Sample scientific texts analysis through textlinguistic approach

Işıl Gamze Yıldız[1]

Trakya University, Edirne-Turkey

Abstract

The richness and variety in written texts offers various benefits for language teaching and learning contexts. This structure of texts could lead to successful learning opportunities. It's known that a large variety of texts can be used in classes however; scientific texts play a larger role in educational settings. In this context, from a perspective focusing on the significance of textlinguistics, this study basically tries to analyze four different scientific texts through following a specific descriptive pattern in order to shed light on determining the effectiveness of texts in foreign language teaching environments. The model for this analysis is based on scientific text analysis through textlinguistic approach offered by Şenöz-Ayata (2004): the relatedness with the research field; the contribution of the study to scientific field; the introduction of the study (aim and method); the summary of the study; the research results; and assessment of the study. This sample analysis model is expected to be contributing to students' foreign language learning process, for candidate teachers while planning to conduct academic research and studies, for teachers of English while selecting and interpreting the content of the texts that they would use in their classes.

Keywords: Textlinguistics, scientific texts, textlinguistic approach, language learning

---

[1] Res. Asst. Phd. Trakya University, Faculty of Education. **E-mail:** dimple2sea@yahoo.com

Introduction

In traditional sense, language studies were carried out diachronically by comparing languages to analyze any specific language. However, since the beginning of the twentieth century, scientific approaches have been used to study and analyze languages. Initially, structural approaches to language studies, which mainly focused on the surface structure of linguistic forms, were applied in a synchronic and descriptive manner instead of diachronic and prescriptive manner (Yule, 2000)

Theoretical review

During the mid-twentieth century, both surface structure and deep structure of linguistic forms became the core of the studies at syntactic level. Following the descriptive approaches to linguistic studies, textlinguistics, as a sub-branch of modern linguistics, investigates the organization of a text including social, intellectual, imaginary constructions by positioning the writer and reader in a mutual interaction in terms of textuality (Günay, 2003). The evolution of textlinguistics as linguistic theory is strongly connected with pragmatic turning point which began towards the end of 1960s (Şenöz-Ayata, 2005). De Beaugranda and Dressler (1981) define texts as a communicative occurrence which meets the seven standards of textuality: namely, cohesion, coherence, informativity, situationality, intentionality, acceptability, and intertextuality.
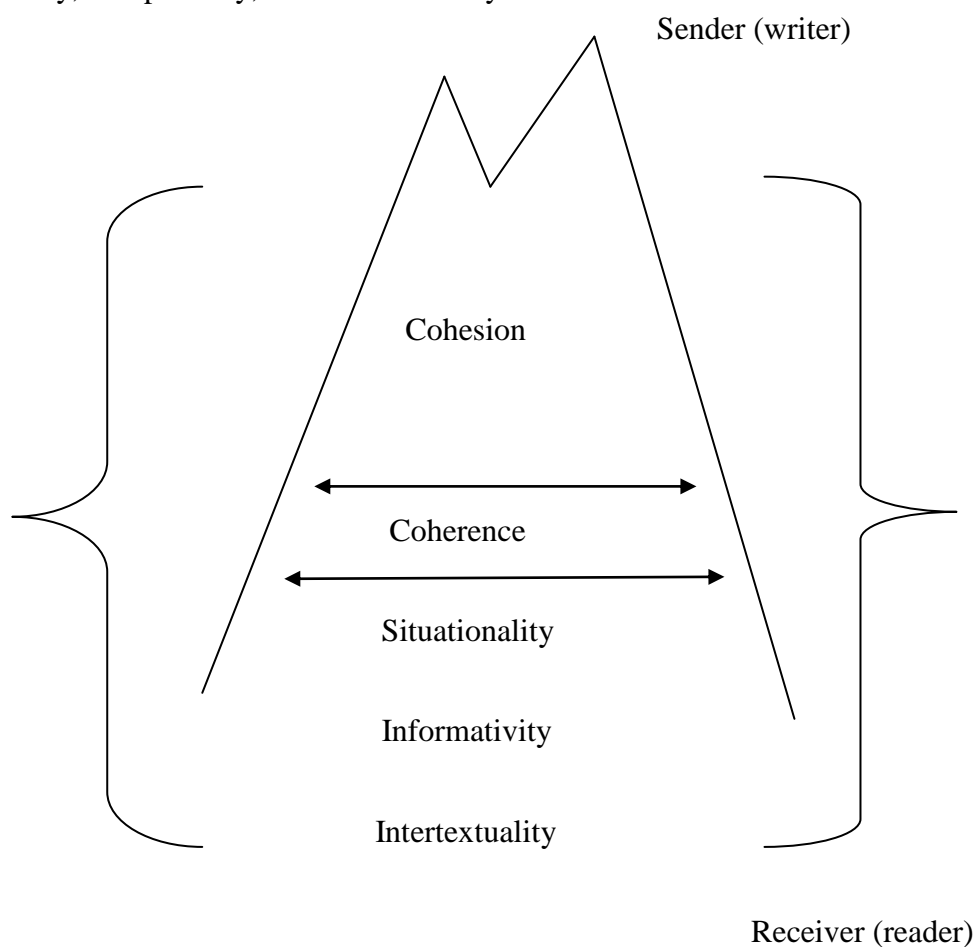

