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THE IMPACT OF CONJUNCTIONS ON EFL UNIVERSITY

STUDENTS' COMPREHENSION AND SUMMARIZATION OF

EXPOSITORY TEXTS

por

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For my parents,

Ivo and Neyde,

from whom I learned the meaning of the word devotion.

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ABSTRACT

THE IMPACT OF CONJUNCTIONS ON EFL STUDENTS'COMPREHENSION AND SUMMARIZATION OF EXPOSITORY TEXTS

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Supervising Professor: Dr. Lêda Maria Braga Tomitch
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This empirical study investigated the impact of conjunctions on EFL students' comprehension and summarization of an expository text. The study was motivated by the need for further understanding of the topic that was acknowledged by several researchers in the field of Applied Linguistics. The methodology adopted involved data collection from 12 participants from the *Letras -Secretariado Executivo Bilíngue* course at *Universidade Federal de Santa Catariana* who were all attending the fourth semester of the course. The activities performed by the participants consisted of a summary task, a reading comprehension task, a gap-filling task with conjunctions and a retrospective questionnaire. The participants' reading times were recorded and subsequently used in the analysis. Data were analyzed both quantitatively and qualitatively examining results from the summary task and the reading comprehension task, with data from the gap-filling task and the retrospective questionnaire contributing to the discussion of the results. This study's findings indicate a facilitative effect of conjunctions for both the summary task and the reading comprehension activity. Overall results suggest that conjunctions' signaling potential may assist readers in the selection process of relevant information, which is crucial for successful reading and summarization practice.

Keywords: conjunctions, reading comprehension, summaries.

ABSTRACT

THE IMPACT OF CONJUNCTIONS ON EFL STUDENTS'COMPREHENSION AND SUMMARIZATION OF EXPOSITORY TEXTS

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Este estudo empírico investigou o impacto das conjunções em na compreensão e no resumo de um texto expositivo. O estudo foi motivado pela necessidade de maior entendimento do tema, conforme reconhecido por vários pesquisadores do campo de Linguística Aplicada. A metodologia adotada envolveu a coleta de dados de 12 participantes do curso de *Letras -Secretariado Executivo Bilíngue* da *Universidade Federal de Santa Catariana,* todos frequentavam o quarto semestre do curso. As atividades realizadas pelos participantes consistiram em uma tarefa de resumo, uma tarefa de compreensão leitora, uma tarefa de preenchimento de lacunas com conjunções e um questionário retrospectivo. Registrou-se o tempo de leitura dos participantes e estes foram usados na análise subsequentemente. Os dados foram analisados tanto quantitivamente quanto qualitativamente, examinando-se os resultados da tarefa de resumo e compreensão leitora com os dados da tarefa de preenchimento de lacunas com conjunções e um questionário retrospectivo contribuindo com a discussão dos resultados. Os achados deste estudo indicam um efeito facilitador das conjunções tanto para a tarefa de resumo como para a atividade de compreensão de leitura. Os resultados gerais sugerem que o potencial facilitador das conjunções pode auxiliar os leitores na seleção de informação relevante, o que é vital para o sucesso nas práticas de leitura e resumo.
Palavras-chave: conjunções, compreensão leitora, resumos.

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INTRODUCTION

"Every man who knows how to read has it in his power to magnify himself, to multiple ways in which he exists, to make his life full, significant and interesting"
(Aldous Huxley; as cited in Flood, James, 1984)

1.1   Preliminaries

The importance of reading to any individual, from the private to the academic, and to the social spheres is absolutely undeniable. After all, reading can 'open doors' to information, knowledge and education; it can offer us art and entertainment in the form of literature; it allows us to broadcast knowledge and information to a wide audience over time and distance. Reading is an important part of our Culture, and, as far as Education is concerned, it goes hand in hand with learners' intellectual development. As Gagné, Yekovich, C.W & Yekovich, F.R. (1993) point out statistics demonstrate a rather bleak picture of social exclusion linked to illiteracy and reading problems.

Recent figures on adult basic literacy in the U.S. are not very encouraging. In 2003 the National Center for Educational Statistics carried out a grand-scale study covering three types of literacy: prose, document and quantitative. Overall results were unimpressive, amongst its results it showed that 14% of American Adults were below the basic level of prose literacy (National Center for Educational Statistics - U.S. Department of Education Institute of Education Sciences NCES 2006-470).

In the Brazilian context, although overall levels of literacy have improved over recent years, this is still an issue of concern as demonstrated by the year 2000 Census. Overall levels of literacy for people aged 15 and above were recorded as 84%, with 16% of this population being considered illiterate, which means that in the year 2000 approximately 24 million people in Brazil were considered to be illiterate. (*IBGE - Instituto Brasileiro de Geografia e Estatística*)

Therefore, it is possible to conclude that not everyone has access to, or is successful in reading, not even in the L1, let alone in the L2.

Although literacy levels in Brazil and in the US have been cited, I do not wish to draw a comparison between the results, for the data were

gathered differently in each country, for different purposes and under different conceptualizations of literacy. The point here is to draw attention to the importance of reading, and add weight to the argument that reading should not be taken for granted.

1.2 Coherence and cohesion in Reading Comprehension

Reading is a complex kind of activity and as such, it has been established as a specific area of research in Linguistics, both in L1 and L2. Within this complexity, this researcher has chosen to pay particular attention to two aspects: cohesion and coherence.

Many approaches have been proposed to explain reading, particularly successful reading, the interactive one being the most accepted today. According to that approach, successful reading comprehension in both L1 and L2 seems to involve the construction of a *coherent* mental representation of a text read (Aebersold, & Field, 1997; Carrell, Devine & Eskey, 1998; Cohen, Glasman, Rosenbaum-Cohen., Ferrara & Fine, 1998; Kintsch & van Dijk, 1978; Tomitch, 2008). The fact that such a representation is characterized as essentially coherent may be explained by the possibility that coherence plays a major role in the way that ideas make sense together (Antunes, 2005; Koch & Travaglia, 1990; Woods, 1996).

In the literature in the field of reading, coherence and cohesion are considered by de Beaugrande and Dressler (1981) to be two essential properties of a text. According to the authors, the notion of coherence is related to the possibility of interpretation of the text and refers to the ways the ideas of the text are related; whereas cohesion refers to the ways the components of the surface text are connected. The surface of the text is defined by de Beaugrande and Dressler as "the actual words we see or hear" (1981, p. 3).

Having said that, it is worth pointing out that the relationship between cohesion and coherence has proved to be controversial, for although important, cohesion does not guarantee coherence in text. There are other elements that influence coherence; some of them may be even external to the text (Koch & Travaglia, 1990). As previously acknowledged by Meurer, scholars should be aware that "cohesion is just one part of the web of relations that make up text" (p.153, 2003).

Acknowledging the fact that text coherence is not achieved exclusively by the adequate use of cohesive devices does not mean that

cohesion should be overlooked. For this reason, this study is supported by the ideas of the Theory of Cohesion (Halliday & Hasan, 1976), whereby cohesion and the underlying relations instantiated by cohesive devices give unity to a text. According to the theory, there is a cohesive force that brings the elements of the text together (Halliday & Hasan, 1976). Although coherence and cohesion have often been analyzed in the field of text production, they also affect text comprehension, and this issue has not been extensively investigated yet (Murray, 1995; Scherer & Tomitch, 2008).

1.3   The study

The specific objective of this study is to investigate reader's perception of cohesive relations, while the study hypothesis is that cohesive markers such as adversative and causal conjunctions facilitate the identification of the relations connecting the text, therefore helping L2 readers construct of a coherent mental representation of the source text, which will be expressed in the participants' summaries. Koch and Travaglia (1990) propose that cohesion is related to the connections that link the elements of the text surface, and it is indicated by linguistic markers. Cohesion allows for the text to flow as a sequence, thus reflecting the linear nature of cohesion (Koch & Travaglia, 1990).

Drawing on Koch (1989), it is possible to define conjunctions as "linguistic markers that correlate what is going to be said to what has already been said. There are several types of connectors and linking words such as, *as, and, but, after, thus,* etc." (p.21, my translation).[1] The author mentions Halliday and Hasan's classification of conjunctions into the "*additive, adversative, causal* and *temporal*" types (Koch, 1989, p.21, my translation). It is worth mentioning that other authors such as de Beaugrande and Dressler (1981), Erlich (1999), or Murray (1995), use the term 'local coherence', instead of 'conjunction'. The definition of conjunctions presented so far is brief, because in the Review of the Literature section, conjunctions and types of conjunctions will be presented in detail.

The need for research in the area of the effect of coherence and cohesion on text comprehension is the motivating factor for this study

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[1]Original text: "marcadores formais que correlacionam o que está para ser dito àquilo que já foi dito. Trata-se dos diversos tipos de conectores e partículas de ligação como *e, mas, depois, assim*, etc.

(Murray, 1995; Scherer & Tomitch, 2008). In response to this need, the proposed study has focused on the influence of cohesion and the ways comprehension is *(or is not)* achieved in L2 reading comprehension of expository texts, by considering how the presence *(or omission)* of adversative and causal conjunctions impact on the readers' comprehension and perception of the text. Such objective was achieved by the collection and analysis of data from the readers' summary writing performed subsequently to reading one expository text presented in two versions, one with their conjunction omitted and another version with the logical connectors unaltered.

Besides the summary data, this study includes data from reading comprehension questions, as well as data from a gap-filling task tackling the use and knowledge of conjunctions and a retrospective questionnaire. The readers participating in this study are EFL university students from UFSC (*Universidade Federal de Santa Catarina*), and they have an intermediate level of English. The overall objective of this study is to examine L2 readers' global comprehension based on the results of data collected from participants' performance on the tasks of the study.

Typically, proficient L2 readers are able to achieve coherence in their reading comprehension by constructing a text base and integrating it with their background knowledge (Kintsch &van Dijk, 1978). Thus, this study assumes that this ability of achieving coherence will involve the readers' construction of a *textbase*, and that will involve the recognition or use of the text's cohesive ties. Cohesion therefore, contributes to coherence because it explicitly provides the links that underlie a text, making connections more evident and increasing readability. The notion of readability suitable for this study is defined as "a measure of the predicted difficulty of a text" (Davies, 1995, p.173). One of the problems L2 readers may find while reading long expository texts is that several relations may be expressed throughout the text and the reader will have to identify each one of these relations. Besides having to deal with a variety of relations that are likely to appear in long expository texts, the reader has to be able to 'hold' the relevant relations in working memory in order to integrate them and then achieve coherence (Murray, 1995). This process may be complicated when it comes to long texts. These two processes of identifying the relevant relations and integrating them are also vital for summary writing. If L2 readers are unable to identify the cohesive relations in the text they read, or if they 'lose track' of these relations, their summaries will reflect that because these relations will not be expressed in the summaries.

Having said that, conjunctions are thought to contribute to text cohesion (Koch & Travaglia, 1990); however, studies are not conclusive as regards how exactly conjunctions contribute to text cohesion. In fact, Murray's (1995) study points to the fact that causal and adversative conjunctions deserve further examination as regards their effect on reading comprehension. Therefore, this study investigates the effect of adversative and causal conjunctions in reading comprehension of a one-page long expository text via summary writing. The research questions investigated are:

1. Does the omission of adversative and causal conjunctions from the source text affect the identification of the controlling idea, central ideas and secondary ideas expressed in the summarized text?

2. Does the omission of adversative and causal conjunctions hinder L2 readers' comprehension according to the readers' answers to comprehension questions?

3. Do results from participants' gap-filling task with conjunctions have any relationship with the participants' performance in the summary task and in the answers to reading comprehension questions?

4. How does the omission of conjunctions affect the production of summaries by the participants in terms of number and type of conjunctions used in the summaries?

1.4   Significance of the study

This study intends to contribute to the discussion about the influence of cohesive mechanisms in reading comprehension and summarization, as results from previous studies have not given definitive answers as regards the role of conjunctions in reading comprehension (Ehrlich, 1999; Lorch & O'Brien, 1999; Murray, 1995; Scherer & Tomitch, 2008; Spyridakis & Standal, 1987; Zadeh, 2006). In fact, even studies that have corroborated the facilitative effect of conjunctions acknowledged the need for further research, perhaps with a narrower focus on more complex types of conjunctions such as the

adversative and the causal ones (Cain, Patson, Andrews, 2005; Murray,1995; Zadeh, 2006). Therefore, this study has focused on the influence of the adversative and causal conjunctions in reading comprehension and in the initial phase of summary production.

In addition, this research deals with two activities, or themes, of vital importance in the academic context, which are, reading comprehension and the production of summaries. All things considered, perhaps a more distinct contribution from this research is the investigation of the interface between reading and writing since this may deepen our understanding of how and where, in terms of processing of information, these two academic activities, or themes, overlap, and how conjunctions influence text reception and production.

1.5   Organization of the thesis

The thesis is organized into five chapters. Chapter I presents an introduction to the problem investigated, followed by the research questions, the significance of the study and the organization of the thesis. Chapter II reviews the literature on reading comprehension and reading models, models of discourse comprehension and theories of cohesion including an analysis of text as a unit of meaning, as well as the literature on previous studies investigating conjunctions in reading comprehension. Chapter III explains the method and the design of the study. Chapter IV presents the results and the analysis of the data collected and discussion of the results. And finally, Chapter V leads to the main conclusions of the study, the limitations and suggestions for further research and the pedagogical implications of the present study.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter offers a review of the theoretical background underlying this study. In subsection 2.1, different models of reading comprehension are discussed in order to take into account the field of research where this study is inserted. Subsection 2.2 discusses the contributions from background knowledge to comprehension. Subsection 2.3 deals with issues regarding the construction of meaning from text, and considers the elaboration of summaries as an instrument used for assessing global reading comprehension. Subsection 2.4 concerns the definition of text and presents an analysis of studies on cohesion, which is the main construct in this study. Subsection 2.5 outlines previous studies on summaries. Finally, Subsection 2.6 reviews previous studies about the impact of conjunctions in reading comprehension.

2.1   An overview of reading models

First and foremost, the construct of reading must be defined. Considering the complexity of this construct, reading will be defined for the purposes of this study as an interactive process between the reader and the text (Aebersold & Field, 1997; Davies, 1995; Rumelhart, 1984; Eskey, 1998). It is relevant to consider that each reader is unique because he/she has different life experiences originated in the family, community, school and culture, to which each reader belongs (Aebersold & Field, 1997). This diversity influences reading comprehension processes, as each reader brings different sets of knowledge and skills to his/her interpretation of the text, making connections between what is read and what is in the reader's mind. Indeed, the meaning that one reader constructs from a text may differ from the one constructed by other readers (Aebersold & Field, 1997).

In spite of the introspective nature of reading, several studies have attempted to examine and understand this cognitive process, which has led to the elaboration of various models of reading comprehension (Davies, 1995). Three main models of reading comprehension are most

frequently found in the literature: the bottom-up model, the top-down model and the interactive model.

The bottom-up model (Gough, 1972) sees comprehension as a linear process, which progresses in sequence from lower level processes, such as letter recognition and decoding, to higher level processing, such as inferential comprehension. It can be argued that this model predicts reading as a laborious sequential process of a reader recognizing letters, then words and sentences in order to get to the meaning of the text. The shortcomings of this model are related to the fact that excessive focus on a lower level process such as decoding, overloads working memory capacity, thereby compromising higher level processes that lead to the construction of meaning (Davies, 1995).

Conversely, the top-down model (Goodman, 1970; 1988) proposes that reading is a "psycholinguistic guessing game" (Davies, 1995, p.61), whereby the reader initially makes predictions and anticipates the content of the text. In fact, prediction and anticipation are the main components of the model (Davies, 1995). Subsequently the reader proceeds from predictions about meaning to attention to progressively smaller units, such as letters and visual features.

The model has been criticized because it was developed based on L1 beginning learners and used to represent reading for proficient readers (Davies, 1995). What is more, there have been attempts to apply the model to L2 reading, but the top-down model does not account for difficulties that are typical of L2 readers. In fact, Eskey has vehemently refuted the assumptions that L2 readers would have the same knowledge base as L1 readers, as for example knowledge (even if only procedural knowledge) of the syntax of a given language, or the reader's vocabulary range in the L1 (1998).

This view was shared by authors such as Aebersold and Field (1997), Clarke and (1998) and Clapham (1996) were also critical about this aspect, emphasizing the fact that it was only after a certain threshold, in other words, a basic level of language knowledge, was crossed in the L2 that L1 reading abilities would be transferred to L2 reading. All things considered, this type of processing may allow the reader to impose his construction of meaning to the text, which may result in miscomprehension of the text (Davies, 1995).

Given the shortcomings of the bottom-up models and the top-down models, another model of reading has been proposed by Rumelhart (1977), who pointed out the deficiencies of the linear model and detected reading situations that could not be explained by either the top-down model or the bottom up model. With a view to explaining

'real' reading situations, Rumelhart proposed a model that allowed more flexibility as regards explaining reading processes; this model is called the interactive model (Rumelhart, 1977), which is currently the most prominent model of reading comprehension in L1.

In contrast to both bottom up and top down models, the interactive model allows for a conceptualization of all levels involved in reading processing occurring independently, yet simultaneously. This model predicts that lower level processes interact with higher level processes, so that readers are able to simultaneously process several sources of information: visual, orthographic, lexical, semantic, syntactic and schematic. The model also considers that both bottom up and top down models can occur simultaneously.

More specifically, the model takes into account several factors that influence reading, such as: syntactic, semantic, lexical and orthographic information. All these knowledge sources are temporarily kept in what is called a visual information store (VIS) and then sent to a pattern synthesizer, where, as the name suggests, the input is synthesized. The model also incorporates a message center, which is a mechanism used to redirect the temporarily stored information. The message center has a crucial role in this model because it is there where hypotheses about the input are generated and confirmed or not; in order to check the input, this processing predicts that both, lower level and higher level sources of knowledge are accessed in order to verify the hypotheses that were generated. This is a continuous process that only stops when the reader feels that a satisfactory understanding of the text has been reached.

In this model, separate knowledge sources and the message center provide conditions for the interaction of these different knowledge sources, thus constituting a more efficient model at explaining reading for it is flexible enough to describe reading as a process that is hierarchal and non-linear (Samuels & Kamil, 1998).

The contributions from the interactive model in L1 have proved to be relevant to L2 reading as well (Eskey, 1998; Eskey & Grabe, 1998; Carrell, 1998). Eskey (1998) reviews the developments in the field of reading drawing attention to the particular needs of the L2 reader, acknowledging the importance of knowledge of the language for reading to occur. In this sense, he rejected that the idea of reading as a "psycholinguistic guessing game" (Goodman, 1967), since this conceptualization puts too much emphasis on the higher level processes of reading at the expense of lower level processes. To my mind, the top-

down model does overlook the importance of linguistic knowledge involved in reading; besides that, the model does not describe in detail how readers progress from predicting and guessing, that is to say, from accessing what is in their minds to actually reading what is in the text.

A further development to the interactive model is the interactive-compensatory model (Stanovich, 1980). The model has been developed through research in the L1 and it combines the interactive model of reading with the assumption of compensatory processing, that is, the possibility that higher level processes may assist problems in lower level processing and vice-versa. With the exception of children learning to read in the L1, studies indicate that, if deficient, both higher and lower order processes can be compensated. This means that if a reader faces difficulties in lower level processes such as literal comprehension or decoding, for example, she/he may rely on higher level processes in order to help the lower ones. Having said that, research seems to indicate the processes that distinguish more proficient from less proficient readers are: general comprehension strategies and [2]context-free word recognition.

Stanovich (1980) reviewed studies that compared skilled and less skilled readers from the same age group considering their individual differences. For that, the author differentiates general comprehension strategies from word recognition processes. It seems that skilled readers differ from less skilled readers in two general processes: strategies for comprehension and remembering large units of text, as well as speed of context-free word recognition.

The distinction between general comprehension strategies from word recognition processes helped the scholar develop the compensatory model because the two processes could be analyzed in isolation in terms of how contextual redundancy *(please refer to footnote 2)*, impacted comprehension strategies and word recognition, and whether there was a difference in the impact. Stanovich (1980) accepts that more proficient readers have superior reading comprehension strategies. However, he contends that word recognition and the ability to use contextual redundancy for word recognition also characterizes the more proficient reader, since the strategy regarding use

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[2] In this study the term context has been used to refer to social context (Carrell, 1998) in the sense that reading is viewed "not only as a lonely private activity but also as a social and contextualized event" (Tomitch, 2000, p. 85). However in Stanovich, (1980) context refers to the words in the text (Aebersold & Field, 1997).

of contextual redundancy is not used to foster accuracy in word recognition, but to speed that up instead (1980).

The most relevant finding discussed in Stanovich's interactive-compensatory model is that more proficient readers tend to use contextual factors in order to speed up their reading, hence positively impacting reading fluency, whereas less proficient readers tend to use contextual factors in order to achieve accuracy (1980). The use of context as a strategy to improve accuracy in reading is not very successful, since it may result in the reader's spending too much time trying to use context to solve text processing problems such as word recognition, which should ideally be an automatized lower level process as far as fluent proficient reading is concerned. Another problematic aspect of that strategy is the reader using the context to generate hypotheses that are not text-constricted based on their own knowledge, and consequently imposing meaning on the text. The reason why this model is included in this review, is the fact that this compensatory processing may explain how readers solved (or failed to solve) this study`s disruption of the text i.e. the omission of the adversative and causal conjunctions.

Moreover, these aforementioned considerations explain successful reading comprehension to the extent that highly automatized word recognition leaves space in cognitive resources for higher level integrative processes resulting in successful reading comprehension. These conclusions are in line with the theory of component processes described in Gagné et al. (1993), which will be discussed further in this review.

All in all, the interactive model seems to be quite suitable for L2 reading as it accounts for the fact that less fluent L2 readers may need to put as much effort in decoding as in higher level process in order to comprehend a text (Eskey, 1998). Furthermore, the flexible and non-linear nature of the model has the potential to describe L2 reading processes from readers at several developmental stages as regards linguistic knowledge in the L2, an issue that demands very specific considerations. However, not only linguistic knowledge influences reading, therefore the following section presents an account of the effect of background knowledge by means of reporting and reasoning about schema theory (Rumelhart, 1980).

2.2   Schema theory and the interactive model

The interactive model of reading assumes that the reader is active in the reading process. The notion of the active reader is very connected to the role of the reader's background knowledge (content schemata) in reading comprehension (Carrell, 1998). This leads this researcher to review the ideas developed in the schema theory. To better discuss the theory, first of all, it is important to define schema. Rumelhart used the plural term, schemata, and referred to them as '*the building blocks of cognition*' (1980).

> …schemata are the *building blocks of cognition*. They are the fundamental elements upon which all information processing depends. Schemata are employed in the process of interpreting sensory data (both linguistic and nonlinguistic), in retrieving information from memory, in organizing actions, in determining goals, in allocating resources, and generally, in guiding the flow of the processing system (pp. 33-34).

According to Rumelhart, schema theory is 'basically a theory about knowledge' (1980, p.34). As a theory of knowledge, schema theory sets out to explain how we understand the world and learn; it proposes that schemata form a mental structure that represents the knowledge a person has, derived from our cultural and personal experiences. We use our background knowledge to deal with new situations, when presented with the 'new' we activate the previous knowledge we have that is relevant to that new situation, thus integrating schemata with the current situation. To my mind, a theory of knowledge in this sense involves declarative and procedural knowledge, since this theory deals with knowledge that we have stored in memory and the ability to use this knowledge to perform a certain task.

Drawing on Tomitch (2003), it is possible to define declarative knowledge as the knowledge about something, i.e., events, facts, concepts, rules, etc., while procedural knowledge may be defined as knowing how to use certain knowledge. For instance, in terms of linguistic knowledge, for EFL learners, knowing the verb tenses in English is a type of declarative knowledge; whereas knowing how to tell a story using the appropriate verb tenses would involve procedural knowledge. This means that to read a text successfully a reader needs to have a certain amount of declarative knowledge, namely the knowledge of a given linguistic system and knowledge of the topic of the text.

In reading, schema theory follows the same logic previously proposed in schema as a theory of knowledge (Rumelhart, 1980). As far as reading is concerned, the current situation is in fact a text, which a reader tries to comprehend. The text presents the reader with certain clues, which are noticed by the reader, who, in turn, activates relevant schema based on the stimuli received. With those stimuli, i.e. the text clues, the reader draws hypotheses which are evaluated as reading progresses until the reader reaches a coherent understanding of the text.

It is important to say that not only schemata and text clues integrate in this process, but also the textual information plays a role in the knowledge that is activated, evaluated and accepted as related to the text representation, which renders schema theory as a theory of communication as well (Rumelhart, 1984).

The shortcomings of this theory are discussed by the author, who points out three main possible problems: readers not having sufficient previous information of a particular text topic; text clues being insufficient; and readers over-relying on previous knowledge (Rumelhart, 1984). All three cases will lead to comprehension failure.

Besides Rumelhart, Carrell (1998) defends schema theory after reviewing several studies that corroborate its conceptualizations. These conceptualizations are well-established today in the field of reading, and have improved our understanding of the complexities involved in the reading process.

Acknowledging the contributions brought by schema theory, Tomitch (1991) offers an overview of previous studies discussing schema. Several studies corroborate the influence of schema on reading, which seems to facilitate recall and integration of information (Anderson & Pearson, 1984; Carrell & Eisterhold 1998), while Gagné et al. (1993) carried out studies that specified how schema impacted on integration and recall. According to the authors, schema aids elaboration as a component process of reading; in this sub-process, what happens is the integration of old information i.e. schema, with new, in this case, the textual information (Gagné et al., 1984). It is as if old information provided 'hooks' which new information could hang on to.

Carrell (1987; as cited in Tomitch, 1988) makes a distinction between content and formal schemata. Content schemata involve readers' background knowledge that is drawn from experience. Also, the culture into which a text is inserted, and the topic of a text are all considered part of the content schema. Formal schemata, on the other

hand, have been described by Carrell as the reader's knowledge about rhetorical organization and the structure of texts (1987).

Differently from Carrell (1987), Alderson (2000) proposes that formal schemata is also related to the notion of linguistic competence, which involves the ability to describe language and the knowledge of the language rules related to the language in which the text is written. Consider, for instance, an L2 student who is not able to identify what the subject of a sentence is in L1, or does not know what a subject is, is not likely to be able to do that in L2 (Aebersold, & Field, 1997).

As regards formal schemata and reading, I would like to make a comparison between L1 and L2 readers concerning the impact of language knowledge in their reading development. L1 readers know the language of the text when they begin reading in L1; however, that is not true in L2 reading development. Drawing upon Alderson (2000) and Clapham (1996), I will justify why I accept language knowledge is crucial, as there is a threshold a reader must cross, so that L1 skills and knowledge can transfer to L2. Without this transfer comprehension is hindered, and readers are unable to use their knowledge and skills, leading to short-circuit and misunderstanding of texts. (Aebersold & Field, 1977, Clarke, 1998). Clarke proposed the 'short-circuit hypothesis' that is connected to readers adopting 'poor reading behaviors' as a result of facing difficult reading situations (Clarke, 1998). Another useful definition for this of short-circuit is offered by Goodman (1998), who defines it as "any reading that does not end in meaning".

