horrible night that she and Mr. Reilly had gone to the Prystania to see Clark Gable and Jean Harlow in *Red Dust*. In the heat and confusion that had followed their return home, nice Mr. Reilly had tried one of his indirect approaches, and Ignatius was conceived. Poor Mr. Reilly. He had never gone to another movie as long as he lived [John Kennedy Toole, A Confederacy of Dunces, p.103. New York:Grove Press, 1982]

b. Suddenly Mrs. Reilly remembered the horrible night that she and Mr. Reilly had gone to the Prystania to see Clark Gable and Jean Harlow in *Red Dust*. It was horrible because it resulted in Ignatius being conceived. It happened like this. They had gone home after the show. Mr. Reilly had tried to have intercourse with Mrs. Reilly. This had caused heat and confusion. In the heat and confusion that had followed their return home, nice Mr. Reilly had tried one of his indirect approaches to her. He succeeded, and Ignatius was conceived. Poor Mr. Reilly. He so regretted conceiving Ignatius that he was afraid to go to the movies again because he feared that if he went to the movies he might get carried away by passion. He feared that if he got carried away by passion, he might father another child and suffer as he did with Ignatius. Consequently he had never gone to another movie as long as he lived.

In text (a), the reader has to make inferences in order to get a meaningful picture of the text. For instance, the reader has to infer what was horrible about the night and what the relation between this horribleness and Ignatius' being conceived is. Similarly, the reader has to make inferences about who and what Mr. Reilly approached or why he did not ever go to another movie. In text (b), some of these inferences are made. However, it does not turn out to be an easier text to understand or a better writing. The reader assumes that the writer is abiding by the Cooperative Principle and, therefore, everything the writer says has to be relevant, necessary and true. However, the reader encounters some other questions on this assumption. For instance, Green (p.105) asks some of these questions in his discussion of the second text: "Is it noteworthy that the Reillys had gone home after the show? Should they be expected to go elsewhere? Noteworthy that Mr. Reilly succeeded in achieving intercourse? Didn't he usually? Noteworthy that Ignatius' existence was regrettable?" After these questions the reader encounters, Green concludes that spelling out the connections between sentences distracts the reader's attention rather than making the text more coherent.

Much in the same way, Celce-Murcia and Olshtain (2000) argue that in written discourse production, these maxims are of great help particularly during revision and editing and they explain how each maxim can be adapted for written discourse as the following list illustrates:

1. The maxim of Quantity requires that the writer carefully consider the amount of information that should be imparted in the text or, in other

words, what content elaboration might be necessary. This is an important feature of an effective text in terms of written communication.

2. The maxim of Quality requires the writer to provide support and justification for his/her position in order to render the text accurate and give it truth-value. Particularly in academic writing, providing justification and evidence is important and this is often accomplished through citing references.
3. The maxim of Relation requires the writer to create a text that makes sense within the potential context in which it will be read.
4. The maxim of Manner requires bottom-up techniques to make the text unambiguous, to make it clear in terms of its linguistic forms and sentence structure as well as clear in the physical shape or format in which it is presented, so that form and content are compatible and processing made possible.

As the list of features adopted in this study that describe coherence illustrates, coherence in writing is not achieved through cohesion only but there are other very important features of a text that make it coherent such as the macrostructure, information structure, connectivity of the content and the metadiscourse features. These coherence features relate to Grice's Co-operative Principle. Gricean maxims have been often used in spoken communication. However, this does not mean that they cannot be used in writing. Indeed, writing is another form of communication and violating these maxims in writing may cause problems in communicating or getting the meaning out of a particular text because as Grabe and Kaplan (1996, p.41) state, writing is also "structured to communicate information within certain accepted principles" which may include Gricean maxims.

2.5.2 Criticisms to Grice's Co-operative Principle

As there are researchers who support Grice's Co -operative Principle, there are also those who debate the usefulness of this principle whose names Lindblom (2001, p.1607) lists. Among the most commonly cited criticisms against Grice's Co-operative Principle is that some maxims, particularly Quantity maxim, are not universal and do not play a role in how people understand each other in some cultures (Keenan, 1976). However, as Celce-Murcia and Olshtain (2000, p.24) maintain, though their interpretation might be different in different cultures, the four maxims apply to all cultures. For instance, being informative may sound inappropriate in some cultures but people in a particular culture would still share some expectations about the appropriateness of the amount of information to be provided. Moreover, this criticism is not a very relevant one for this study since this study focuses on academic writing rather than conversations and the analysis was carried out on the essays written by Turkish learners of English adhering to some academic writing conventions.

Another criticism to the Cooperative Principle is related with the 'intentionality" as raised by Strawson (in Mooney, 2003, p.900). Strawson claims that Grice explains utterer's meaning in terms of what the utterer intends to mean. However, the real meaning lies behind some underlying mechanisms related with human psychology. Similarly, Sperber and Wilson (1986, p.32) claim that Grice gives a very poor account of communication since he does not consider some 'underlying mechanisms rooted in human psychology, which explain how humans communicate with one another". According to these researchers, Grice's assumption is that the speaker utters a sentence which may have several meanings and the hearer can eliminate the meanings which are not compatible with the assumption that the speaker is adhering to the cooperative principle. Thus, the hearer will be left with one meaning only which s/he will receive as the one the speaker intends to mean. What the speaker intends to mean generates what Grice calls 'implicature".

An implicature is generated during conversation when there is a difference between what is said and what is meant and an implicature can be generated from nonfulfillments of the maxims. This "borderline between what is said and what is implicated" has been criticised by relevance theorists such as Sperber and Wilson who claim that Grice's theory explains how utterances are interpreted (Saul, 2002). However, Saul states that Grice's main goal was to develop a theory based on "speaker intentions", thus, examining what is said by a sentence. Therefore, he states, Grice looks at "what speakers in general mean when they use that (the one they use) sentence" rather than providing an explanation for the utterance interpretation process (p.349). Moreover, Wimsatt and Breardsley also note that the only way to find intentionality is to look at the words of the speaker (in Mooney, 2003) since what the speaker intends to mean is conveyed through his/her words. Mooney goes on to assert that if the speaker has realized his/her intention, there is no need to examine anything outside the text and if the speaker is not successful, "there is simply no record of the intention, no way of establishing exactly what it is" and Mooney clarifies this with an example:

> Consider I intend to insult someone. If they are not insulted, my intention has not been realized. There are two possibilities here in terms of retrieval of intention. It may be possible to see in my utterance a potential insult (that the particular recipient failed to note); but it also should be possible to see how the recipient failed to notice it. ... What matters is not my intention to insult, but whether or how an insult is present in my utterance.

Therefore, Mooney concludes, intentionality is a textual concept. In other words, it is constructed textually because the only way to examine a speaker's intention is to look at the words s/he uses.

In his discussion on maxim violation, Mooney distinguishes two types of violations: successful and unsuccessful violations. He states that if the violation (e.g. a lie) is successful, "that is, if it is completely quiet and unostentatious, the hearer will not detect the violation" and a successful violation do not generate implications but an unsuccessful violation does. An unsuccessful violation generates implications such as information about the speaker's personality, or state of knowledge, rather than implicatures. Mooney states that there is a social implication where there is an exploitation or nonfullfillment of maxims.

Mooney's point very well describes why criticisms of Gricean maxims in terms of intentionality and implicature are not applicable particularly in written discourse in the present study. The only way for a reader to interpret what the writer intends to mean is to examine what s/he conveys through the words in the text. Moreover, particularly for the present study, during the analysis for maxim violation, implicatures do not have any role in the analysis. If there are implicatures successfully done by the writers, a case which does not apply to the essays analyzed in the study, there is no problem since these implicatures do not cause any unintentional maxim violation. That is, the fact that there are successful implicatures does not change the result of the study. If there are instances when the writers unintentionally have implied some meanings which result in unsuccessful implicatures, they are regarded as maxim violations. Moreover, unsuccessful violations of maxims, as Mooney states, create some implications for the students such as lack of proficiency in the language or lack of appropriate writing skills. When the essays used in the study are examined, it is clear that violations in the data are unintentional and not for communicative purposes to generate implicatures (see sample essays in Chapter III).

2.5.3 Other Studies on Writing that Adapted Gricean Maxims

There are very few studies that adapted Gricean maxims in writing. One of these studies was carried out by Aziz Khalil in 1989 who studied cohesion and coherence in Arab EFL college students' writing. Khalil analyzed 20 one-paragraph compositions in terms of cohesion by using Halliday and Hasan's model and in terms of coherence by using Gricean maxims. However, this study does not question whether Gricean maxims can be used as a tool for analyzing coherence in writing. Instead, in the study, a very short evaluation sheet with only three questions based on the maxims is developed to guide the raters in their analysis of coherence. Therefore, Gricean maxims are used as a tool for analysis of coherence but the applicability of this tool in the analysis for coherence is not questioned. Moreover, the Quality Maxim is excluded from the study because, the researcher says, this Maxim "does not apply to the topic [what they had learned inside and outside of class during their first semester at the university] written about by the students" (p. 362). However, in an academic writing, particularly in argumentative type of writing, the submaxims of Quality maxim have to be adhered to by the students. Otherwise, the writer will lose credibility. Therefore, an analysis of the essays for the violation of Quality maxim is needed to judge whether this maxim, as well as the other maxims, has a role in the quality of the essays.