Figure 1
Iceberg Model for Textuality

Coherence comprises the components of the surface of the text in a meaningful and sequenced order; coherence deals with the order of the sentences and their interrelatedness; informativity focuses on how new information is transferred in the text; situationality refers to the notions of time and place which are necessary for a reader to place the information into communication; intentionality reflects the aim of the writer; acceptability is the reader's evaluation that how relevant the text is with the expectation of the reader, and intertextuality simply indicates the implicit or explicit relation of the text with other texts (De Beaugranda and Dressler, 1981).

In this sense, textlinguistics studies different text types and clarifies their properties in order to inform the reader about their classifications, characteristics, and functions. Among these, scientific texts enable readers to get knowledge on a specific scientific issue. By this way, readers can get the required information on what they need. Scientific texts are a part of informative texts as they provide information for their readers. The purpose of such texts is to discuss a scientific problem which forms the subject of their study. Therefore, in a scientific text, the problem should be stated clearly in order to make the readers comprehend the crucial point of the research (Şenöz-Ayata, 2005). Scientific texts provide meta-language and readers should have background knowledge in order to understand them. In a scientific text, it is also possible to come across some technical terms which can only be understood by target readers. In addition to these properties, target readers also may need the ability of interpretation while reaching to a conclusion during the reading process. Therefore scientific texts include a common message for its readers different from some other kind of texts such as stories, poems, and etc. Ögeyik (2004) refers to the degree of interpretation of texts in a reader focused approach which is common in written texts. However scientific texts do not permit different interpretations since they include a certain message for the readers.

In this respect, some studies mainly focus on different types of textlinguistic analyses for highlighting the workings of textlinguistic approach to describe the textuality of the texts; for instance, Coşgun-Ögeyik (2010) investigates the attitudes of prospective teachers of English towards linguistic courses and textlinguistic descriptions in particular. Güvendir (2006) describes how textuality and seven criteria are used in various texts; Akyay (2010) interrelates textlinguistic data to decode and encode texts in translation studies. Medina (2003) emphasizes the importance of textlinguistics in foreign language teaching and found out that textlinguistics provides students with an opportunity to take the first steps in text analysis. Erer (2006) investigates the problematic areas in paragraph translation and offers textlinguistic approach for decoding such areas. Coşgun-Ögeyik (2010) uses textlinguistic criteria to decode the national exam "YDS" (foreign language exam) and offers some alternative ways to respond the questions in the exam by using these criteria. In all these studies, the main aim is to underline the importance of textlinguistic approach to decode and encode various types of texts.

As for the scientific texts, one of the most significant points while constructing a scientific text is locating it into a scientific basis. A scientific text should comprise introduction, development and conclusion parts as in other texts (Şenöz-Ayata, 2004: 42). In the introduction part, writer presents the problem and aim of the study. This part serves as a guide to reader for getting prepared for other parts of the text. In the development part, writer

gives the collected data to persuade readers for his/her argument. This part is a collection of samples and applications which are related to the subject of the text. Conclusion part of the text is mainly related to the introduction and development parts. This part is a brief summary and assessment of the study which is mainly connected to introduction and development parts.

