Chapter 1:

Introduction
1.1. Background Information

The need for information about the structuring of longer stretches of speech or text forced many linguists to shift their focus of attention in the early seventies from the formal system of language towards the process of communication (Lyon, 1977; Widdowson, 1984; Van Dijk, 1992 & others). The emergence of two major fields of linguistics, i.e. text analysis and discourse analysis, was the result of the new movement. These two trends have attracted applied linguistics with the hope of shedding light on the area of language teaching and learning.

In discourse analysis we examine how humans use language to communicate and how they use linguistic messages so that the hearers can interpret these messages. The words, phrases and sentences that appear in discourse are the evidence of an attempt by a producer to communicate his/her message to recipients, so the discourse analyst takes the function or purpose of a piece of linguistic data as its primary area of investigation. They describe linguistic form, not as a static object, but as a dynamic means of expressing intended meaning. In this matter, they are interested in the results of psycholinguistic processing experiments. Discourse analysis is the study of linguistic forms and the regularities of their distribution and also a consideration of the general principles of making sense which is done by people on what they hear and read. It refers to attempts for studying the organization of language above the sentence or above the clause.

Harris (1952) defined the goal of discourse analysis as the systematic variety of a random collection of sentences from a text. It examines the language use which is affected by the communicative contexts, for example, the relationship between the discourse and the
speakers and listeners in social transactions. Discourse analysis is defined in M. Stubb’s textbook (1983) as a study of language use beyond the boundaries of a sentence, the interrelationship between language and society and the interactive properties of everyday communication; in other words, it is concerned with language use in social contexts. Analysis of text and discourse is involved in understanding the processes, functions and meanings of social interaction.

For Fairclough, the term of discourse is “a form of social practice rather than a purely individual activity or a reflex of situational variables” (1992, p.63). He adds that the relationship between social practice and a text is in fact mediated by the dimension of discursive practice: “it is the nature of the social practice that determines the macro-processes of discursive practice, and it is the micro-processes that shape the text” (p. 86). To clear the sense of discourse analysis, Stubbs says that “any study which is not dealing with a) single sentences, b) contrived by the linguist, c) out of context, may be called discourse analysis (1983, p. 11). This means that there is a shift in focus from sentences in isolation to utterances in contexts. The importance of the situation and the environment, including the relationships between initiator and recipient, in which people use language and their purpose in using it, constitutes the context. Cook (1994) uses the term ‘text’ to mean a stretch of language independent of context. The term context is crucial to the analysis of discourse because ‘context’ brings in the influences of the world which shaped the text and also the world knowledge of the reader as also the conditions which surround him (the reader). Context consists not only of the physical world in which the communication takes place but also the relationships of the addressee as well as the cultural and social set up which shapes their minds in fact everything. It is the role of context that builds
coherence into a piece of text. Coherence is one of some essential features of a text which is required in comprehension of any discourse by the reader to resort to. Coherence, like cohesive devices used to tie pieces of text together in specific ways, is accomplished in many ways (e.g. using templates from scripts and rhetorical genre forms, via clause selection and with syntactic markers of various types) to make a text comprehensible. The ability to interpret the coherence relations between text fragments, whether they are explicit or implicit, is crucial for comprehension of the text. As it is claimed reading is an active and constructive process building meaning from a text based on ability to make coherence. Some researchers suggest that the reading of academic material can be particularly challenging for EFL learners due to the some grammatical features, lexical and knowledge about the cohesive devices making coherence in the text.

In teaching reading skills for academic or specials purposes, the effective approach seems to be benefited the interactive process to activate their prior knowledge of content and use textual cues to help them cope with new information. Parallel to this process between reader and content, there is also another way of interaction which is between reader and writer using the cohesive devices signaling coherence. In fact writers can applies these devices to produce a desired effect, depending on their underlying purposes and perception of readers’ expectation. For instance, in composing textbook, the writer takes benefit from these devices to present information in a clear, convincing and interesting way in an effort to promote acceptance and understanding, as well as reader-writer solidarity. It is also an important persuasive resource used to influence readers' reactions to texts according to the values and established conventions of a given discourse community.
In defining the coherence and cohesive procedure in discourse analysis, Widdowson states:

I want to suggest that in discourse analysis we are concerned with procedures of two sorts: those which relate to rules of usage and which realize propositional development, which I call cohesion procedures, and those which relate to rules of use and which realize the illocutionary development of discourse, which I will call coherence procedures (1979, p. 142).