The relevance of schema theory to this study is related to the fact that it underlies reading and summarization processes. Schema theory raises issues related to the reader being active in the construction of meaning from text, rather than being a passive recipient of the contents of the text. Besides that, it is important to acknowledge that Alderson (2000)'s considerations about linguistic schemata are relevant to this research since its object of study, i.e. conjunctions, are in fact, part of one's linguistic schemata.

As regards the reader being active in the reading process I refer to Tomitch (2000), when she analyses reading comprehension in EFL activities and the kind of reading comprehension processes these activities motivate. While discussing Davies (1995), Tomitch comments on the categorization of reading tasks as active reading tasks and passive reading tasks. As far as the passive reading tasks are concerned, they include multiple-choice exercises, true/false questions and

comprehension questions that do not require readers to read beyond the text surface (Tomitch, 2000).

Active reading tasks, on the other hand, comprehend activities that demand that the reader interacts with the text, going beyond textual boundaries, inferring and engaging in higher level thinking processes. Tomitch (2000) points out that active reading tasks contextualize reading since an active reader takes part in the construction of meaning from text, taking into account not only the text itself, but the social and cultural context where text and reader are inserted, as proposed by the author in the quote below:

> they allow the reader to see the text not as a mere product on the printed page, standing on its own and having meaning in itself, but as part of a broader social context which includes the writer and also the reader him/herself" (p. 85).

Besides contextualizing reading, these tasks permit the reader to look at the text from a distance, and comprehend the text as a whole; therefore, the reader can construct a coherent mental representation of the text in an interactive process of reading comprehension.

The importance of background knowledge is hereby discussed and acknowledged. This section also extends the ideas from schema theory to active reading in accordance to Tomitch (2000). Active reading is demanded from the participants in this study, one of the reasons being the fact that the ability to read actively is essential to university students. The question of the impact of conjunctions on comprehension remains, with this researcher considering to what extend readers need to rely on conjunctions to read actively. Having reasoned about the importance of previous knowledge, schema theory and active reading, this section was very much focused on the reader. However, the reading process involves both reader and text, therefore the next section reports on studies about textual interaction and its relation to the interactive model.

2.3   Textual interaction and the interactive model

Besides considering the interaction between the reader and the text, some authors have also devoted more thought to the textual aspects of reading comprehension, such as textual interaction, in other words, the interactions amongst the elements of the text. In respect to that

issue, Grabe (1998) contends that the interactive approach has, in a way, ignored the particularities of L2 reading, and these are related to lower level processes. In fact, issues related to decoding ability seem to differentiate good from poor readers; efficient and fast word recognition being characteristic of successful comprehenders. According to Grabe (1998), word recognition is a factor that impacts L1 reading, especially at early literacy levels, but it also affects L2 reading for beginners in the L2. Such findings have vital implications for L2 reading, because L2 readers will only be able to recognize words in the L2 fast when they acquired certain knowledge of the L2, and are able to call upon that knowledge when reading. As previously discussed, the superiority of speed and accuracy of word recognition is present in Stanovich's study (1980).

Tackling L2's specific need for more emphasis on lower level processes, Perfetti (1985, 1986a, b) initially proposed the verbal efficiency model. This model stressed linguistic aspects in reading comprehension such as 'lexical access, proposition integration and text model' (Grabe, 1998 p. 62), and it was thought to be a more suitable model for L2 reading according to Grabe (1998).

However, as far as this study is concerned, Grabe's (1984, 1986b; as cited in Grabe, 1998) explorations over the notion of the interactive nature of the text point to other aspects to be reckoned with.

The author defines textual interaction as 'the interaction of linguistic forms to define textual functions' (Grabe, 1998, p. 65). Given the focus of this study on conjunctions, which are linguistic forms that have specific textual function, it is relevant to consider the possibilities presented by conjunctions in terms of signalling and constructing meanings. Grabe (1998) reasons that, the discussion over the repercussions of textual interaction to reading should concentrate on the possibility that there are certain linguistic aspects that associate with certain text types. If a pattern emerges from this kind of research, teaching practice would benefit, for the emerging patterns could guide the teaching of certain linguistic elements that associate with certain text types, resulting in positive contributions to reading and writing pedagogy.

This section has introduced the relevance of the text itself and its linguistic elements, which leads to a review of models of discourse processing in the following section, where the reader integrates the text base, in other words, the elements from the text, to his/her previous knowledge (schema) in order to construct a mental representation of the text (Kintsch & van Dijk, 1978).

2.4 Models of discourse comprehension and the component processes of reading comprehension

This subsection presents a discussion based on models of discourse comprehension (Kintsch & van Dijk, 1978; van Dijk & Kintsch, 1983) and the theory involving the component processes of reading comprehension (Gagné et al. 1993).

Kintsch and van Dijk (1978) devised a model for text comprehension and text production that allowed the semantic structure of texts to be described at a micro and macro-levels.

The model discusses the application of micro-rules for the organization of the text propositions into a text base. According to their theory, a text base is defined as the hierarchically organized set of propositions from the text surface, including the connections between them (Kintsch & van Dijk, 1978). In order to define proposition, I will refer to van Dijk and Kintsch (1983), who defined proposition as quoted below:

> an intentional unit corresponding to the meaning of a sentence in linguistic theory and to the conceptual representation of a sentence in a cognitive model of language comprehension (p. 112, as cited in Tomitch, 2003, p. 63)

At the macro level, the text base model entails the macro-rules for the summarization process: the *deletion* of detailed and redundant information, the selection of a topic sentence and the *creation* of a topic sentence when that is not provided in the text and *generalization* rules using superordinate terms or categorizations. These operations are under the control of a schema, which controls relevance criteria underlying the selection and deletion processes. The macro-rules are explained in detail in the excerpt from Kintsch and van Dijk (1978) below:

1. Deletion. Each proposition that is neither direct nor an indirect interpretation condition of a subsequent proposition may be deleted.
2. Generalization. Each sequence of propositions may be substituted by the general proposition denoting an immediate superset.

3. Construction. Each sequence of propositions may be substituted by a proposition denoting a global fact of which the facts denoted by the microstructure propositions are normal conditions, components, or consequences. (p. 366).

At the comprehension level, the objective of the model is the construction of a macro-structure of the text, whereas at the production level, the model entails the generation of the inverse operation of the macro-rules.

The aforementioned production level consists of the recall or summarization protocols produced after reading, and involve the following operations: *optional transformation*, which is not detailed by the authors in this model; *reproduction, reconstruction, metastatements, production plans* and *text generation*. At the *transformation* level, readers use traces from their comprehension process stored in memory to produce micro-propositions to construct a text base. The authors explain that transformations include "reordering, explication of coherence relations among propositions, lexical substitutions, and perspective changes" (Kintsch & van Dijk, 1978, p. 375).

The *reproduction* level is characterized by the reader's use of memory traces when producing the recall or summarization protocols. These traces come from the reader's memory of the input and text processing, or the comprehension processes, or from the reader's memory of contextual information. The model emphasizes traces from comprehension processes because these are responsible for the creation of propositions.

Since it is not feasible for a summarizer to remember all the textual elements after reading a text, the *reconstruction* level involves inferencing for the reconstruction of the text. This operation is under the control of a schema, which should guarantee that only relevant information is reconstructed. This is a very critical phase because its success depends on the generation of plausible inferences. By 'plausible' the authors refer to inferences that conform to the textual information. The opposite situation is the occurrence of elaborations which are defined by the authors as:

> inferences which occur when the reader uses his/her knowledge about the topic under discussion to fill in additional detail not mentioned in the text, or to establish connections between what is being read and related items of knowledge (p. 52, van Dijk & Kintsch, 1983; as cited in p.92, Tomitch, 2003)

The distinction between plausible inferences and elaborations are of utmost importance for the analysis of the data produced by the participants in terms of judging the plausibility of the ideas they produced in the summaries, which in turn attest to their success (or failure) in comprehending the texts read.

The *metastatement* operation simply refers to the summarizer expressing opinion or judgment about the text read. *Production plans*, on the other hand, are more complex, being considered a monitoring phase, with the schema controlling the production operation. However, schema needs to be updated with textual information in order to lead to a plausible representation of the text. In addition, production plans involve the macro and micro organization of the discourse. Macro organization is characterized by summarizers counting on their textual memories, and being aided by their previous knowledge of text structures and global coherence; whereas micro organization entails organization at the propositional level.

The model provides a description of the *text generation* processes, in fact the authors consider the outcome of recall or summarization protocols as "texts in their own right" (Kintsch & van Dijk, 1978, p. 374). It describes a cyclical process in which propositions are organized and temporarily stored in the memory buffer. The content that is kept in the memory buffer is dependent on their superordination and recency.

Just as in the comprehension level, the macro-rules of *generalization*, *deletion* apply and include *construction* or *reproduction* of propositions and function under the control of a schema.

The authors further developed this model of semantic representation into the situation model (van Dijk & Kintsch, 1983). The situation model predicts that two processes occur simultaneously: the construction of a *text base* which consists of encoding the semantic structure of the text, in parallel with the construction of a general understanding of the text based on background knowledge. The result of the interaction is a representation that is called the situation model. The construction of a coherent situation model will require the reader to perceive the text as a coherent whole while simultaneously building a *text base*. This study assumes that successful readers are able to build a *coherent* mental representation of the text by constructing a *text base* and integrating it with their background knowledge, expressing such mental representation in their summaries.

The introduction of this study, drawing on Gagné et al. (1993) stressed the value of reading. These scholars' interest in improving matters resulted in vital contributions to the field that took into account the complexity involved in reading. The authors proposed a model of reading that describes its component processes using studies that compared skilled readers to less skilled so that it is possible to discover what skilled readers do that less skilled readers do not do.

According to Gagné et al. (1993), successful reading comprehension is complex and involves two distinct types of knowledge: declarative and procedural knowledge, which were previously defined in section 2.2. The proficient reader is able to use his/her declarative knowledge in a successful manner. In order to achieve that, the reader will need to have developed a set of skills and strategies, which enables him/her to operationalize his/her declarative knowledge to promote reading comprehension. Operationalizing linguistic and world knowledge to read involves a series of component processes used to process language. As Gagné et al. (1993) mention, these component processes are: decoding, literal comprehension, inferential comprehension and comprehension monitoring.

The **decoding process** consists of two sub-processes, matching and recoding. Through *matching* a reader recognizes letters, letter combinations, and words associating them to sound and meaning stored in long-term memory. The declarative knowledge that resides in long-term memory comprehends meanings as well as perceptual features of visual input and sounds.

According to the authors, matching is understood as the process of readers associating written input into one's sight vocabulary, defined as a "set of words that they [readers] recognize quickly in print" (Gagné et al., 1993, p. 270). In that sense, matching entails the association of words to their meaning and phonemic representation (sound), both levels being stored in long-term memory. Interestingly, the association of written input to its phonemic representation involves perception at both ends of the association i.e. written input, which is visual, is translated into a phonemic representation, that is, sound.

The authors predict that the evolution of matching is related to the development of reading skills. The matching process is therefore realized in chunks, which are defined by the authors as 'the larger perceptual patterns a reader knows' (Gagné et al. p.270). Although information used in matching is held as declarative knowledge, the use of this information is procedural, hence it can be automatized. *Recoding* occurs when a reader finds an unknown word and resorts to dividing the

word into syllables, attempting to associate them to representations in long-term memory.

Moving on to **literal comprehension**, this is a lower level process characterized by the formation of propositions via lexical access and parsing of words into phrases, clauses and sentences, thereby forming propositions. Lexical access relies on vocabulary knowledge that is stored in long-term memory whereas the parsing process will be guided by the syntactic and linguistic rules of a language, which are also part of long-term memory; both sub-processes require declarative knowledge.

Findings suggest that there is a weak, yet significant relation between speed of lexical access and reading ability. In fact, context has been found to have a beneficial effect on speeding up lexical access, since the comparison between two types of readers show that skilled readers use the context to help them achieve literal comprehension to a greater extent than less skilled readers.

Inferential comprehension is a higher level process that is vital for comprehension, since it is through inferential comprehension that a reader is able to understand a text in depth, selecting the main ideas and looking for an understanding of the relationship between the ideas of the text. The sub-processes involved in inferential comprehension are: *integration, summarization* and *elaboration*.

Integration is intrinsically related to this research, since this sub-process involves the reader applying cohesion rules to link the ideas on the text surface as well as using their background knowledge in order to form a coherent representation of the text. In this respect, it is possible to relate Gagné et al.'s 1993 theory with Kintsch and van Dijk's (1978) description of the construction of a *text base* with the reader integrating propositions that are explicitly given in the text and generating inferences to join these propositions. By integrating propositions, the relationship among them can be made explicit, thereby resulting in a facilitative effect on cognition (Gagné et al., 1993).

Once the propositions are processed and relations are made explicit, it becomes simpler for the reader to integrate these propositions. In addition, an integrated set of propositions may function as a "chunk" of information, relieving the burden on working memory and freeing resources for reasoning (Gagné et al., 1993). The representation of a text as a chunk is easier to remember than a text as a set of disconnected propositions. If this sub-process occurs successfully, 'the ground is prepared' for summarization. Although research has

indicated that difficulty in forming propositions may result in trouble in chunking information, the authors point out that chunking can be improved with practice and exposure.

As regards *summarization*, Gagné et al. (1993) refer to Kintsch and van Dijk (1978). As previously reviewed, according to Kintsch and van Dijk's (1978) theory, a macrostructure is represented by a group of propositions that were selected as representing the central ideas of a text. This is a hierarchical representation that is achieved by means of the application of macro-rules of deletion, generalization and construction, which were discussed in the situation model previously reviewed in Section 2.3. Gagné el al. (1993) point out that the representation resulting from *integration* and *summarization* is not identical to the information on the surface of the text, because the macrostructure that results from these sub-processes is an inferential product instead of a literal one.

In fact, in inferential comprehension, the reader attempts to find the essence of the text. For that, the reader needs to establish which information is relevant, this can be via conscious, or unconscious processes involving a selection based on relevance, which is assisted by the readers' declarative knowledge, in other words, the relevant schema. Not only does the schema underlie the selection of relevant information, as it assists the readers in the understanding of the relations among the text propositions and the establishment of a topic concept.

A factor involving declarative and procedural knowledge is use of text structure, which has been shown to facilitate summarization (Bartlett, 1978; Meyer, Brandt & Bluth, 1980; Taylor, 1980; as cited in Gagné et al., 1993). Text schemas, for instance, influence summarization and the selection of relevant information (Gagné et al., 1993).

The authors conclude that the use of text structure differs from skilled to less skilled readers, and the ratings of level of importance of text propositions differ from young to adult readers. It seems that use of text structures has a positive effect on summarization, according to the definition of declarative knowledge; it is fair to consider the *knowledge* of text structure as declarative knowledge, whereas the *use* of text structures may be considered procedural knowledge (Tomitch, 2003). Clearly, there is interplay between procedural and declarative knowledge in the realization of the summarization sub-process, considering the fact that successful readers *use knowledge* of text structure to summarize.

Having discussed *integration* and *summarization* we move on to *elaboration*. This higher level sub-process relies on prior knowledge to a great extent; however, for skilled readers, *elaboration* has the text surface as a starting point, that is, although skilled readers use background knowledge to elaborate, their elaboration is based on the text propositions.

And finally, **comprehension monitoring** is a higher level process whereby the reader, with a reading purpose in mind, sets a goal and continually monitors his/her comprehension by checking that this goal is being achieved, using remedial strategies whenever the he/she has problems reaching that goal. Remediation is in line with Stanovich's compensatory model (1980), in the sense that higher order processes may be strategically applied in order to solve lower order processing.

However, this consideration deserves a word of caution, as readers may over-rely on prior knowledge in an attempt to solve problems at decoding or literal comprehension levels. If this is the case, readers may impose their own meanings to the text and, as a result, compromise comprehension (Tomitch, 2003). Furthermore, it may be simplistic to consider that higher levels processes such as inference generation can compensate for decoding problems. My criticism finds support in Eskey's consideration on the complexities involved in lower level processes in L2 reading (Eskey et al, 1998).

To sum up, research has indicated that problems in comprehension can stem from almost all the component processes of comprehension. Decoding, for instance, needs to be automatized, so that higher level processes can take place. However, less skilled readers differ from skilled readers as regards their speed of matching and recoding. Due to working memory capacity limitations, these processes need to be automatic and fast in order to free the mind for constructing meaning.

Besides that, findings demonstrate that differences in declarative knowledge have been noticed in observations of both, skilled and less skilled readers. Therefore, Gagné et al.'s (1993) study have made their contribution to the field by describing reading comprehension processes in detail and making a distinction between the performance of more skilled readers and less skilled readers at the level of the sub-processes and main component processes, advancing the understanding of reading through research.

Further contributions to the understanding of the reading process that relied on the empirical observation of different types of reader were

offered by Tomitch's (2003) study, where the scholar conducted an investigation comparing the reading processes of better and weaker readers, taking into account measures of reading ability as well as individual differences of working memory capacity. Both types of participant in the study read problem/solution texts, which, were presented in two versions: one complete version and another version that had missing information, in other words, the texts had their structure distorted.

Of particular relevance to the present study is a phenomenon detected by Tomitch (2003) in her analysis of her participants' reading processes, the phenomenon was experienced by weaker readers and was denominated the 'illusion of knowing' (p. 147). Drawing on Epstein, Glenberg and Bradley (1984), Tomitch defined 'illusion of knowing' as "a failure to detect a contradiction in a text, followed by an overassessment of comprehension" (Tomitch, 2003, p.147). It would be interesting to observe whether participants in this study experience a similar phenomenon while expressing their comprehension of texts that were disrupted, namely, with its conjunctions omitted, as a way of determining the importance and impact of the textual information itself in the reading process.

However, as the author points out, text disruptions were not the only cause for the participants experiencing the 'illusion of knowing', as findings indicated that better readers were able to overcome textual disruptions, with the exception of one type of disruption, namely, the omission of a problem in a problem/solution text type. In fact, study findings show weaker readers seemed to apply reading strategies that did not lead to successful comprehension. Weaker readers seemed to have read either in a bottom-up or on a top-down fashion. As a result, when reading in an ascending manner readers seemed to be able to understand propositions, but miss the connections between them. Whereas when engaging in an excessively top-down manner readers seemed to construct representations of the text that did not correspond completely to the meanings in the texts they read. Therefore, besides textual distortions, readers' use of inadequate reading strategies compromised their comprehension (Tomitch, 2003).

Concluding, the models of discourse processing reviewed have been brought by this researcher in order to help her explain the effect of conjunction in summarization as a sub-process in comprehension, and also consider the interface between reading and writing that the models reviewed account for. In addition, Gagné et al.(1993) 's description of the component processes in reading comprehension offer this researcher

the possibility to consider the influence of the aforementioned textual markers associated to each component process, with a view to clarifying where and how conjunctions aid comprehension (or not).

2.5   Summary as a measure of comprehension

In this section studies investigating summaries are reviewed, since they will be used as a measure of comprehension in this study. Not only has the validity of summaries, in studies examining reading comprehension been acknowledged, but they have also been connected to studies about writing. Validity is defined for the purposes of this study as the extent to which a test procedure serves the uses for which it was invented (Davies, 1995, p. 176)

Although writing is out of the scope of this study, this researcher realizes that summaries may also lie in the interface between reading and writing. This interface was previously discussed by Eisterhold (1990) who considered several ways in which reading and writing are connected, reasoning about this interface in both L1 and L2 contexts. Studies in L1 and L2 indicate that there is a complex connection between reading and writing, with the added variable linguistic proficiency levels of development in the L2. Two main factors seem to influence the process in the L2 context: L1 transfer of reading and writing abilities and L2 input.

However, Eisterhold concludes that transfer of L1 reading abilities is not automatic, addressing pedagogical implications that explicit instruction is needed to facilitate the transferring process (1990). The issue of the extent to which L2 input and L1 transfer of reading abilities remains unclear, motivating further discussions on the matter. Consequently, this leads this researcher to review a study conducted by Koerich and Dellagnello (2008).

The authors (Koerich and Dellagnello 2008) perceived a difficulty faced by students in the identification of central ideas when realizing a summary task. The scholars therefore proposed a study intended to ascertain whether the source of that difficulty was related to linguistic knowledge or reading ability. For that, the experiment entailed participants reading in their L1 (Portuguese) and in their L2 (English) and subsequently performing a summary task with access to the original texts. The objective was a comparison between the summaries produced for each language. The participants of this study were 42 Brazilian

students of *Inglês Instrumental* (English for Specific Purposes) at UFSC. The parameters of analysis in their framework included central ideas, details, form (as quality of linguistic expression) and the summaries themselves as variables.

The results of Koerich and Dellagnello's (2008) study for both L1 and L2 revealed that participants seemed to try to recall as much information as possible rather than the central ideas of the text, producing list-like summaries which indicates lack of familiarity with summary practice. Interestingly, when comparing the summaries in L1 to the summaries in the L2 it was possible to see that the L2 impacted the summaries produced in a positive manner. This may be explained by the fact that possible linguistic limitations prevented the participants from reproducing every detail of the original text, hence applying a more global strategy when summarizing, which is in fact the desirable strategy for the production of summaries. As a result, the summaries produced from and in the L2 were more coherent and cohesive texts than the ones in the L1, the latter being characteristically longer and list-like.

Overall, the reason for the deficiencies, such as the inclusion of details and the lack of identification of the central ideas, show that there were problems in reading ability and in the production of that text genre. As far as reading ability is concerned, it seems that the problem stems from a lack of ability to differentiate relevant from irrelevant information, and without this ability it is not possible to identify the central ideas of the text in order to produce a summary (Koerich & Dellagnello, 2008). That distinction between relevant and irrelevant information is a reading ability that directly impacts writing in terms of the production of that genre and clarifies one aspect of reading ability influencing writing.

Another study worth mentioning has been carried out by Denardi, (2009). In her study she discusses academic summaries from the perspective of writing, and views the academic summary as a genre. This implies that a summary is seen as a type of practice in human communication and interaction. Her description of summaries includes textual and enunciative mechanisms. Enunciative mechanisms are related to the way a message is conveyed i.e. how it serves a specific communicative intention. Textual mechanisms refer to the language used in the text and include connection, verbal cohesion, nominal cohesion and anaphora (Denardi, 2009). Textual mechanisms are directly related to this study since they include connections, which in this study are referred to as conjunctions (Halliday & Hasan, 1976).

According to Denardi (2009), conjunctions have the function of organizing a text, and in this study we have the opportunity of examining that function.

Lastly, I refer to the study by Scherer and Tomitch (2008), which has actually inspired the present study in terms of objective and partly in terms of methodology .The approach adopted by Scherer and Tomitch (2008) of taking into account the presence or absence of conjunctions in the comparison between the summaries produced by the two groups, as well as considerations about the overall organization and cohesiveness of the summaries seem very adequate to ascertain not only the impact of conjunctions in the summaries, but it is also useful for an investigation of the relationship between reading and writing. In the last section this study will be reviewed in detail.

2.6 Text, coherence and cohesion

Considering that reading is an interactive process that involves both, the reader and the text, it is relevant to review the literature about both. While in sections 2.1, 2.2 and 2.4 of this review, considerations were related to the reader, reading comprehension and discourse processing, this section concentrates on the text and two key elements of textuality: coherence and coherence. First, I propose a negotiation of conceptualizations stemming from textual linguistics (de Beaugrande & Dressler, 1981) and the Theory of Cohesion (Halliday & Hasan, 1976) in order to define two major constructs in this study: **text** and **cohesion**.

Although definitions of text abound, it was with textual linguistics that text was conceptualized as a unit of meaning. As a result I bring forth de Beaugrande and Dressler (1981), who viewed text as a **communicative even**t that comprehends seven standards of textuality, namely: *cohesion, coherence, intentionality, acceptability, informativity, situationality* and *intertextuality* (de Beaugrande & Dressler, 1981). De Beaugrande and Dressler's theory is relevant to this study because it describes cohesion and coherence as essential characteristics of texts, and this study investigates the importance of cohesive devices in the comprehension of texts.

The seven standards of textuality are well-known in the field of Applied Linguistics, and despite the fact that they were proposed in 1981, they still hold as parameters for text analysis. In fact, de Beaugrande (2004) reviewed the seven standards under the perspective

of Critical Discourse Analysis in which he discusses the role of discourse in human communication, considering how language mediates power relations, identities and realities. In this review "A New Introduction to the Study of Text and Discourse", whose publishing is a statement in itself, for it is published on line for free; de Beaugrande (2004) gives examples of cohesion, coherence, intentionality, acceptability, informativity, situationality and intertextuality in everyday discourse, showing the current use of the standards.

Unfortunately, a detailed discussion of de Beaugrande's latest works (2004; 2008) is out of the scope of this study. For now, I will concentrate on one of the aforementioned standards of textuality, the one on which this study is focused: cohesion. For that, I feel that it is necessary to introduce the conceptualizations of text in the Theory of Cohesion (Halliday & Hasan, 1976) since this theory has exerted great influence on this study. Therefore, the following definition is proposed:

> A text is best thought of not as a grammatical unit at all, but rather a unit of a different kind: a semantic unit. The unity that it has is a unity of meaning in context, a texture that expresses the fact that it relates as a whole to the environment in which it is placed……Being a semantic unit, a text is REALIZED in the form of sentences and this is how the relation of text to sentence can best be interpreted. A set of related sentences, with a single sentence as the limiting case, is the embodiment or realization of a text. So the expression of the semantic unity of the text lies in the cohesion among the sentences of which it is composed (Halliday & Hasan, 1976, p. 293).

This view of text takes into account meaning and texture, texture being related to the connections among the elements that enable a text to work as a unit of meaning within a certain social context.

Texture in Halliday and Hasan (1976) corresponds to textuality in de Beugrande and Dressler (1981). In this sense, there is a similarity between the notions of text and texture in Halliday and Hasan and the standards of textuality in de Beaugrande and Dressler (1981), since they both understand texture or textuality as being necessary conditions for a text to be a unit of meaning. Besides that, both conceptualizations consider that a text is inserted within a given social context and serves a communicative purpose.

Considering all the agents involved in the context of production and of reception of a text (de Beaugrande & Dressler, 1981), I would suggest that a text is best thought of as a vehicle within a communicative interaction that takes place within a certain social

context. On one extreme, there is the writer and his/her communicative intentions and purposes, encoding meanings that are in his/her mind and giving expression to them via language and creating a text in the process. On the other extreme, there is the physical realization of the writer's meanings. Hence, the text, which is understood as a semantic unit, is not limited to the actual words that are made explicit; instead, it includes information that may have been left unsaid. Moreover, when a text is viewed as a unit, this means that the textual elements are not loose in the text; for to form a single unit, a text needs to have some *'linkage'*, and this linkage is not exclusive to the surface text, but includes underlying relations linking the surface elements of the text (Koch, 1989).