In this respect, Şenöz-Ayata (2004: 43) arranges the content of the introduction and conclusion parts in such an order:

The contents of the introduction part are;

- ✓ Giving information about the research field

- ✓ Introducing the studies in the research field

- ✓ The contribution of the study to scientific field

- ✓ The introduction of the study (aim and method)

- ✓ Giving information about the parts of the study

The contents of the conclusion part are;

- ✓ The summary of the study

- ✓ The summary of the results reached

- ✓ Assessment of the study

In this respect, the theoretical frame of the text, research method, findings and judgments should also be mentioned if the writer wants to reach his/her goals in making his/her text be accepted as a scientific unity (Şenöz-Ayata, 2004) Therefore, in this study, the scientific texts are chosen for describing their textuality regarding the abovementioned components of introduction and conclusion. In doing this, it is assumed that it would shed light on other studies that will be conducted accordingly. By analyzing and comparing scientific texts, it is aimed to offer a sample model for the candidate teachers who are planning to conduct academic research and studies, for teachers of English while selecting and interpreting the content of the texts that they would use in their classes, and for teacher trainees to design their courses, particularly reading and writing courses, by taking textlinguistic criteria while selecting and using scientific texts.

Methodology

In this study the characteristics of scientific texts and text linguistic criteria will be taken into account for defining the text to be described and evaluated as a scientific text. The model for this analysis is based on Şenöz-Ayata's arrangement for (2004) scientific text analysis through textlinguistic approach. Therefore this study is a descriptive one. Considering all these issues and textlinguistics criteria, sample scientific texts (two Turkish and two English scientific texts written in the same field) will be analyzed with a comparative approach.

Findings and discussion

The findings of the study will be displayed by analyzing four different scientific texts separately. Then a comparison of these texts will be presented.

Sample Article I by Özdemir (2006) ***"Türkiye'de İngilizce Öğreniminin Yaygınlaşmasının Nedenleri"***

This text has a theoretical basis mainly trying to find out the underlying reasons of the spread of English language learning in Turkey. And it starts with a claim that the reasons of this spread are the methods of teaching and the course books that are used in language teaching classes. Moreover the main reason for this spread is presented as the economic and political power of two countries, America and England.

This claim is simply indicated at the very beginning of the article in the abstract section. Abstract of the study is given both in Turkish and English and it is fulfilled with displaying the key terms related with that study. In this sense the abstracts simply and clearly define the aim and content of the study.

There is an introduction part under the abstracts. This part includes three paragraphs. It is briefly an introduction to the subject of the study. Concepts such as 'communication', 'language', 'mother tongue' and 'foreign language' are presented one by one. And these concepts are pertinent in the order they are given. In other words, each concept is strictly interrelated with the other. After displaying the last concept 'foreign language', the subject of the study starts to be developed via use of sub-titles such as *'Türkiye'de Öğretilen İlk Yabancı Diller', 'Türkiye'de 1960'dan Günümüze Yabancı Dil Öğretimi', 'Dil-Egemenlik İlişkisi', 'İngilizce Eğitim Yöntemlerinin İngilizcenin Yaygınlaşmasındaki Rolü', 'Ders Kitaplarının İngilizcenin Yaygınlaşmasındaki Rolü'.*

The writer firstly introduces the languages which have been taught in Turkey as foreign languages. This part is a good entry to the main event that will be discussed more deeply in the following parts of the study. The writer then focuses on the foreign language teaching implications in Turkey and touches upon the manner of Turkish education system on that field. After mentioning Turkey's attitude on teaching and learning English language, the writer centers upon the language-hegemony relationship which is the main goal to be reached throughout the study.

The next two sections under the sub-titles *'İngilizce Eğitim Yöntemlerinin İngilizcenin Yaygınlaşmasındaki Rolü' and 'Ders Kitaplarının İngilizcenin Yaygınlaşmasındaki Rolü'* fairly declares the essential assumptions of the study. In these sections, some examples are given in order to support the effects of teaching methods and existing course books on the spread of learning English in Turkey. The writer gives an example for the course book *'Opportunities'* and states that there are many statements subliming the American and/or English culture such as *"When a man is tired of London, he is tired of life"*.

After the development part, the writer makes a conclusion explaining the subject matter of the study one more time by stating the main reasons of spread of English language learning in Turkey as the teaching methods, the course books and the power of the mentioned countries. Then the writer finishes the article by making suggestions such as *"It is undeniable that learning English is crucial for people to reach information, to communicate with others in the world. However, one must be conscious about his/her aims while learning English"*.