By cohesion procedures, the language user realizes the appropriate value of anaphoric elements; it is the way in which a sequence of units of information encapsulated in linguistic units is provided with a conceptual unity. By coherence procedures, the language user realizes what communicative act is being performed in the expression of particular propositions, and how different acts are related to each other in linear and hierarchical arrangements, for example in some cases, when the language user is faced with an interrogative or order proposition, he/she recognizes an invitation rather than interrogation or order.

However, it seems that coherence is not simply a matter of illocutionary connections in dissociation from propositional development. Procedures of cohesion and coherence are not entirely distinct, any more than are rules of usage and use. In the point of view of Widdowson there are two ways of looking at the communicative activity that goes on in the creation of discourse coherence. Discourse analysis focuses on the grammatical and lexical characteristics of textual cohesion and the organizational devices contributing to discoursal coherence. It looks at how, for example, the choice of verbal tenses or other grammatical features affect the structure of the discourse. The analysis also looks at the
relationship between utterances in discourse, for example, aspects of cohesion and cohesive devices and the discourse markers function that are employed. In using terms such as reference, implicature and inference, discourse markers, presupposition, discourse analyst is describing what senders and receiver are doing and not the relationship which exits between one sentence and another. These are the means by which the communication is performed and its purpose is achieved; it goes without saying that their role in comprehension process of a discourse is vital. In this line, it is worth noting that even during language acquisition, children learn to build relevant and coherent messages to communicate effectively with individuals in their surroundings to adjust their messages accordingly. They also learn how to interconnect different kinds of propositions in accordance with culturally predefined discourse categories, and to master the marking devices offered by their language to express conceptual relationships within a discourse (anaphora, connectives, etc.). Considering the importance of coherence in reading comprehension, it is needed to define how these cohesive devices should be best described in coherence relations of a text and also to assess the relative role of some cohesive devices while highlighting the key role of others in the perception of coherence in discourse. Therefore they deserve to be analyzed in order to be clear in terms of their functions in a coherent text. One of these devices is discourse markers. As language elements, they facilitate the comprehension process and shorten its time. They function as connectors and link two parts together and show the type of meaning relationship between these parts. They do not have meanings of their own. Discourse markers occurring between sentences would signal the type of meaning relationship between them and enhance the comprehension process. They occur both intra-sententially and inter-sententially. Intra-
sententially, they come between the main clause and the adverbial clause. Traditionally, discourse markers are discussed under different headings such as adjuncts, connectors, disjuncts, conjuncts (Quirk et al., 1985). In addition to their role in cohesive relations, they can function for finding out the coherence relations between the elements in favor of the shortening comprehension process of reading a text. As Trillo (2008) believes discourse markers play a crucial role in comprehension process; since they are the elements which fill the discoursal and cognitive slots that the user of language needs in order to weave the net of interaction. So without sufficient discourse markers in a piece of writing, a text would not seem logically constructed and the connections between the different sentences and paragraphs would not be obvious. It is worth noting that the writer should be take care of use discourse markers when necessary, otherwise the text sounds incomprehensible. Some linguists believe that discourse markers do not belong to any particular grammatical category. The phenomenon of discourse markers shows that interaction needs to have a pragmatic skeleton, including these discourse slots, which holds the communicative force of the interaction together. It can be claimed that these elements are the signalling devices to send the producers’ communicative intentions. Schiffrin (2001) presents a useful summary of three perspectives on discourse markers: (1) Halliday and Hasan’s (1976) systemic functional approach which concerns to the cohesive function of discourse markers; (2) Schiffrin’s (1987) interactional sociolinguistic approach in which markers serve to connect utterances on the multiple planes of participation framework, information state, ideational structure, action structure, and exchange structure; (3) Fraser’s (1990) pragmatic approach in which the role of markers is to convey the speaker’s communicative intentions or dictate the interpretation of the message
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conveyed. She also calls attention to the lack of coherence and consistency among the studies of discourse markers.