On the other extreme, you have a reader interacting with the text, trying to recover the meanings from the text; this process involves factors that are internal and external to the text. Internal factors are those related to the restrictions of meanings that the actual surface of the text presents, and external factors are those related to the context of the reading situation, the reader's purpose of reading and his or her activation of background knowledge to assist in this very complex process of constructing meaning from text.

Having offered and reflected upon definitions of text, which present cohesion and coherence as essential text properties, this discussion leads to the theme of coherence and cohesion. Since cohesion is a central construct in this study, I will work towards a definition of the concept. However, before that, two points must be considered: the clarification regarding the terminology and the relationship between cohesion and coherence.

First of all, some authors use the term cohesion (Halliday & Hasan, 1976; de Beaugrande & Dressler, 1981; Erlich, 1999) while others use the term local coherence (Kintsch & van Dijk, 1978; Lorch & o'Brien, 1995). By the same token, some authors use the term coherence (de Beaugrande & Dressler, 1981; Erlich, 1999) while others use the term global coherence (Kintsch & van Dijk, 1978; Lorch & o'Brien, 1995). In this study the preferred terms are cohesion and coherence. Besides clarifying terminology, it is important to make a distinction between the two constructs.

My initial thoughts about coherence involve an image of an invisible web underlying a text. This relates to the idea of texture present in the definition of text, since this web of underlying relations contributes to the texture of the text. Hence, the definition of coherence

offered by de Beaugrande and Dressler (1981) is the one chosen for this research.

> "… it 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*… A CONCEPT is definable as a configuration of knowledge (cognitive content) which can be recovered or activated with more or less unity and consistency in the mind…RELATIONS are the LINKS between concepts which appear together in a textual world: each link would bear a designation of the concept it connects to… Sometimes, though not always, the relations are not made EXPLICIT in the text, that is, they are not ACTIVATED directly by expressions on the surface…People will supply as many relations as are needed to make sense out of the text as it stands (p. 4).

According to this definition, it would be fair to suggest that coherence is not exclusively textual, but the result of the processing of the text by its users influenced by facts that are external to the textual world. This processing involves the interaction of the users' background knowledge with the textual information, and inference generation for the processing of the text (de Beaugrande & Dressler, 1981). In addition to the interaction between reader's background knowledge and textual information, I would argue that the social context where a certain text is inserted, influences text reception, as demonstrated by de Beaugrande & Dressler's (1981) own examples of text, such as the following road sign:

> SLOW
> CHILDREN
> AT PLAY
> (de Beaugrande & Dressler 1981, p. 1)

In the above example, if readers did not know that they were reading a road sign, the reception of the text would be compromised. Alternatively, if the sign was placed in the middle of a school playground, for example, the meanings drawn from it would be very different from the meanings constructed by the same text, had it been presented in the form of a road sign and placed on a residential street, or *near* a school, or playground. This consideration leads me to claim that the context where a text is inserted contributes to the meanings it expresses.

Furthermore, coherence may be related to a 'principle of interpretability' (Koch & Travaglia, 1990, p. 60) that a text needs to have, but this principle is intrinsically related to the communicative situation within which the text is received, involving not only the principle of interpretability granted by the text, but the reader's communicative intentions towards a text. In fact, a text will be perceived as coherent according to internal and external factors. The internal factors are related to the logical relations that are established in the surface of the text whereas the external factors are related to the context where the text is inserted as well as its communicative situation, the example below illustrates that:

> You are cordially invited
> To celebrate the wedding of
> Sarah Johnson and Thomas Cade
> Saturday, September 14th
> 3:00 P.M.
> 35 East Olivet Avenue
> RSVP 213 555 1821[3]

There are several external factors interacting for the possible meanings that can be derived by the text above. If we consider that the reader who reads the text above receives that invitation in person and that the reader knows Sarah and Thomas, consider that the reader knows where 35 East Olivet Avenue is in the 'real world', we can predict that the reader will be able to draw very specific meanings from that invitation. If this reader intends to attend the wedding, this specific purpose will influence his/her reading processes.

 On the other hand, although I, for instance, do not know Sarah or Thomas, nor received this invitation by post, or know where 35 East Olivet Avenue is in the 'real world', yet I can establish that the text is a wedding invitation, because I recognize the conventions used for wedding invitations. I, as a reader, share that kind of knowledge with the text producer, therefore, I can identify that Sarah, Thomas, and 35 East Olivet Avenue refer to external factors. I have the schema for wedding invitations; as a result, I can place the external factors and generate

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[3]Source:n.d.http://desktoppub.about.com/od/designprojects/p/wedding.htm

inferences about them, even though I do not know the people or the place represented linguistically.

As Sarah, Thomas and 35 East Olivet Avenue are represented textually they are affected by internal factors too. As a reader, I understand that Sarah and Thomas are getting married, for the information in the surface of the text says: "the wedding of Sarah Johnson and Thomas Cade". The surface of the text tells me "You are cordially invited to celebrate", so my knowledge of the language tells me the passive voice is being used and "you" is receiving the action. If I received the invitation in person or by post I would know that "you" referred to me; therefore I would be simultaneously using my linguistic knowledge and my schema for weddings in order to process the internal and external factors to interpret the text above.

The external factors previously examined affect coherence, with the reader activating his/her previous knowledge, and bringing relevant information to the foreground when a reader attempts to understand a text. Having examined coherence in text and the external and internal factors that affect it, I move on to cohesion. From the standards of textuality aforementioned, cohesion is the standard that will be explored in detail here since it is central to this study. Drawing on de Beaugrande and Dressler (1981), the following definition of cohesion is proposed:

> it concerns the ways in which the components of the SURFACE TEXT, i.e. the actual words we see or hear, *are mutually connected within a sequence.* The surface components depend upon each other according to grammatical forms and conventions, such that cohesion rests upon GRAMMATICAL DEPENDENCIES. [As linguists have often pointed out, surface sequences of English cannot be radically rearranged without causing disturbances.]" (p. 3)

Again, the imagery of a web could apply, except for the fact that the construct is a bit more complex since cohesion involves the connection of the elements of the surface of the text as well as the relations that underlie them (de Beaugrande & Dressler, 1981).

The authors' review of cohesion included a categorization of cohesive devices that has been extensively used in the field; however, their account on conjunctions was not meant to be exhaustive[4]. These

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[4] For the sake of clarity I chose to use the term 'conjunction' to refer to all cohesive markers including sentence connectors as well as subordinating or coordinating conjunctions. However, other authors used other terms such as junctions, subordinating conjunctions, sentence connectors, linkers, transition words (Adamson, 1995; de Beaugrande & Dressler; 1981).

cohesive devices signal relationships that underlie the text. The authors classify them in four major types. To better visualize, the classification is presented as Table 1 below:

Table 1: De Beaugrande & Dressler's conjunctions (junctions) categorization

Type of Junction	Relation	Function	Example
Conjunction	additive	connecting elements on the basis of similarity of status.	moreover, and, in addition, furthermore
Disjunction	alternative	connecting elements on the basis of alternating status.	or, either or, whether or not
Contrajunction	adversative	connecting elements on the basis of adverse status.	but, however, yet, nevertheless
Subordination	explanatory	connecting elements that are interdependent	because, therefore, since, as, thus, while

These cohesive devices signal relations within or among events and situations of the textual world, which range from additivity, alternativity, incompatibility and subordination to causality, time and modality. Although related to syntax and grammar, cohesion is not exclusively grammatical since it involves the application of syntactic or grammatical structures to communication in 'real time' (de Beaugrande & Dressler, 1981, p.80). This application demands that syntax or grammar interact with the other contextual and human factors, hence the interest of this study in connecting conceptualizations from textual linguistics to notions from discourse processing.

This dialogue between concepts from textual linguistics and notions of discourse processing, calls for a more detailed revision of a classic theory in the field of linguistics, the Theory of Cohesion (Halliday & Hasan, 1976). Unlike de Beaugrande and Dressler (1981), Halliday and Hasan (1976) do not make a distinction between cohesion and coherence, rather than that, their conceptualization proposes that cohesion involves not only the elements of the surface of the text, but their underlying relations as well.

Further explanations for that approach are offered by Hasan (1984). The author explains that she developed her studies, research and theory under the functional perspective (Hasan 1984), where language is

understood within a wider context e.g. social and cultural. Consequently, under that perspective, it is not necessary to distinguish cohesive textual elements and the ideas underlying them or the external world, for under functional linguistics, both are inextricably related. In the author's words:

> It goes without saying that coherence in text stands in some relation to some relation to some state of affairs in the extralinguistic universe, in roughly the same way that in normal, noncitational uses of language, the saying of sentences stands in some relation to a state of affairs in the world of our social or psychological experience. (Hasan, 1984, pp. 181-182)

In fact the author clearly rejects the "gulf between form and meaning" (Hasan, 298, p. 186) and justifies her views drawing on Firth, who advocated that "no study of meaning apart from a complete context can be taken seriously" (Firth, 1935; as cited in Hasan, 1984, p. 182). Furthermore, Hasan's definition of cohesion reflects her theoretical affiliation, as can be observed in the quote below:

> The concept of cohesion is a semantic one; it refers to relations of meaning that exist within the text, and that define it as text… Cohesion occurs where the INTERPRETATION of some element in the discourse is dependent on that of another. The one PRESUPPOSES the other, in the sense that it cannot be effectively decoded except by recourse to it. When this happens, a relation of cohesion is set up, and the two elements, the presupposing and the presupposed, are thereby at least potentially integrated into a text (Hasan, 1976, p.4).

The fact that cohesion is seen as a semantic concept confirms the connectedness between form and meaning in language. In other words, the authors consider cohesion as to be semantic because it does not cover the surface information only, but also the underlying relations of meaning that exist between them. Although in Halliday and Hasan's (1976) Theory of Cohesion they propose to examine cohesion in the English language only, the authors explain that cohesion is a resource of language. Through cohesion the elements of the text are connected, making the text a unit. (Halliday & Hasan, 1976). In this sense, cohesion is seen as expressed by cohesive devices and the adequate use of these devices contributes to text cohesion. Therefore, I would suggest that it is possible to hypothesize that the misuse of cohesive devices may

compromise the overall coherence of the text, because that may change meanings in the text, given the aforementioned semantic nature of cohesion.

In their theory of cohesion, Halliday and Hasan (1976) described cohesion as being related to the serial processes that determine or recover the meaningful relations among the ideas in the text. These underlying relations give texture to a text, and are realized by the following cohesive mechanisms: reference; substitution; ellipsis; conjunctions; lexical cohesion (Halliday & Hasan, 1976).

As this research focuses on the influence of conjunctions on reading comprehension, I will provide only an overview of reference, substitution and lexical cohesion while conjunctions will be discussed in detail.

Reference: reference is realized by means of the linguistic items that in a discourse refer to other items; they are called the referent and the referred. Briefly speaking, personal reference is realized by means of personal and possessive pronouns; demonstrative reference is realized by demonstrative pronouns and some adverbs or adverbial phrases; and comparative uses adjectives and their comparative forms. Reference can be either endophoric (textual) or exophoric (situational), and it is subdivided as anaphoric or cataphoric. Anaphoric reference is the type of mechanism where the referent relates to a previous linguistic element, whereas the cataphoric reference is the type where the referent relates to a linguistic element that appears after the referred term (Halliday & Hasan, 1976). The examples below, illustrate the cohesive mechanism of reference:

a) *John* is practical in the extreme. *He* has no patience with faith, an intense horror of superstition, and he scoffs openly at any talk of things not to be felt and seen and put down in figures (Gilman C.P., 1892, in Daley, J. 2006, p. 113) - **Pronominal, endophoric, anaphoric reference**

b) Your dictionary is *different from the one* I saw in the bookshop. (example created by this researcher) - **Comparative endophoric, anaphoric reference**

Substitution: according to the Theory of Cohesion (Halliday & Hasan, 1976), we use substitution when we place a linguistic item in the place of another linguistic item, or when we substitute whole clauses. This resource is used to avoid repetition. The authors point out that

substitution differs from reference in the sense that in the substitution mechanism, one term is replaced by the other based on their similarity, hence it involves a redefinition, but with reference, the referred term and the referent share what they call 'a total identification' (Halliday & Hasan, 1976). Substitution can be nominal, verbal, or phrasal.

> **c)** ... and it was not until dark that *the dogs* came sneaking back, *one by one*, by meekness and humility signifying their fealty to White Fang. (London, J. 1906, in Sinclair, A. 1981, p. 356)

Ellipsis: when, in a grammatical structure such as a clause or a sentence, there is a word element that can be either repeated or omitted, ellipsis constitutes the latter (Halliday & Hasan, 1976). This can be observed in the following examples, created by this researcher:

> **d)** By trying to avoid a problem you create another *problem*.
> **e)** By trying to avoid a *problem* you create another. (the word 'problem' is **elliptical**)

Sentence 1 presents the repetition of the word *problem*, which is omitted in sentence 2, an example of ellipsis. The omitted item antecedes the ellipsis; therefore the elliptical element is implicit. Ideally, the reader keeps the antecedent active in his working memory and is able to resolve the ellipsis, in other words, is able to find out what the omitted element is. When this does not happen, the reader may go back to the previous text in order to resolve the ellipsis.

Lexical cohesion: it can be realized by reiteration or collocation. Reiteration refers to the repetition of the same lexical item or its substitution by means of synonyms, hyperonyms, or general terms, whereas collocation is the use of terms that belong to the same semantic field as the referent (Halliday & Hasan, 1976). Examples of reiteration and collocation are provided below:

> **f)** As for the *roses*, you could not help feeling they understood that *roses* are the only *flowers* that impress people at garden-parties; the only *flowers* that everybody is certain of knowing. (Mansfield, K., 1992; as cited in Daley, J. 2006, p. 206). – **reiteration**.

g) It was a big, airy *room*, the whole *floor* nearly, with *windows* that look all ways, and air and sunshine galore. It was a *nursery* first and then a *playroom* and *gymnasium*, I should judge; for the windows are barred for little children, and there are rings and things on the *walls*. (Gilman C.P., 1892, in Daley, J. 2006, p. 114) – **collocation**

Having provided an overview of the cohesive mechanisms, I move on to a more detailed review of conjunctions. First of all, the categorization of conjunctive relations provided by Halliday and Hasan (1976) is not intended to be the only 'possible' organization, but its description contributes to an understanding of how the conjunctions were applied in this study. Besides, this categorization belongs to a theory that is considered a classic in the field. Although the main types of conjunctive relations are very broad categories, the authors discussed the subtleties of meaning of the conjunctions, and for this reason the latter were subdivided into subcategories.

According to the Theory of Cohesion (Halliday & Hasan, 1976), a **conjunction** functions as a "semantic connection" (p. 308), that is to say, a mechanism which signals the relationship between elements, sentences or clauses in the text, linking antecedents to succeeding elements, sentences or clauses and making the relationship that unites them explicit.

Conjunctions are different in nature from the cohesive mechanisms of reference, substitution and lexical cohesion. The latter mechanisms involve the identification of elements in the surface of the text. In addition, elements brought together by means of reference, substitution and lexical cohesion are available in the text and structurally related. By contrast, conjunctions function as signaling very specific relations of meaning that underlie the text. The cohesive force of a text is not in the conjunctions per se, but in the underlying semantic relations that they signal (Halliday & Hasan, 1976).

The main types of conjunctions are additive, adversative, causal, temporal, and continuative. Although the relationships among the textual elements do not need to be explicit to exist and make sense, their explicitation may facilitate reading (Koch, 1989).

In addition, conjunctive relations can be internal or external, being external the ones that belong to the phenomena that language is expressing and internal being those relations that belong to the communication process, in other words, to the linguistic form used by the language users to discuss the phenomena (Halliday & Hasan, 1976).

Although there is a fine line between them, both types of relation can be observed in additive, adversative, causal, temporal and continuative conjunctions.

Next, in order to illustrate the framework provided by Halliday and Hasan (1976) Table 2 below is proposed:

Table 2 - Summary Table of Conjunctive Relations (adapted from Halliday & Hasan, 1976, p. 242)

Types of Conjunctive Relations	External /Internal	Internal (unless otherwise specified)		
Additive	**Additive, simple** Additive: *and, and also* Negative: *nor, and…not* Alternative: *or, or else*	**Complex, emphatic** Additive: *furthermore, in addition, besides* Alternative: *alternatively* Complex, de-emphatic, afterthought: *incidentally, by the way*	**Apposition** Expository: *that is, I mean, in other words* Exemplificatory: *for instance, thus*	**Comparison** Similar*: likewise, similarly, in the same way* Dissimilar: *on the other hand, by contrast*
Adver-sative	Adversative proper Simple: *yet, though, only* Containing 'and': *but* Emphatic: *however, nevertheless, despite this*	Contrastive Avowal: *in fact, actually, as a matter of fact* Contrastive (external) Simple: *but, and* Emphatic: *however, on the other hand, at the same time*	Correction of meaning: *instead, rather, on the contrary* of wording: *at least, I mean*	Dismissal Closed: *in any case, in either case, [1]no matter* Open-ended*: in any case, anyhow, at any rate, [2]however it is [3]somehow [4]but then*

Causal	Causal, general	Reversed causal	Conditional(also external)	Respec-tive
	Simple: *so, then, hence, therefore*	Simple: *for, because*	Simple: *then*	Direct: *in this respect, in this regard, with reference to this*
	Emphatic: *conse-quently because of this*	Causal, specific:	Emphatic: *in that case, in such an event, that being so*	
		Reason: *it follows, on this basis*	Generalized: *under the circumstances*	Reversed polarity: *otherwise, in other respects, aside from this*
	Causal, specific:	Result: *arising out of this*	Reversed polarity: *otherwise, under other circumstances*	
	Reason: *for this reason, on account of this*	Purpose: *to this enc*		
	Result: *as a result, in conse-quence*			
	Purpose: *for this purpose, with this in mind*			
Temporal	Temporal, simple (external only)	Complex (external only)	Internal temporal	'Here and now'
	Sequential: *then, next, after that*	Immediate: *at once, thereupon*	Sequential: *then, next, secondly*	Past: *up to now, hitherto*
	Simul-taneous: *just then, at the same time*	Interrupted: *soon, after a time*	Conclusive: *finally, in conclusion*	Present: *at this point, here*
		Repetitive: *next time, on another occasion*	Correlative forms	Future: *from now on, henceforward*
	Preceding: *previously, before that*	Specific: *next day, an hour later*	Sequential: *first…next*	Summary *to sum up, in short, briefly*
	Conclusive Simple: *finally, at last*	Durative: *meanwhile*	Conclusive:*… finally*	Resumptive: *to resume, to return to the point*
	Correlative forms	Terminal: *until then*		
	Sequential:	Punctiliar: *at this moment*		

first…then
Conclusive:
at first… in
the end

Note on the Dismissal type:1, 2, 3, 4- these conjunctions were proposed by this researcher as they are present in the text used in this research; this is why I stated in the title of Table 2 that the original framework has been adapted.

Additive Conjunctions

According to Halliday and Hasan (1976), additive conjunctions express a variety of meaning which range from addition, correlation, alternation, similarity and dissimilarity, including emphatic forms that make verbal communication more expressive i.e. *further, furthermore, again, also, moreover, what is more, besides, additionally, in addition, in addition to this, not only that but, etc*.

Adversative Conjunctions

As can be observed in Table 2 above, sources of adversative relations may be internal or external. The latter can be expressed by *yet, but, however and though*. Among the subtleties of meaning that are characteristic of conjunctions, it is worth noticing that the conjunction *but* has the 'and' element in its meaning even though *but* is an adversative conjunction, not an additive one. The 'and' element in *but* projects the meaning, while *but* links the preceding sentence to the subsequent one. In this sense, *but* differs from *yet*, because *yet* does not have this projecting feature (Halliday & Hasan, 1976).

A closer look at conjunctive forms shows that there is another difference between *however*, *but* and *yet*, for *however* can occur in a non-initial position in the sentence, as observed in the Theory of Cohesion (1976). On the other hand, there is a correspondence in meaning between *yet* and *although*, which can be observed in the example below:

[5:35]   a. The total came out wrong. *Yet* all the figures were correct; they'd been checked.
(cf: The total came out wrong, although all the figures were correct.)
(Halliday & Hasan, 1976, p. 252)

The underlying meaning of *yet* in the example above is 'in spite of', but it is worth mentioning that the meanings of *yet* and *although* correspond, but their structural use is different because *yet* occurs as a sentence connector. Whereas *although* appears as a subordinating conjunction; hence *yet* does not allow for a sequence inversion. The conjunction *though* has the same meaning as *although* when it appears in the beginning of a sentence. However, its normal position is at the end of the sentence. *Although* appears in subordinate clauses followed by the main clause or vice-versa, that is to say, the order of the sequence of clauses can be inverted (Halliday & Hasan, 1976).

In addition, the authors reason that adversative words such as *nevertheless* and *still*, and prepositional expressions such as *in spite of this* are emphatic. It is also worth pointing out that the adversative conjunctions that express contrast or correction have in common the fact that the underlying meaning that they express is 'as against' - *But, on the other hand* and *however*, *at the same time*, etc. This is why we perceive the meaning of *however* to be different from the meaning of *yet*. If we take:

[5:36]   a. She failed. However, she's tried her best.
(Halliday & Hasan, p. 252)

then replace *however* by *yet*, we observe a change in meaning, the underlying relation changes from 'as against', to 'in spite of' (i.e. *She failed in spite of the fact that she's tried her best*).

The use of conjunctive forms such as *in fact, as a matter of fact, actually, to tell (you) the truth,* expresses the meaning of **'as against'** in an internal way, that is, **'as against'** refers to what was stated. In this sense it is textual, therefore classified as internal, for it relates to the meanings created by the words in the text, the communication itself, and not the phenomena being expressed. The meaning created is one of avowal. The specific meaning of avowal can be defined as "an assertion of veracity" (Halliday & Hasan, 1976, p.253). This seems to be a case of claiming that what is being said has a true value.

In terms of the sense of correction type, this is distinct from the avowal type because the latter is external, that is, it refers to the phenomena whereas the correction type is internal, referring to what was communicated. Characteristic expressions of this relation are *instead (of that), rather, on the contrary, at least, I mean*. It is also possible that the same phenomenon is expressed in two different dispositions by the use

of conjunctions such as: *at least, rather, I mean*, as in fact they express a correction of wording, as opposed to a correction of meaning (Halliday & Hasan, 1976).

Halliday and Hasan (1976) conclude their account on the adversative relations pointing out that there are also generalized adversative relations that may occur externally or internally, expressing the meaning of **'no matter what, still'** – they are dismissive and can be close- or open-ended. The cohesion here is with something that came before, but the meaning of cohesion is that 'what came before' is not relevant. According to the authors (1976), these relations can be expressed by: *in any case, in either case, whichever way it is* for the closed relations and*: in any case, anyhow, at any rate, however it is, *somehow, *but then.* [5]

Causal conjunctions

Unlike the adversative conjunction the distinction between the external and the internal relations is much more 'blurred' in the causal type. This is related to the fact that what language users perceive as cause is, to a certain extent, subject to their interpretation. Causal relations are expressed in their simple form by conjunctions such as: *so, then, hence, therefore and* emphatically *with*: *consequently, because of this;* to name a few (Halliday & Hasan, 1976)*.*

The authors explain that the specific relations of result, reason and purpose when expressed by *so*, are not really distinct, expressing the following meanings: *as a result of this, for this reason, for this purpose*. While when the same relations are expressed by prepositional phrases, they usually express different meanings.

The examples below, offered by this researcher illustrate two cases of external causal relations, one of reason and the other of result:

3. You cannot make an omelette because <u>there are no eggs</u> =   reason
4. There are no eggs; <u>therefore you cannot make an omelette</u>. =   result

In example 2, there is a relationship of cause and effect between the main clause (You cannot make an omelette) and the subordinate clause (because there are no eggs). Whereas in example 1 there is a relationship of consequence and reason between the main clause (There

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[5] The last two instances were added by this researcher for the open-ended relations expressed in the text that was used as instrument in this study.

are no eggs) and the subordinate clause (therefore you cannot make an omelette), that refers to the phenomena. On the other hand, expressions such as: *arising out of this, following from this*, etc. are used in internally expressed reasoning, that is, reason that is constructed in the discourse (Halliday & Hasan, 1976).

The authors propose that the external causal relations of reason could be expressed as: *"a therefore b"* (Halliday & Hasan, 1976, p.257). External conditional relations are similar to the external relations of reason and result. However, it is a relation like *" possibly a; if so then b"* (Halliday & Hasan, 1976, p.258), something is a condition for something else. In order to reason on that type of relation, I suggest the following example:

5. If there were some eggs, you could make an omelette.

The use of language here forms a conditional clause that is creating a hypothetical situation. Conditional conjunctions as *if, since … then*, also have a type of cause and effect meaning, like the causal conjunctions, but the difference in these conditional relations are hypothetical.

Nevertheless, not all conditionals are used hypothetically, the form *under the circumstances,* for example, can be used hypothetically or non-hypothetically. The negative form of this expression, *under no circumstances*, is used to express reversed polarity including the following forms: *otherwise, in other respects, aside from this, etc.*

Temporal relations

In their external sense, temporal conjunctions may express sequential, simultaneous or preceding temporal relations as illustrated in Table 2. Another example of external relations is the conclusive subcategory, expressed by *finally, at last, in the end, eventually* it is worth observing that more than time, these conjunctions signal the termination of a series of actions (Halliday & Hasan, 1976).

The forms *first, at first, first of all, etc* are in fact cataphoric because they point to something that is yet to come, whereas correlative forms such as *then, second, next or finally*, point to the previous anaphoric expression. This is the reason why these are categorized by the authors as correlative relations (Halliday & Hasan, 1976).

These complex external relations express very specific meanings as regards time as can be observed in Table 2 above, thus these forms can render information regarding time more or less precisely, depending

on the communicative intention, making time a very broad and flexible concept that can be manipulated by language.

As regards the internal meanings of temporal conjunctions, they are related to the communication rather than to the event, hence when we talk about how discourse progresses; we are talking about internal temporal cohesive relations. The authors (1976) offer the following examples of forms that express internal sequential relations: *then*, *next*, *secondly*; and examples of forms that express internal conclusive relations: *finally, in conclusion*, *etc*.

Following the line of thought of the specificities in the treatment concept of time granted in the external relations, the concept of time is extended in what the authors call a 'time 2', that is a textual time, wherein the temporal meaning changes and extends to other meanings that are something other than temporal. From this extension we can understand the culminative meaning in expressions such as to *sum up, in short, in a word, to put it briefly*. In addition, it explains resumptive meaning, e.g. *anyway, to come back to the point, to resume* – "where the speaker indicates that he is resuming the main purpose of communication following a digression of some kind" (Halliday & Hasan, 1976, p. 265)

Continuative conjunctions

This category covers some forms that do not easily fit the four categories of conjunctions, for instance: *now, of course, well, anyway, surely, after all* (Halliday & Hasan, 1976). Among the instances given, two forms are directly related to this study, *well* and *anyway*.