Another study is carried out by LaFond (2000) who argues that inexperienced writers tend to flout the Quality maxim and as a result of this, they cannot fulfill the maxims of Quantity, Relevance and Manner. That is, flouting of the Quality maxim affects the fulfillment of other maxims because when the Quality maxim is violated, adhering to other maxims becomes difficult for the students. In this study, freshman students at the University of South Carolina were asked to write spontaneous essays on the topic of 'The night I saw the movie, Titanic". Half of the students had seen the movie before but half of them had not. Therefore, half of the students would be telling the truth but half of them would be deceiving. When the two groups of essays were examined, non-factual essays had more Manner, Relevance and Quantity maxim violations than the truthtelling essays and if the truthtelling and falsifying essays violated two or more of the maxims of Relevance, Quality and Manner, these essays were regarded as "falsifications" but they were "regarded as facual if they contained less than two types of maxim violations in them" (p.12). The study, therefore, showed that violation of Manner, Relevance and Quantity maxims has a direct role in readers' judgements of adherence to the Quality maxim. However, this study, like the previous one, does not question the applicability of the maxims as a tool for coherence analysis and does not analyze coherence in writing through Gricean maxims. Moreover, the study did not involve academic essays.

A more recent study which adapted Gricean maxims in writing was carried out by Ron White (2001). In this study White used these maxims to analyze how a letter written by a student is received by lay readers. The letter was a reply to a complaint and the researcher aimed to find out how lay readers respond to the letter by asking them to comment on the writer's aim, her success in achieving this aim and what they thought about the amount written. Therefore, this study did not focus on academic essay writing and the readers' responses were related with the violation of Quantity Maxim only. In addition, the study, similar to the previous study, did not question whether Gricean maxims can be used as a tool to analyze coherence in writing.

More studies in the field of coherence in writing need to be carried out because, as review of literature on coherence shows, although there are studies done in this field, many of these studies focus on one aspect of coherence neglecting the other side and ignoring or rejecting the findings of other studies. Therefore, there is always a need to conduct further studies to understand the nature of coherence and to develop new ways to help students achieve coherence in writing which have new insights and implications for pedagogical practices. This study is an attempt to reach a better understanding of coherence suggesting a more comprehensive application of Gricean maxims for analyzing coherence in student essays.

CHAPTER III

METHOD OF RESEARCH

3.0 Presentation

In this chapter, first the research questions which the present study aims to answer are presented. Second, the research setting is explained referring to the institution where the study is carried out and the raters who analyzed the student essays. Next, the research design of the study is described by explaining the data collection procedure. Following this, the data analysis process is explained together with the procedure followed in two stages of analysis and in the statistical analysis part of the study.

3.1. Research Questions

This study aims to answer the following questions:

1. Is there a correlation between teachers' judgments of coherence in students' essays and adherence to Gricean maxims in the essays?
2. If there is a correlation, what kind of a correlation is there between teachers' judgments of coherence in students' essays and adherence to Gricean maxims in the essays?
3. Is there a dominance of a maxim that contributes most to the correlation between teachers' judgments of coherence in students' es says and adherence to Gricean maxims in the essays?
4. Can Grice's Co -operative Principle and its associated maxims be used to analyze coherence in students' argumentative essays?

3.2 Research Setting

3.2.1 Institutional Setting

The essays analyzed in this study were written by freshman students from both social sciences and engineering departments in the 2002-2003 Spring semester for the requirements of Development of Reading and Writing Skills II (Eng 102) course offered by the Department of Modern Languages (DML).

Before students are allowed to study at their own departments at METU, they have to take a proficiency exam and those who get a grade of 74.5 and above are exempted from two compulsory English courses they would need to take while they are studying at their departments in the first year. However, although those who get a grade between 59.5 and 74 are allowed to study at their own departments, they need to take two compulsory English courses one of which is the Eng 102 course offered by DML during their first year of study at the university.

In Eng 102, the overall aim is to develop and reinforce students' academic writing skills in the different methods of development in academic writing. The emphasis is on student autonomy, research skills and synthesizing ability and the ability to evaluate, and analyze written discourse is highlighted. Students learn the discourse patterns and structures to be used in different essay types and documentation in writing is emphasized. Therefore, main focus is on teaching academic writing skills which students need to acquire for their departmental studies and for their future academic lives.

In this course, students are required to write three types of essays, namely expository, argumentative and reaction essay in addition to taking one midterm and a final exam. For each essay they are required to write, students need to do pre-reading tasks, they are provided with the related input for writing the particular type of essay, they are expected to write essays based on the ideas they are exposed to in the reading selections in the course book and they are asked to do research on the topic they are going to write about.

As with other types of essays, students are required to follow certain discourse patterns for their argumentative essays. In many of the textbooks for writing, conventions of argumentative type of writing are mentioned (e.g. Heffernan and Lincoln, 1982; Axelrod and Cooper, 1991). According to these conventions, basic elements of an argumentative writing are making claims, supporting these claims by giving evidence, avoiding fallacies, acknowledging and refuting the counter arguments. Therefore, students in Eng 102 are taught to write an argumentative thesis statement following an adequately developed and appropriate introduction paragraph, some pro-argument paragraphs in which they have to have a controlling idea with relevant, adequate and effective majors and minors to support this controlling idea, a part in which they introduce the counter arguments against their thesis statements and refutation for these arguments with relevant, adequate and effective supports or evidence, and a conclusion paragraph.

Since documentation is an important part of academic writing, while students are writing their essays, they are required to integrate relevant citations from outside sources to make their arguments effective and reliable, or sometimes to introduce their counter arguments. As they use these citations, they are asked to make smooth integrations into their essays by using the correct APA format for references.

As for the actual production of each essay, students follow a process approach to writing for their argumentative essays. First, they are asked to form their outlines which have to be approved by the instructor. Then, they write their rough drafts in class with their sources, which is followed by peer-editing and self-editing processes. Later, by using their peers' feedback, students write their final drafts and submit all the related materials they have produced in the process of writing with their final drafts to be graded.

As far as grading is concerned, instructors grade student essays by using a checklist prepared by the syllabus committee for each type of essay since there is a need for standardization of grading as there are many instructors teaching the same course. The following list shows the criteria in the checklist for argumentative essay:

Introduction:

- The essay has an introductory paragraph that goes from general to specific. It includes clear, relevant, adequate and interesting background information.
- The introduction moves smoothly and logically into the thesis statement.
- The introduction includes an argumentative thesis statement which is specific and clear and which builds an expectation in the reader.

Body paragraphs:

For type A & B (pro arguments + counter and refutation paragraph)

- Each pro argument paragraph has a clear and relevant topic sentence.
- Each pro argument paragraph explains the controlling idea of the essay with an adequate number of accurate, mature and relevant major and minor supports.
- The counter argument has been introduced effectively using an appropriate structure.
- Each reason of the opponent is refuted effectively.
- All the ideas in the body paragraphs support the main idea of the essay. Coherence within and across paragraphs has been maintained through the use of appropriate linking devices which are presented clearly in a logical order.

For type C (counter and refutation paragraphs without any pro argument paragraph)

- The counter arguments have been introduced effectively using an appropriate structure.
- In each counter argument and refutation paragraph, reasons of the opponents are refuted effectively with an adequate number of accurate, mature and relevant ideas.
- All the ideas in the body paragraphs support the main idea of the essay. Coherence within and across paragraphs has been maintained through the use of appropriate linking devices which are presented clearly in a logical order.

Conclusion:

- The essay has a conclusion which re-emphasizes the main idea in paraphrased form.
- The conclusion ends with a relevant concluding remark that wraps up the essay and does not introduce a new topic.

Citing:

- The essay includes at least two in-text references in the correct APA format.
- The essay includes a reference list in the correct APA format.

Synthesizing:

- The borrowed ideas have been accurately quoted or paraphrased.
- Ideas that are relevant and worth citing have been borrowed from reliable sources.
- The borrowed ideas have been well-integrated into the essay. There is a smooth transition between the essay and the citations.

Language:

- The ideas are presented with accurate, various and sophisticated sentence structures and vocabulary in the appropriate register.
- The ideas are presented with accurate, various and sophisticated sentence structures and vocabulary in the appropriate register.

Mechanics:

- The essay has minimal spelling and punctuation mistakes.

Process:

- The corrections and modifications in the rough draft of the essay indicate that the writer has edited and improved his/her work considerably considering the comments in the editing sheet.

In this checklist, the sections related with coherence in student essays guide the instructors to grade coherence supposing that it is achieved through cohesion although other sections in the checklist seem to draw attention to the principles of Gricean maxims such as presenting relevant information, supporting one's ideas, organizing the essay in a clear order and using accurate language. However, the important point is that the principles in the checklist which may seem to relate to the Gricean maxims are not presented as the features of a text that make it coherent. The instructors at the department may well be affected by the principles in the checklist while grading coherence in student essays. However, many textbooks, classroom instructions and feedback given to students do not focus on the fact that these features, in fact, influence coherence judgments of the readers. As a result of this, students think that coherence is achieved through cohesion (a principle stated in the checklist) and they are not made aware of the fact that other principles such as the submaxims of Gricean maxims are needed for a text to be coherent.