Concerning the definition of discourse markers, Maschler (2002) employs a semantic as well as a structural criterion in her definition, claiming that ‘markers are used to negotiate frame shifts or changes in footing’ (2002: p. 19). Four categories of discourse markers are resulted from this definition as: interpersonal, referential, structural, and cognitive. It is worth noting that discourse markers have been widely studied by researchers even if discussions on definable issues are still unresolved. However, there is a general agreement on the fact that the production of coherent discourse is an interactive process that requires producer to draw upon communicative knowledge. The fact that most of the studies on discourse markers have focused their attention on their use by native users of English who have capabilities to recognize the semantic and pragmatic value of these elements, therefore, there is a need to further explore and systematically investigate this issue on the nonnative English user. Given the need as mentioned before, this study attempts to assess the role of discourse markers function, as one of the cohesive devices, in coherence relations of a specific text. As Brinton (1996) believes discourse markers are grammatically optional and semantically superfluous but they pragmatically serve a variety of functions. She presents an inventory of ten functions which she groups into two main categories (based on the modes or functions of language identified by Halliday (1973). First, the textual function which is related to the way the speaker structures meaning as text, creating cohesive passages of discourse, using language in a way that is relevant to the context. And second, the interpersonal function which refers to the nature of the social exchange, that is, the role of the speaker and the role assigned to the hearer. Clearly, discourse analysis is
the primitive needed approach in studying the communicative use of language. In point of view of Leech (1983) discourse analysis is the study of the general condition of the communicative use of language but Mackay and Mounford (1978) Swales (1990) and Bhatia (1993) point to its inadequacies and report new way for language analysis; that is, genre analysis. While discourse analysis identifies the functional components of the text, genre analysis enables the writer to put these functions into a series in order to organize the overall structure of such texts. Dudley-Evans (1995) also relates genre analysis to discourse analysis and register analysis. He says that the essential difference between discourse and genre analysis seems to be that discourse analysis seeks to describe relations that are in all texts. It is concerned with the similarities between texts but genre analysis claims only to be able to say some thing about individual texts.

Genre analysis articulates an approach which attempts to establish theoretical and methodological developments in the human sciences especially linguistics so that they could benefit in doing research and practice in academic writing.

In this line, Bhatia (2002) adds:

The main goals of genre theory are: -to represent and account for the seemingly chaotic realities of the world; to understand and account for the private intentions of the author, in addition to socially recognized communicative purposes: to understand how language is used in and shaped by socio- critical environment; and to offer effective solutions to pedagogical and other applied linguistic problems (pp. 3-19).

Accordingly, we consider the complex meaning of genre as a formal discourse category, either oral or written, which shares some
characteristics such as the area it belongs to, readership of the text, author, 
macrostructure, content and communicative purpose. The genre analysis 
model has proved very influential in EAP and genre studied generally. This 
is largely owing to its explicitness, completeness and capacity to 
investigate and explain complex relationships between text and context in 
educationally appropriate terms. Genre analysis has been a multi 
disciplinary activity attracting attention not only from linguistics, discourse 
analysts, communication experts and rhetoricians, but also from 
sociologists, cognitive scientists and translators.

Swales (1981 & 1990) whose research has been seminal in shaping 
genre theory in ESP uses the concept of genre in order to pay attention to 
the role of contextual factors and emphasizes the role of communicative 
purposes through a text. The findings of genre analysis bring together the 
insights of the earlier approaches to text analysis and it is attempted to 
further studies in the examination of the writer’s purpose because this has a 
central importance in comprehension of a text. The interest in discourse 
community and how conventions of different discourse communities 
placed ESP research in a position where it can make a meaningful 
contribution to discussion of how ideas are disseminated and facts created 
in communities opens many avenues for research.

Genre has structure and standardized communicative constraints, 
and those who practice it frequently and professionally will have an overt 
knowledge of its rhetorical features. As a result, many ESP writers 
(Paltridge, 1997; Mustafa, 1995; Marshall, 1991) have recommended that 
academic writing instruction should focus on the genre: its communicative 
purpose, its content structure, and its language conventions.

In specific discipline, it may be more efficient to focus on the 
specific features of the text genres which are important for students to read
and write. They need to see how the moves and steps work in the genres they use and how they are expressed in English. This study is being attempted to research the discourse markers function in one genre, that is, medical research articles, to analyze them in every section and in terms of their function in process of comprehension.