The first, the conjunction 'well' is often used in dialogues when a 'speaker' answers a question, indicating a response to a question previously made, being therefore cohesive. The second conjunction, "anyway' may have a dismissive or a resumptive meaning depending on the context.

> [5:68]a. They changed over to a most peculiar kind of train which you don't see now. I've forgotten what it was called. Was it called a 'steam coach'? I can't remember. Anyway it was just one coach but it ran by steam and it made a funny noise. (Halliday & Hasan, 1976, p. 270)

This review of cohesion intends to indicate that cohesive markers have very specific meanings. This line of thought is shared by Koch,

who indicates that if cohesive mechanisms are not employed in accordance with these specific meanings, overall coherence of the text may be affected, compromising the text interpretability (1989). Therefore, it seems that the use of cohesive mechanisms has a facilitative function in reading comprehension and in the construction of meaning by readers.

Koch has offered a classification of cohesive mechanisms that distinguishes surface from underlying mechanisms (1989), which seems to echo Halliday and Hasan's conceptualizations over the *cohesive force*, which lies in the relations between the ideas of the text (Halliday & Hasan, 1976), and that these relations are manifested in text. Thus, surface mechanisms comprehend cataphor, anaphor, ellipse, superordinate, while underlying mechanisms linking propositions include opposition or contrast, finality or purpose, consequence, temporal localization, explanation or justification, addition (Koch, 1989).

Although these underlying mechanisms compare with the meanings described in the categorization of conjunctions in the Theory of Cohesion (1976), the two classifications differ from the classical theory inasmuch as Koch (1989) proposes two main types of relations: logic-semantic relations and argumentative relations. The types of logic-semantic relations listed are: conditional, causal, mediation or finality, disjunction, temporal, conformity or manner. The types of argumentative relations include: addition, disjunction, contrajunction or adversative, explanation or reason, confirmation, conclusion, comparison or generalization.

Having said that, this classification clearly takes into account the categories proposed in the Theory of Cohesion. In fact, the distinction between logic-semantic relations and the arguments relations were, in way, contemplated by Halliday and Hasan (1976) when they discussed the external and internal meanings of cohesion.

A remarkable characteristic of Koch's review of cohesion is the fact that the discussion is not limited to sentences, but to the effect of cohesion in text organization (1989). Besides that, she examines the meanings created by cohesive mechanisms in detail. Moreover, the categorization proposed by Koch (1989) highlights the difference between cohesion that stems from the world of phenomena and cohesion that stems from the textual world. The limitations of the use of the classification by Koch in this study concern the fact that her classification was used in Portuguese, and there are differences between the two languages in terms of syntax, morphology and lexicon.

However, these differences are not within the scope of this study; therefore they will not be discussed.

That aside, Koch's (1989) view of cohesion is relevant to the study when it comes to her consideration about cohesion and text production and comprehension. According to the author, cohesion is necessary for continuity, but not sufficient for text production and comprehension. On the other hand, she contends that cohesion is highly desirable in other types of text: [6]"scientific, didactic expository, argumentative, to name a few" (Koch, 1989, p. 18) [my translation].

Perhaps a crucial consideration regarding this issue is the fact that in general, readers want to comprehend a text. Thus, they may 'strive' to maintain coherence and cohesion, even when the texts they read have disturbances and they must 'fill the gaps' in cohesion and coherence, generating inferences to that effect.

The debate over the role of conjunctions was further explored by Murray (1995). Murray's study concentrates on investigating the possible signalling effect and facilitative role of conjunctions in the integration processes in comprehension. For that, the researcher proposed an investigation based on the comparison between texts where the conjunctions were present and texts where the conjunctions were omitted. The study focussed on narrative texts and three specific types of conjunctions were selected additive; causal; adversative. Murray, (1995) revised a study by Haberlandt (1982), where reading times were used as measures of reading comprehension, with faster reading times indicating a facilitative effect (Haberlandt, 1982; as cited in Murray, 1995).

Results showed that adversative and causal conjunctions functioned as signals in the text, whereas the additive conjunctions did not prove to have the same effect. In fact, this can be explained by the uninformative nature of additive conjunctions, thus providing few restrictions to the upcoming text. Besides this major difference, the presence of causal and adversative conjunctions resulted in slower reading times, a finding that contradicts the expectations based on Haberlandt (1982). According to Murray, this unexpected effect justifies the need for studies about the semantic attributes of causal conjunctions as they tend to signal importance, which may explain their yielding slower reading times (1995).

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[6] Original text: científicos, didáticos, expositivos, opinativos, por exemplo".

In sum, from the three types of conjunctions examined, findings show that only the adversative conjunctions confirmed the research objectives that were - to confirm the signalling and facilitating role of conjunctions in comprehension. From Murray's (1995) study, it is possible to conclude that the signalling and facilitating roles of conjunctions are related to highly restricting semantic attributes of adversative conjunctions in relation to the upcoming text.

More current research that confirms the facilitative effect of conjunctions includes the previously mentioned study by Scherer and Tomitch (2008). The authors compared two groups of Brazilian students whereby one group read an expository text with its conjunctions and the other group read the same text, but in a version without conjunctions. The first group was denominated CC and the second was denominated NC. The findings of the study suggest that readers rely on conjunctions to identify the macrostructure of a text. What is more, the presence of conjunctions seems to facilitate the integration of textual information in memory as readers use them to link information and represent a text in memory.

In their study, the scholars also investigated the influence of conjunctions in the identification of central ideas graded as "high, medium and lower level ideas" (p. 116 Scherer & Tomitch, 2008) [my translation], but the impact of conjunctions was not totally confirmed for that hypothesis. Having said that, the summaries produced by the CC group were more cohesive and better organized hierarchically. In fact the absence of conjunctions seems to have compromised some of the ideas expressed in the summaries produced by the NC group (Scherer & Tomitch, 2008). In my opinion this is related to the fact that conjunctions have specific meanings (Halliday & Hasan, 1976). Moreover, the absence of conjunctions in the texts read resulted in the absence of conjunctions in the summaries produced, as the authors point out:

> In relation to the use of connectors, a significant absence of connectors in the summaries of the NC version is clearly perceptible, in a similar fashion to that of the text read, since many relations amongst sentences were not specified by the subjects. (p. 114 Scherer & Tomitch, 2008, my translation[7])

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[7] Original text: Em relação ao uso de conectivos, é claramente perceptível nos resumos da versão NC uma ausência significativa de conectivos, à semelhança do texto lido, uma vez que muitas relações entre as sentenças não foram especificadas pelos sujeitos (p. 114 Scherer & Tomitch, 2008).

Further attempts to understand the influence of cohesive devices in reading comprehension were made by Zadeh (2006), a scholar from the Iran University of Science and Technology. The researcher developed an investigation of the effect of cohesive devices taking into consideration text type, or genre and participant variables. As far as texts are concerned, the study included narrative, expository and argumentative texts, whereas in terms of participant variables, participants were grouped as having a low, intermediate and high level of language proficiency.

Besides supporting the hypothesis of the facilitative effect of conjunctions, referred by the author as 'connectives', Zadeh's (2006) study has shed light on the role of conjunctions, as explained in his quote below:

> Connectives function as procedural devices that help readers how to process the resulting contextual effects. Each contextual effect is relevant to a preceding proposition because the readers construct appropriate inferences from the possible assumptions generated. (p. 12)

To sum up, this section was aimed at offering an overview of studies about cohesion, reviewing classical studies such as Halliday and Hasan's theory of cohesion (1976) and the standards of textuality by de Beaugrande and Dressler (1981) and more current investigations (Scherer & Tomitch, 2008; Zadeh, 2006), including Murray's study (1995) that are of fundamental importance to the present study.

Although the present study's major theoretical guidance comes from a cognitive perspective, I have included a discussion of the theme from a textual linguistics perspective (Halliday & Hasan, 1976; Koch, 1989; Koch & Travaglia, 1990) since the ideas proposed by those authors have also influenced the present investigation.

Chapter III

METHOD

This chapter reports on an experiment carried out for this research describing participants, instruments and procedures taken in detail. It is divided into three major sections: 3.1 Main Data Collection; 3.2 Pilot Study, and 3.3 Design of the Study. In fact, three collections were realized: two during the Pilot Study and one for the Main Data Collection.

3.1   Main Data Collection

3.1.1   Participants

Participants in this study were 12 Brazilian undergraduate students from the fourth semester of the *Letras -Secretariado Executivo* course at *Universidade Federal de Santa Catarina,* hereinafter *UFSC,* Brazil. The initial pool was 13, but data from one participant had to be discarded because the participant did not complete the last task: The Retrospective Questionnaire. Participants were divided into two groups, a control group and an experiment group. Each group had six participants.

Letras-Inglês – Secretariado Executivo is an eight-semester undergraduate course which leads to a qualification in bilingual secretarial studies. According to the structuring of the course, undergraduate students in the fourth semester of this course are required to have an intermediate level of English. This researcher accepted that the course requirements as regards levels of proficiency in English, which confirm fourth semester students of *Letras-Inglês – Secretariado Executivo* at UFSC, had an intermediate level of English. Thus, all participants in this study were considered to have an intermediate level of English (L2). There were eleven women and one man, who were from nineteen to thirty-five years old, so it was not possible to achieve a balance of women and men in the groups since there was only one man in the group.

3.1.2   Instruments

3.1.2.1   Texts

One text was selected from an American publication called *'Genuine Articles – Authentic reading texts for intermediate students of American English'* (Walter, 1986). As the title of the publication may suggest, there was a concern about using an authentic text in the experiment in order to render the experiment as realistic as possible; on the other hand, one must not lose sight of the fact that the event under investigation was a data collection exercise; therefore, instruments had to be adapted for the purpose of the research. With that in mind, a text entitled *'Getting to the airport'* was selected as version C – which stands for conjunctions, as it had all its conjunctions present (Appendix A). The other version of the text was called NC, which stands for no conjunctions, and this text had all its adversative and causal conjunctions omitted (Appendix B), in order to fulfil the purpose of the study.

In addition, the text was selected according to linguistic level, textual characteristics, that is, presence of conjunctives and text type, in this case, this researcher chose to use an expository text. Previous studies (Murray, 1995; Scherer & Tomitch, 2008) have shown that expository texts, as opposed to narrative texts, tend to be harder to process, therefore readers may rely more heavily on textual markers to comprehend expository texts than narrative texts. Having said that, a closer look at the structure of the text used in this experiment shows that it has a comparison and contrast structure, but it also uses description and narration, which may add to the text's general readability. This last consideration is not going to be explored here, but is revisited in the conclusion to this study.

The text topic was also taken into account in order to control for familiarity as a variable. This researcher considered the topic of the text appropriate since it was not domain-specific. As far as the use of conjunctions as characteristics of the texts that were taken into consideration, Table 3 describes the characteristics of the texts as regards the number of words and use of conjunctives.

Table 3: Text features: number of words, number and type of conjunctives

Text features	Text version C	Text version NC
Total number of words	630	615
Total number of conjunctives	17	0
Number of adversative conjunctives	8	0
Number of causal conjunctives	8	0

As previous studies found that additive conjunctions did not demonstrate that they influenced comprehension (Lorch & O'Brien, 1995), these conjunctions were not omitted in the text used in this study, except for "indeed"[8]. This researcher decided to omit this specific conjunction from the text used in this study since it had a more emphatic meaning (adding strength to its preceding idea), than the other additive conjunctions present in the text used in this study (Adamson, 1995). Therefore, the number of additive conjunctions was not listed in Table 3.

3.1.2.1.1 Effects of the presence and omission of adversative and causal conjunctions in the study texts

As previously mentioned in the review of the literature section, conjunctions are cohesive devices that signal certain relationships in the text. In order to verify the actual effect of adversative and causal conjunctions in comprehension, this researcher selected an expository text which had several adversative and causal conjunctions signalling a number of specific relationships that connected the ideas in the text.

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[8] Please refer to Table 4.

Table 4 below exhibits each conjunction omitted, listing them by category, showing their position in the text alongside the presumed effect they had in each section of the text surface.

Table 4: List of omitted conjunctions by category, text with conjunction, text with omission and presumed effect of each omission

Con-junc-tion	Category	Position in Text with conj	Text with omission	Presumed effect
If	Causal	**If** there were any justice in this world, the early-airport people would get rewards	There were any justice in the world, the early-airport people would get rewards	The conditional structure is disrupted, breaking the flow of reading.
But	Adversa-tive	And the late airport-people would be punished. **But** there is no justice in this world.	And the late airport-people would be punished. There is no justice in this world.	The adversative relation is left implicit.
But	Adversa-tive	Our flight had been called three times, **but** he insisted we stay for another round.	Our flight had been called three times, he insisted we stay for another round.	The omission of the conjunction may lead the reader to infer a temporal relation rather than an adversative one.
If	Causal	**If** we miss this one, there's always another plane in an hour.	We miss this one, there's always another plane in an hour.	The reader may infer a relationship of reason rather than condition due to the omission.

If / be-cause	Causal	**If** you miss your flight it's **because** God didn't want you to go.	You miss your flight - God didn't want you to go.	The conditional structure is disrupted, breaking the flow of reading. The causal relationships are left implicit.
As a matter of fact	Adversa-tive /avowal type	**As a matter of fact**, I was an early-airport person for years.	I was an early-airport person for years.	The emphasis is lost.
Indeed	Additive	My luggage will get on the plane first. **Indeed** it will.	My luggage will get on the plane first. It will.	The conjunction is supposed to add strength to its preceding sentence, but with the omission, not only the emphasis is lost, but the whole reason for the existence of the second sentence ("It will").
Though if	Adversa-tive	**Though if** I get there real, real early, I told my old coward self, I will get the best seat.	I told my old coward self that I get there real, real early, I will get the best seat.	Due to the omission of the conjunctions I inverted the clauses forming the conditional sentence. Even with the inversion, the omission made the sentence quite fragmented.
No matter	Adversati ve	**No matter** how early I showed up, I was always told that someone called two or three years ahead of me.	How early I showed up, I was always told that someone called two or three years ahead of me.	The omission of the conjunction gives the impression that the sentence is incomplete, compromising its whole meaning.

If	Causal	Is that coward Simon flying somewhere today? **If** he is, give me his seat.	Is that coward Simon flying somewhere today? Is he? Give me his seat.	The conditional connection is lost with the omission.
If	Causal	**If** you hurry, you can make it.	You hurry, you can make it.	The conditional connection is left implicit.
So	Causal	I was too embarrassed to say that I arrived at airports early so I wouldn't have to hurry.	I was too embarrassed to say that I arrived at airports early - I wouldn't have to hurry.	The dash replaces the omitted conjunction and the causal relation is left implicit
Instead	Adversative	**Instead**, I ran down the corridor to the plane.	I ran down the corridor to the plane.	The adversative relation is left implicit. The relationship could be mistaken for a sequential one, rather than adversative.
But then some-how	Adversative/ Dismissive type	"I was here early", I said weakly. "**But then, somehow** I wasn't anymore".	"I was here early", I said weakly. "I wasn't anymore".	Two opposite ideas are in juxtaposition, but no link is given making reading difficult.

The conjunctions were marked in bold to make them easily identifiable to the reader. As Table 4 shows, the omission of the conjunctions is expected to influence reading. The predicted effects include disrupting the flow of reading, leaving the connection between some sentences implicit and unclear. Readers of the text with the conjunctions may perceive the text to be fragmented and are likely to generate more inferences to draw meaning from text than the readers who read the text with the conjunctions present.

3.1.2.2   Informed Consent Form - Written Instructions

As requested by the Ethics Committee *(CEP – Comitê de Ética em Pesquisa)*, an Informed Consent Form was written in the participants' L1 (Portuguese), containing general information about the study, the context of the research, the researcher and the Professors involved in this investigation. The participants signed the form prior to their participation in the study (Appendix C).

Following that, participants received a document with specific instructions in Portuguese, explaining all the procedures they had to follow for the study. (Appendix D).

3.1.2.3   Summary Task Sheet

Participants received a summary sheet with a reminder of the instructions for that particular phase of the study (Appendix E). Since the focus of the study is L2 reading, instructions were given for the summary to be written in the L2, but in order to avoid limitations caused by lexical difficulties, the instruction given advised the participants to use their L1 (Portuguese) whenever they faced a vocabulary problem while writing their summaries. In addition, instructions set a limit of 30 lines for the summaries in order to guarantee conciseness (Scherer & Tomitch, 2008).

3.1.2.4   Reading Comprehension Questions

In order to check whether the absence of conjunctives affected the comprehension of cohesive relations in the text, participants had to answer eight comprehension questions based on the underlying relations signalled by the conjunctives (Appendix F). Once more, due to the focus of the study being L2 reading, written instructions were given for the reading comprehension questions to be answered in the L2.

3.1.2.5   Gap-Filling Task

This task was introduced after the pilot test, as advised by my advisors, since we detected the need to find out more about the participants' knowledge of conjunctions, hence providing data to verify whether this specific knowledge affected the participants' performance

and ultimately, the results of the study. This activity was selected because it brings in several of the conjunctives used in the reading task. The aim of this task is not to check the participants' vocabulary knowledge, but to check if they are able to associate the conjunctions to the underlying relations they signal; therefore, the task includes a glossary. The task was adapted from Adamson (1995). A copy is given in Appendix G.

3.1.2.6 Retrospective Questionnaire

A retrospective questionnaire was adapted from Tomitch (2003), containing eleven questions in order to gather data on the participants' impressions of the texts they read, as well as their perception of their own reading comprehension. Out of the eleven questions, nine questions were open-ended and two were based on Likert scales. Likert scales are normally used in questionnaires, where respondents are offered a chance to grade their agreement to a statement in the questionnaire. Usually respondents to questionnaires can evaluate a statement by choosing from a scale ranging from 1 to 5 or 7 (or more) to express how much they agree or not with that statement (ChangingMinds.org, 2010).

The objective of this instrument is to allow participants to explain how they read the text; what kind of problems they found; how they tried to solve such problems and how they ultimately evaluated their own reading process (Appendix H).

Another purpose of the questionnaire was to ascertain whether the instructions were understood by the participants, since the researcher decided not to apply a training session as it is going to be explained in subsection 3.2.3.

3.1.3 Procedures

First of all, participants were invited to take part in this research, when they were informed that this study was going to be carried out in one session lasting approximately one hour and thirty minutes. The researcher asked participants to read and sign the Informed Consent Form (ICF) and asked participants if the content of the form was clear to them. As a response, none of the participants expressed any doubt about the ICF, and they all signed the forms.

Before I report on the experiment, I need to explain that I did not include a Training Session in the main data collection. Having said that,

my decision to exclude the Training Session was based on the following considerations: group availability for data collection, time scale for the completion of this study, need to include the gap-filling task, participants' familiarity with the type of task my study entailed and insights from the Pilot Study.

The experiment started with the researcher handing out the instructions in writing to the participants. Subsequently, the researcher read each instruction aloud; explaining each one in detail, and making sure participants understood what they had to do.

As subsequently observed in the description of the Pilot Study, there were problems regarding the instrument used. The instruments were two versions of the text entitled "Getting to the airport" which the researcher considered could compromise findings from data collection; as a result another collection had to be arranged. In addition, this study had very specific requirements, in other words, for this research I was interested in L2 readers who were neither beginners nor advanced students, to be able to ascertain whether cohesive devices such as conjunctions had a beneficial effect in comprehension measured by summarization.

Time scale for the study was problematic, because at this point we were already in the second semester of 2009. To inform my decision, I considered the insights from the Pilot Study, which confirmed that the participants did not express any doubt or insecurity as regards completing the study task and decided to withdraw the training section from the study procedures.

However, I was prepared to start the whole process of data collection again if my findings indicated that the participants' performance had been compromised due to that. For that, I included a question in the Retrospective Questionnaire to verify if, at any moment, the participants had any problems understanding what they had to do. In response to that, not one participant expressed any problems regarding their understanding of the tasks. In fact, some of them mentioned that everything was very well explained 'both orally and in writing'. After that, the researcher explained that participants were going to be divided into two groups: group A with 6 participants (control group) and group B with 6 participants (experimental group), and asked participants to organize their sitting arrangements accordingly, which they did in a straightforward manner. The participants were not aware that one group was the control group and the other was the experimental group, as this

information was only relevant to the researcher and the advising professors at that point.

Having explained my decisions, I moved on to reporting the experiment. The Experiment Session began with the participants being asked to read their texts, group A read Text version C (with conjunctions) and group B read Text version NC (with no conjunctions) – where the term 'with no conjunctions' refers to the omission of adversative and causal conjunctions. No time limit was established for any of the activities performed, to give participants ample opportunity to complete each process involved in the experiment, since time is a factor that can produce a difference in results. Some participants were able to summarize and answer comprehension questions faster than the others, so the researcher managed the tasks by collecting the completed summary tasks and handing in the next study task i.e. the reading comprehension questions. Thus, time was managed in such a way that neither the faster, nor the slower participants were affected by the time factor in an attempt to respect individual differences and take into consideration time as a factor that may influence reading.

After participants finished reading, texts were collected and participants were asked to summarize their texts in the L2. After finishing summarizing the texts, participants handed their summaries to the researcher. Subsequently, the researcher returned the texts read to the participants together with the comprehension questions, and participants were asked to answer the comprehension questions in the L2. When participants finished answering the comprehension questions, they received the Gap-filling task.

Finally, when the gap-filling task was completed, the participants received the Retrospective Questionnaire, which was in the participants L1 and was supposed to be also answered in the L1. Participants were allowed to leave the room as they finished answering the Retrospective Questionnaire. There were three participants who were the last ones to hand in the last task, who actually expressed their satisfaction in taking part in the experiment.

3.2   Pilot Study

The Pilot Study comprises a pre-pilot experiment and two Pilot Studies.

3.2.1   Pre-Pilot Experiment

The pre-pilot experiment was carried out in March, 2009 with two participants who were undergraduate students from the fourth semester of a *Letras* course at *Universidade Federal de Santa Catarina*, hereinafter UFSC. The two participants were considered to have an upper intermediate level of English by their teacher of '*LLE-7492 Compreensão e Produção Escrita em Língua Inglesa II'*–. The experiment was a pre-pilot activity that allowed me to check the instruments, tasks, and instructions planned for my research. The participants were asked to fulfill two tasks: read two texts in the L2; summarize them in the L1; and answer comprehension questions about the texts in the L1. In total, four texts were read, two of them with conjunctions and two of them with no adversative or causal conjunctions. Texts were read one at a time, followed by the summarization task, with the participants being asked to summarize the text without having access to it. After that, the participants were asked to answer comprehension questions with access to the text.

Insights from this pre-pilot experience showed that the students understood what they had to do, but found the text entitled "British Modern Families" (See Appendix M) too easy. In the light of the remark, the researcher realized that this text was unsuitable for the experiment since it could result in a ceiling effect, therefore the text entitled "British Modern Families" was replaced by the text called "Getting to the airport" (Appendix B). Another relevant remark from the students was the fact that summarizing and answering the comprehension questions in the L1 was tiresome, because it involved translating the ideas, which was perceived as an extra burden.

Based on the insights from the pre-pilot experience, this researcher decided to carry out a second pilot study where the new text, "Getting to the airport" was used.

3.2.2   Pilot Study

The Pilot Study was carried out in June, 2009, six weeks before the main data collection. Participants from two groups were invited to take part in this study: 14 students from the 4th Semester of the *Secretariado Executivo* course also at *UFSC* and 12 students from the 2nd Semester of the *Secretariado Executivo* course at *UFSC*.

The experiment with both groups included a Training Session carried out in the L1. The pilot study procedures involved the participants being divided into a control group and an experimental group.

3.2.3   Insights from the Pilot Study

The instruments, procedures and instructions for the data collection with the participants from the 2nd Semester of the *Secretariado Executivo* at UFSC were the same as those for the participants from the 4th Semester of *Secretariado Executivo* at UFSC, except for the fact that with the latter, participants were asked to summarize and answer comprehension questions in the L1. Asking the participants to summarize and answer comprehension in their L1 was a decision taken in order to control language ability as a factor affecting the reading comprehension results, since the participants were in their 2nd phase of the *Secretariado Executivo,* and not all the participants had an intermediate level of English according to the teacher of 'LLE 7491 - *Compreensão e Produção Escrita em Língua Inglesa I*'.   Despite that, a brief analysis of the results demonstrated that language ability did affect some of the participants' performance. Therefore, the researcher considered the data collected in the second collection was unsuitable for the analysis, because in that experiment, linguistic level was a variable that could affect the validity of the findings. It seems that, in this particular experiment, the selection of the text in accordance to the language ability of the participants had more bearing on the suitability of the experiment than the instructions to summarize in the L1 or L2. Or, rather, asking L2 readers to fulfil reading comprehension activities in the L1 did not compensate for the linguistic difficulties the text presented for that particular group of readers.

Although the experiment with the students from the second semester of the *Secretariado Executivo* course at UFSC did not prove to be suitable for this research, to a certain extent, it provided the researcher with assurance about the experiment because the problems as regards the level of language ability in the L2 were not detected in the results from the data collection with the students from the fourth semester of *Secretariado Executivo* at UFSC. This confirmed that the text selected for the experiment was adequate for students in that particular phase of the *Letras* course. In addition, in both experiments

participants were able to understand the instructions and perform all the tasks within 90 minutes.

All things considered, the previously discussed insights from the Pilot Study confirm the importance of carrying out pilot experiences in experimental research. Since it provides the researcher with vital information such as the adequacy of the instruments prepared in relation to the participants and to the purpose of the study, it gives the researcher a chance to check if her/his instructions are clear and the timing that should be allocated for the experiment.

Although the pilot study confirmed the suitability of the instruments as regards the participants' level of English as well as the adequacy of the instructions, the instruments needed revision. When beginning the analysis section, this researcher realized that there were problems in the preparation of her instruments: the texts and the comprehension questions had problems. The texts used in the study were prepared in two versions: one with conjunctions and another one with no adversative or causal conjunctions, but in the version with no adversative or causal conjunctions three conjunctions were not omitted: *well, no matter, somehow*. Also, I had included the preposition "with" in line 3, where the conjunction "if" had been omitted. For more details, please refer to Appendix L.