3.2.2 Subjects

There are three raters involved in this study. Two of the raters were requested to work on 50 student essays and to rate these essays according to a coherence scale. One of these two raters taught English for ten years in different institutions and she has been teaching writing skills at DML for three years. She is in the process of getting a Ph. D. in ELT. The other rater has also been teaching writing skills at DML for three years with no other experience in teaching at other institutions. She has COTE (Certificate for Overseas Teachers of English) and is in the process of getting an M.A. degree in ELT.

In addition, the third rater was requested to analyze 10 student essays (20% of the total number of essays) out of 50 essays used in the study for the purposes of reliability. This rater was asked to identify the instances when any Gricean maxim is violated in each essay. The third rater involved in the study is also an instructor at DML who has been teaching writing skills for 5 years and who is in the process of getting a Ph. D. in ELT having taken a linguistics course where Gricean maxims were covered.

3.3 Research Design

The research design of this study is a combination of qualitative and quantitative research. Qualitative research design is used by the co-raters who analyzed the student essays and by the researcher while analyzing the essays to identify maxim violations. The quantitative research design is used by the researcher while analyzing the correlation between co-raters' judgment of coherence and researcher's analysis of the same essays with Gricean maxims.

3.3.1 Data Collection

For this study, 50 essays as a sample of argumentative essays written by METU freshman students in 2002-2003 Spring semester are randomly selected among the essays written by students from both social sciences and engineering departments. Therefore, the researcher did not try to equalize the number of essays written by male and female students or by students from specific departments since gender and students from different departments are not variables in this study.

3.3.2 Data Analysis

Student essays as the data for the study are analyzed in two different stages. In the first stage of analysis, two raters from DML who have been teaching Eng 102 course rated the student essays from 1 to 5 using a 5-point scale (see, Appendix A). The researcher does not expect the instructors to have completely different criteria of coherence since both of them work for the same department and sharing the same teaching environment is certainly expected to lead to shared understandings of discourse standards. However, before rating the essays, the instructors are interviewed about what criteria they have in mind while analyzing coherence in students' essays in general so that the researcher can ensure there is not a huge difference between coherence judgments of the two instructors. Both of the instructors told the researcher that they use the following criteria while analyzing an essay for coherence: transitionals, key words, reference words, synonyms, appropriate use of discourse pattern, smooth transition between sentences and paragraphs, adequate development of student's own ideas, support and elaboration of ideas with relevant ideas, and smooth integration of citations into the essay. Moreover, the raters were interviewed for a second time after the analysis of the essays to identify whether they have used any new or additional criteria for coherence while analyzing the essays. However, they stated that they did not add any criteria other than the ones they mentioned in the first interview. The result of these interviews show that instructors' coherence judgments seem to relate very much to the submaxims of Gricean maxims as well as the principles in the checklist they use to grade student essays though in the coherence section of the checklist there is focus on cohesion. However, in order to find out how much instructors' judgments of coherence and adherence to Gricean maxims correlate, a correlation analysis has to be carried out. Otherwise, the relation between instructors' judgments of coherence and Gricean maxims can be drawn only from some intuitive judgments. In the second stage of analysis, the researcher analyzed the essays to identify the instances when any Gricean maxim is violated by the writers of the essays.

3.3.2.1 Analysis by the Raters

At the beginning of the study, after the two raters were interviewed for their coherence criteria, it was observed that two raters are using similar criteria for analyzing coherence in student essays. For the process of essay analysis for coherence by co-raters, a 5-point-scale is designed. In the scale, columns are numbered from 1 to 5 which represent the quality of the essays in terms of coherence from totally incoherent (1) to totally coherent (5). Co-raters are not informed about what other remaining three numbers (2, 3, 4) represent because it is crucial for the study that co-raters analyze coherence in the essays by using their own intuitive judgments as they do while they are grading student essays during the semester at DML.

In order to answer the research questions this study addresses, raters were asked to rate these essays from 1 to 5 considering to what extent each essay is coherent according to their criteria in mind. They decided that they would be able to complete the analysis within 3 weeks and, thus, they were allowed three weeks to analyze the essays or more than three weeks if, during analysis, they felt that they needed the time so that they can analyze the essays without any stress to finish them in a very short time, which may affect their judgments of coherence.

3.3.2.2 Analysis for Maxim Violations

While the raters were analyzing the essays, the researcher started analyzing the same essays to identify number and type of maxim violations in each essay. Moreover, during this time, another rater from DML was asked to analyze 10 essays and identify the number of maxim violation in these essays so that reliability between the analyses carried out by the researcher and the co-rater could be ensured.

While analyzing the essays in terms of Quality Maxim, even if the first specific maxim under this category may not be applicable (Do not say what you believe to be false), the researcher identified whether the second specific maxim is followed in the essays. That is, the researcher evaluated whether the students have provided adequate evidence for their claims in their argumentative essays or whether their claims have remained to be simple generalizations and propositions. For the Quantity Maxim, the researcher evaluated the amount of information provided. For instance, the researcher identified whether the students have provided unnecessary details about their arguments or whether the information they have provided is sufficient enough to support their claims by evaluating whether what they argue needs to be further explained and developed. While analyzing the essays for Relation Maxim, the researcher questioned whether there are any pieces of information that are irrelevant to the topic of the essay, to the thesis statement, to the topic sentences of the paragraphs or to the major supports under each topic sentence. Finally, the analysis of the essays in terms of Manner Maxim focused on ambiguity (having more than one meaning), obscurity (expressions that are difficult to understand), prolixity (wordiness, repetition of the same ideas) and being orderly (organization of ideas in the way expected for the type of essay written).

The following samples of student argumentative essays exemplify how these essays were analyzed to identify the number of maxim violations. For the analysis, following coding was used:

Table 1. Coding Used in the Analysis

Gricean maxim	**Code**
Quality	QL
Quantity	QN
Relevance	R
Manner	M

Table 2: Sample Student Essay 1

Raters' Judgments of Coherence on the Scale: Rater 1: 2 Rater 2: 2

TECHNOLOGY MAKE EDUCATION EASIER Everyone knows that technology (1) becomed as a part of everyday's life. Billions of people even cannot imagine a life without electricity (2). People use electronic tools at home, in offices, in hospitals when we (3) want to enjoy or even when walking on the road for listening to music to relax. To summarize, technology affect our lifes deeply. Education (4) is affected too and in almost all universities, even in high schools there are pc labs, projectors etc. Also (5) most of people think that technology in education makes students lazy, actually technology allows students a good education. First of all, using technology in education saves both	QN(1): lack of adequate information R (2): irrelevancy between technology and electricity M (3): lack of clarity R (4): irrelevant to previous idea M (5): lack of clarity

students' and teachers' time. For example, after reflectators (6) there is no need to write on the board (7). Everyone knows that carrying books and bags is a torture for students. After joining electronical tools in classes, carrying books was disappeared (8) so that (9) the students will not be tired in the class and there will be more time to concentrate on the lesson (10). Moreover, the teacher must not give unnecessary breaks (11). Secondly, by using technical tools we can increase the attendance and influence of students. No student want to attend a class with heavy bags and waiting the teacher writing on the board a paragraph (12). Also teachers can increase students' in fluence and joining ability (13) by using slide shows, screen projection and television monitor. According to the research of Jack Treuhaft (1995) "If you want your audience to sit, listen, and watch your presentation without interreptions the television display is a good choice. People are comfortable being passive (13) while watching the tube. The television also provides excellent color saturation and clear, crisp graphics and animation. Large monitors are easy to see in brightly lit rooms without dimming the light" (14). The other advantage of using technology in education is that teachers and students will find more information about the lesson. It is obvious that computers allows everyone to reach info-what they want-easily. Another way to get info is to discuss with other teachers (15) and search the solution together by using technology (16). Technology supports people to connect with people on every part of the world. Some of educationers and authorities say that using	M (6): lack of clarity QL (7): lack of evidence QL (8): lack of evidence M (9): lack of clarity R (10): irrelevant to carrying books R (11): irrelevant to previous idea QL (12): lack of evidence R (13): irrelevant to previously mentioned idea R (14): irrelevant to previously mentioned idea R (15): irrelevant to computers or technology QN (16): lack of adequate information

technology in education makes students lazy and cause them not to study, the result of technological education is causes only waste the lesson time for enjoying and learning nothing. Do not forget, technology supports all information about everything and it is easy to understand (17); more information means more education (18). To sum up, after the all reasons above, it is obvious that schools should require multimedia in classrooms in order to benefit both the students and teachers. People against the use of technology in education probably have never tried to use a computer or any electronical tool for anything (19). All part of our lifes we use opportunities of technology, which make life easier, why do not we use it for better education (20) and a better generation?	M (17): lack of clarity QL (18): lack of evidence QL (19): lack of evidence QL (20): lack of evidence because of wrong implication