1. 2. Statement of the Problem

Non native scholars interested in reading international journals are faced with the problem of developing adequate academic competence in English. Not all problems in reading comprehension are related to the unfamiliar vocabulary or syntactic forms. Students who have problems at discourse level, rather than word or sentence level might benefit from instruction in the development of topic in discourse. In response to this need and in an attempt to develop teaching practices, genre analysts working with English for Academic Purposes (EAP) have focused their attention on academic written genres (Swales, 1990 & 1981; Bazerman, 1988; Myer, 1990). This method is considered the one to promote the reading performance of scientific texts and provides the reader with background knowledge for the development of the target reading skills and overcome the problems in these areas. Maher (1987) argues that fluency in reading skills is the minimum requirement not only for the comprehension of international journals but also for local in-house publications in countries where English is not the mother tongue. EAP practitioners need to learn more about written academic discourse in order to instruct and function more effectively in their profession. And also it seems that the awareness of contextual socio-cultural schemata such as context for different academic genres or reader
/ writer roles, are also considered fundamental for successful reading (Johns, 1997). It was proved that those who do not possess this knowledge are seriously hindered in gaining access to most information and, consequently, in progressing in their field of study.

As the learners of ESP should be able to read researches published in English by the discourse community of their particular research area, knowledge of the intended meaning, schemata, linguistic forms, some reading strategies, and the most important one: grasping the meaning relationship (coherence) can be used as the means to overcome the problems raised in their reading comprehension.

Discourse markers as the devices of coherence, play an important role in interaction between writer, reader, context and language conventions of academic genres and discourse communities. Learners often appear to be unaware of discourse markers and their functions in the above mentioned situation. Although several recent psycholinguistic studies have investigated the actual processing of connectives and lexical markers of text structure, there is still no consensus on the exact role of explicit discourse markers in text (Sanders & Noordman, 2000). They should therefore receive more attention in the teaching English for Academic Purposes. However presentation and explanation of discourse markers is inadequate in this situation. It is argued that neglect in covering this topic gives misleading information to students concerning the importance of the concept and so they can not achieve the intended purpose of the ESP courses and can not handle the difficulty when they are faced with unmanageable size of the research articles in their field of study (medicine).
1.3. Research Questions

This research presents an experimental and an exploratory study intended to address the aforementioned lack of knowledge of discourse markers function and their impact on reading comprehension improvement. This involves the following research questions to be raised:

1- Is there any difference between discourse markers used in the different sections of medical research articles in terms of their frequency?

2- Is there any impact of explicit treatment of discourse markers function in the medical discourse on the reading comprehension of learners of ESM? Is there any difference in performance between those who are aware of discourse markers that recur in specific genre and those who are not aware of discourse markers?

1. 4. Statement of the Hypotheses

On the basis of the above-stated research questions, the following null hypotheses are proposed in the following interrelated statements:

- There isn’t any difference between discourse markers used in the different sections of medical research articles in terms of their frequency.

- The explicit treatment of discourse markers function in the medical discourse doesn’t have any impact on the reading comprehension of learners of ESM. And there isn’t any difference in performance between those who are aware of discourse markers that recur in specific genre and those who are not aware of discourse markers.

1. 5. Definition of Key Terms
EFL: stands for “English as a foreign language”. It refers to the teaching of English to people who live in a country in which English is neither the first nor the second language (e.g. Iran).

ELT: it is an abbreviation which stands for “English language teaching”. It refers to the teaching of English to people for whom it is not the first language.

ESP: English for specific purposes; it is goal oriented, that is, Students study English not because they are interested in the English language as such but because they need English for study or work purposes.

EAP: English for Academic Purposes. It accounts for an amount of ESP activity. For some practitioners, EAP is a branch being EOP. EAP is thus specific purpose language teaching differentiated from EOP by the type of learner: future or practicing student as opposed to employee or worker.

ESM: English for Students of Medicine; specialized teaching of English to the students of medical fields.

Rhetoric: Rhetoric is the process a writer uses to produce a desired piece of text. This process is basically one of choosing and organizing information for a specific set of purposes and a specific set of readers.

Genre: As Swales (1990) defines shortly "a genre comprises a class of communicative events, the members of which share some set of communication purpose".

Discourse: It refers to all language units with a definable communicative function, whether spoken or written. It stresses the need to see language as a dynamic, social, interactive phenomenon – whether between speaker and listener, or writer and reader. It is argued that meaning is
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conveyed not by single sentence but by more complex exchanges, in which the participants’ beliefs and expectations, the knowledge they share about each other and about the world, and the situation in which they interact, play a crucial part.