As far as the reading comprehension questions are concerned, after this researcher conducted a brief analysis of the results, it was considered that some questions needed revision. In order illustrate the issues raised by this researcher, Table 5 below is offered:

Table 5: Issues Raised over the Reading Comprehension Questions Applied in the Pilot Study

Reading Comprehension Questions	Issues Raised
1. What kind of people does the text talk about in relation to arriving at the airport to catch a plane?	Adequate
2. In the first paragraph, why does the author consider the world to be 'unjust'?	Adequate
3. According to the text, how would a late-airport person react in case they missed a flight?	Adequate
4. Why does the author think that there is a conspiracy against early-airport people?	Adequate
5. Why does the author call his experience in London-Heathrow *"the ultimate embarrassment"*? Did he act as an early-airport person or late-airport person? Please justify your answer.	This question is partly 'answered' by question 7
6. How did the author answer the question from the text: *"You should get to the airport earlier..."*? Why was the author late?	The answer to this question is too similar to the answer to question 5. Participants found that confusing..
7. What kind of person did the author marry? To what extent did the author change his attitude about catching planes?	It offers information to the reader, it tells the reader that the author changed his attitude about catching planes

After considering the issues raised above, and the problems described as regards the preparation of the texts, I reorganized the instruments that were going to be used as instruments in the experiment. Subsequently, another data collection was scheduled in order to guarantee that this study yielded reliable results.

3.3   Design of the Study

3.3.1   Criteria for Selection of the Study Tasks

The design of this study comprises five tasks: reading; summarizing a text; answering reading comprehension questions about that text; doing a gap-filling exercise with conjunctions; and a retrospective questionnaire. The gap-filling exercise was applied in order to check whether the participants' level of knowledge of conjunctions so as to assure that this variable influenced their performance in the summary and the reading comprehension tasks. Additionally, the retrospective questionnaire was applied in order to provide the researcher with clues about the participants' perception of this particular reading experience. In addition, the study includes the participants' reading times as another measure of reading comprehension. Reading times were used as measures of reading comprehension, with faster reading times indicating a facilitative effect (Murray, 1995), which, together with the retrospective questionnaire, aided the triangulation of data.

The decision-making processes for task preparation is explained in this section, including: choice of language to be used by the participants when performing the tasks and the parameters used to select and prepare the study tasks.

Choice of Language

Initially, this researcher took the decision to ask the participants to perform the summary task, to answer the comprehension questions and to complete the gap-filling task in the L2 due to insights from the pre-pilot phase and from theoretical considerations proposed by Tumolo (2005).

The pre-pilot phase involved students from the fourth semester of the _Letras -Secretariado Executivo_ group at UFSC, which happened in the first semester of 2009. During that pre-pilot experience, the participants were asked to read a text in the L2, and then summarize the text in the L1, without access to the text. Subsequently, the participants were asked to answer comprehension questions in the L2. When the participants finished their tasks, they mentioned that it was too time-consuming to summarize and answer the comprehension questions in Portuguese. As a result, it is fair to say that code switching seemed to be more troublesome than answering the questions in the L2, since that

involved translation processes, which are different from comprehension processes (Tumolo, 2005).

As far as Tumolo's (2005) considerations over the choice of language that should be demanded from test takers in testing situations (in his research), two main factors were selected to guide me when considering whether to ask participants to perform the study tasks in the L1 or the L2: *context* and *purpose*.

Firstly, this study is within a certain educational *context*, i.e. the participants are inserted in the Department of Foreign Languages and Literature at UFSC. In this *context* participants are routinely required to summarize and answer comprehension questions in the L2. Secondly, the *purpose* of this study: this study has been motivated by reading in the specific context of the L2, asking the participants to summarize and answer comprehension in the L2 would add to the relevance of its findings as regards L2 readers with an intermediate level of English who are *Letras-Inglês* course students.

Considering that researchers in the field of L2 reading acknowledge the fact that a certain threshold level must be crossed so that comprehension can occur (Aebersold & Field, 1977, Clarke, 1998) the profile of the participants was taken into account and was found to satisfy the purpose of the study. As previously explained in the method, the structure of the *Letras – Secretariado Executivo* course allowed this researcher to consider the participants in this study as having an intermediate level of English.

Having said that, neither the answers nor the content of the summaries were judged by their linguistic accuracy or suitability of lexical choices, but for their adequacy, as regards expressing comprehension of the text read. Furthermore, the participants were instructed, both in writing and orally, that they could use words in their L1, Portuguese, in case they did not remember a certain word. Differently from the summary task, the comprehension questions and the gap-filling task, the retrospective questionnaire was applied in the L1. This is because this task was not measuring participants' reading performance, but providing information on how the participants understood the study instructions, how they perceived the texts and the task, their level of familiarity with the text and their perception of their level of understanding of conjunctions. Thus, the use of the L1 was considered more appropriate for this particular task, especially because this would make the participants feel more relaxed to express their thoughts.

3.3.2   Parameters used for Task Selection and Preparation

Moving on to task selection and preparation, the two main tasks that measured comprehension, in other words, writing a summary and answering reading comprehension questions, need to be explained in terms of parameters. The summary task was selected given its acknowledged validity as an instrument to evaluate global comprehension and the identification of central ideas in a text (Baretta, 1998; Kintsch & van Dijk, 1978; Scherer &Tomitch, 2008; van Dijk & Kintsch, 1983). As advised by Scherer and Tomitch in their (2008) study, this researcher set a limit of number of lines for the summary task to avoid the risk of participants writing at length, thus guaranteeing that participants kept the conciseness that is characteristic of summaries.

In addition, reading comprehension questions were applied as an instrument adding to the validity of the findings from the summary. Moreover, since summaries are instruments that measure global comprehension and this study investigated the influence of cohesive devices in both local and global comprehension, the design of the study included reading comprehension questions aimed at the relations that were signaled by the conjunctions, and compared the effects of the presence or absence of conjunctions in the texts read. In other words, the interest was in finding out whether the absence of conjunctions affected the relations established in the text, being conjunctions understood as 'facilitators' in the understanding of textual relations and underlying relations within the text given their function as signaling relations.

Model Of Analysis For The Summary

The model of analysis for this study was created based on Scott (1981) and Celani et al. (2005)'s parameters reviewed by Koerich and Dellagnello (2008) in order to enable the analysis of the summaries produced by the participants. This framework proposes a division of comprehension into three major parts: the controlling idea, the central ideas and the details, which I named secondary ideas for the purpose of this study. In Koerich and Dellagnello 's (2008) review of Scott (1981) and Celani et al. (2005), they explain that there are several levels of comprehension and propose three levels of comprehension. When establishing the typology of ideas for the present study, this researcher related those three levels to the idea types for this study, hence general comprehension involving a) the identification of the topic of the text, which corresponded to the controlling idea in this study; b) the identification of the key ideas and the topic of the text, which

corresponded to the central ideas in this study and c) detailed comprehension which corresponded to the supporting ideas in this study.

The researcher invited four raters to help with the creation of the model of the analysis, and they kindly accepted this invitation. In total, four raters were invited; three raters were Brazilian MA students who were familiar with studies with summarization processes and theory (Kintsch & van Dijk, 1978; van Dijk & Kintsch). The researcher was also considered to be a rater who had a profile that was similar to that of the raters mentioned previously. The fourth rater was a native speaker of English, a graduate who also had a certificate in Education, and was familiar with summarization practice.

The researcher asked the raters to first read the text used in this study and then select what they thought were: the controlling idea of the text, the central ideas and the secondary ideas. The communications with three of the raters were via e-mail, and with one of the participants communication was in person. After receiving feedback from the raters, the researcher organized data in a table, which is shown below:

Table 6 – Raters selection of controlling idea, central ideas and secondary ideas of the text used in the study

Raters	CRI	CI1	CI2	SI1	SI2	SI3
	Differences between early-airport people and late-airport people	Consequences for being an early-airport person and the advantages of late airport-people		early-airport people suffer from illnesses and nervousness, as well as abuse such as being called cowards	having to waiting for their luggage, and not getting the seat they want	Eventually, early-airport people become late-airport people
	The early-airport people x The late-airport people.	Early-airport people suffer, get ulcers, heart attacks, are anxious; while late airport people are relaxed	There should be justice for the early x late people.	" But if I get real, real early"	Early-airport people are called cowards	The ultimate embarrassment happened when the author took the 9:15 flight instead of the 7:15 that he planned.
	arrival to the airport	Early-airport people and late-airport people		pros and cons of being an early comer or a late comer		

The differences between early-airport people and late-airport people	The perceived cons-piracy to rob the author of the just rewards for always doing the right thing				

CRI = controlling idea; CI = central idea; SI = secondary idea

This researcher also selected the main ideas, central ideas and secondary ideas of the text as is illustrated in Table 7 below:

Table 7 – Researcher's selection of main ideas, central ideas and secondary ideas of the text used in the study

CRI	CI1	CI2	SI1	SI2	SI3
here are two types of people as far as getting to the airport is concerned **early-airport people x late airport people**	The **advantages and dis-advantages** of being an early-airport person or a late-airport person.	The **injustice**: early-airport people suffer/ do not **benefit** from being early, quite opposite, they seem to be punished whereas late-airport people do not suffer **consequences** for being late	**Physical and emotional suffering of** the early-airport person:	Besides the advantage of not suffering from anxiety, late-airport people end up with an advantage: **good seat or getting their luggage off the plane first**.	The author **accidently changed from being an early-airport person to being a late-airport person.**

CRI = controlling idea; CI = central idea; SI = secondary idea

The decision to separate the two tables above was an attempt to illustrate that the researcher did not give more weight to her analysis of the ideas of the text than the ideas brought forth by the raters. After that, the researcher compared each category: main ideas; central ideas and secondary ideas across the four raters' selections and her own. The items that were more frequently stated were selected. The words that appear in bold illustrate the ideas that were repeated, the criteria used to select repetition of ideas included synonyms and superordinate. As a result of that comparison, the following model of analysis was constructed for this study, see Table 8 below:

Table 8 – Model of Analysis for the Summaries

Ideas	Propositions
CRI	The differences between early-airport people and late airport people
CI1	The **advantages** and **disadvantages/consequences** of being an early-airport person or a late-airport person.
CI2	There should be **justice** for the early x late people.
SI1	Early-airport people suffer from **illnesses** and **nervousness**, as well as abuse such as being called **cowards**.
SI2	Having to waiting for their **luggage**, and not getting the seat they want
SI3	The author **accidently changed from being an early-airport person to being a late-airport person.**

CRI = controlling idea; CI = central idea; SI = secondary idea

The words in bold stress which words, phrases or sentences the researcher found to express the ideas in common amongst the five raters.

Parameters/Classification for Comprehension Questions

The comprehension questions used in this experiment are classified according to three classifications: the IELTS (International English Language Testing System); the guidelines from UFSC for assessing L2 reading comprehension used in the university entry examination; and the guidelines from UNICAMP (*Universidade de Campinas*). They are also used for assessing L2 reading comprehension.

The lists below have been taken from Tumolo (2005) to illustrate the three classifications in detail. Although the guidelines offer information including text type, grammar and vocabulary used in the exams, only the information about the skills involved in reading comprehension tasks are listed here:

IELTS:

- Identifying structure, content, sequence of events and procedures
- Identifying, distinguishing and comparing facts, evidence, opinions, implications, definitions and hypotheses
- Following instructions
- Finding main ideas which the writer has attempted to make salient
- Identifying the underlying theme or concept
- Identifying ideas in the text, and the relationships between them, e.g. probability, solution, cause, effect
- Drawing logical inferences
- Evaluating and challenging evidence
- Formulating an hypothesis from underlying theme, concept and evidence
- Reaching a conclusion by relating supporting evidence to the main idea

UFSC *(Entrance Examination):*

- Recognize main topics and secondary topics/details
- Identify ideas and the existing relations among them
- Locate key words
- Use visual information as aid to textual comprehension
- Recognize words and expressions with similar meanings
- Identify contextual reference

- Relate information, seeking the intertextuality

UNICAMP:
- Identify and extract information the way it appears in the text;
- Put the information in order in a way to distinguish what is relevant and the irrelevant;
- Identify the existing relations between two or more elements within the text;
- Locate segments of the text to justify an answer or transcribe segments to account for a certain aspect of the text;
- Reconstruct the controlling idea articulating some pieces of information;
- Identify segments of the text conveying value judgment about information present in the text;
- Recognize some elements part of the discursive nature of the text, such as the identification of the author, the audience, and point of view;
- Show the ability to guess the meaning of words and expressions;
- Determine the consequences of the choice and use of some words and expressions in their contexts;
- Identify relations and contradictions between and among texts;
- Identify discourse markers such as it is important to..., finally, however, and this and that;
- Identification of text writer and audience, the context, the objective, the media, titles, subtitles, letter type, and extra-linguistic features, such as pictures, photos, graphs and illustrations.

Based on the aforementioned parameters, a framework was created for this study, which is exhibited in Table 9 that follows:

Table 9: Classification of the Comprehension Questions

Q#	Question	Classification	AV
	What kind of people does the text talk about in relation to arriving at the airport to catch a plane?	Reconstruct CRI articulating some pieces of information (UNICAMP) Identify main ideas which the writer has attempted to make salient (IELTS)	1
	What kind of person is the author?	Identify relations and contradictions between and among texts *or within* (my insertion) (UNICAMP) Read carefully seeking logical conclusions (UFSC)	3
	What are the main advantages late-airport people have over early-airport people?	Recognize main topics and secondary topics/details (UFSC) Identify ideas and existing relations among them (UFSC)	3
	In the first paragraph, why does the author consider the world to be 'unjust'?	Identify ST conveying value judgment about information in the text (UNICAMP) Read carefully seeking logical conclusions (UFSC)	2

According to the text, how would a late-airport person react in case they missed a flight?	Locate ST to justify an answer or transcribe segments to account for a certain aspect of the text (UNICAMP) Use strategies of skimming[9] and scanning (UFSC) Identifying ideas in the text and the relationship between them e.g. probability (IELTS)	1
Why does the author think that there is a conspiracy against early-airport people?	Locate ST to justify an answer or transcribe segments to account for a certain aspect of the text (UNICAMP) Use strategies of skimming and scanning (UFSC)	
How did the author explain his lateness when a passenger confronted him with the following statement: *"You should get to the airport earlier..."*? Was his answer precise? Please justify your answer.	Locate ST to justify an answer or transcribe segments to account for a certain aspect of the text (UNICAMP) Reaching a conclusion by relating supporting evidence to the main idea (IELTS)	
How come the author arrived late in the plane? Wasn't he an early-airport person? Explain the reason for his	Formulating a hypothesis from underlying themes, concept and evidence (IELTS) Reaching a conclusion	

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[9] Skimming is hereby defined as a "quick, superficial reading of a text in order to get the gist of it (Aebersold & Field, 1997, p. 74)

arriving late.	by relating supporting 1evidence to the main idea (IELTS)

Q # = question number   MAV=maximum attributed value
CRI = controlling idea   ST = segments of the text

Model of Analysis for the Comprehension Questions

The model of analysis below illustrates what the expected answers for the comprehension questions are. They were given by the researcher and three raters. Two raters are MA candidates for a Degree in Applied Linguistics in English at UFSC, and one rater holds a Post-graduate certificate in Education from Garnett College, University of London, UK. The researcher agreed with the suitability of the answers given and marked the key elements in the answer that would guide her grading procedures.

The model was elaborated by the researcher combining the answers from two raters and from the researcher herself. For more details of each rater's answers please refer to Appendices I, J & K.

The purpose of the model of analysis is to control for subjectivity in the evaluation of the answers given by the participants. Having said that, the researcher did not expect to have the participants using the exact words used in the model of analysis, but to express the ideas contained in it, in their own words. To better visualize the model designed, please refer to the Appendix Section (Appendix N).

Analysis of the influence of the presence or absence of adversative and causal conjunctions in the production of summaries

In addition to the investigation of the impact of conjunctions in comprehension measured by reading comprehension questions and a summary task, this study proposes to examine whether the presence or absence of conjunctions in a source text would influence its summary production in terms of the number and type of conjunction used in the summaries. This aim was motivated by the interface between reading and writing that summarization practice grants. However, given the scope of this study, this interrelation was limited to the extent of comprehension being considered as a first step in the production of a summary.

This aim called for a measurement of the influence of adversative and causal conjunction in the production of summaries. Based on previous studies analyzing summaries (Koerich & Dellagnello, 2008, Denardi, 2009; Scherer & Tomitch, 2008) it seemed fair to consider that form and textual mechanisms could be examined in studies using summaries.

Koerich and Dellagnello's (2008) framework for the analysis of summaries encompassed the following variables: central ideas; details; form defined by the authors as 'written expression'[10] (Koerich & Dellagnello, 2008, p.225, my translation) or the 'linguistic expression'[11] (Koerich & Dellagnello, 2008, p.222, my translation) used in the summaries produced and the summaries themselves as variables, while the framework used by Denardi (2009) included textual mechanisms that refer to the language used in the text and include connection, verbal cohesion, nominal cohesion and anaphora (Denardi, 2009).

In addition, Scherer and Tomitch (2008) took into account the number of adversative and causal conjunctions in the summaries produced by the two groups. Therefore, the analysis of the summaries for the present study will compare the number and type of conjunctions used in the summaries produced by group A (C) that read Text A (C) with conjunctions and group B (NC) that read the text with no conjunctions.

All things considered, the summaries produced for this study were also analyzed in terms of the number and type of conjunctions. Three types of conjunctions were examined i.e. additive, causal, temporal and adversative. My decision to examine number and type of conjunctions produced in the summaries is related to the aforementioned relationship between reading and writing fostered by summarization. Subsequently, the results from the data gathered were analyzed with a view to answering this study's research questions.

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[10] Original text: (expressão escrita)
[11] Original text: expressão linguística

CHAPTER IV

ANALYSIS OF THE RESULTS AND DISCUSSION

In this section each research question is presented followed by the results from the tasks applied in this study, which will be analyzed both quantitatively and qualitatively. Having said that, it is important to notice that not every study task results are presented following each research question, only the tasks that are relevant to each research question are presented each time.

4.1   Research Question 1

- Does the omission of adversative and causal conjunctions from the source text affect the identification of the controlling idea, central ideas and secondary ideas expressed in the summarized text?

Overall, the omission of adversative and causal conjunctions seemed to have compromised the identification of the controlling idea, the central ideas and secondary ideas expressed in the summaries produced by the participants in this study.

In order to identify the similarities and differences between the two groups, the results for each idea type will be analyzed for group A that read the text with conjunctions – Text A (C – with conjunctions), and group B that read the text with no adversative or causal conjunctions – Text B (NC – no conjunctions).

Comparing the total scores for the summarization task from groups A (C) and B (NC) it seems to that Group A (C) outperformed group B (NC). Group B (NC) had a total score of 52.5 points (43.75%) in the summaries, while group A total score was 76 points (63%), showing an advantage for group A (C).

The overall results of the summary task for groups A(C – with conjunctions) and B (NC – without conjunctions) are expressed in the graph below:

Graph 1: Results of the Summary Task for Group A (C) and B (NC) in percentages

Results % of the Summary Task for Group A (C) and Group B (NC)
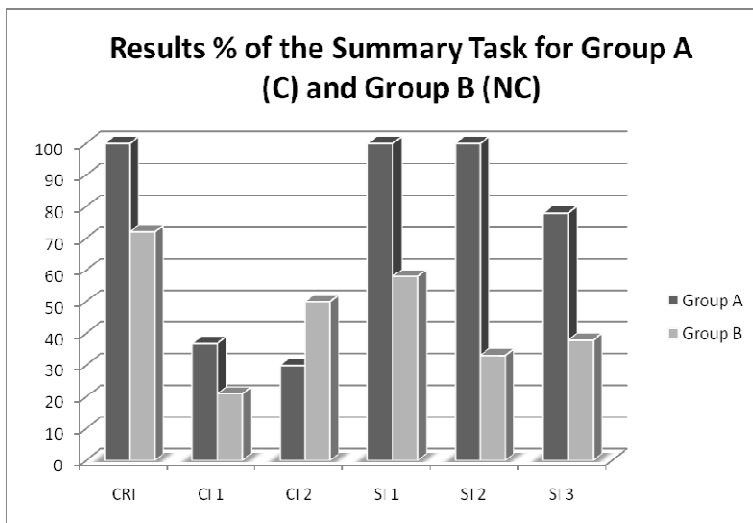
CRI = Controlling Idea   SI = Secondary Idea
CI = Central Idea

An interesting fact signaled by the quantitative data illustrated above is the difference in scores being more 'noticeable' for the secondary ideas than for central ideas. Besides that, the difference between the two groups as regards CRI was also considerable.

Group results per idea type can also be presented in percentage terms as the table below shows:

Table 10: Results of the Summary Task for Group A (C) and Group B (NC) in percentages

IDEAS	GROUP A (C) %	GROUP B (NC)%
CRI	100	72
CI1	37	21
CI2	30	50
SI1	100	58
SI2	100	33
SI3	78	38
TOTAL	63	43.75

CRI = Controlling Idea   P = Participant
CI = Central Idea   SI = Secondary Idea

As can be seen in Table 11, as far as the Controlling Idea was concerned, Group A (C) was very successful, achieving 100% comprehension of CRI. Group results correspond to 72% in terms of successful comprehension, thus showing a tendency for an advantage for Group A(C) for CRI.

Quantitative data for the central ideas, i.e. CI1 and CI2, seemed to demonstrate some difficulty in terms of identification of ideas, as indicated by data from for both groups, Group A (C) with 37% in terms of successful comprehension for CI1 and Group B (NC) with 21% for that central idea. Surprising results can be observed in the results for CI2, where Group B (NC) achieved 50% successful comprehension, outperforming Group A (C), which achieved 30% for that same idea.

These data seem to corroborate Koerich and Dellagnello (2008)'s findings that pointed to readers' difficulty in attributing relevance to the ideas of a text, in other words, identifying what is important and what is secondary or detailed information.

While the aforementioned table illustrates that group A (C) outperformed group B (NC) in terms of overall results per idea, Tables 12 and 13 below exhibit the results for each group in percentage terms with results for each participant in each group:

Table 11: Results from the Summary Task - Group A (C)

Results from the Summary Task - Group A (C)

Ideas	MAV	P1	P2	P3	P4	P5	P6	Total per Idea	%
CRI	3	3	3	3	3	3	3	**18**	**100**
CI1	5	0	5	0	1	0	5	**11**	**37**
CI2	5	0	2	0	0	5	2	**9**	**30**
SI1	2	2	2	2	2	2	2	**12**	**100**
SI2	2	2	2	2	2	2	2	**12**	**100**
SI3	3	3	3	2	0	3	3	**14**	**78**
Totals	**120**	**10**	**17**	**9**	**8**	**15**	**14.5**	**76**	

CRI = Controlling Idea   P = Participant   % = percentage
CI = Central Idea   SI = Secondary Idea   MAV = maximum
attributed value (determined by the researcher)

Table 12: Results from the Summary Task - Group B (NC)

Results from the Summary Task Group B (NC)

Ideas	MAV	P7	P8	P9	P10	P11	P12	Total per Idea	%
CRI	3	1	0	3	3	3	3	**13**	**72**
CI1	5	0	4	0	0	0	2.5	**6.5**	**21**
CI2	5	5	5	0	0	0	5	**15**	**50**
SI1	2	0	2	2	1	0	2	**7**	**58**
SI2	2	0	0	2	0	2	0	**4**	**33**
SI3	3	0	2	3	0	0	2	**7**	**38**
Totals	**120**	**6**	**13**	**10**	**4**	**5**	**14.5**	**52.5**	**43.75**

CRI = Controlling Idea   P = Participant   % = percentage
CI = Central Idea   SI = Secondary Idea   MAV = maximum
attributed value (determined by the researcher)

As far as the controlling idea was concerned, results confirm that all participants in group A, who read the text with conjunctions – Text A (C) were able to reconstruct the controlling idea in the text. The same was not true in relation to group B whose participants read the text without conjunctions – Text B (NC), where one participant was not able to reconstruct the controlling idea at all and another participant was granted 1 point out of five. Besides the difference between the two groups being 'noticeable' as regards the reconstruction of the controlling idea, data from one of the participants deserve consideration:

P7 - The text was about people who plans [sic] every detail in life to avoid making a mistake and those who procrastinate every single thing they can.

This proposition was granted 1.0 point out of 3.0 points for this researcher considered the attempt to reconstruct the controlling idea only partially successful. My scoring and analysis of the aforementioned datum is based on the situation model (Kintsch & van Dijk, 1976; van Dijk & Kintsch, 1983), for the reconstructing the controlling idea of a text depends on the situation model having activated the relevant schema and processed the text from that perspective. Nevertheless, the reconstructing process also entails taking into account information from the text (Kitnsch & van Dijk, 1976), therefore a successful reconstruction of the controlling idea will be textually restricted, which is not the case of the proposition constructed by participant 7. This proposition was in fact, considered an elaboration (Tomitch, 2003) since it includes information that is not present in the text.

To my mind, the participant was able to identify the contrast between two types of people, which is the underlying theme of the text; however, the participant over-generalized, instead of using the surface of the text to identify exactly the types of people contrasted in the text.

This may be explained by the fact that previous research has indicated that when readers have difficulty in lower level processes, they may try to compensate for that and resort to higher level processes, for successful comprehension (Stanovich, 1980). Perhaps, the absence of conjunctions made comprehension more difficult. Participant 7 may therefore, have resorted to elaborations in order to compensate for the disruption of the surface of the text. In fact, previous studies acknowledge that there is a 'danger' in the compensatory hypothesis, which is the case when readers over-rely on their own previous knowledge, which may result in the generation of 'unwarranted inferences' (Tomitch, 2003, p. 153) and readers imposing their own

meanings to the text (Tomitch 2003). Therefore, the example constructed by participant 7 was brought forth because it corroborated previous considerations about the problems in comprehension caused by elaborations (Tomich, 2003).

Similar to the scores for CRI, scores for CI1 showed an advantage for group A, with two participants being able to recognize CI1, while two people were granted 4 and 2.5 points for CI1 in group B. Interestingly, in both groups the participants who were able to fully identify CI1 were the ones who had the highest overall scores within their own groups i.e. participants 2 and 6 in group A and participants 8 and 12 in group B. As far as recognizing CI1 was concerned, both groups seemed to have difficulties. This may be explained by the level of reading it entails.

The identification of CI1 demands a certain detachment from the text (Tomitch, 2000) on the readers' part, so that not only do they process the information in the text, but also judge it against other clues in the text itself. This process is textually restricted, but at the same time, detached from the surface of the text so that judgment and connections can be made.

In other words, the text does not explicitly state CI1 (The advantages and disadvantages/consequences of being an early-airport person or a late-airport person). Because the information is implicit, obviously if the reader relies exclusively on the text, he/she will not be able to identify CI1; again the situation model applies (Kintsch & van Dijk, 1976; van Dijk and Kintsch, 1983). The authors stress the importance of the establishment of the 'discourse topic' (Kintsch & van Dijk, 1976, p. 366), i.e. the theme which has a controlling and constricting role in the construction of the representation of the text. The importance of the 'discourse topic' is related to the semantic nature of discourse comprehension.