Table 3: Sample Student Essay 2

Raters' Judgments of Coherence on the Scale: Rater 1: 1 Rater 2: 2

COMMUNICATION TECHNOLOGY Technology changes very quickly in recent years. Of course, it changes in positive way. People use technology in every part of their life (1). Technology is very useful for people (2). Communication is the main part of our life (3). Technology supports communication, also communication supports technology (4). Technology usage in communication is very useful for two reasons. Firstly, technology provides fast communication	R (1): irrelevant to previous sentence R (2): irrelevant to previous or the other sentence R (3): irrelevant to previous sentence R (4): irrelevant to previous sentence M (5): lack of clarity

between people. The world changes very quickly and we know that there may be everything (5). With the help of telephones and mobile phones, we reach everyone in the world immediately. Also we may have a visual communication with our friends, relatives or anyone with using the web cameras. A high percent of people who have computer have a web camera at the same time (Mandel, 2001, p.1) (6). Maybe you cannot meet face to face in real world but you have a chance on internet. Doing chat and sending e-mails provide fast communication too. You send a letter but there is a little probability about your friend does not reach it (7). But e-mail does not look like it (8). Natural events don't effect it (9). You can send 1.5MB information with using e-mail once (10). It equals to minimum 100 pages of a letter.	R (5): irrelevant to previous or next sentence R (6): irrelevant to previous sentence M (7): obscurity M (8): lack of clarity QN (9): lack of adequate information on natural events
Secondly, technology provides (11) reaching recent news and informations about everything in 1 or 2 minutes. Everyone can reach the last news throughout the world with using T.V or computer. For example, there is an earthquake in China, after 5 or ten minutes you can hear it from T.V. or you can read something about earthquake on internet. Not only for recent news people use T.V. (12) and computer, but also they can reach any kind of information about everything with the help of searching engines such as "google", "yahoo" or "altavista" (12). You write only the subject on the web site and click the "search" button. It (13) gives you a lot of new web-site names in 1-2 seconds. You look at them (14) and find informations very quickly.	R (10): irrelevant to previous sentence M (11): lack of clarity due to wrong word choice R (12): irrelevant to television M (13): lack of clairty QN (14): unnecessary information M (15): lack of clarity due to inappropriate
Psychologists say that (15) especially children spend	introduction of counter

a lot of time on T.V. and computer because of chat, e-mail, internet. Children are isolated from the society (16). However, people can limit the time they (17) spend on them. At this point, they have to talk and help the children about this issue (18). When their work on T.V and computer finished, they have to shut it. A person who phoned his friend or send something to him, he does not need to visit them (19). Relationships between people decreases. Number of visiting the relatives decreases. Face to face meetings decreases. It causes restricted culture (20). However, people see different cultures properties on the internet and learn them (21). Flisi says that "technology that brings people closer together may be the factor that shapes our culture" (22) (in Cihan et al., 2000, p.45) Differences between cultures decreases and compose a fixed-mixed culture (23). Also people have self-control. If they want they visit their relatives. Moreover, communication helps them to meet face to face at this o'clock, at this place (24). If they are not doing these (25), it results from people's laziness. Technology does not cause laziness. In conclusion, technology makes our life easier in every part also in communication. People had not communicated very fast like this before this time. Moreover, there are kinds (26) of communication. All of them are very useful, easier and cheaper. At the last (27) we can say that technology usage in communication is very useful.	argument R (16): irrelevant to previous sentence M (17): lack of clarity QN (18): lack of adequate information M (19): lack of clarity due to inappropriate introduction to counter argument M (20): lack of clarity R (20): irrelevant to previous sentence R (21): irrelevant to counter argument R (22): irrelevant to previous sentence QN (23): lack of adequate information M (24): lack of clarity M (25): lack of clarity M (26): lack of clarity M (27): lack of clarity

Table 4: Sample Student Essay 3

Raters' Judgments of Coherence on the Scale: Rater 1: 3   Rater 2: 3

AN EXACT PERSON? CLONING AND ITS OUTCOMES	
Since technology has developed, people began to question whether it is capturing us completely or not. One of the technological cases which is argumentative is cloning (1). Cloning should not be legalized for several reasons.	QN (1): lack of background information
Firstly, it is important to consider possible health risks involved. Westhusin (2001), a cloning expert at Texas A&M University, claims that roughly 98 percent of cloned animal embryos (2) fail to implant in the womb or die while developing. Of the few babies that do survive, some die shortly after birth. The living ones suffer from deformities and ailments, including supersized organs and breathing problems. In short, it is not certain that the cloned will be a hundred percent healthy.	R (2): irrelevant to human cloning
Secondly, there are some psychological risks to be questioned. When cloned child becomes aware of himself, there may become unwilling outcomes. According to Pence (2000), ‘the child will be harmed because s/he will know that it (3) was not wanted for himself but for the characteristics of the ancestor.” He may begin to think that he is not wanted for himself (4) and desired only to replace another person. ‘He may begin to question his existence as an individual, hia autonomy.” (5) (Goldman in Pence,	M (3): lack of clarity M (4): prolixity, repetition

2000). And parents may face some problems inside. While expecting an exact copy of the ancestor, there may become some disappointments. The cloned child cannot be expected to behave just like its predecessor. It will be a copy of the ancestor but it is important to consider that all of us are shaped by our environment. On the other hand, cloning will help people who cannot have children (6). There are a lot of infertile couples in the world who desire to have children. Those people will try any solution that science offers but if the result is still negative, they will want to try cloning (7) at the end. But still the moral values should not be ignored when deciding such a critical issue. People are not toys to play with or they cannot be copied as materials *according to some desires* (8). Since the outcomes of cloning are not known well, and it is quite new to be in usage, it should not be used for human beings (9).	M (5): lack of clarity M (6): lack of clarity due to no appropriate introduction to counter argument QL (7): lack of evidence R (8): irrelevant to the counter argument as a refutation M (8, italized part): lack of clarity QN (9): lack of information in the conclusion

Table 5: Sample Student Essay 4

Raters' Judgments of Coherence on the Scale: Rater 1: 3   Rater 2: 3

NECESSARY EVIL	
When earth has occured, people did not know what is death, what is born (1), what causes death.	M (1): lack of clarity
When time has passed, *deaths started to happen without knowing their reasons* (2).	QL (2, italized part): lack of evidence
People have begun getting curious and they have wanted to search deaths reasons (3).	R (3-all 3 sentences): irrelevant to next sentence
With begining experiments, researchers have released that,animals have the same anatomy with humans bodies (4) and they have thought that, they can use animals in their experiments (4), whereas,the other people have not agreed them. This arguments are stilI continuining in these days.	R (4): irrelevant to each other
Although using animals in biomedical research for purpose of finding cures or threatments to human diseases has often referred as a necessary evil (5), I believe that, animals should be used in experiments.	M (5): lack of clarity
The first reason why I agree that animals should be used in experiments is that, developments should be tried some how. Researchers have to develop their experiments by using animals or humans bodies. People are the most important existence in the world (6)	R (6): irrelevant to next sentence
and if we lose a person while making an experiment, we can not find a person with same properties (7) but we can find animals like the other animals. For these reasons, losing animals is more logical than losing people while making an experiment. Moreover, finding people willing to be coby is hard. Some researchers	QN (7): lack of adequate information on the properties of human beings that are not the same

maybe use themselves as a coby, but this ends with death of them and the experiment do not finish. "Farmerly,some researchers used themselves as a coby but this ends whit death and experiments do not finish."(Aldhous,P .1999,p:3) (8). Also, animals do not decide whether they can be coby or not and researchers use them without permission. However, they can not use humans bodies without permission.	M (8): prolixity
The second reason why animals should be used in experiments is that getting results of experiments can be quickly and correctly. Researchers have to use animals to develop medicines for some illnesses, because some viruses appear only in some animals. According to Andy Coghlan "to develop AIDS vaccines depend heavily on experiments with related viruses in monkey, in which some of the animals are likely to become ill."(p:3,1999) (9). Moreover, metabolizm of animals is faster (10) than that of people. Some medicines, vaccines show effects on animals rapidly (10), so it is logical to use animals in experiments to get results of experiments quickly. "By conducting experiments on live animals, scientists believe that, they can make more rapid progress than would otherwise have been possible." (Conglan, A. p:3 ,1999) (11). In addition, veterinary knowledge requires experiments with animals. Some universities must make experiments with animals to develop their students skills (12). In veterinary schools, students have to practice and learn animals anatomy, before graduating schools and starting their work life. 'Much basic research on physiological, pathological and therapeutic	R (9): irrelevant to previous sentence R (10): two ideas irrelevant M (11): prolixity R (12): irrelevant to the topic sentence of the paragraph

processes still requries animal experimentation. Such research has provided and continues to provide the essential foundation for improvements in medical and veterinary knowledge, education and practice," (13) said *Jon* Copley (1999,p:4) Some people maybe think that, animals should not be used in experiments and they support this ideas with these sentences; animals are living, like people they have rights of live. This is true but experiments should be made somehow. Although animals are living and they have right of live, people are the most important existence in the world so losing animals is more logical than losing people. To conclude, in spite of some opponents, I support that, animals should be used in experiments to get results of experiments quickly and correctly. Also, developments should be tried and using and finding animals are more logical and easy ways than using people and finding people as coby.	M (13): lack of clarity in terms of connection to previous sentence