Regarding the frame of the study, it can be concluded that it is a well organized article. The writer defines the aim of the study at first hand and then, she supports her assumption in the development part by giving various examples taken from different resources. The use of examples is the tool to convey the intended aim and it supports the objectivity of the scientific report. Hence, the language used in the article is formal. The conclusion part touches upon the content of the study again and put forward suggestions related with the field.

Sample Article 2 by Tosun (2006) *"Yabancı Dille Eğitim Sorunu"*

The main concern of this article is to point out the issue of education in a foreign language stating that there has been a shift from foreign language education to education in foreign language. This shift is presented as a harmful phenomenon and the writer tries to find out possible solutions to overcome this affect.

There are two abstracts (one in Turkish and one in English) displaying the aim of the study. The key terms which will be used frequently are given under the abstracts. However there is not a separate introduction part in the article. And the introductory paragraph starts with a manner which is not suitable for a scientific report since it starts with the statement referring to the key words given above; " *Bu tamlamanın üzerinde tek tek durursak sırasıyla karşımıza dört kavram çıkmaktadır" (p.28) (If we focus on this collocation, four separate concepts can be reported in the sentence).* The reader may not be able to understand which collocation the writer refers to.

The writer then defines the key words one by one. One of these words is 'mother tongue'. He explains this word by using various definitions and compares it with the word 'foreign language. And he mentions two features of determining a language as a foreign one. Here a detailed definition is given about these features.

The article does not include any separate section presented under a sub-title and this creates confusion for the reader in following the frame of the article. The development part is so complicated that it gives the reader an impression that there is not an important and crucial part to be used to support the main assumptions of the text. It is not surprising to indicate that there is not a separate conclusion part in the report. The writer continues his work starting with an abstract section and finishes the article without any other part. At the last part, he finishes with his suggestions about how foreign language education in Turkey should be.

The language used in the report cannot be regarded as a formal one because the writer frequently uses an informal tone. It would be beneficial to display this attitude by giving some examples from the article: *"Bütün bu güçlüklere karşın niye hala bir yabancı dil öğrenmek için 'yırtınır' dururuz? Şöyle aklımıza gelenleri bir sıralayalım" (p.36), "Son olarak akla gelebilecek öyleyse yabancı dil kime nasıl öğretilmeli? Sorusuna gelince burada, buna da bazı yanıtlarım olacaktır" (p.40)- (Why do we still wear ourselves out for learning a foreign language? Let me list some of them. Finally, I have some answers for the last question "how should a foreign language be taught to whom and how?).* In addition to that, there is not any reference shown in the article which is an important feature of scientific reports. Besides, there is a bibliography section at the end of the article but no reference is stated in the

development part. Regarding the criteria, it seems that this article is far from being a scientific report and does not include any feature of this kind of texts.

Sample Article 3 by Ellis (2007) *"Educational Settings and Second Language Learning"*

This article focuses on educational settings in which the second language learning occurs. Although the article does not include a separate abstract section it successfully defines the aim and objectives of the study. In the introduction part- which includes the abstract- a general distinction between natural and educational settings is explained. Then the writer defines the situation of language learners within these settings and states that the learners of a second language experience the second language both in natural and educational settings.

After the introduction part, the writer puts forward these settings under different categories. He uses sub-titles in order to clarify the subject and make the reader to comprehend the text. These titles are '*Types of educational settings', 'The language classroom setting', 'Submersion', 'Segregation', 'Mother tongue maintenance', 'Immersion' and 'Dual language'.* Within these sub-titles the writer emphasizes the phenomenon of using English as a universal language, a language which has its own characteristics enabling the learners to communicate in various settings. The writer thoroughly deals with each section without causing any question marks. And in each section he supports his statements by referring other studies. Using references is an important feature of scientific reports enabling the readers or other researchers to reach the related sources written in the field. Besides, it is an indicator of objectivity which means not using one's own interpretation without depending on some scientific proofs.

The conclusion part is displaying a very brief summary of the study. The aim of the study is defined by saying *"The aim has been to identify the potential learning outcomes associated with different types of settings, defined in very broad terms"(p.23).*

Also the possible variations in outcome within settings as well as between settings are considered. Regarding this, he identifies a set of general principles that underlie language learning success in educational settings. The writer is again preventing the subjectivity by displaying the restrictions of the study.