Analyzing CI1 under the perspective of the component processes as proposed by Gagné et al. (1993), one can observe that CI1 demands inferential comprehension, the problem experienced by Participant 7 was the generation of inferences that were not plausible, that is to say, the participant elaborated away from the text, probably over-relying on background knowledge, as Stanovich had 'warned' in his compensatory model (1980).

A qualitative analysis of the data from participants who successfully identified CI1 may show the facilitative effect of the

adversative and causal conjunctions. The following instances were taken from the two participants who scored higher in each group:

Group A (C):
P1 – The author of the text starts by discussing the 'real' advantages of going to the airport early. He states that there is no advantage to those who plan early… As an argument to the disadvantages of arriving early, he mentions the fact the late-airport person will be the last ones to check in the luggage.
P6 – The text shows negative and positive points of being the late type and the early type.
Group B (NC):
P8 – People who get early at the airports should get a reward…while the ones who get there when they [sic] pilot is about to turn on the plane end up getting the best advantages and fly with no concern at all.
P12 – The author's describe some situations that happened to him, he was a [sic] early-people

As can be observed in the abovementioned instances, the propositions from the two participants in group A (C) are more succinct in comparison to those in group B (NC); with the latter being a bit fragmentary with Participant 8 including unnecessary details and being characteristically list-like, a feature that is also true for Participant 12.

In contrast, Participant 6, from group A is able to identify the central idea using superordination, and Participant 1 recalls information in a hierarchal organization of the central idea, in a proposition that also shows superordination:
P6 – The text shows negative and positive points of being the late type and the early type.
P1 – The author of the text starts by discussing the 'real' advantages of going to the airport early. He states that there is no advantage to those who plan early… As an argument to the disadvantages of arriving early, he mentions the fact the late-airport person will be the last ones to check in the luggage.

This study's findings are similar to Koerich and Dellagnello (2008) in the sense that more successful summarizers organized their summaries in a concise and hierarchical manner, as against the list-like fashion that characterized the less successful summarizers.

CI1 expresses more of a global understanding of the text though; this is why the propositions from the two participants in group A (C), who read the text with conjunctions, are more effective in terms of

expressing global reading comprehension. Perhaps the presence of the conjunctions signaling the underlying relationships in the text made processing faster, demanding less cognitive effort, freeing resources for the integration needed for the construction of propositions in the summary (Gagné et al., 1993; Kitsch & van Dijk, 1978; van Dijk & Kintsch).

Differently from results for CI1, results showed that group B (NC) outperformed group A (C) for CI2. Again, the participants with the highest scores within each group identified CI2, with the exception of Participant 7 in group B, who was not amongst the higher scorers in that group.

The results for both groups from the quantitative results deserve further comments, as the extract below illustrates:

Group A (C):

P2- … The author also mentions the conspiracy of good seats being given to the late-airport people.

P5- The early-airport people should receive rewards, the other group should be punished. But [sic] the situation is opposite (oposta)… If our world were perfect this kind [sic] thing would not happen.

P6- … to have the luggage back earlier and that [sic] it is very unfair.

Group B (NC):

P7 – The author writes about how he feels when he thinks that [the] organized should get a reward for behave [sic] the right way, but the Universe seems to "close the eyes" and do better things to those who do everything in the last possible minute.

P8 - People who get early at the airports should get a reward. The reason for that is simple: besides having to wake up around four hours before the flight leaves… As if getting stressed and anxious was not enough.

P12 – The author's [sic] believe that people get early to the airport or late, and who's got late don't [sic] receive a punishment for that. … and he was always 'prejudicado'…And a late person doesn't get any disease because they are too relaxed about it.

In retrospect, Participant 7 is the same participant who constructed an elaboration for CRI, reading too much beyond the lines,

detaching too much from the text, thus elaborating away from the text. Based on the parameters selected and constructed for this research, it is true to say that for CI2, the participant had to identify value judgment about information in the text (Tumolo, 2005), which she did successfully. So far it has been possible to identify a top-down tendency from the representation that she constructed from the text in the form of a summary.

On the other hand, the propositions from Participants 5 and 12 represent a clear case of linguistic difficulties in the L2 being compensated by reading ability. In this case, the participants needed to include a word in Portuguese, their L1, in their propositions, which was allowed for the summary task in case participants experienced vocabulary problems. Indeed, the participants expressed CI2 in a clumsy manner; nevertheless, their understanding of CI2 was adequate.

It is worth pointing out that data from participants 2 and 6 in group A (C), who read the text with conjunctions, compared to data from participants 7, 8 and 12 in group B (NC) show higher level of comprehension from the latter, who read the text without conjunctions. It is necessary to discuss this result since it is contrary to this study's assumption. Maybe for the identification of that specific idea, CI2, the compensatory hypothesis holds true, with the lack of elements from the surface of the text being compensated by readers' inference generation in order to achieve comprehension (Gagné et al, 1993; Stanovich, 1980; Rumelhart, 1980).

On the other hand, the aforementioned data from participants 7, 8 and 12 showed that the participants had to use some textual clues to generate inferences and they probably judged them i.e. using monitoring strategies to check if their comprehension is adequate, as or predicted by Gagné et al. (1993).

All things considered, their reading shows a slight tendency for the compensatory interactive model (Stanovich, 1980).

Moving on to the secondary ideas, all the participants in group A (C) were able to identify SI1, as against three participants in group B. In addition, one participant in group B (NC) was able to identify part of SI1, thus scoring 1.0 point for it. According to the classifications of reading abilities from UNICAMP described in Tumolo (2005), SI1 required the participants to locate ST (segments of text) to account for a certain aspect of the text.

However, in the case of this experiment, participants had to remember information since they had no access to the text when they produced their summaries. Maybe participants from group A (C) had an

advantage retrieving relevant information for SI1 due to the presence of conjunctions in the text because conjunctions may be able to facilitate reading, hence freeing memory resources; therefore, it is possible to infer a signaling effect of conjunctions for SI1.

A greater difference was noticed in SI2, with all the participants in group A (C) scoring 12 points, which corresponds to 100% for that item, in contrast to only 4 points being awarded for the experimental/no conjunctions group, corresponding to 33% for that item.

In order elaborate the answer for research question 1, I have brought evidence of conjunctions in the section of the text where SI2 appears. The keywords in SI2 are presented in bold in order to highlight the presence of relevant information. Directing my reader's attention to the excerpt from the text below, which was read by group A (C), I would like to hypothesize that the conjunctions, which are underlined in the excerpt, may have rendered its subsequent text more emphatic, perhaps catching the reader's attention.

As a matter of fact, I was an early-airport person for years. My **luggage** will get on the plane first, I told myself. Indeed it will. Which makes it the last luggage they take off the plane when you land. You know who really gets his luggage first? The late-airport person, who walks into the airport three minutes before the plane takes off.

Though if I get there real, real early, I told my old coward self, I will get the best **seat**. Well, just try to show up early and get the best seat. Well, just try to show up early and get the seat you want. Go ahead and try. No matter how early I showed up, I was always told that someone called two or three years ahead of me and asked for that **seat**. I figured it was a conspiracy. I figured there was someone in America who called every airline every day and said: "Is that coward Simon flying somewhere today?" If he is, give me his seat."

In addition to the abovementioned text excerpt, data from participants 5 and 6 show the presence of keywords, which were signaled by the conjunctions in the text, read:

Participant 5:   And how about the late airport people's luggage? They are [sic] in the top crashing others luggage. … Other problem is about the best seat, but almost always these best [sic] seat belong to a late-airport people.

Participant 6:   It also points out about the **luggage** concerning [sic] that who gets later to the airport can have the **luggage** back earlier.

The proximity between the keywords and the conjunctions may indicate that the presence of the conjunctions signaled the ideas around

the keywords, rendering SI2 more noticeable and relevant (Zadeh, 2006). As a matter of fact, rendering an idea relevant is directly connected with building a coherent text base and the situation model that explain summarization (Kintsch & van Dijk, 1978; van Dijk and Kitsch, 1983), since relevance criteria underlies the summarization process. As a matter of fact, Koerich and Dellagnello (2008) diagnosed the difficulty summarizers had in the identification of relevant information, which in turn affected the production aspect of summaries (2008).

Finally, again group A (C) outperformed group B (NC) regarding SI3, with five participants scoring a total of 14 points for that item, while group B scored 9 points, in percentage terms that represents 78% for group A (C) group, against 38% for group B (NC).

Besides the difference in percentage demonstrating the advantage that group A (C) had over group B (NC) regarding SI3, qualitative data add support to this claim, as it is exemplified below:

Group A (C):

P1 – Also, he tells that one day, he arrived early at the airport and went to buy a ticket to [sic] 9 a.m. NY and the salesperson offered a ticket to [sic] 7:05 a.m. and it was 7 a.m. He accepted and when he went into the plane the 'aeromoça' said [sic] him that he should arrive early to the airport. And he arrived.

P2 – Nevertheless, he concludes his point on the advantages of being a late-airport person telling a story that happened to him when he arrived so early to his 9 o'clock flight, leaving a few minutes after the time he had arrived. Suddenly, he became the late-airport person

P3 – The problem is when someone arrives so early that he or she can be place [sic] in a earlier plane, so this person could be considered a late passenger.

P5- Once I got too early in [sic] the airport and became myself a late-airport people [sic].

Group B (NC):

P8 - … when he got so early in the airport that he had enough time to get the previous fly [sic] and a woman complained he was late.

P12 – He describes the most embarised [sic] situation that he past [sic] for been [sic] a early-person, he came to the airport two hours

earlier, and the 'balconista' said that if he run he can get the flight earlier. He was so embarised to tell her that he just like to get earlier that he took the plane, and get [sic] late.

Being able to identify SI3 entailed formulating a hypothesis from underlying themes, concept and evidence and *reaching a conclusion* by relating supporting evidence to the main idea. These abilities are in fact synthesized in the interactive model since the model proposes that readers 'receive' the input, store it temporarily then synthesize it. From the synthesized input readers generate hypotheses that are checked until the readers *reach a conclusion* about the input, in this case the text (Rumelhart, 1977). All things considered, SI3 introduced further cognitive demands in relation to all the other ideas from the Model of Analysis.

Having a closer look at the summaries produced by two participants in group B (NC), one can observe that Participant 12 was able to formulate a hypothesis and reach a conclusion in 'He was so embarised [sic] to tell her that he just like to get earlier that he took the plane, and get [sic] late'. For that, this reader used textual evidence such as: *embarrassed; came to the airport two hours earlier, like to get earlier,* which can be observed as underlined in the following text excerpt:

"Sir, you have a seat on the 9:15 a.m. flight to New York, is that right?"

"Yes," I said.

"Well, it's only 7 a.m., and the 7:05 a.m. flight has not left yet. If you hurry, you can make it."

I was too embarrassed to say that I arrived at airports early so I wouldn't have to hurry. Instead, I ran down the corridor to the plane. I climbed on board, out of breath, red-faced, and tripped over a woman's legs to get to the last unoccupied seat. The woman I stepped over was no coward. She had the courage to complain.

"You should get to the airport earlier!" she snapped at me.

"I was here early," I said weakly. "But then somehow I wasn't anymore."

Although participant 12 in group B (NC) identified SI3 in a satisfactory manner, only one more participant in group B (NC) was able to partially identify SI3. The underlying theme was the accidental change that the event reported triggered. However, neither Participant 8

nor 12 were able to achieve this level of comprehension i.e. bringing the underlying theme to the surface in their understanding.

A more striking contrast can be observed in the summaries produced by group A, because four out of six participants were successful at identifying the underlying theme of that section i.e. the accidental change. There were differences in the way the participants constructed their propositions, with Participants1 and 2 being more close to the text than Participants 3 and 5, whose propositions show that they were able to successfully apply the macrorule of deletion, generalization and construction as suggested by Kintsch and van Dijk (1978).

It is worth noting that Participants 1 and 2 included more details and elements from the actual text, which shows that the deletion rule was not applied in a satisfactory manner in terms of expressing the gist of SI3. Participants 3 and 5, on the other hand, were able to delete the detailed information: conditions, components or consequences (Kintsch & van Dijk, 1978), generalize it and reconstruct SI3 expressing a global fact denoted from the processing of the text, preserving "both truth and meaning" (Kintsch & van Dijk, 1978, p. 366).

It is therefore fair to say that the situation model explains the summary data from this study as it conceptualizes readers integrating the information from the text with their background knowledge and thus constructing a coherent mental representation of the text at the situation model level.

As far as the effect of adversative and causal conjunctions SI3 is concerned, it is worth examining the excerpts of the two versions of the text read for this experiment, with the text read by Group A (C) containing adversative and causal conjunctions, and the text read by Group B (NC) with absent adversative and causal conjunctions, as illustrated in Table 14 below:

Table 13: Excerpts from the two versions of the text used in the study

Text read by Group A – Text A (C – with conjunctions	Text read by Group B – Text B (NC – without conjunctions)
"Sir, you have a seat on the 9:15 a.m. flight to New York, is that right?"	"Sir, you have a seat on the 9:15 a.m. flight to New York, is that right?"
"Yes," I said.	"Yes," I said.
"Well, it's only 7 a.m., and the 7:05 a.m.	

flight has not left yet. If you hurry, you can make it."

I was too embarrassed to say that I arrived at airports early <u>so</u> I wouldn't have to hurry. <u>Instead</u>, I ran down the corridor to the plane. I climbed on board, out of breath, red-faced, and tripped over a woman's legs to get to the last unoccupied seat. The woman I stepped over was no coward. She had the courage to complain. "You should get to the airport earlier!" she snapped at me.

"I was here early," I said weakly. "<u>But then somehow</u> I wasn't anymore."

"Well, it's only 7 a.m., and the 7:05 a.m. flight has not left yet. You hurry, you can make it."

I was too embarrassed to say that I arrived at airports early - I wouldn't have to hurry. I ran down the corridor to the plane. I climbed on board, out of breath, red-faced, and tripped over a woman's legs to get to the last unoccupied seat. The woman I stepped over was no coward. She had the courage to complain.

"You should get to the airport earlier!" she snapped at me.

"I was here early," I said weakly. "I wasn't anymore."

Differently from the versions used in the actual experiment, the conjunctions are hereby underlined in order to facilitate their visualization.

C = text with conjunctions   NC = text without the adversative and causal conjunctions

In the text read by group A (C) the following relations were signaled: causal (the conditional type and reason type); adversative (the dismissal type). Considering the quantitative and qualitative analysis of the results generated by this task, it is possible to say that the omission of the conjunctions compromised the interpretability of the text. All in all, results seem to show that there is a tendency for the facilitative effect of conjunctions in reading comprehension and in the performance of a summarization task.

In order to further investigate this tendency, it is worth considering reading times' data from group A (C) and B (NC). Reading times appear to be a measure of reading comprehension according to Murray (1995), when he revised a study by Haberlandt (1982). According to that review it appears that shorter reading times were related to more successful reading comprehension (Murray, 1995).

Tables 15 and 16 below display the reading times that were collected for the present study registered in minutes:

Table 14: Reading Times Totals for Group A (C) in number of minutes

Participant	P1	P2	P3	P4	P5	P6
RT	15	11	15	11	20	15

RT = reading times

Table 15: Reading Times Totals for Group B (NC) in number of minutes

Participant	P7	P8	P9	P10	P11	P12
RT	9	9	6	17	4	4

RT = reading times

Group A, who outperformed Group B in terms of identifying CRI, CI1, CI2, SI1, SI2 and SI3, took more time for the reading task.

Despite the association mentioned in Murray (1995), the reading times variable in the present study go against previous findings, because the participants who exhibited shorter reading times were not the ones who had more successful results in the summary task. In order to examine that finding, I would like to take one particular example from the participants in this study, Participant 5. Participant 5 had the highest reading time, yet she was able to identify the CRI, CI1, S1, SI2 and SI3, demonstrating good overall comprehension as well as detailed comprehension expressed in the secondary ideas. In fact the way she expressed SI3 was very effective as data below show:

P5: Once I got too early in [sic] the airport <u>and became myself</u> a [sic] late-airport people.

Her reconstruction of SI3 indicates that she perceived the accidental change experienced by the narrator of the story, which is quite demanding, since it shows a change of status. The complexity lies in the fact that the change of status is not explicitly stated, it demands

inferential comprehension (Gagné et al., 1993). Besides that, it is possible to perceive that P5 had some linguistic difficulties which she managed to overcome while performing this study's tasks, because she was able to identify the controlling idea of the text as well as one of the central ideas, CI2, and all the secondary ideas, SI1, SI2 and SI3.

Incidentally, a similar outcome as regards reading times was experienced in Murray's study, who explained his finding proposing that the presence of conjunctions could have caught the readers' attention, slowing reading as a result (Murray, 1995). His suggestion makes sense for this study, in particular in the case of P5, who had the longest reading times but expressed depth of comprehension in the summary data, thus corroborating Murray's explanation that longer reading times may be connected to deeper processing (1995).

Concluding the analysis of the results from both groups for the summary task, conducted in order to answer Research Question 1, it is fair to say that there is a tendency towards corroborating the facilitative effect of conjunctions in the summary task, partially confirming the assumption that the presence of conjunctions facilitates global comprehension expressed by the summaries.

Having completed the discussions related to Research Question 1, I move on to examining the results of the Reading Comprehension Questions.

4.2   Research Question 2

- Does the omission of adversative and causal conjunctions hinder L2 readers' comprehension according to the readers' answers to comprehension questions?

The objective of research question 2 is to confirm (or deny) the findings from research question 1, with a view to adding to the validity of this study. In addition, this researcher attempted to tap comprehension at a more local level, in particular with questions 4, 5, 7 and 8 that were devised to check the relations between sentences that had been signaled by the conjunctions as in the original text.

Overall, results for the reading comprehension task show that there is a difference between Group A (C – with conjunctions) and

Group B (NC – no conjunctions) favoring Group A (C) as exhibited in the following graph:

Graph 2: Results of the Reading Comprehension Task for Group A (C) and B (NC) in percentages
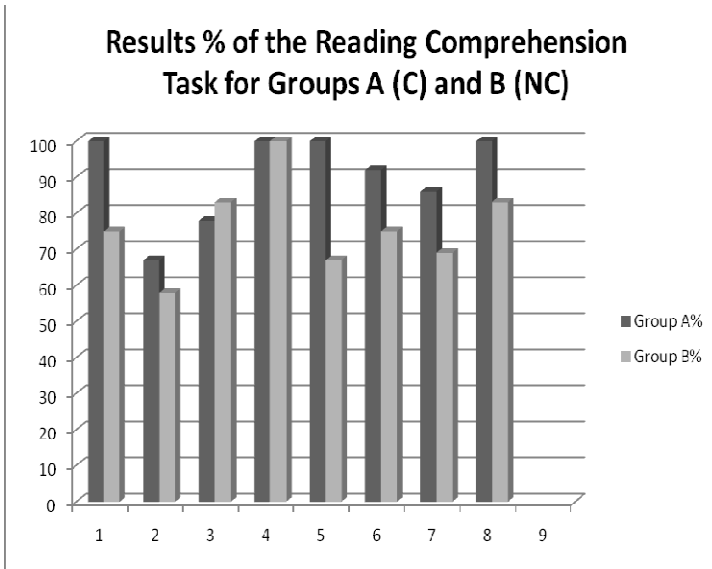
The graph seems to indicate that in general, group A (C) had an advantage over group B (NC) in terms of overall results and in all answers for the questions proposed in the task, except for answers to question 4. In quantitative terms, the participants in group A (C), who read the text with conjunctions, responded more questions correctly than the participants in group B (NC), who read the text without conjunctions. Besides answering more questions correctly, the difference in the score for each answer from group A (C) were greater than the difference in the score from each answer from group B (NC). Total scores were higher for group A (C) than for group B. Group A (C) had a total score of 95 points out of a total of 108 points, which in percentage terms translates as 88%. Group B (NC) had a total score of

83 points out of a total of 108 points, which in percentage terms translates as 76%. Table 17 below exhibits the aforementioned results:

Table 16: Overall Results of the Reading Comprehension Task for Group A (C) and B (NC)

Question	MAV	Group A%	Group B%
1	1	100	75
2	3	67	58
3	3	78	83
4	2	100	100
5	1	100	67
6	1	92	75
7	3	86	69
8	4	100	83
TOTAL	18		
MTS	108	88	76

MTS = Max. Total Score   MAV = Maximum Attributed Value GTS = Group Total Score

Quantitative data need to be looked at in more detail; therefore, the results for each answer given by the participants in each group are exhibited in tables 18 and 19 below:

Table 17: Results of the Reading Comprehension Task for Group A (C)

Q	MAV	P1	P2	P3	P4	P5	P6	R	%
1	1	1	1	1	1	1	1	6	100
2	3	1.5	1.5	1.5	1.5	3	3	12	58
3	3	3	3	1.5	1.5	3	2	14	83
4	2	2	2	2	2	2	2	12	100
5	1	1	1	1	1	1	1	6	100
6	1	1	1	1	1	1	0.5	5.5	91
7	3	1.5	3	3	2	3	3	15.5	86

8	4	4	4	4	4	4	4	24	83
T	18	15	16.5	15	14	18	16.5		
MTS	108						GTS	95	88

Q= Question   T= Total R= Results   MTS= Maximum total score
MAV= Maximum attributed value GTS= Group total score

Table 18: Results of the Reading Comprehension Task for Group B (NC)

Q	MAV	P1	P2	P3	P4	P5	P6	R	%
1	1	0.5	1	1	1	0	1	4.5	75
2	3	0	3	1.5	1.5	0.5	3	9.5	52
3	3	2	3	3	3	1	3	15	83
4	2	2	2	2	2	2	2	12	100
5	1	0	1	1	1	0	1	4	66.66
6	1	0.5	1	1	0.5	0.5	1	4.5	75
7	3	1.5	3	1	3	3	1	12.5	69
8	4	4	4	4	4	0	4	20	83
T	18	15	16.5	15	14	18	16.5		
MTS	108						GTS	83	76.85

Q= Question   T= Total R= Results   MTS= Maximum total score
MAV= Maximum attributed value GTS= Group total score

Firstly, it is possible to observe that all participants in group A (C) were able to reconstruct the controlling idea as demanded by question 1, *"What kind of people does the text talk about in relation to arriving at the airport to catch a plane?* . In fact, the main components of the controlling idea are repeatedly expressed in the surface of the text, as it is exemplified in its first lines:

After years of study, I have determined there are only <u>two types of people</u> in this world: <u>those who get to the airport early</u> and <u>those who walk in the plane as it is about to take off</u>. If there was any justice in this

world, the <u>early-airport people</u> would get rewards for doing the right thing. And the <u>late-airport people</u> would be punished.

For the first question in the reading comprehension task, readers needed to identify the components of the controlling idea and put them together. Although question 1 was relatively simple to answer, not all participants in group B (NC) were able to respond to it correctly. On the other hand, all participants in group A (C) were able to identify the controlling idea, scoring 6 points, which corresponds to 100%, as against 75% for group B (NC), where participants scored a total of 4.5 points out of a total of six for group score.

Similarly to CI in the summary task, question 2, *"What kind of person is the author?"* demanded that the readers kept a distance from the text (Tomitch, 2000) in order to identify a contradiction in it. In other words, the author narrates previous experiences of being an early-airport person eliciting the reader's sympathy, which could lead the reader to infer that the author is an early-airport person. On the other hand, the information in lines 16 to 17 and 32 to 42 contradicts the idea that the author is an early-airport person. The excerpts from Text A (C – with conjunctions) that follow, offer evidence of the aforementioned **contradictory information** that is signaled by the conjunctions:

Lines 16 – 17: As a matter of fact, I was an early-airport person for years.

Lines 32 – 42 "Well, it's only 7 a.m., and the 7:05 a.m. flight has not left yet. If you hurry, you can make it."

I was too embarrassed to say that I arrived at airports early so I wouldn't have to hurry. Instead, I ran down the corridor to the plane. I climbed on board, out of breath, red-faced, and tripped over a woman's legs to get to the last unoccupied seat. The woman I stepped over was no coward. She had the courage to complain.

"You should get to the airport earlier!" she snapped at me.

"I was here early," I said weakly. "But then somehow I wasn't anymore."

After a lifetime of arguing over whether I really have to pack 24 hours in advance and set the alarm clock four hours ahead, I have learned one fact about early-airport people and the late-airport people: they always marry each other.

As far as question 2, *"What kind of person is the author?",* is concerned, group A (C) scored 12 points out of 18, which translates as 58%, while group B (NC) scored 10.5 points, that is to say, 52%, showing an advantage for the group that read the text with conjunctions.

It is worth pointing out the semantic value of the conjunction in line 16, "as a matter of fact" which, according to Halliday and Hasan, has an 'avowal' value (1976). In the text excerpt above, it is possible to see that the conjunction "as a matter of fact" precedes a clause that offers relevant information, **"I was an early-airport person for years".** This clause is indeed a revelation, where the author tells the reader that he *was* an early-airport person, but question 2 asks what kind of person the author *is*. This researcher's intention was to verify if readers were able to detect this contradiction, assuming that the adversative conjunction would exert a signaling effect (de Beaugrande & Dressler, 1981; Halliday & Hasan, 1976; Koch, 1989; Murray; 1995; Scherer & Tomitch, 2008)

As previously defined in the review of the literature, this type of adversative conjunction gives more weight to the information that follows it, as it functions as if stating the veracity of the information that precedes it (Halliday & Hasan, 1976). In this sense it is possible to say that the conjunction is not only signaling, but promoting a relation as well, granting veracity to the statement it precedes. Nevertheless, data show that only 4 participants were able to detect the contradiction, with one of them, participant 8, being a bit hesitant about the contradictory idea:

P.5: The author used to be an early-airport people.

P.6: The author is the type of person who is always too early in the airport, but faced the experience of being the late-airport person.

P.8: He used to be an early-airport people, but as the text ends he seem to have changed by his previous experiences.

P.12: He was a early-airport people, but now he is a late-airport people.

Question 3, "*What are the main advantages late-airport people have over early-airport people?*" required readers to recognize secondary ideas and connect them, grouping them into two categories: advantages and disadvantages, demanding superdordination (Kintsch & van Dijk, 1978) or summarization (Gagné, 1993). Results show that group B (NC) outperformed group A (C) by one point, these specific results seem to weaken this study's hypothesis that conjunctions facilitate comprehension, however, those results alone are not sufficient do refute that hypothesis, therefore data need further examination.