Table 6: Sample Student Essay 5

Raters' Judgments of Coherence on the Scale: Rater 1: 5 Rater 2: 4

THE RISKS TO CHILDREN PLAYING COMPUTER GAMES Time is passing and everything is changing rapidly in the world. The most important change is occurring on technological field. The life is becoming easier with the development of various kinds of technology. Some	M (1): connection is not clear

technological machines are videophones, satellite systems, computerized television, and computers (1). Most of the people do their works such as writing, computing, and getting knowledge (from the Internet) by using computer. Even though computer is so helpful on working, children (2) suppose the computer as a game device and they buy computer games, which are effect people negatively to play (3). Because the computer games destroy people (4) especially children in some ways, they are not suitable for children.	R (1): irrelevant to previous and next sentences R (2): irrelevant to "people" in the relative clause M (3): lack of clarity R (4): irrelevant to "children" M (5): lack of clarity
Firstly, playing computer games makes children get lower grades. Wasting more time is (5) an important factor for this reason. Most of the children play computer games when they just come from school so they don't spend time studying as much as playing the computer games. As the children don't study enough, they cannot have high grades (6). Moreover, children cannot be able to concentrate on lessons and they cannot understand what they read, write and listen because the games do not go out from their minds (7). Therefore, the children become unsuccessful in the school.	QL (6): lack of evidence QL (7): lack of evidence
Secondly, computer games cause some health problems. Eye disorder and obesity are the main health problems which are caused by playing computer games. Ultraviolet rays, which supply radiation (8) affect the eyes negatively and cause some eye disorders. Furthermore (9), playing computer games leads to obesity. When children play computer games, they do not move and food which they ate isn't burned. Since the food isn't burned, it isn't converted to calories and children gain weight.	M (8): lack of clarity M (9): inappropriate use of marker

Finally, playing computer games make children have bad behavior. When children play violent computer games, they are likely to be aggressive. Two Iowa State researchers have said that children become more aggressive if they play violent computer games (in Schorr, 2001). Funk who is another researcher have found that 'video computer game playing among 357 seventh and eighth grade students had preferences to the types of games that they played. The two most preferred categories were games that involved fantasy violence, preferred by almost 32% of subjects; and sports games, some of which contained violent subthemes, which were preferred games with a general entertainment theme, while another 17% favored games that involved human violence. Fewer than 2% of the adolescents preferred games with educational content" (in Cesarone, 1997). The study have shown that most of the children play violent computer games so the society gains more aggressive people (10) unwillingly. In addition, playing computer games makes children more nervous which is caused by excessive inordinate desire. When children play computer games, they always want to be winner. If they cannot be the winner, they play the game again and again, and they become more nervous.	QL (10): lack of evidence for the conclusion
Some people may claim that children learn vocabularies (for a foreign language) by playing computer games. However, this is incorrect because the children are not aware of the vocabularies and they just concentrate on the game and also they have only one aim that is playing the game (11). Moreover, even if the children try to learn the	QL (11): lack of

words which the children do not know the meanings, the vocabularies which are offered by the game are too limited. <u>Thus, the vocabularies which are memorized by the children do not be enough for them. (12)</u> To sum up, playing computer games is detrimental for children in terms of education, health and behavior. Children get lower grades, have some health problems and also have some bad behaviors like being aggressive and being nervous. Hence, both production and selling of the computer games should be banned for the goodness of human being.	evidence R (12): irrelevant to the claim that counter argument is incorrect.

3.3.2.3 Statistical Analysis

After the two stages of analysis were completed, there were 3 sets of data related with coherence analysis of the essays. First set of data consisted of the coherence ratings of the first rater on the 5-point scale and the second set of data involved the ratings of the second rater on the scale. The third set of data came from the researcher involved number of maxim violations in each essay.

3.3.2.3.1 Co-rater Reliability Analysis

In this stage of statistical analysis, in order to clarify whether the raters' coherence judgments in 50 essays had a high reliability level as an important criterion for the continuation of the study, these two sets of data were analyzed on Statistical Packages for Social Sciences Program (SPSS 9.0).

3.3.2.3.2 Correlation Analysis

In the first stage of correlation analysis, to answer the research questions 1 and 2, after number of maxim violations was identified, correlation of these three sets of data was calculated by using Spearman's Correlation Coefficient on SPSS (9.0 Version). Raters' coherence judgments ranging from 1 to 5 were entered for each rater in a separate column and in another column, number of maxim violations was entered. Correlations measure how variables or rank orders are related. Spearman's correlation coefficient is a non-parametric statistic and is used when the data have violated parametric assumptions. That is, if the data are not normally distributed or have ordered categories, Spearman's correlation coefficient is more appropriate, which measure the association between rank orders. Moreover, if the data is ordinal, that is, if the data can be ordered in a meaningful way such as 1, 2, 3, 4, 5 (1 is totally incoherent and 5 is totally coherent; in other words, 5 is better than 1), the data is said to be non-parametric (Field, 2000, p.91).

For the second stage of correlation analysis, to answer the research questions 3 and 4, number of violations for each maxim in each essay was counted and these numbers for each essay were entered as well as the two raters' coherence judgments for these essays for correlation analysis. In this stage of analysis, correlation of 6 sets of data was calculated by using Spearman's correlation coefficient on SPSS (9.0 Version) to identify whether the violation of any maxim is dominantly correlated with the raters' coherence judgments.

CHAPTER IV

RESULTS AND DISCUSSION

4.0 Presentation

In this chapter, results are categorized into two groups. First of all, results of the raters' assessment of the essays for coherence and the results of the researcher's analysis of the essays for maxim violations are presented. Next, the results of the quantitative data analysis involving the statistical analysis of the correlation between the raters' judgments of coherence and the number of maxim violations in the essays are explained. Lastly, the results of the correlation analysis between the number of violations for each maxim in the essays and the raters' judgments for coherence are presented.

4.1. Results

4.1.1 Qualitative Data Analysis

The results of the qualitative data analysis in this study are explained in two stages. The first stage of analysis consists of the results of two raters' coherence judgments in student essays and second stage of analysis involves the results of the analysis carried out by the researcher to find out the number and kind of maxim violation

4.1.1.1 Analysis by the Raters

When the 5-point scales of raters are examined, it is found that raters agreed on the coherence judgments for 84% of the essays whereas there was a slight difference between their coherence judgments for 16% of the essays. However, this difference was not a significant one since there was only 1 point difference between their ratings of the same essay on the 5-point scale. The reason for this difference may lie behind the raters' different experiences and backg rounds in relation to teaching and different levels of importance they give to coherence criteria they hold.

Rater 1 tended to rate 10% of the essays as 'totally incoherent" (1) on the scale whereas Rater 2 rated none of the essays as 1. While Rater 1 rated 14% of the essays as 2, 52% of the essays as 3 and 18% of the essays as 4, Rater 2 rated 18% of the essays as 2, 52% of the essays as 3 and 24% of the essays as 4. Finally, Rater 1 rated 6% of the essays has 'totally coherent" (5) on the scale; h owever, Rater 2 rated none of the essays as 5. The following table illustrates percentages of the essays rated by the raters on the scale:

Table 7: Percentages of Essays According to the Raters' Coherence Ratings

Number on the scale	**Percentage of essays rated by Rater 1**	**Percentage of essays rated by Rater 2**
1	10%	0%
2	14%	18%
3	52%	52%
4	18%	24%
5	6%	0%

The essays the raters graded differently and raters' judgments for these essays are also shown in the following table:

Table 8: Essays Rated Differently by the Two Raters

Essay number	Judgments of Rater 1	Judgments of Rater 2
1	1	2
5	1	2
14	1	2
18	5	4
19	5	4
28	5	4
33	1	2
36	1	2

4.1.1.2 Analysis for Maxim Violations

Results of the analysis of the number of maxim violations in 50 essays are presented in the table below:

Table 9: Number of Maxim Violations in Each Essay

Essay number	Number of maxim violation	Essay number	Number of maxim violation
1	24	26	15
2	20	27	20
3	25	28	8

4	16	29	24
5	15	30	16
6	12	31	18
7	17	32	11
8	9	33	29
9	13	34	12
10	14	35	20
11	13	36	20
12	8	37	7
13	12	38	13
14	18	39	12
15	15	40	9
16	12	41	14
17	12	42	13
18	4	43	18
19	13	44	17
20	13	45	9
21	12	46	18
22	10	47	10
23	8	48	20
24	8	49	13
25	20	50	7

The following table shows the number of times each maxim is violated in the total number of essays.

Table 10: Number of Times Each Maxim is Violated

Maxims	Number of times each maxim is violated
QL	105
QN	158
M	260
R	198

4.1.2 Quantitative Data Analysis

The results of quantitative data analysis are presented in two stages. The first stage of analysis consists of reliability analysis of the raters' judgments of coherence in student essays and the second stage of analysis involves the correlation analysis of each rater's coherence ratings and number of maxim violations in each essay.