Discourse markers: They function as connectors and link two parts together and show the type of meaning relationship between these parts. Discourse markers occurring between sentences would signal the type of meaning relationship between them and enhance the comprehension process.

Pragmatics: it studies the factors that govern our choice of language in social interaction and the effect of our choice on others. Pragmatic factors always influence our selection of sounds, grammatical constructions, and vocabulary from the resources of the language.

Coherence: The relationship which is between the linguistic strings in a way that hearers recover messages from utterances. The hearers are expected understand them on the basis of their background or contextual assumptions.

1. 6. The purpose and Significance of the study

The interest of the application of the academic text knowledge in teaching professional reading and writing is a consequence of the increasing role sciences and technology are playing on our modern society. So, increasing speed of recent advances in all disciplines, getting up to date knowledge from the esteemed academic journals in English has become very important. In this line, EAP has adopted various approaches to text analysis to link all ESP activity to view of a text. In discussing the teaching language in ESP, Strevens (1977) argued that the language is
attended at the levels of: 1- register; discussing about lexical and grammar / structural features 2- discourse; concerning the effect of communicative context, the relationship between the text / discourse and its speakers / writers/ readers/ listeners 3- genre; discussing how language is used in a particular setting, such as research papers, dissertation, formal letters. Genre analysis, as one of the new approaches to language description, is of special interest to ESP practitioners and has wider implications for EAP. It is an exciting and fruitful development within ESP because it gives importance to the context and particularly the social and institutional aspects of that context.

Genre-based instruction is argued to be a facilitative approach in reading comprehension and provides the reader with background knowledge for the development of the target reading skills, so it can be the main objective of ESP readers in our EFL learning teaching situation to improve reading and writing and overcome the problems in these areas. ESP learners should know how to get the general idea of a text through different moves and stages in order to reach to the communicative purposes. Any ESP text has its own structure patterns which are typical and can be identified. The learner is more likely to meet them in the target situation. Identifying and teaching these particular patterns of ESP texts can be of great consequence in reading and understanding written specific texts. Gaining this knowledge can be regarded a possible way through which reading comprehension instruction might be enhanced and would be positive and beneficial to readers and writers of academic texts. To instruct and function more effectively in the profession, EAP practitioners need to teach their learners to observe these structure patterns of every genre in ESP texts, in this way they empower students to cope with the specialized written texts. As the needs of readers and writers are of
importance in academic texts, one must analyze what the learners need to be able to do before attempting to design the syllabus. Thus, the identification of the elements of each genre is one part of the need analysis for readers of that genre.

It seems that the awareness of contextual socio-cultural schemata such as context for different academic genres or reader / writer roles plays a fundamental role for successful reading (Johns, 1997). It was proved that those who do not possess this knowledge are seriously hindered in gaining access to most information and, consequently, in progressing in their field of study and/or research. In higher education, both lecturers and students should make extensive use of academic texts in English if they want to compete not only with their native English speaking counterparts but also with all those who are proficient in English as a second or foreign language. In other words, they need to read research published in English by the discourse community of their research area. In fact, reading academic texts (such as textbooks and research articles) and to know the intended meaning of texts seem to be the greatest requirement for students in most higher education situations where English is taught and /or used as a foreign language (Jordan, 1997).

In a text, utterances predict forward but interpretation may operate backwards: we look backwards in discourse to relate an utterance to its predecessors. Coherence of discourse is a function of listener’s interpretation. Coherence implies that a text is a unit and elements of the text come together to make it comprehensible. Interpretation of a text means what the readers bring to a text is what the author puts into it. It grew out of work in different disciplines including linguistics, semiotics, psychology, anthropology and sociology. Comprehension can, in one sense, be defined in terms of grasping of the meaning relationships
(coherence) which exist inside a sentence by the receiver. Coherence of a text may be covert or overt. In sentences which are overtly related, we can detect cohesive ties such as references, discourse markers, connectors and etc. In this line, discourse markers presentation is considered as an important way for grasping the intended meaning and a mean for expressing the writer-reader relationship. Although it seems useful to raise learners’ awareness of their presence in academic texts, it is argued that there is neglect in covering this topic. Therefore, the failure to adequate represent discourse markers gives misleading information to students concerning the importance of the concept. Discourse markers appear to be an area which students find problematic and often there is little attention to how it could be used pedagogically for teaching academic reading. This situation prompted me to consider how to develop the reading ability of non native students of Medicine in English. This interest arises from the present situation at my work place which is an university of medical sciences.