Although the writer uses sentences including 'I' pronoun, the language used in the article is formal. The passive voice is quite frequently used to support the formality that is used in scientific reports. In addition, the writer uses a table demonstrating different kinds of educational settings. Using tables for demonstrating the information is another technique that is used in scientific texts. All in all, the article is coherent and cohesive from the beginning till the end when considered from the scientific discourse.

Sample Article 4 by Jenkins (2006) *"Current Perspectives on Teaching World Englishes and English as a Lingua Franca"*

The main purpose of this article is to explore recent research into World Englishes and English as a Lingua Franca focusing on its implications for TESOL, and the extent to which it is being taken into account by English language teachers, linguists, and second language acquisition researchers.

The article begins with a paragraph written in bold but not with a title named as abstract. However this paragraph summarizes the content and aim of the study very effectively. There is not a separate section titled 'introduction' but the following three paragraphs can be regarded as the introduction part of the article. Although the study is written quite formally, sometimes it is possible to see the statements in which the writer mentioning about her previous experiences; "As I was about to deliver a paper at a British university a few months ago, the conference organizer hesitated midway through introducing me, pointed to the phrase World Englishes on the biographical information I had provided, and asked whether the plural form was a mistake" (p. 157). The use of these kind of statements do not avert the text into an informal style in contrast, they enrich the quality of it.

The development part of the article strictly follows the order it presented in the introductory phase. Thus the article includes the sub-titles related with the topics that are mentioned in detail. All the sections in the development part have theoretical basis and include references to other sources.

The informative quality and objectivity is prevented throughout the text. Similar studies which are conducted within this field are given. The writer clarifies the topics which he put forward in the introduction part. This part is important in terms of cohesion and coherence, since it must be in harmony with the introduction part. When considered, the development part of the article is relevant to the introduction part. Because, it is related to the problem and purpose of the article and meets the expectations of the readers in terms of clarifying the ideas mentioned in the introduction part.

The conclusion part of this article can be considered as the summary of the whole text. Although there is not a separate section for conclusion, the last part of the article favors all the claims of the introduction and development parts. Moreover, it meets all the requirements for the conclusion parts of scientific texts. The writer addressing this part as '*Emerging Consensus and Remaining Issues and Questions'*. Besides presenting the summary of the study, she proposes to conduct further researches in order to attain more affective results and general agreement on the issue.

On the whole, this article is well formed, highly informative and subjective. In other words, it covers the features of the scientific discourse.

Comparison of Turkish and English Scientific Reports

Since the analysis of scientific reports given here have theoretical basis, it would be compared from this perspective rather than focusing on the structures of practical research.

* One of the Turkish samples titled *"Yabancı Dille Eğitim Sorunu"* does not include the features of a scientific text. Because there is no introduction or conclusion part which are the most essential parts of a scientific text displaying the aim of the study, the summary of findings, discussion and etc. Besides, it does not support its assumptions by referring to other sources. Moreover the development paragraph draws a complex picture of the subject and makes the article nearly impossible to understand or to follow. Also the language used in the article is quite informal. Thus, this article cannot be an example of how a scientific discourse should be.

* Apart from the sample given above, other Turkish sample can be regarded as quite informative. The writer defines the aims of the study in a theoretical frame having a coherent structure. The sections are presented under various sub-titles to ease the reading process. By this way the reader can understand what will come next and continue to read. The language used in the article is formal and reflecting a feature of scientific texts. The English samples are both informative and similar with the second Turkish sample in their organization and structure. The language used in these texts is formal and they support the study by using references.

* Although the articles in English and the Turkish one generally have the same qualities, it is obvious that English samples use more references than Turkish ones. The theoretical parts in English samples mostly make use of references. But the same is not true for the Turkish samples.

* The English samples do not include abstract sections. Rather they make an introduction by the use of one or more paragraphs. However this does not mean that these articles are not following the structural organization of scientific texts. Both texts are fairly good enough to reflect the features of the scientific texts.

* One way or another the Turkish and English samples serves for the same aim and that is being informative. Except from the one Turkish sample, three articles nearly reflect the same organization and structure.

* The biggest difference between the samples cannot be determined between the Turkish and the English ones. Indeed the ultimate difference is between the first Turkish sample and the other three samples (including the other Turkish sample!). This situation is important since it shows us that we may not be able to make strict distinctions between the samples belonging to two different languages. Hence more samples should be compared in order to reach more general conclusions. This claim was also supported by Şenöz-Ayata (2004:41) "The studies on that field are fairly restricted".