4.1.2.1 Co-rater Reliability Analysis

The first co-rater reliability analysis is conducted on the data from the co-rater about the number of maxim violations in 10 essays and the same data from the researcher and the reliability was found to be 0.9319 on SPSS. When the 5-point scales the two raters used for essay analysis were analyzed to identify the reliability of the judgments, the reliability was found to be 0.9433 on SPSS. Therefore, a high reliability was found at 0.01 level between coherence judgments of the two raters.

4.1.2.2 Correlation Analysis

4.1.2.2.1 Correlation Analysis of Raters' Judgments and Number of Maxim Violations

When three sets of data from the two raters and the researcher were collected, they were analyzed on Spearman's Correlation Coefficient on SPSS to identify the correlation level. This analysis indicated that the correlation between the ratings of Rater 1 and the number of maxim violations in each essay was -.772 which indicates a significant negative correlation at 0.01 level. In addition, the correlation between the ratings of Rater 2 and number of maxim violations was -.783 which also indicates a significant negative correlation at 0.01 level. The table below created by SPSS illustrates the levels of correlation between the variables and the symbol ** indicates the instances when the correlation is significant on SPSS:

Table 11: Correlation Analysis on SPSS

Correlations

			RATER1	RATER2	MAXIMS
Spearman's rho	RATER1	Correlation Coefficient	1,000	,989**	-,772**
		Sig. (2-tailed)	,	,000	,000
		N	50	50	50
	RATER2	Correlation Coefficient	,989**	1,000	-,783**
		Sig. (2-tailed)	,000	,	,000
		N	50	50	50
	MAXIMS	Correlation Coefficient	-,772**	-,783**	1,000
		Sig. (2-tailed)	,000	,000	,
		N	50	50	50

**. Correlation is significant at the .01 level (2-tailed).

The following matrix shows the type of correlation between the variables. The correlation between the ratings of Rater 1 and the number of maxim violations is negative. Moreover, correlation between the ratings of Rater 2 and the number of maxim violations is also negative.

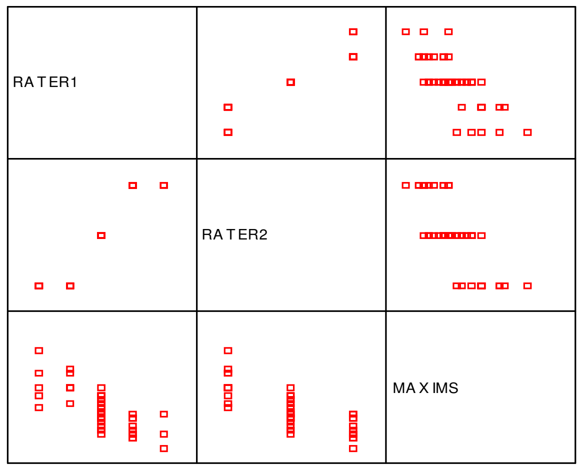

Figure 1: Matrix for Three Sets of Data

4.1.2.2.2 Correlation Analysis for Each Maxim

After the number of violations of each maxim in each essay was counted, a correlation analysis was carried out on SPSS using Spearman's correlation coefficient to identify whether there is dominance of a maxim that contributes most to the correlation between teachers' judgments of coherence in students' essays and adherence to Gricean maxims in the essays and there is, which maxim contributes most to the correlation between teachers' judgments of coherence in students' essays and adherence to Gricean maxims in the essays.

The results of SPSS analysis showed that correlations between Rater 1 and the Quality, Quantity and Relation maxims are found to be negative and significant at .01 level. Similarly, correlations between Rater 2 and these three maxims are also found to be negative and significant at .01 level.

Table 12: Correlation Between Raters' Judgments and Individual Maxims

Correlations

			RATER1	RATER2	QL	QN	M	R
Spearman's rho	RATER1	Correlation Coefficient	1,000	,988**	-,378**	-,598**	-,208	-,358**
		Sig. (1-tailed)	,	,000	,003	,000	,074	,005
		N	50	50	50	50	50	50
	RATER2	Correlation Coefficient	,988**	1,000	-,412**	-,578**	-,210	-,352**
		Sig. (1-tailed)	,000	,	,001	,000	,072	,006
		N	50	50	50	50	50	50
	QL	Correlation Coefficient	-,378**	-,412**	1,000	,127	-,067	-,021
		Sig. (1-tailed)	,003	,001	,	,189	,322	,442
		N	50	50	50	50	50	50
	QN	Correlation Coefficient	-,598**	-,578**	,127	1,000	-,144	-,047
		Sig. (1-tailed)	,000	,000	,189	,	,159	,373
		N	50	50	50	50	50	50
	M	Correlation Coefficient	-,208	-,210	-,067	-,144	1,000	,335**
		Sig. (1-tailed)	,074	,072	,322	,159	,	,009
		N	50	50	50	50	50	50
	R	Correlation Coefficient	-,358**	-,352**	-,021	-,047	,335**	1,000
		Sig. (1-tailed)	,005	,006	,442	,373	,009	,
		N	50	50	50	50	50	50

**. Correlation is significant at the .01 level (1-tailed).

QL maxim is found to be negatively correlated with the judgments of Rater 1 with -.378 while it is negatively correlated with the judgments of Rater 2 with -.412. QN maxim, on the other hand, is negatively correlated with Rater 1 with -.598 and with Rater 2 with -.578. The negative correlation of M maxim with Rater 1 is -.208 and it is -.210 with Rater 2. Finally, R maxim is negatively correlated with Rater 1 with -.358 and with Rater 2 with -.352.

4.2 Interpretation of the Results

The results of the correlation analysis answer the research questions this study addresses. First of all, in relation to the first research question, the result of the analysis on SPSS shows that there is a significant correlation between the ratings of Rater 1 and the number of maxim violations in the essays and between the ratings of Rater 2 and the number of maxim violations at 0.01 level. Therefore, this means that there is a relationship between raters' coherence judgments for the student essays and the number of Gricean maxims violated in these essays.

In relation to the second research question, the result of correlation analysis on SPSS also shows that this significant correlation is negative and the matrix table illustrates this correlation between the three sets of data. Thus, it can be concluded that the less raters rate an essay as coherent, the more the instances when maxims are violated in an essay. Similarly, the more they rate an essay as coherent, the less the instances when maxims are violated.

As far as the third research question is concerned, Quantity maxim is the most significant and negatively correlated maxim with the coherence judgments of both raters. In other words, the more Quantity maxim is violated in an essay, the more the raters tend to rate the essay incoherent. In addition to Quantity maxim, the correlation results of the Quality and Relevance maxims with the raters' judgments are higher than the correlation result of the Manner maxim. On the other hand, Manner maxim is the maxim which does not have any significant negative correlation with the raters' judgments.

In relation to the last research question, it can be concluded that Grice's Co-operative Principle and its associated maxims can be used to analyze coherence in students' argumentative essays because the study has shown that as the number of maxims that are violated in the essays increases, in line with this, these essays are found to be less coherent than the ones which involve fewer numbers of maxim violation.

In this study, correlation analysis is carried out to determine whether the correlation among the variables is "significant" or due to chance factors and level of significance expresses the probability that the correlation is due to chance factors. As stated in the website of University of the West of England (2002), 0.01 level of significance means a 1 percent probability that the correlation occurred by chance. Therefore, the lower this probability, the easier one can talk about a relationship between the variables. For instance, if the level of significance is between 0.01 and 0.001 or lower than 0.001, there is a strong evidence that there is a correlation (positive or negative) between the variables. In the present study, the results of the correlation analysis show that the negative correlation among the variables is statistically significant. However, if the results were significant at the 0.001 level, the study would prove a very strong negative correlation among the variables. However, with the present results, it can be argued that some other factors might affect the raters' coherence judgments if it is not totally the Gricean maxims. For instance, instructors may not have paid attention to the language problems in the essays because of the tendency in the discourse community to focus more on the development of ideas and the general organization of the essays. Although there were instances of Manner maxim violation in many of the essays, since instructors may not have considered language related problems more important than the problems in the development of ideas and in the overall organization of the essays, the correlation between their coherence judgments and number of maxim violations is found to be significant at 0.01 level rather than 0.001 level.

When maxims are analyzed separately independent of each other, Manner maxim, seems to be the least negatively correlated maxim with the raters' judgments of coherence in student essays. The reason for this can probably be the fact that at DML, the tendency is to ignore some minor language problems or unclear expressions as long as they do not interfere with the meaning the student wants to create, though they pay attention to organization. Therefore, the raters tend to rate the essays for coherence by considering the features that violate the obscurity, ambiguity and prolixity submaxims of Manner maxim the least but they consider organization features more, the last submaxim of Manner maxim. On the other hand, as the discourse community, among the instructors at the department, there is a tendency to pay more attention to features that violate Quantity, Quality and Relevance maxims. For instance, instructors in this particular discourse community tend to rate the essays that do not successfully support the claims, give sufficient information and explanation for major supports in the essays, and include relevant ideas or citations lower than the essays which include the features above but which have problems related with the use of language such as structural or lexical errors. Therefore, the instructors at the DML value elaboration of ideas with sufficient and relevant ideas more than some minor language problems which do not totally distort the meaning. This is also easily observed from the maxim violation analysis of student essays and the interview with the raters before and after their analysis. Maxim violation analysis showed that there are many Quantity maxim violations, in particular the first submaxim (lack of adequate information) and Quality maxim violations, in particular the second submaxim (lack of evidence). Moreover, when the raters were interviewed about their criteria of coherence before the analysis, their focus was more on the development of ideas than on the language problems. Similarly, after their analysis, they were interviewed about whether they realized that they had any other criteria in mind that they did not mention in the pre-analysis interview during the analysis and they did not add any new criteria to their lists of coherence features. This is most probably the reason why maxim of Manner does not have significant contribution to the raters' judgments of coherence in student essays.