Firstly, it is possible to trace a parallel in terms of reading abilities demanded between question 3 and CI1, as shown in the

excerpts from two of the frameworks created for this study, as it is shown below:

> CI1- **The advantages and disadvantages/consequences** of being an early-airport person or a late-airport person. (From the **Model of Analysis, Table 8**, created for the summaries)
>
> Q3- Recognize main topics and secondary topics/details (UFSC)
> Identify ideas and existing relations among them (UFSC) (from the **Classification of the Comprehension Questions, Table 9,** created for the analysis of the comprehension questions)

Although CI1 and Q3 demand similar abilities, for the identification 'advantages and disadvantages of being an early-airport person or a late-airport person' involves the recognition of main topics and the relations among them, results for CI1 are different from results for Question 3. My previous consideration about CI1, where group A scored 37% and group B had 21%, took into consideration the level of difficulty involved in the recognition of that central idea and highlighted the signaling potential of adversative and causal conjunctions, as if their presence could facilitate reading, making it easier for participants to process the relations thus impacting global comprehension expressed in the superordination of advantages and disadvantages. Had results for question 3 being advantageous for group A (C), it would be 'simpler' to confirm my previous consideration about the difficulty in the identification of that central idea, with the conjunctions functioning as facilitating textual clues. However, this was not the case for question 3.

A possible explanation may be the fact that question 3 provided the two superordination categories: advantages and disadvantages, and it seems that providing the categories facilitated superordination. As far as question 3 is concerned, the explanation for the discrepancy is provided, yet the corroboration of the facilitative effect of conjunctions is not, since both groups had access to the favorable conditions present in question 3. Therefore, both groups had an advantage as regards superordination, but only group A (C) had an advantage provided by the presence of the conjunctions, yet results did not reflect the latter advantage.

Moving on to question 4 *"Why does the author consider the world to be 'unjust?"*, according to the classification of the question

(Tumolo, 2005), the answer to this question is present in the text, and it demands that readers locate the relevant information in the text. In addition to that, readers needed to reach a logical conclusion about the information in order to answer the question, hence readers need to process surface information and generate inferences using such information to establish a causal relation. Results for question 4 contradict this researcher's hypothesis that conjunctions have a facilitative effect on reading comprehension, for results for both groups were quantitatively equal.

Table 20 below presents the excerpts from versions C (with conjunctions) and NC (no conjunctions) of text, illustrating the sections of the text where conjunctions were present:

Table 19: Text excerpt from the version with conjunctions and the version without conjunctions

Text with conjunctions	Text without conjunctions
If there were any justice in this world, the early-airport people would get rewards for doing the right thing. And the late-airport people would be punished. But there is no justice in this world. The early-airport people get ulcers, heart attacks and are anxious. The late-airport people do not show any sign of concern when they are flying.	There was any justice in this world, the early-airport people would get rewards for doing the right thing. And the late-airport people would be punished. There is no justice in this world. The early-airport people get ulcers, heart attacks and are anxious. The late-airport people do not show any sign of concern when they are flying

The conjunctions are presented in bold and underlined in this table for better visualization.

Once more, the question itself may have influenced results, as it posits a "why question", leading the participants to establish a causal relation in order to answer it. When establishing a causal relation, the participants may have generated inferences that compensated for the disruptions in the text (Kintsch & van Dijk, 1978). Data from participants' answers to question 4 indicate inference generation motivated by a "why question", which is particularly observable due to the presence of the causal conjunction "because" in the participants' answers, as can be seen below:

P1: Because the late-airport people are not punish [sic] concern their action.

P2: Because considering he is an early-airport person, who plans everything in advance, he sees no advantages being granted to people like him.

P3: Because early-airport people are not rewarded.

P4: Because the early-airport people would get rewards for doing the right thing and the late-airport people would be punished.

P5: Because the early-airport people should get rewards and the late-airport people should be punished. But the earlier people get sick and are anxious the late people have good health.

P6: Early-airport people do the right thing and do not get any kind of rewards. Late-airport people are never punished.

P7: Because it seems to ignore those who do the right thing and reward those who don't.

P8: Because the people who get late in the airport end up with the best advantages while the early ones suffer with anxiety and other problems.

P9: Because there are no advantages of getting early in the airport and should have.

P10: Because there is no justice for the people who get late at the airport, in his opinion, this type of people should be punished

P11: Because the later airport people doesn't are [sic] punished and the early have ulcers, heart attacks.

P12: That who gets late never be punished.

In addition to the fact that participants from both groups were successful at responding to question 4, it is very curious that two out of six participants in group B (NC) perceived the texts to be incomplete, according to the retrospective questionnaire. Yet they were able to overcome the distortions when answering question 4. The data below with questions and some answers from the retrospective questionnaire show that:

4 – Na sua opinião, este texto foi bem escrito? Justifique a sua resposta.

P9: Não muito, algumas frases pareciam meio soltas, sem conexão...

5– Na sua opinião, o texto que você leu estava completo? Justifique a sua resposta.

P8: Não. Senti falta de alguns conectivos, como o "if".

In this specific case, perception of a discrepancy enables a reader to apply remedial strategies in order to compensate for distortions in the text, with the reader engaging in higher order processes to compensate for lower order ones, that were caused by the omission of the adversative and causal conjunctions from the text (Gagné et al., 1993; Stanovich, 1980; Tomitch, 2003). Also, previous knowledge of conjunctions may have helped, for it may have contributed to readers being able to identify that the distortion was the omission of a conjunction, therefore, the reader was able to generate inferences to supply that specific need, such as the omission of the conjunction "if", mentioned by participant 8. Having said that, the fact that the participant noticed the omission of some conjunctions such as the causal "if" shows that these omissions were perceived as disruptions. Probably to have noticed that something was missing, the participants may have interrupted their reading flow, which in a way corroborates this study's hypothesis that the omission of adversative and causal conjunctions negatively impacts reading.

Another point to be included in this discussion is the fact that group B (NC) had higher overall scores in the gap-filling task, which was designed to inform this researcher of the participants previous knowledge of conjunctions and investigate whether previous knowledge of conjunctions affected the participants performance in the summary task and the reading comprehension questions (Alderson, 2000; Carrell, 1998; Tomitch, 1991).

For question 5, readers had to skim and scan the text for relevant information establishing probability relations among them in order to answer the question. All participants in group A (C) responded the question correctly, with a total score of 6, which corresponds to 100%, while group B (NC) scored 4 points, which correspond to 66.66%. Participant P11 in group B (NC) did not respond anything at all while P7 resorted to an elaboration (Tomitch, 2003), leading to comprehension failure, as data below show:

Question 5: According to the text, how would a late-airport person react in case they missed a flight?
P7: They would fight for their seat even if they were wrong.
Similar results were found in the results for question 6, with group A (C) outperforming group B (NC) in 1 point i.e. the total score for group A (C) in question 6 was 5.0, that is to say, 91% as against 4.5,

or, 75%, for group B (NC). Qualitatively speaking, participants in both groups varied as regards how much they skimmed information off the text and how much they *processed* the information from the text to give a more general answer to question 6. For example, answers from Participants 1 contain fewer elements of the surface of the text than that of Participants 2 and 9, as the data below illustrate:

Question 6: Why does the author think that there is a conspiracy against early-airport people?
P1: Because no matter how early people arrive in the plane someone will ask for that seat.
P2: Because he only sees advantages being granted to the late-airport people. For instance, if he plans to get the best seat, it is probably taken, no matter how early he gets.
P5: Because the early-airport people always get the worst situation (sempre levam a pior em tudo) and never
P9: Because it doesn't matter if he get early to the airport. There always someone who called ahead and reserved the best seat the seat that he wanted.

Question 7, *How did the author explain his lateness when a passenger confronted him with the following statement: "You should get to the airport earlier..."? Was his answer precise? Please justify your answer.",* demanded a higher level of inferential comprehension as it required readers to establish a causal relation between the question and the answer, again detaching themselves from the text (Tomitch, 2000), but still keeping to the information in the text, using textual clues to answer the question. Results were 15.5, or 86%, for group A (C) and 12.5, or 69% for group B (NC), with group A (C) having an advantage of over group B (NC).
A closer look at question 7 will show that this question required the readers' judgment as well, as displayed in the underlined text in the excerpt below:

Question 7: How did the author explain his lateness when a passenger confronted him with the following statement: *"You should get to the airport earlier..."*? Was his answer precise? Please justify your answer.

Judging the preciseness of the statement and justifying one's judgment demands the kind of reading that is interactive, since a justification could only be considered plausible if it was supported by textual evidence. For successful reading comprehension as regards question 7, besides being interactive, reading had to be critical (Tomitch, 2000). In other words, participants had to analyze whether they were convinced by the answer given by the author in the excerpt above. If the participants had taken notice of the details of how the author became late for the flight, they would have not been convinced by the answer given by the author.

In fact, this researcher was looking for that level of reading when elaborating question 7, that is to say, interactive and critical reading (Rumelhart, 1977; Tomitch, 2000). As regards the impact of conjunctions in an interactive and critical reading, the following section of the text was in my mind for that effect:

When I got to the ticket counter, the person there said: "Sir, you have a seat on the 9:15 a.m. flight to New York, is that right?"

"Yes," I said.

"Well, it's only 7 a.m., and the 7:05 a.m. flight has not left yet. If you hurry, you can make it."

I was too embarrassed to say that I arrived at airports early so I wouldn't have to hurry. Instead, I ran down the corridor to the plane. I climbed on board, out of breath, red-faced, and tripped over a woman's legs to get to the last unoccupied seat.

It is worth noting that certain textual clues were necessary for a successful answer to question 7, which are underlined in the excerpt above. Firstly, the clues expressing the time gap between the author's real flight and the actual flight he took needed to be taken into consideration, since they indicate a change of attitude, however unintentional that was. Secondly, the accidental nature of that change is detectable in the author's explanation that he was 'too embarrassed to say that' he arrived at airports very early because he did not like to rush. Thirdly, the conjunction 'instead' signaled the contrasting ideas, instead of explaining the real reason of being so early, the author took a chance and ran for the earlier flight. Besides carrying an adversative meaning, the conjunction is somehow elliptical (Halliday & Hasan, 1976; Koch, 1989), meaning:

"Instead of telling the woman that I arrived early at airports early so I wouldn't have to hurry."

In this sense, the conjunction brings the underlying contrasting relation to the surface of the text and by being elliptical it also promotes

connections between the sentences. This consideration, associated with the quantitative data for question 7, adds strength to this study's claim as regards the facilitative effect of conjunctions.

Further qualitative evidence from participants data are also brought forward to inform this discussion, as it is seen below:

P1: He explain [sic] "I was here early, but then somehow I wasn't anymore". No. In fact if [sic] would be me I neither answer anything, because just me know about my problems.

P2: His answer was 'I was here early. But then, somehow I wasn't anymore. This means that he arrived early for the flight he planned to get, but suddenly all his plans changed.

P3: No, because the woman did not understand that he had to be in the next plane.

P4: They responded weakly that he was in the airport early. The guy became confused because he arrived very early and the people snapped him.

P5: He answered "I was here early. But then, somehow I wasn't anymore" He got too early in the airport, that there is another flight in that moment. His answer was not precise. Because his effort to get early failed devido[sic] his anxiety."

P6: He was too plain. He should explain that he was ther [sic] for the 9:15 flight and he had the opportunity of going earlier.

P7: He was early for his original flight, but when he was told that he could try to catch the earlier flight he was late for that one. The precise answer was: "I was here early", then "I wasn't anymore".

P8: He said he did get there earlier, and if fact he did, because his flight was 9 but he got early that he had the time to take the 7:05 one.

P9: " I was here early" "I wasn't anymore".

P10: He said: I was here early, but in fact for the 7:05 am he wasn't early anymore. He was so many hours early that he could try to get the plain before his flight, so he did.

P11: He said "I was here early", but don't explain why [sic] was lateness.

P12: He said he was early but now anymore. He answer are [sic] precise for someone that knows that he gets very early.

Participants 2, 3, 4, 5 and 6 from group A (C) demonstrated the ability to judge the preciseness of the statement and to justify that judgment through their answers. Although participants in group B (NC) were able to get part of the answer correct, only Participants 8, 10 and

11 demonstrated the aforementioned judging ability. Still in question 7, only participant 2 from group A (C) and managed to reach the conclusion that the author changed from being an early-airport person to being a late-airport person, explicitly stating that there was a change and that it was unexpected, expressed by the word 'suddenly' in the participant's answer, which is signaled by the adversative conjunction 'but':

P2: His answer was 'I was here early. But then, somehow I wasn't anymore. This means that he arrived early for the flight he planned to get, but suddenly all his plans changed.

Having said that, participant 10's answer to question 7 was also plausible; however it did not seem to detect the accidental aspect of the change.

P10: He said: I was here early, but in fact for the 7:05 am he wasn't early anymore. He was so many hours early that he could try to get the plain before his flight, so he did.

At last, and similarly to question 7, question 8, "*How come the author arrived late in the plane? Wasn't he an early-airport person? Explain the reason for his arriving late.*", required the reader to formulate a hypothesis, analyzing the textual information in order to reach conclusions and come up with a causal relation that was motivated by the question (de Beaugrande & Dressler, 1981; Halliday & Hasan, 1976; Koch, 1998). For that kind of relation to be processed, higher levels of comprehension had to interact with lower level ones related to the processing of the text surface (Kintsch & van Dijk, 1978; Rumelhart, 1977, van Dijk & Kintsch, 1983). Results show that group A (C) had an advantage; however, qualitative data indicate that this advantage did not seem to have been caused by the omission of the conjunctions in the texts read by group B (NC).

Keywords and conjunctions in the data were purposefully underlined with a view to showing how their presence related to successful comprehension. As can be seen below, from all the 12 participants in the study, only Participant 11 was unable to answer question 8, whose answer was somewhat incomprehensible and disconnected from the question and the text, suggesting a more global difficulty:

How come the author arrived late in the plane? Wasn't he an early-airport person? Explain the reason for his arriving late.

P1: He wanted to take a plane at 9:15 am, so for his schedule he was early, but the salesperson asked him if he wanted to take the plane at 7:05 am he would take it and he went. For this schedule he was late.

P2: He didn't arrive late, he was offered an earlier flight since he was there in advance for his actual flight and because there was still time for him to get his earlier one.

P3: Actually, he was arranged to an earlier plane because he arrived earlier in the airport, so he seems to be a late-airport person, because he was late to the plane they arranged for him.

P4: He arrived early for the flight of 9:15 but the flight attendant asked him if he would get the flight of 7:05 and he got run for the first flight who did not his intention.

P5: He got late at the airport because he decided to take a plane that was going to take off in five minutes. He did the same late-airport people used to do.

P6: He was so early that he could catch the flight that is two hours before the time he expected.

P7: He didn't. He actually got up early to the 9 am flight but late to the 7:05 am flight.

P8: He was early for his flight, but he was offered a seat on the previous flight, and for that one he was late.

P9: Well he got early for the 9:15 am flight but the 7:05 am flight hadn't gone yet. He had 5 minutes to catch it, that's why he got late to that flight.

P10: He were[sic] late for the 7:05 am flight but for his real flight he was two hours earlier. He was an early-airport person, but he realized that this would not help him to confront the problems that can may [sic]occur.

P11: The pack 24 hours.

P12: He arrived early, but there was a[sic] earlier flight lefting [sic], and he was embarrassed to say that he likes to being early, so he took the flight late.

In a way, question 8, 'forces' the participant to look for a contradiction and establish a causal relation for the facts in the text, which most participants managed to do successfully. There was a tendency to use the textual information about the time of the flights to establish the reason why the author was late. Some participants signaled the contradictory relation using conjunctions such as "*but"*, and the adverb *"actually"*; both express an adversative relation that is an avowal type (Halliday & Hasan, 1976). Others used conjunctions that

signal causal relations such as *"that's why"* or *"because",* in other words, there were some qualitative differences, but, on the whole, both groups, except for one participant in group B (NC), were successful as regards question 8.

Extending the discussion to the effect of previous knowledge in question 8 (Carrell, 1998; Tomitch, 1991), admittedly a certain understanding of check-in procedures would facilitate the answer to this question, for the check-in routine involves arriving at the check-in earlier than the time stated on a person's ticket. Without that knowledge, understanding the section of the text corresponding to question 8 could be harder.

Thus, data from the retrospective questionnaire are intended to help this researcher better understand results from the summary task and the reading comprehension task. For that, only two aspects were measured quantitatively: the effect of familiarity with the topic and text difficulty over comprehension. The other items in the retrospective questionnaire offered qualitative data. In order to better visualize results the Tables 21 and 22 below are presented:

Table 20: Data from the Retrospective Questionnaire regarding text difficulty and familiarity for Group A (C)[12]

Results from the Retrospective Questionnaire Group A (C)							
Participants	P1	P2	P3	P4	P5	P6	GAS
Reference to text difficulty	4	1	4	5	3	2	19
Level of familiarity	3	1	3	6	4	4	21

GAS= Group Average Score
Likert scales:
Perception of difficulty: 1 corresponds to very easy and 6 to very difficult.
Level of familiarity: 1 corresponds to very familiar and 6 to very unfamiliar.

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[12] As explained in Chapter III, the Retrospective Questionnaire was adapted from Tomitch (2003).

Table 21: Data from the Retrospective Questionnaire regarding text difficulty and familiarity for Group B (NC)

Results from the Retrospective Questionnaire Group A (C)							
Participants	P7	P8	P9	P10	P11	P12	GAS
Reference to text difficulty	2	1	2	2	5	2	14
Level of familiarity	2	3	1	4	5	2	19

GAS = Group Average Score
Likert scales:
Perception of difficulty: 1 corresponds to very easy and 6 to very difficult.
Level of familiarity: 1 corresponds to very familiar and 6 to very unfamiliar.

Surprisingly, three of the participants in group A (C) mentioned in the retrospective questionnaire that they were not very familiar with the topic of the text, against two participants in group B (NC), with Participant 11 giving the highest rating of unfamiliarity across both groups. Despite the unfamiliarity with the text topic by three participants in group A (C), all participants from group A (C)were able to answer **question 8 in a satisfactory manner.**

The same is not true for group B (NC), where Participant 11 was unable to answer question 11. It seems that this particular Participant found the experimental tasks difficult, judging by the Likert scales as reference to text difficulty above, and this participant's data as well.

Although question 8 involved a certain degree of previous knowledge, it seems that lack of familiarity with the topic of the text did not prevent participants from comprehending it. Perhaps the text was informative enough, which compensated for the participants stated low familiarity with its topic. In the case of the impact of conjunctions, these considerations do not weaken the hypothesis of their facilitative effect.

The apparently incongruent results from the retrospective questionnaire with the results from the reading comprehension questions suggests that the readers' perception was somewhat different from their actual reading performance. This kind of situation is similar to that perceived by Tomitch (2003), in which she finds that some poor readers who perceived the texts used in the experiment to be coherent and

complete had, as a matter of fact, failed to perceive the inconsistencies that were purposefully created in those texts, engaging in the previously reviewed phenomenon of the 'illusion of knowing' (Tomitch, 2003, p. 147).

To sum up the quantitative analysis of the reading comprehension questions, where group A (C) appears to have had an advantage over group B (NC), where overall results for group A were 88% as against 76% for group B (NC), answers to question 3 reveal an advantage for the participants who read the text without conjunctions whereas answers to questions 1, 2, 5, 6, 7, 8 showed more advantages for the participants who read the text with conjunctions, whereas answers for questions 4 can be considered to represent similar results.

All in all, quantitative and qualitative analysis point to the fact that answers to the reading comprehension questions from Group A (C) were significantly distinct from those of Group (NC), therefore pointing to an advantage for the group that read the text with conjunctions. Let us refer back to the reading time scores that were previously mentioned for the point is worth discussing.

Incidentally, the scores for reading times show that Group B (NC) read their texts faster, but if faster reading times corresponded to facilitated comprehension (Haberlandt, 1982; as cited in Murray, 1995), the aforementioned advantage would not hold true. As previously mentioned, Murray (1995) when analyzing similar results of the effect of conjunctions in reading comprehension, proposed that longer reading times may not indicate reading difficulty, but more attentive reading. What is more, the participants who had the fastest reading times were the ones who presented more comprehension difficulties. Although I could not prove all the reasons for that incoherence, drawing on Alderson, and Clapham (1996), I would predict that some participants may have short-circuited (Goodman, 1998), while others resorted to elaborations (Tomitch, 2003).

In response to Research Question 2 the answers to reading comprehension questions not only reinforce the tendency demonstrated by the summary task that the presence of conjunctions facilitates comprehension, but also add strength to it.

Subsequently I explore the relationship between the participants' performance on the gap-filling task with conjunctions and compare the results with the results from the summaries and the answers to reading comprehension questions, which leads to Research Question 3.

4.3   Research Question 3

- Do results from participants' gap-filling task with conjunctions have a relationship to their performance in the summary task and in the answers to reading comprehension questions?

With this question, this research deals with another variable that could impact participants' performance as regards reading and summarizing, that variable is level of declarative knowledge that participants have of conjunctions (Gagné et al., 1993; Tomitch, 2003). At first glance, it seems fair to assume that if readers do not have formal knowledge of conjunctions they would not be likely to use them as signals when reading a text. On the other hand, readers with no or low level of formal knowledge of conjunctions may not be affected by the omission of conjunctions.

Taking those initial considerations into account, this study contained a gap-filling task that was supposed to verify the participants' formal knowledge of conjunctions. The task in fact tackles procedural knowledge and the participants were supposed to use the conjunctions to complete two texts (Gagné et al., 1993; Tomitch, 2003). *(For more details, please refer to Appendix G).* Tables 23 and 24 below show the total scores for the gap-filling task per participant in each group:

Table 22 – Gap-filling task Group A - Total scores per participant and per group

Participants	1	2	3	4	5	6	GTS
Total Score	7	17	12	5	11	14	66

GTS = Group Total Score

Table 23 – Gap-filling task Group B - Total scores per participant and per group

Participants	7	8	9	10	11	12	GTS
Total Score	12	17	15	15	8	6	73

GTS = Group Total Score

Results suggest that the group with higher results in the gap-filling task was Group B (NC), which, incidentally, had lower scores in both, the summary task and the reading comprehension questions. Conversely, group A, who had achieved better results for comprehension questions and for the summary task, had worse results in the gap-filling task, in other words, comprehenders and summarizers who performed better in this experiment were from the group who seemed to have lower level of knowledge of conjunctions. Therefore, it seems fair to hypothesize that the conjunctions may in fact have even helped summarizers establish relevance criteria for the ideas that they included in their summaries (Kintsch & van Dijk, 1978; Koerich & Dellagnello, 2008; Zadeh, 2006).

In conclusion, these results may suggest that relying on conjunctions is an advisable strategy to assist the selection process in summarization tasks as well as answering particular reading comprehension questions such as the ones used as instruments in this study.

4.4   Research Question 4

- How does the omission of conjunctions affect the production of summaries by the participants in terms of number and type of conjunctions used in the summaries?

In addition to the investigation of the impact of conjunctions in comprehension measured by reading comprehension questions and a summary task, this study proposes to examine whether the presence or absence of conjunctions in a source text would influence its summary

production in terms of the number and type of conjunctions that were present in the participants' summaries. This aim was motivated by the interface between reading and writing that summarization practice grants (Koerich & Dellagnello, 2008). However, given the scope of this study, this interrelation was limited to the extent of comprehension being considered as a "first step" in the production of a summary, therefore the only aspect of form to be analyzed in response to Research Question 4 are the number and type of conjunctions present in the summaries produced by participants in Group A and Group B.

Narrowing the focus, table 25 below illustrates the use of additive, causal, temporal and adversative conjunctions in the summaries produced by the participants in both groups:

Table 24: Total of conjunctions present in the summaries from Group A and Group B, listed by type

Conjunction type	Group A (C)	Group B (NC)
Additive	13	9
Causal	13	10
Temporal	8	9
Adversative	8	5
Totals	42	34

The most used conjunctions in group B (NC) were the causal type, while the most used conjunctions in group A (C) were the causal and the additive ones. The prevalence of causal conjunction may be indicative of the participants' efforts to establish causal relations in order to explain the events in the text in both groups. The most common instance of the adversative conjunctions used by the participants in both groups was the conjunction *'but',* which according to Halliday and Hasan in addition to its adversative meaning, has a retrospective quality. This retrospective quality is shared by the additive conjunctions, which the author explains as if *'but'* had an *'and'* embedded in it (1976).

The *least* used conjunctions in both groups were the adversative ones. Interestingly, in previous studies about the effect of conjunctions in reading comprehension, the adversative type was found to be the *most* impacting (Murray, 1995). These findings, therefore, point to the possibility that adversative conjunctions are harder to process in both,

comprehension and the production processes, involved in the act of summarizing.

Murray's (1995) study indicates that the presence of adversative conjunctions positively impacts the integration of the sentences in the text base, because when readers perceive the signals for an adversative relation the sentences are easier to integrate in memory. According to that study, the reason for that is the restricting nature of adversative conjunctions, which is explained in the quote below:

> Adversative connectives are highly constrained. They specify solely that the subsequent text is likely to contrast or limit the scope of the content of the preceding text. The content of the immediately preceding sentence combines with these constraints to create the expectancy that the subsequent sentence is likely to contrast with the preceding sentence (Murray, 1995, p. 120)

The author points out that the text that follows a conjunction is likely to be more closely related to the text that precedes it; this connection generates a specific expectancy. Incidentally, the restricting nature of adversative conjunctions appears to be in line with the reflections from de Beaugrande and Dressler (1980) when they stated that "cohesion rests upon GRAMMATICAL DEPENDENCIES" (p.3). Therefore, it is fair to say that these previous studies indicate that conjunctions, in particular the adversative ones, influence text processing.

This expectancy is probably what fosters integration (Gagné et al., 1993), it may be even possible to conceptualize that the expectation is a 'bonding agent'. Perhaps this 'bonding agent' is in fact, inferencing. A specific kind of inference is generated when readers link sentences, and what characterizes these inferences is the fact that to be effective, these connections need to be textually restricted, and in this case, these inferences are defined as plausible inferences (Tomitch, 2003), that is, inferences that conform to the text. As for the adversative conjunctions, there are constraints based on the contrasting relation between sentences.

These plausible inferences represent the readers' identification of a certain relation, such as the adversative one. These 'bonding agents' are in the interface between reading and writing when it comes to writing a summary, but the bonding that was manifested as inferencing in reading, becomes the underlying relation, the cohesive force (Halliday & Hasan, 1976) that connects sentences in the process of

writing a summary. Making this relation explicit confirms that a summarizer perceived the adversative relation and was sure of it, since the summarizer stated it.

Similarly to Murray's (1995) findings, it seems that adversative relations were more troublesome for the participants in this study too, however, in the case of this study this was observed with regards to making the adversative relation explicit in their summaries. Together, findings from Murray 's (1995) study and from this study indicate that adversative relations may be more difficult to process and are more crucial for both reading and summary production, since they happen between sentences or ideas that are closely related, in fact, there is a dependency between them (de Beaugrande & Dressler, 1981; Halliday & Hasan, 1976).

Besides that, with adversative relations, their omission may lead to distortions in meaning. In order to defend that possibility, let us consider the case when a reader perceives the omission of a conjunction, but instead of realizing that the conjunction that is missing is an adversative one, the reader infers that what is missing is a causal, additive or temporal conjunction. In the examples below, sentence 1 was modified in examples 2, 3 and 4; produced by this researcher:

1. I was here earlier, <u>but</u> I was offered an earlier flight, this is why I was late boarding this plane.
2. I was here earlier, <u>because</u> I was offered an earlier flight, this is why I was late boarding this plane.
3. I was here earlier, <u>and</u> I was offered an earlier flight, this is why I was late boarding this plane.
4. I was here earlier, <u>then</u> I was offered an earlier flight, this is why I was late boarding this plane.