The medical field was chosen for this study primarily because the number of English language medical professionals is increasing worldwide and among the different groups of learners, the students of medicine have received a noticeable share in the English Language Teaching (ELT) system worldwide (Robinson, 1991). They need to study books, journal, articles and medical discourse and take part in conferences, scientific debates and etc. in their own field of study and have a strong desire to read the medical articles in respected journals; their demand is more specific than English for medical purposes (EMP), that is, there is a great need to learn better English. Having good medical English language skills is not enough to fulfill these requirements. It is a fact of life that one does not need to know English to be a successful physician,
however to be a successful physician-researchers. It will be incumbent
upon them to read and write English fluently. It seems that medical
scientists should be more sensitive to the whole process of negotiation of
meaning; they should do so with their intended reader’s purpose in mind,
and have a good knowledge of communicative functions and the
underlying structure of the medical research articles otherwise they will
fail to communicate effectively or even fail to communicate at all. They
have to acquire the structure patterns of medical research articles so that
they manage to convey their communicational intentions effectively.
Genre knowledge of texts has the power to force communication
intentions to achieve their purposes. Also journal editors certainly take
responsibility for the quality and importance of papers they select to
publish. Additionally, medical discourse, due to its increasing relevance
and spreading in modern society, is a domain of language which deserves
closer scrutiny and analysis by academicians as well as practitioners. That
is why the practitioners and teachers of EMP should teach their students a
genre-based syllabus. It is believed, genre knowledge is a prerequisite for
becoming equal members within the discourse community of medical
doctors.

This study is being undertaken to consider the issues of learning
English at university level and seeks the ways of improving the quality of
learning in ESP program in terms of reading. It is focused on the
coherence devices in the genre of medical research articles. In spite of the
valuable publications dealing with academic and specialized discourse,
few of these are devoted specifically to medical discourse. And although
many valuable researches, particularly in ESP, consider genre as an
appropriate pedagogy for developing ESP curricula, none has considered
the function of discourse markers in the different rhetorical sections within
medical research articles and their effect on reading comprehension. This study may be considered a step toward that end and also one attempt to examine whether the knowledge of discourse markers in one genre helps the readers overcome the difficulties raised in reading of their own specific written texts. This knowledge deserves more attention both for pedagogic and research reasons.

Research procedures have been done by analyzing a sample of medical texts to find the discourse markers which commonly appear in the different sections of this type of written ESM discourse. After extracting results, they have been presented by classification to help the learners in learning and comprehending these texts.

We believe that by developing the analysis of discourse markers in the different part of one genre, i.e. medical research articles, the ESP learners can handle their reading problem in facing with the longer stretch sentences; also we can provide not only these learners but also the ESP teacher with the information necessary for structure of academic texts, recognizing, writing, translating and teaching this type of genre or subgenre. In addition, the findings of this proposed study formulate a valid procedure for preparing the textbook and the specific texts and for reading comprehension and also they are beneficial to a particular set of language users. Also, it is of relevance to the ESP course designers in order to determine the prerequisites of an ESP course and in decision making to make recommendation for changes in teaching and learning practices. It may lead us to the implementation of a more efficient method of teaching in ESP courses.
1.7. Limitation and Delimitations of the Study

The objectives of this study revolve around helping ESP learners to develop their competency in academic reading texts. It is attempted to analyze the discourse markers in different sections of the medical research articles, prepare a syllabus design about their function as one of coherence factors and then instruct this syllabus to ESP learners with the goal of promoting their reading strategies in ESM texts. Exploring these concepts will certainly help to devise better instructions for different learning situations. However, this study is limited to examining the impact of knowledge of discourse markers function on the reading processes of ESP learners. Nevertheless, only some Medical students have been selected for the study for the sake of the convenience of the topic of the research and homogeneity of subjects with regard to their specific field of study. Choosing other subjects with characteristics other than those included in this study might yield differing results.