Another possible explanation for the relation of Manner maxim with the raters' judgment of coherence can be the fact that the study is carried out on student argumentative essays. Different types of texts such as exposition or argumentation have characteristic patterns in which propositions are organized differently. In these text types, coherence is also achieved through conforming to the appropriate organization pattern (Enkvist, 1990, p.23) and as discussed in Chapter II, formal schemata plays a role in coherence judgments. Therefore, during the evaluation process, raters considered the fact that the essays were argumentative essays and, thus, should conform to the principles of argumentative pattern of organization such as including an argumentative thesis statement, pro arguments which are supported by some other ideas, and some counter arguments which are refuted effectively. In other words, conforming to the expected pattern of organization for argumentative writing is a factor that contributes to coherence of student essays for the raters and other instructors at the DML. This was also confirmed by the raters at the beginning of the study when they were interviewed for the criteria they use in general to analyze coherence in essays.

The reasons mentioned above also explain why the maxims of Quality, Quantity and Relevance have more negative correlation with the raters' judgments of coherence. That is, as the effect of Manner maxim violation is minimal in instructors' judgments of coherence, some other factors predict or explain these judgments. The students are expected to provide information or make claims which are supported by some evidence, and to provide adequately developed topic sentences and major ideas to support the topic sentences in the paragraphs. For instance, if the student does not develop one of the major ideas in a paragraph with some minor ideas, or if the student makes a claim or argues for an idea without any evidence, the instructors tend to rate the essay lower than the other in which the student adequately develops the majors with minors or if the student supports the claims with evidence. Similarly, an essay in which the student supports the ideas with irrelevant citations or develops the topic sentence in a paragraph with an irrelevant major support is rated lower than another essay in which the student does not provide any irrelevant information or support.

The results of this study show that Grice's Co-operative Principle and its associated maxims have some implications for coherence analysis in student writing. These results do not contradict with the results of other similar studies in which there are references to Gricean maxims and writing quality. In the study carried out by White recently, it was found that although there are "cultural differences in writer-reader expectations…in a survey of lay readers' responses to a sample letter which show that, while there are individual differences in the way these maxims are interpreted, readers expect clarity, brevity, and sincerity…" (2001, p.62). In this study, therefore, readers expect adherence to the maxims of Manner (clarity), Quantity (brevity) and Quality (sincerity). Moreover, in the study by Khalil, it was found that Arab students, in their paragraphs, failed to supply sufficient information about the assigned topic, which led the raters to rate these paragraphs as incoherent (1989, p.359). Much in the same way, in the present study, it is confirmed that adhering to Gricean maxims has a role in the raters' judgments of coherence in the student essays.

However, the results of this study are still important when other studies which were carried out on Gricean maxims and writing are considered because this study involves the analysis of a particular type of text in an academic setting, analysis of coherence in particular in these essays and all four of the Gricean maxims. Some studies previously conducted which adopted Gricean maxims for essay analysis did not seem to focus on academic writing and on argumentative essay type. Khalil (1989) in the study of coherence worked on student paragraphs and White (2001) worked on letters as a reply to a complaint. Moreover, in these studies the researchers did not question whether Gricean maxims can be used as a tool for coherence analysis but the maxims were simply used for analysis. While White worked on Quantity maxim particularly, Khalil excluded Quality maxim from the analysis for some reason. Therefore, none of these studies worked on academic writing, particularly, on argumentative writing and questioned Gricean maxims as a tool for coherence analysis in an academic context. In addition to these studies, the present study refutes the findings of Lafond to some extent. Lafond (2000) argues that Quality maxim has a hierarchical superiority over the other three maxims because the findings of this study suggest that if there is the violation of Quality maxim in a text, the writer cannot adhere to the other maxims. However, the present study shows that at least the Quality maxim is independent of the other maxims for the raters in their ratings of coherence because this maxim does not have a significant positive or negative correlation with another maxim in the coherence judgments of the raters. Therefore, at least for the context in which the present study is carried out, it is impossible to suggest that violation of Quality maxim has a positive correlation with the violation of other maxims. Similarly, the present study also refutes the Relevance theory for the specific context of the study because the study shows that it is not only the violation of Relevance maxim that has a relationship with the raters' coherence judgments in the essays but the violation of the remaining maxims as well (see sample essays in Chapter III and Table 7 in this Chapter). However, the present study shows a positive correlation between the violations of Manner and Relevance maxims (see Table 5). This finding does not contradict with the Relevance Theory since the positive correlation means that the violation of Manner and Relevance maxims has an effect on each other and that if the reader cannot understand the communicative intention of the writer which might be disturbed by ambiguity, lack of clarity, lack of orderliness and prolixity, the reader may perceive it as irrelevant (see Samples 2 and 5 in Chapter III).

As discussed in Chapter II, there are a variety of approaches to coherence and there are various studies conducted in this field. While some of these studies take coherence as a concept internal to the reader, others take it to refer to the features related with the text. As a result of the beliefs of the researchers, their researches focus on these aspects of coherence. In this study, coherence is thought to be text-based but the study does not deny that sometimes readers' judgments of coherence may also be affected by features outside the text. In other words, the results of this study show that Gricean maxims have a role in making a text coherent and that while analyzing student argumentative essays, Gricean maxims can be used as a tool. However, this result does not necessarily reject the findings of other studies on coherence in writing. The contribution of the present study, therefore, to the field of research on coherence is that there is a significant negative correlation between students' adhering to Gricean maxims and coherence ratings of the raters in student argumentative essays, which suggests that these maxims can be used as a tool in analyzing student argumentative essays in academic settings.

In fact, Gricean maxims involve many theories of coherence discussed in Chapter II. For instance, Quantity and Relevance maxims are very much related with the theories of coherence from an information-oriented perspective because coherence with Quantity and Relevance maxims also requires information management. The writer has to decide how much information is to be provided to the reader, how much of this information is to be redundant and sometimes irrelevant. Moreover, the techniques to manage information such as theme-rheme, given-new or topic-comment and topic development techniques can be used to adhere to Quantity and Relevance maxims. Similarly, principles of Quantity and Relevance maxims do not contradict with the theories of coherence from a cognitive perspective because in order to adhere to these principles, the writer has to achieve connectivity in the reader's mentally represented text. According to Givon, this is done in two ways: anaphoric and cataphoric grounding. Therefore, the writer has to ensure that in the reader's mental representation of the text, new information is connected to the previously mentioned information, that is, relevant to the previously mentioned information and that it is better for the reader to predict the coming information to be able to follow the text smoothly and this is also related with the principles of Relevance and Quantity maxim.

As far as non-linguistic conceptions of coherence are concerned, they also have common features with the principles of Gricean maxims. For instance, from a reader-based perspective, as discussed in more detail in Chapter II, one way to achieve successful communication in written discourse for the writers is to form mental representations of the ideas the writer wants to convey, of the text as it is written and of the their readers as they will build from the text, which is also required from the writer to be able to adhere to the maxims of Quantity, Relevance and Quality. In order to give sufficient, relevant information with evidence where necessary, the writer needs to take the reader into account, for instance, by considering the reader's world knowledge, linguistic conventions in that culture (how language works) or in that particular text type and reader's intellectual sophistication so that the writer can adjust his/her content and language accordingly. Moreover, reader's f ormal schemata also plays a role in judging a text as coherent and writer's creating a text that adheres to the principles of the particular genre and text type is important. This is also what the principles of Manner maxim emphasize (be orderly) and other principles of Manner maxim are always applicable in any type of communication so that the communication is clear and meaningful, which also contributes to coherence.

CHAPTER V

CONCLUSION

5.0 Presentation

In this chapter, first a summary of the study including the aim of the study, methodology and the results is given. Next, the implications of the study for the teaching and learning of coherence in writing, and for the assessment process of writing are discussed. Lastly, some suggestions for further research in the same field are discussed.

5.1 Summary

The present study aims to examine the relationship between adherence to Grice's Co-operative Principle and its associated maxims of Quantity, Quality, Manner and Relevance in student argumentative essays and instructors' judgments of coherence in the same essays. Thus, the study, in particular, investigates whether Gricean maxims can be used as a tool for analyzing coherence in METU freshman students' argumentative essays.