In this study by analyzing scientific texts and comparing these, it is aimed to offer a sample for the candidate teachers who are planning to conduct academic researches and studies. In addition to this, it is also aimed to enable the teachers of English as a foreign language to select and interpret the content of the texts that they would use in their classes. Moreover, candidate teachers who learn about the textlinguistics can make use of this knowledge to teach reading and writing skills effectively to their students. Working on the written texts has many benefits. Besides reaching to a specific knowledge in a certain filed, students can learn a lot about the culture, history, social position, ideology and political tendency of the target language (Ögeyik, 2008:105). These help students to comprehend the text and the context that the text is written. All in all written texts are valuable sources for learning and teaching English as a foreign language. To conclude, a sample analysis of four different scientific texts is presented according to the criteria of textlinguistics to shed light on other studies that will be conducted. However, it should be kept in mind that there are many other types of texts that can be used in teaching English as a foreign language.

Conclusion

The aim of this study was to use textlinguistic approach to analyze the textuality criteria of four sample scientific texts for enabling readers follow the flow of the text. Textlinguistic analysis of the sample scientific texts was carried out on the criteria of the relatedness with the research field; the contribution of the study to scientific field; the introduction of the study (aim and method); the summary of the study; the research results; and assessment of the study. It was determined that the sample texts obey the criteria in general; however, in semantic level the language used in one of the texts does not obey the norms of scientific report and seems too informal. By analyzing the textuality criteria of the texts, it is expected that the study may contribute to foreign language learning and teaching process in terms of text selection, text analysis while decoding and encoding texts, and for reporting research findings of researchers, teachers, candidate teachers, and etc., since the richness of a scientific text lies in its form as well as the information it conveys.

References

Akyay, E. (2010). *Textlinguistics and Translation Performance: A Sample Study in Translation Courses.* (Unpublished MA. Thesis). Trakya Üniversitesi Sosyal Bilimler Enstitüsü.

Coşgun-Ögeyik, M. (2010). Metindilbilim ölçütleriyle yabancı dil sınavlarının değerlendirilmesi: ÜDS sınavından örnek bir betimleme çalışması. *Milli Eğitim Dergisi.* 186, 151-165.

De Beaugrande, R. A. & Dressler, W. (1981). *Textlinguistics.* New York: Longman.

Ellis, R. (2007). Educational settings and second language learning. *Asian EFL Journal. 9/4*, 11- 27.

Erer, N. G. (2006). *Translation as an Integrated Approach in ELT.* (MA. Thesis). Graduate School of Education of Bilkent University.

Günay, D. (2003). *Metin Bilgisi.* İstanbul: Multilingual Publishing.

Güvendir, E. (2006). *İkinci Dil Ediniminde MetindilbilimÇçözümlemesi.* (Unpublished MA. Thesis). Trakya Üniversitesi Sosyal Bilimler Enstitüsü.

Jenkins, J. (2006). Current perspectives on teaching World Englishes and English as a Lingua Franca. *TESOL Quarterly. 40/1*, 157-181.

Medina, B. L. (2003). The role of textlinguistics in the foreign language class. *Encuentro Revista de investigacion e innovacion en la clase de idiomas.* 12, 148-156.

Ögeyik, M. (2004). *Yazın Eğitiminde Kuramlar ve Uygulamalar* (Unpublished PhDThesis). İstanbul Üniversitesi Sosyal Bilimler Enstitüsü.

Ögeyik, M. (2008). *Metinlerarasılık ve Yazın Eğitimi.* Ankara: Anı Yayıncılık.

Özdemir, A., E. (2006). Türkiye'de İngilizce öğreniminin yaygınlaşmasının nedenleri. *Mersin Üniversitesi Eğitim Fakültesi Dergisi.* 2/1, 28-35.

Şenöz-Ayata, C. (2004). Metindilbilimsel yöntemle bilimsel metin çözümlemesi. In Öztokat, N. (Ed.) *Disiplinlerarası Ortam ve Yöntem Sorunları* (pp:41-49), İstanbul: Multilingual Publishing.

Şenöz-Ayata, C. (2005). *Metindilbilim ve Türkçe.* İstanbul: Multilingual.

Tosun, C. (2006). Yabancı dille eğitim sorunu. *Journal of Language and Linguistic Studies.* 2/1,28-42.

Yule, G. (2000). *Pragmatics.* Hong Hong: Oxford.