In order to make the obtained data more workable, the pre and post ESP instruction tests were in the multiple choice format, in other word , the competency of the students in reading comprehension of medical texts were measured objectively by administering the ESP multiple choice tests. This can be considered as the second limitation, because in this way, some relevant data may have to be excluded.

The third limitation is that the research sample is selected from a population of medicine students of a university who have chosen ESP course after passing the General English course.

The forth limitation which should be considered is that the variable of student’s gender, age, mother tongue, social class, motivation and language proficiency are not controlled in this research; so the obtained data can not be analyzed and interpreted based on the mentioned variables.
It will not be clear whether the weak or strong students or whether the male/female students can equally learn the instructed syllabus and equally perform on ESP reading comprehension.

In short, the current findings, though insightful for ESP reading instruction and language teaching and learning, contain some drawbacks that call for further research. Replication of the study with larger samples would increase the credibility of the results further.

8. Overview of the Study

In the present study, the researcher divides the thesis into five chapters as follows:

- **Introduction:**
  This chapter states the background information related to discourse analysis, genre analysis, the role of context in discourse, coherence relations between the fragments in the text, discourse markers and the need for further researches in that field. It also poses some questions and the related hypothesis that were the researcher’s main concerns. The key terms and concepts of the thesis statement are defined consistently and also the purpose and importance of the study are explained briefly. In order to uphold the internal and external validity of the study, the limitations and delimitations imposed on the study are mentioned in this chapter. The tentative subtitles of the chapter are as follows:
  - Background knowledge
  - Statement of the problem
  - Research questions
  - Statement of the hypothesis
  - Definition of the key terms
- Purpose and significance of the study
- Limitations and delimitations of the study

**Review of the related literature:**

The second chapter reviews the literature of the study that is its full background knowledge. As the topic of this study covers several issues, the researcher presents some related background knowledge about them in this chapter. It chapter includes the issues on the field of discourse analysis, genre analysis, the role of context in discourse, cohesive devices and coherence relations in the texts, discourse markers role in comprehension of the text, reading comprehension, academic reading and reading performance strategy, ESP instruction and approaches, and ESM and medical discourse. In addition in this chapter, the researcher reports other researches that have been conducted in the related field.

**Data collection methodology and research design:**

This study is descriptive and experimental. The process of design of research is represented schematically, and also the process of sample selection, instrumentation and data collection procedure are elaborated. It is to be mentioned that the procedures and materials related to two phases of the study are separately discussed in this chapter. In addition the classified discourse markers of the medical research articles, supplied with the example and explanation, as a lesson plan for the instruction to the experimental group in the treatment course is presented. The tentative subtitles of this chapter are as follows:
- subjects, material, instrumentation, procedure, research design, analysis

**Data analysis & Results:**

This chapter reports the data obtained from administrating the research instruments. Regarding the research questions and the related hypothesis,
the obtained data were analyzed statistically to see whether the null hypotheses are confirmed or rejected. In order to find the result from the pre and post instruction tests administrated on subjects of the study and the frequency of discourse markers in medical articles, the computer software (SPSS) has been used.

The tentative subtitles of the chapter are as follows:
- the most frequent discourse markers obtained from the selected medical research articles
- data obtained from the pre instruction ESP test and English proficiency test and comparing the data
- data obtained from the post instruction ESP tests
- comparing and contrasting the data of the groups obtained from the post instruction ESP test

- **Discussion, conclusions, implication and suggestion for further studies:**

The last chapter reviews the research questions and the researcher attempted to reconsider the hypotheses based on the results given in the previous chapter. The obtained data provide a dependable basis for the researcher to fully discuss the identification of the most frequent discourse markers in different sections of the medical articles and effectiveness of the knowledge and explicit instruction about discourse markers function in medical texts on reading comprehension. As it was mentioned before, the main goal is to present an effective approach for improvement reading in the ESP class. A significant hyproduct of this research is a creation of a method made available to all ESP teachers who are keen to improve their teaching. Then, the researcher generalizes the results from the sample to the whole research population. At last, in recommendation for further research, some suggestions are made for further studies to those who are
interested in doing research in the field of ESP teaching. The tentative subtitles of this chapter are as follows:
- Research questions and hypothesis
- Reviewing the research findings and discussion about these findings
- Making inferences from the findings and comparing the findings with the related previous studies
- Pedagogical implications
- Recommendations for further studies
- Summary of the study