At the beginning of the study, two raters from DML were asked to rate 50 argumentative essays according to coherence in the essays by using a 5-point-scale which involved ratings from 1 (totally incoherent) to 5 (totally coherent) (co-rater reliability= 0.9433). During this process, the researcher analyzed the same essays to find out the instances in each essay when a Gricean maxim is violated. In order to ensure reliability of the researcher's analysis, 20% of the essays were also analyzed by another instructor by using Gricean maxims (reliability= 0.9319)

As a result of the raters' judgments of coherence in the essays and the researcher's analysis of maxim violations, there were three sets of data for SPSS analysis. A correlation analysis was carried out on SPSS by using Spearman's Correlation Coefficient for the three sets of data and the results of this analysis showed that the correlation between the Rater 1's judgments of coherence and the number of maxim violations in the essays was found to be -.771 and the correlation between the Rater 2's judgments of coherence and number of maxim violations was -.781. In other words, there was a significant negative correlation between these variables.

In order to examine whether there is a correlation between the violation of any specific maxim and the raters' judgments of coherence, another analysis was carried out on SPSS. For this analysis, the number of each maxim violations in each essay was entered as well as the raters' coherence judgments. This analysis indicated that QL maxim is negatively correlated with the judgments of Rater 1 with -.378 while it is negatively correlated with the judgments of Rater 2 with -.412. QN maxim, on the other hand, is negatively correlated with Rater 1 with -.598 and with Rater 2 with -.578. The negative correlation of M maxim with Rater 1 is -.208 and it is -.210 with Rater 2. Finally, R maxim is negatively correlated with Rater 1 with -.358 and with Rater 2 with -.352. In other words, the most negatively correlated maxim with the raters' judg ments was QN maxim and the least negatively correlated one was M maxim. Thus, lack of adequate information or providing more information than needed in student essays has a role in raters' judgments of coherence whereas submaxims of M maxim do not seem to have an important role in coherence judgments and the reasons for this are discussed in the study.

The findings of the study relate to the features of coherence compiled by Lee (2000), adapted in this study and presented in Chapter II. The findings suggest that the macrostructure, information structure, connectivity of the underlying content, connectivity of the surface text, and the metadiscourse features play a role in coherence judgments. The macrostructure of a text relates to Manner maxim (orderliness), Relevance maxim; information structure relates to the maxims of Quantity, Relevance and Manner (orderliness). Connectivity of the underlying content is associated with the maxims of Quality and Quantity. Moreover, connectivity of the surface text is related with the maxims of Manner (obscurity) and Relevance and metadiscourse features relate to maxims of Relevance, Manner (orderliness) and Quality (hedges)

5.2 Implications for Analysis of the Essays

One of the research questions this study addresses is whether Gricean maxims can be used as a tool for coherence analysis in student essays. The study shows that coherence in student argumentative essays at DML can be analyzed using Gricean maxims. First of all, this result has some implications for the analysis of student essays at the department. With the help of Gricean maxims, the instructors can analyze coherence with more concrete criteria rather with their own intuitive judgments, which for most of the time results in a holistic grading for coherence. In that way, student essays will be analyzed for coherence in a more objective manner because the submaxims of Gricean maxims explicitly explain what to look for in the essays for judgments of coherence.

5.3 Implications for the Teaching and Learning Process

One of the implications of the results of the study for the teaching process is that Gricean maxims can be used as a teaching method for coherence in writing. In other words, while the instructors at DML are emphasizing the importance of coherence and how to achieve coherence in academic writing, they can refer to the principles of Gricean maxims. For instance, the study showed that violation of QN maxim is an important factor in instructors' perceptions of incoherence in student argumentative essays. Therefore, this can be emphasized in the teaching process and the instructors can inform the students about how giving unnecessary details or not providing adequate information will lead to incoherence in the readers' mind by using some example essays in which QN maxim is violated. Moreover, the importance of adhering to the principles of R and QL maxims can be emphasized as well as the principles of M maxim in order to achieve coherence in their essays. The students should be aware of the fact that in their argumentative essays, not providing evidence for their claims, citing an irrelevant idea or developing their ideas with some irrelevant ideas will cause their essays to be judged as incoherent by the readers, which will affect the overall writing quality. Much in the same way, ambiguity or lack of clarity in their expressions will disturb the reader which will affect the reader's coherence judgments.

Another benefit of using Gricean maxims for coherence in writing for the instructors is that Gricean maxims will ease the instructors' job during the focus on coherence in the classroom instruction because these maxims clarify the 'fuzzy" nature of coherence for the learners as well as for the instructors. Coherence has been discussed to be a hard to understand and hard to achieve concept by many researchers and there are many teachers who would agree with this statement. One reason for this is that coherence is thought to be achieved through some linguistic markers such as repetition of key words, using synonyms, connectors or some other similar signals. When it is realized that the essays which have the linguistic markers to achieve coherence sound incoherent, coherence becomes a concept really hard to achieve. However, Gricean maxims provide a concrete background for achieving coherence in writing because the principles under the maxims describe very clearly and explicitly how to write to sound coherent.

From the perspective of the learners, Gricean maxims provide new insights for the learning process. It is not only the teachers who are disappointed to receive incoherent papers but the students as well become disappointed when they receive feedback about the incoherent nature of their essays though they make use of the linguistic markers they are taught in class. With the knowledge of the principles of

Gricean maxims, they will become aware of the fact that using linguistic markers is not enough to achieve coherence but some other important principles need to be adhered to. For example, they will learn that the irrelevant citations they make are not just irrelevant but they are one of the reasons why their essays are judged to be incoherent. Therefore, they will learn that they cannot produce a coherent essay by combining the sentences on the surface level only but by adhering to the principles of maxims such as being relevant, providing necessary and adequate information, providing evidence for their claims and being clear, unambiguous, organized avoiding prolixity.

As a result of the instruction on coherence by referring to Gricean maxims, the students will be aware of the fact that in addition to using cohesive devices taught in class and in the textbook, while writing their argumentative essays, they have to write a relevant and adequately developed introductory paragraph for the topic of their essay, produce relevant pro arguments for their argumentative thesis statements, write some major supports which are relevant to the particular pro argument and are developed and supported adequately with some minor ideas, provide some counter arguments which are relevant to the topic and the thesis statement of the essay and which are refuted with relevant and adequately developed and supported ideas and cite relevant ideas where necessary. Moreover, during this production process, the students should know that they have to write in an organized, clear, unambiguous way avoiding unnecessary repetition of the ideas.

5.4 Implications for the Assessment Process

The results of the study have also some implications for the assessment process. At DML, the students' essays are graded by the instructors using a checklist for each type of essay. Although the checklist for the argumentative essay, as well as for the other types of essays, includes a section for assessing coherence in the essays, the focus in this section is on the surface level connection between sentences and paragraphs achieved through some linking devices, which misleads the students to perceive coherence as the surface level connections in the essay. However, in order to have better results, Gricean maxims can be used as a tool to analyze coherence in student essays.

The same checklist for argumentative type of writing can be used with some modifications about coherence section. For instance, under coherence section, principles of Gricean maxims can be added and if there are violations of these maxims in an essay, the essay should be graded accordingly. In this way, the criteria for assessment of coherence in writing will not be limited to surface level connections and a more sound and adequate assessment of coherence will be achieved. This will satisfy the instructors who recognize a problem in an essay in which the student has successfully used the linguistic markers taught in class but who may not be able to describe the problem. Moreover, the learners will also receive a better feedback in terms of coherence problems in their essays because Gricean maxims will explain them the problems in more concrete terms.

While adapting the maxims for analysis, however, there may be some need to paraphrase them for the instructors to ease the understanding and applicability of the maxims for written text and the following rewritten forms of maxims can be a starting point for developing a section in a checklist to use for analyzing coherence in student argumentative essays at DML:

<u>Quantity:</u>

3. Develop your ideas in a way as informative as is required for the purposes of the current type of writing.
4. Do not make the ideas more informative than is required.

<u>Quality:</u>

3. Do not write what you believe to be false or what contradicts with your argument.

4. Do not write that for which you lack adequate evidence or which you cannot support.

Relevance:

Express ideas that are relevant to your thesis.

Manner:

5. Avoid obscurity of expression.
6. Avoid ambiguity.
7. Be brief (avoid unnecessary prolixity).
8. Organize your writing and the information according to the requirements of the type of essay you are writing.

5.5 Suggestions for Further Research

Some of the questions raised in the process of conducting this research could lead to some other studies in this field. First, further research can be carried out by replicating the same study with other institutions, with other students and with other essay types. Gricean maxims can be used for analysis of another type of essay in an EFL context other than the argumentative essay and this study can question whether the same results are obtained. Similarly, the present study can be replicated by changing the institutional setting and the students and further research can question whether the same results can be obtained in a different context. Moreover, the present study can be replicated with raters and an analyst from different institutions. In other words, raters from an institution may rate the essays for coherence and an analyst from another institution may analyze the essays for maxim violations. Since one of the limitations of the present study is related with the discourse community in which the study is carried out and the impossibility to generalize the results, a study which will replicate the present study in another context would provide valuable implications.

Another suggestion is that further research can examine the issues raised in other studies which the present study has refuted. For instance, a study can question whether, in other contexts, Lafond's findings about the superiority of Quality maxim over the others are applicable. In addition, another study can focus on whether Relevance Theory is valid in the coherence judgments for the essays written in different discourse communities, rated by different raters from these discourse communities and in a different type of writing.

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APPENDICES

APPENDIX A

5-Point-Coherence Scale

Essay number	SCALE				
	1	2	3	4	5
1					
2					
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