Sentence 1 expresses an adversative relation, which is disrupted in sentences 2, and 3, where a causal and then an additive conjunction were used respectively. Sentence 2 becomes illogical with the presence of the causal conjunction, whereas sentence 3 loses an adversative relation and gains an additive one. In comparison to sentence 1, sentence 3 loses the constraining nature; with the clauses that precede and follow the conjunction less closely related i.e. the meaning of the whole sentence is somehow transformed. Sentence 4 uses a temporal conjunction, the clause introduced by the conjunction 'then' functions as an explanation for the clause that follows it.

In comparison to sentences 2 and 3, sentence 4 is the closest in meaning to sentence 1. The examples shown above to a certain extent justify the claim that conjunctions not only signal relations, but promote them, too (Halliday & Hasan, 1976). The degree to which this is true seems to vary according to the level of constraint that is typical of each type of conjunction, judging by the examples this researcher used.

Findings from the summary task seem to confirm the meaning potential of the adversative conjunctions and the dependency between clauses linked by an adversative relation, hence adding support to previous studies that claimed that conjunctions had a positive impact in comprehension (Haberlandt, 1982; Murray 1995; Scherer & Tomitch; Spyridakis & Standal, 1987).

Moreover, the fact that adversative conjunctions were the least used conjunction in the summaries produced for this study furthers the discussion of the impact of conjunctions to the reading and writing interface. We conducted the analysis of research question 3 moving from Koerich and Dellagnello (2008), having established that the identification of relevant information seems to be one of the main sources of difficulty for summarization practice, to this study's findings that the adversative conjunctions were the least produced conjunctions by summarizers. In the relation between both types of findings lie Murray's (1995) findings on the impact of conjunctions in reading comprehension with adversative relations being the ones that were more difficult to detect when the conjunction was omitted from text. Overall, findings seem to attest to the complex nature of adversative relations in both reading comprehension and summarization practice.

CHAPTER V

Final Considerations, Limitations and Implications

5.1   Final Considerations

The specific objective of this study is to investigate reader's perception of cohesive relations, while the study hypothesis is that cohesive markers such as adversative and causal conjunctions facilitate the identification of the relations connecting the text, therefore helping L2 readers construct of a coherent mental representation of the source text, which will be expressed in the participants' summaries.

The purpose of this empirical study was to examine the effect of adversative and causal relations on reading comprehension and summarization. The adversative and causal types were chosen given the heavily constricting nature of the former and the complex nature of the latter (Murray, 1995). Data from this study have indicated tendency for a facilitative effect of these conjunctions on reading comprehension and the summarization task.

This study also considered the interface between reading and writing granted by data from the summaries produced by the participants. It turned out that the adversative conjunctions were the least produced in the participants' summaries, with a greater deficiency in the use of the adversative conjunctions for the participants who read the text without the conjunctions. In addition, the participants who read the text without conjunctions used fewer conjunctions of all types in their summaries. Taking into consideration that in previous studies about the effect of conjunctions in reading comprehension the most influential conjunctions were the adversative ones, together with evidence of the adversative conjunctions being the least produced, in particular by the participants who read the text without conjunctions, it is fair to say that this study adds weight to the complexity detected in adversative conjunctions.

Given the study findings, it is possible to predict a beneficial effect of conjunctions in the process of selection of relevant information. This process is under the control of schema, as theorized by Kintsch and van Dijk in the text base model (1978) and the situation model (van Dijk & Kintsch, 1983), and conjunctions may assist in the process of selection of relevant information. Thus, this study intends to point to a

strategy to help readers, in particular L2 readers to overcome the previously diagnosed difficulties involved in the selection of relevant information (Koerich & Dellagnello, 2008).

Consequently a crucial issue surrounding cohesion and coherence emerges: cohesion is not all there is to text coherence or to the construction of meaning (Meurer, 2003), from the perspective of reading or writing, but it may be of assistance in some very specific cases such as with expository prose, in particular in cases where the reader is not familiar with the domain approached by a text and above all it may be of great assistance to the L2 reader. Perhaps this is one aspect of the very complex issues involving L2 reading which may be exacerbated by lack of linguistic knowledge as predicted by Eskey, who advised scholars and teachers to "hold at the bottom" (1998, p. 96 and 97) meaning that an interactive model with emphasis on lower level processes would be more advisable for L2 learners.

Expressing my agreement with Eskey (1998), I conducted this study under a cognitive perspective, but also considered studies from a textual perspective in order to examine the elements of the text in detail, reasoning about the specific particularities of textual markers such as conjunctions, which may present particular difficulties for the L2 reader and learner in an academic context. Moreover this research takes into account Davies concern over the lack of studies in reading comprehension that attend to text as a variable affecting reading (1995).

Although previous teaching experiences, including my own, and common sense tell me (together with most L2 teachers and scholars) that "of course" conjunctions help in both reading and writing, I hope the intricacies of the specific roles of conjunctions in reading and summary practice hereby discussed contribute to successful L2 reading in the Brazilian academic context, by confirming the study hypothesis that conjunction have a facilitative effect via the quantitative and qualitative analyses that were carried out for this study.

5.2   Limitations of the Study and Suggestions for Further Research

This study's findings corroborate previous research that confirms the facilitative effect of conjunctions in reading comprehension (Lorch & O'Brien, 1999; Murray, 1995; Scherer & Tomitch, 2008; Spyridakis & Standal, 1987; Zadeh, 2006). However, there were limitations to this

study that need to be pointed out. Besides acknowledging these limitations, I offer suggestions for further research.

First of all, the number of participants was small, there were only 12 participants; therefore, it is not possible to generalize the conclusions from the study. Studies with a higher number of participants are needed for that, the replication of this study may be a possibility.

Another limitation to this study is the fact that no valid proficiency test was administered to check the participants' intermediate level of L2 proficiency, thus, I would suggest that future studies should include a valid proficiency test in the L2.

Besides that, the method did not allow the researcher to investigate exactly how and when the conjunctions helped comprehension or, conversely, how and when their omission compromised reading. Perhaps pause protocols, a type of think-aloud protocols (TAPs), used in Baretta's study (1998) and in Tomitch (2003) would have been more efficient methods since TAPs would allow the researcher to examine the inferences that readers make to fill in the gaps and make the connections (Baretta, 1998; Kintsch & van Dijk, 1978; van Dijk & Kintsch, 1983).

Another problem regarding conjunctions is the fact that this study did not examine the effect of temporal conjunctions, even though the text used included a narrative element in its structure. Consequently a study with different text types, including narratives, may offer further contributions to the understanding of conjunctions associated with text types.

5.3   Pedagogical Implications

First of all, I would like to discuss more global implications of this study for empirical studies in general. More specifically, I refer to the insights drawn from the Pilot Study that were discussed in detail Chapter III, the Method Section, with a view to stressing the importance of assessing the instruments and procedures before carrying out empirical research.

As previously mentioned, it was through empirical observations during the pilot studies that this researcher understood in more depth the importance of choosing a text that is not too easy not too difficult for the reader. In terms of the procedures, it was important to test them before collecting data in order to make sure that the instructions were clear to

the participants and also calculating how much time would be needed for data collection.

In terms of specific issues related to reading, this study corroborates the interactive model of reading, and confirms the shortcomings of the top-down model of reading for, in this study, when readers neglected text constraints and resorted to "unwarranted inferences" (Tomitch, 2003, p.153) their comprehension failed. Conversely, that seemed to be a strategy used by readers when they had problems processing information from the surface of the text, as predicted by the compensatory model (Stanovich, 1980) and Eskey (1998) amongst other scholars). According to Eskey, it is of particular importance to bear this in mind when it comes to L2 reading, as the text may present linguistic difficulties to readers who are less proficient in the L2.

Findings from this study seem to demonstrate the influence of conjunctions in reading comprehension, which confirms the importance of teaching conjunctions. This importance has been widely acknowledged in the field, in theoretical and practical terms, for the teaching of conjunction can be considered a common practice in the teaching of reading in the L2. However, this study findings, and its limitations regarding the examination of conjunctions point to a more holistic approach to the teaching of cohesive devices (Zadeh, 2006). To better illustrate this point, the following data from Participant 8 are brought forth:

> People who get early at the airports should get a reward. The reason for that is simple: besides having to wake up around four hours before the flight leaves… As if getting stressed and anxious was not enough.

In this example, the participant is able to use conjunctions, but her comprehension is fragmented – a suggestion to deal with this type of problem could be to relate conjunctions to text structure and underlying ideas signaled by them, identify relevance of ideas, an ability that seems to be problematic for summarization practice as reported by Koerich and Dellagnello (2008).

Moreover, this relates to the suggestions made by Eisterhold (1990) who concluded that the teaching of abilities in reading should be explicit when it comes to the use of reading abilities to improve writing, as conjunctions have the potential to signal relations, emphasize ideas,

bring the readers' attention to relevant ideas in the text, in this sense they could assist learners in the processing of important information in the text.

Finally, considering the complexity involved in the 'web of relations' in a text (Meurer, 2003, p. 153) and the possibility of relations that language grants as envisaged by Halliday and Hasan (1976), based on the present investigation, I would suggest that, as regards constructing and interpreting meanings, the role played by conjunctions is not a 'small one'. In fact, cohesive devices seem allow readers to get to the core of that web, which, in this study, is represented by a text.

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Malaysia, Vol. 12, 1-18

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A First Look at the Literacy of America's Adults in the 21st Century
http://nces.ed.gov/Pubsearch/pubsinfo.asp?pubid=2006470
accessed on January, 19 2010 at 6:30 p.m.

Instituto Brasileiro de Geografia e Estatística: Literacy and illiteracy rate of persons aged 15 years or over, by sex and urban or rural household, by age groups - 1980/2000
http://www.ibge.gov.br/english/estatistica/populacao/tendencia_demografica/tabela23.shtm accessed on January, 19 2010 at 9:15 a.m.

U.S. Dept. of Education/ National Center for Educational Statistics
http://nces.ed.gov/Pubsearch/pubsinfo.asp?pubid=2006470
accessed on January, 19 2010 at 11:03 a.m.

http://desktoppub.about.com/od/designprojects/p/wedding.htm
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http://www.bbc.co.uk/worldservice/learningenglish/newsenglish/britain/070601_family.
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Appendix A

Name: _____ Timing: _____ minutes

Instruction: You are going to read a text and summarize it in English. After that you will answer comprehension questions.
Reminder: You won't have access to the text during the summary task.

Getting to the airport C[13]

After years of study, I have determined there are only two types of people in this world: those who get to the airport early and those who walk in the plane as it is about to take off.

If there were any justice in this world, the early-airport people would get rewards for doing the right thing. And the late-airport people would be punished. But there is no justice in this world. The early-airport people get ulcers, heart attacks and are anxious. The late-airport people do not show any sign of concern when they are flying.

I once found myself in an airport bar with a man on the same flight as me. Our flight had been called three times, but he insisted we stay for another round.

"If we miss this one, there's always another plane in an hour," he said, signaling for two more drinks.

"To Recife, Brazil?" I said. "There isn't another flight for a week."

"I have a theory", he said. "If you miss your flight, it's because God didn't want you to go."

This is clearly a guy who is never going to get an ulcer. Early-airport people suffer another abuse. They are called exactly what they are: cowards. I know. As a matter of fact, I was an early-airport person for years. My luggage will get on the plane first, I told myself. Indeed it will. Which makes it the last luggage they take off the plane when you land. You know who really gets his luggage first? The late-airport person, who walks into the airport three minutes before the plane takes off.

---

[13] In this study, C stands for text with causal and adversative conjunctions and NC means text with no adversative or causal conjunctions. It is important to point out that in the versions received by the participants the texts were not labelled C or NC so that participants were not influenced by these labels.

The pilot is practically in the air when these people are still paying off the taxi. Then they make a big fuss at the gate in order to get their luggage be the first off the plane, but it is probably sitting on top of our luggage, crushing our shirts.

Though if I get there real, real early, I told my old coward self, I will get the best seat. Well, just try to show up early and get the best seat. Well, just try to show up early and get the seat you want. Go ahead and try. No matter how early I showed up, I was always told that someone called two or three years ahead of me and asked for that seat. I figured it was a conspiracy. I figured there was someone in America who called every airline every day and said: "Is that coward Simon flying somewhere today?" If he is, give me his seat."

The ultimate embarrassment of the early-airport person happened to me a few years ago when I was flying from London – Heathrow to JFK-New York. When I got to the ticket counter, the person there said: "Sir, you have a seat on the 9:15 a.m. flight to New York, is that right?"

"Yes," I said.

"Well, it's only 7 a.m., and the 7:05 a.m. flight has not left yet. If you hurry, you can make it."

I was too embarrassed to say that I arrived at airports early so I wouldn't have to hurry. Instead, I ran down the corridor to the plane. I climbed on board, out of breath, red-faced, and tripped over a woman's legs to get to the last unoccupied seat. The woman I stepped over was no coward. She had the courage to complain.

"You should get to the airport earlier!" she snapped at me.

"I was here early," I said weakly. "But then somehow I wasn't anymore."

After a lifetime of arguing over whether I really have to pack 24 hours in advance and set the alarm clock four hours ahead, I have learned one fact about early-airport people and the late-airport people: they always marry each other.

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Appendix B

Name: _____Timing: _____ minutes

Instruction: You are going to read a text and summarize it in English.
After that you will answer comprehension questions.
Reminder: You won't have access to the text during the summary task.

<u>Getting to the airport</u> NC

After years of study, I have determined there are only two types
of people in this world: those who get to the airport early and those who
walk in the plane as it is about to take off.

There was any justice in this world, the early-airport people
would get rewards for doing the right thing. And the late-airport people
would be punished. There is no justice in this world. The early-airport
people get ulcers, heart attacks and are anxious. The late-airport people
do not show any sign of concern when they are flying.

I once found myself in an airport bar with a man on the same
flight as me. Our flight had been called three times, he insisted we stay
for another round.

"We miss this one, there's always another plane in an hour," he
said, signaling for two more drinks.

"To Recife, Brazil?" I said. "There isn't another flight for a
week."

"I have a theory", he said. "You miss your flight - God didn't
want you to go."

This is clearly a guy who is never going to get an ulcer. Early-
airport people suffer another abuse. They are called exactly what they
are: cowards. I know.

I was an early-airport person for years. My luggage will get on
the plane first, I told myself. It will. Which makes it the last luggage
they take off the plane when you land. You know who really gets his
luggage first? The late-airport person, who walks into the airport three
minutes, the plane takes off. The pilot is practically in the air when these
people are still paying off the taxi. They make a big fuss at the gate in
order to get their luggage be the first off the plane, it is probably sitting
on top of our luggage, crushing our shirts.

I told my old coward self that I get there real, real early, I will get the best seat. Just try to show up early and get the best seat. Just try to show up early and get the seat you want. Go ahead and try. How early I showed up, I was always told that someone called two or three years ahead of me and asked for that seat. I figured it was a conspiracy. I figured there was someone in America who called every airline every day and said: "Is that coward Simon flying somewhere today?" Is he? Give me his seat."

The ultimate embarrassment of the early-airport person happened to me a few years ago. I was flying from London – Heathrow to JFK-New York. I got to the ticket counter, the person there said: "Sir, you have a seat on the 9:15 a.m. flight to New York, is that right?"

"Yes," I said.

"Well, it's only 7 a.m., and the 7:05 a.m. flight has not left yet. You hurry, you can make it."

I was too embarrassed to say that I arrived at airports early - I wouldn't have to hurry. I ran down the corridor to the plane. I climbed on board, out of breath, red-faced, and tripped over a woman's legs to get to the last unoccupied seat. The woman I stepped over was no coward. She had the courage to complain.

"You should get to the airport earlier!" she snapped at me.

"I was here early," I said weakly. "I wasn't anymore."

After a lifetime of arguing over – Do I really have to pack 24 hours in advance and set the alarm clock four hours ahead? I have learned one fact about early-airport people and the late-airport people: they always marry each other.

Adapted from: Genuine Articles: Authentic reading texts for intermediate students of American English. (Walter, 1986).

Appendix C

Formulário do Consentimento Livre e Esclarecido

Título do Projeto: O impacto dos Conectivos na Compreensão de Leitura e no Resumo de um Texto Expositivo em Língua 2.

Gostaria de lhe convidar a participar de um projeto de pesquisa sobre os processos envolvidos na leitura em L2. Esses processos cognitivos têm um papel importante quando realizamos uma tarefa complexa como ler um texto em língua estrangeira. Você está sendo convidado(a) a participar deste estudo por estar em processo de desenvolvimento da leitura em inglês. Se você aceitar participar, por favor, leia este consentimento e, se concordar com a informação aqui apresentada, assine onde indicado. Uma cópia ficará comigo, pesquisadora responsável pelo projeto, e outra com você.

Objetivo do Estudo:
O objetivo deste estudo é investigar o impacto dos conectivos na Leitura inglês. Muitos estudos foram realizados sobre este tema, porém o tema permanece controverso, portanto mais pesquisas são necessárias para que possamos aprender mais sobre o efeito dos conectivos na compreensão leitora em L2.

Procedimentos:
Se você aceitar participar deste estudo, você será solicitado a realizar as seguintes tarefas na fase de treinamento: (1) ler um texto em L2 com o propósito de resumi-lo, (2) resumir o texto lido em inglês sem ter acesso ao mesmo, (3) responder a perguntas de compreensão a respeito do texto, com acesso ao texto. Na segunda fase, a fase da coleta de dados, você será solicitado a efetuar as seguintes tarefas: (1) ler um texto em L2 com o propósito de resumi-lo, (2) resumir o texto lido em inglês sem ter acesso ao mesmo, (3) responder a perguntas de compreensão a respeito do texto, com acesso ao texto, (4) responder a um questionário retrospectivo. A realização das tarefas será em horário de aula, gentilmente cedido pelo professor Celso Tumolo e será feita aqui mesmo, no CCE.

Riscos e benefícios do estudo:

Não há riscos em participar deste estudo. Antes de realizar as tarefas, você terá tempo de se familiarizar com elas e fazer todas as perguntas que quiser, até se sentir totalmente confortável com elas. Em contrapartida, você poderá aprender mais sobre o desenvolvimento da sua compreensão leitora. Ao final da pesquisa, os resultados do estudo serão tornados públicos, mas sua identidade será totalmente preservada e não será incluída nenhuma informação que possa identificá-lo (a). Somente as pesquisadoras deste projeto terão acesso aos dados coletados.

Natureza voluntária do estudo:
Sua decisão de participar ou não deste estudo não irá afetar você ou sua relação com a Universidade de nenhuma forma. Se você decidir participar e depois decidir desistir, não tem problema. Você poderá desistir a qualquer momento. Peço apenas que você nos notifique, através de um dos e-mails listados abaixo. Para contato telefônico: (48 3269 8569; 48 88323569). Você não precisa se justificar.

Contatos:
As pesquisadoras responsáveis por esse estudo são Mestranda Claudia M. Winfield winfield@terra.com,br, Profa. Dra. Lêda Tomitch leda@cce.ufsc.br, Prof. Dr. Celso Tumolo Prof.celso@yahoo.com.br. Para contactá-los você pode enviar um e-mail para um dos endereços acima.

Declaração de consentimento:
Declaro que li a informação acima. Quando necessário, fiz perguntas e recebi esclarecimentos. Eu concordo em participar deste estudo.

Nome: _____

Assinatura do participante: _____

Assinatura das Pesquisadoras Responsáveis:_____

Data: _____

Appendix D

<u>Instruções para os Participantes</u>

Caro(a) participante,

Sou aluna do Curso de Mestrado em Inglês da PGI-UFSC, e minha área de pesquisa é em Leitura. Antes de explicar as instruções, eu gostaria de agradecer a participação de todos neste estudo.

Para que os procedimentos fiquem claros, eu enumerei cada atividade que vocês realizarão conforme segue:

Você vai ler um texto em <u>inglês</u> para resumi-lo. Leia o texto atenciosamente, você pode ler o texto duas vezes se necessário.

O texto será recolhido pela pesquisadora, que lhe pedirá que resuma o texto em <u>inglês</u>. Você não terá acesso ao texto durante o resumo devido aos propósitos específicos do estudo.

Lembre-se de que no resumo você não precisa listar cada detalhe do texto. Portanto, preste atenção às idéias principais e escreva um resumo conciso, com um máximo de <u>30 linhas</u>.

Se tiver problemas de vocabulário, caso não se lembre de uma determinada palavra em inglês, você poderá usá-la em português.

Quando terminar de resumir, entregue o resumo à pesquisadora e ela lhe devolverá o texto juntamente com as perguntas de compreensão. Esta é a Terceira tarefa, na qual você deverá responder as perguntas de compreensão em <u>inglês</u>.

Quando você terminar, queira entregar à pesquisadora o texto e as perguntas de compreensão respondidas.

Ao terminar de responder às perguntas de compreensão, você receberá a quarta tarefa: uma atividade de preenchimento de lacunas.

Ao terminar a quarta tarefa, você receberá um Questionário para ser respondido em <u>português</u>. Quando você terminar, queira entregá-lo à pesquisadora.

Mais uma vez, muito obrigada pela sua participação na minha pesquisa!

Appendix E

Name: _____Date:_____

SUMMARY TASK

Please make a summary of the text you read in English.
Remember that in a summary you do not have to remember every detail about the text. So, make sure you focus on the main ideas and try to organize the ideas in a concise summary with a maximum of 30 lines.
If there are any vocabulary problems, that is, if you do not remember a word in English, you can write it in Portuguese.

Appendix F

Name: _____Timing: _____ minutes

<u>COMPREHENSION QUESTIONS</u>

1. What kind of people does the text talk about in relation to arriving at the airport to catch a plane?

2. What kind of person is the author?

3. What are the main advantages late-airport people have over early-airport people?

4. In the first paragraph, why does the author consider the world to be 'unjust'?

5. According to the text, how would a late-airport person react in case they missed a flight?

6. Why does the author think that there is a conspiracy against early-airport people?

7. How did the author explain his lateness when a passenger confronted him with the following statement: *"You should get to the airport earlier..."*? Was his answer precise? Please justify your answer.

8. How come the author arrived late at the airport? Wasn't he an early-airport person? Explain the reason for his arriving late.

Appendix G

Name: _____ Timing: _____ minutes

GAP-FILLING TASK

INSTRUCTIONS FOR THE PARTICIPANTS

Dear participant, please complete the following activities in <u>English</u>. There is a glossary at the end of activity 2 for your reference. There is no time limit for this activity.

1. Complete the passages below using words from the box underneath.

thus	for instance	until	or	for example
so before	indeed	since	therefore	
however	although	if		

The process of becoming an adult is important in the life of any human being. Most human societies [1]_____, mark the change from child to adult in some way, often with special 'initiation ceremonies'.

[2]_____ both sexes may undergo initiation ceremonies, in societies where males are dominant, they are particularly important for boys. [3]_____, a boy may not be considered a real 'man' [4]_____ he cannot show great qualities of endurance. [5]_____ he may have to endure having his nails torn out, [6]_____ he might have some teeth removed. Sometimes there is a space of years between initiation ceremonies, [7]_____ it is not unusual for a man to be over thirty [8]_____ he becomes a full 'adult'.

In some societies age and status are indicated by a person's clothes. [9]_____, in England up to about 1960, boys wore short trousers [10]_____ they were well into their teens. Being allowed to wear long trousers was [11]_____ a clear sign that you were no longer a child.

[12]_____, even when you were allowed to dress in an 'adult' way, you would not be considered a full 'adult', [13]_____ you would not have the right to vote, to drive a car, to marry without your parents' consent, etc.

2. Mrs Black is a community health worker. She is giving a talk to a group of parents. Complete her talk using the linkers in the box before each section.

as a matter of fact	so	because
firstly	but	the thing is
	whereas	

Good morning. When I came in this morning, I thought I would talk about childhood illnesses, [14]_____ then I was asked to say something about 'safety in the home', [15]_____ I'll begin with that.

[16]_____, I'll say a few general words. [17]_____, people don't realize that homes are dangerous places. [18]_____, statistics show that more accidents occur in the home than any other single location. It's curious, isn't it? [19]_____ the dangers on the road and in factories are obvious, the dangers in the home just aren't understood. By the way, I just read in the paper this morning a good example of this – a five-year-old boy who had to be rushed to hospital [20]_____ he pulled a boiling kettle off a stove and burnt himself – did any of you read that?

Glossary:

although =	embora, contudo, apesar de, conquanto
for instance =	por exemplo
however	entretanto, todavia, porém
indeed =	de fato
since =	uma vez que, visto que, já que desde que
therefore =	portanto, assim
whereas =	ao passo que, enquanto que, considerando que

Adapted from: Adamson, D. (1995). *Practise your Conjunctions and Linkers*. Longman: Essex. UK.

Appendix H

Name: _____Timing: _____ minutes

<u>QUESTIONÁRIO RETROSPECTIVO</u>

1. Você entendeu bem as instruções para as atividades que realizou? Por favor, explique a sua resposta.

2. Você percebeu que a leitura fluiu bem? Por quê?

3. Você achou o texto fácil ou difícil? Por favor, classifique o texto em relação ao grau de dificuldade, numa escala de 1 a 6, em que 1 corresponde a muito fácil, e 6 a muito difícil.

4. 1 ( )   2 ( )   3 ( ) 4 ( )
   5 ( )   6 ( )

5. Na sua opinião, este texto foi bem escrito? Justifique a sua resposta.

6. Na sua opinião, o texto que você leu estava completo? Justifique a sua resposta.

7. Do que se tratava o texto?

8. Como foi a leitura do texto: simples, complicada, interessante? Por quê?

9. Você tem familiaridade com o assunto tratado no texto. Por favor, classifique o texto em relação ao grau de familiaridade, numa escala de 1 a 6, em que 1

corresponde a muita familiaridade, e 6 a pouquíssima familiaridade.

1 ( )   2 ( )   3 ( )   4 ( )
 5 ( )   6 ( )

10. Considerando seus conhecimentos sobre a leitura, escrita e gramática da Língua Inglesa, você sabe o que são conectivos ou conjunções? Já estudou esse tema?

11. Você sabe qual é a função dos conectivos ou conjunções? Saberia dar algum exemplo de conectivo ou conjunção? Costuma usá-los(as)?

12. Há mais alguma observação que você gostaria de fazer a respeito da sua leitura, do texto ou das atividades de resumo e compreensão de texto que você realizou?

Appendix I

ANSWERS FOR COMPREHENSION QUESTIONS FROM RATER 1

1. What kind of people does the text talk about in relation to arriving at the airport to catch a plane?
    The ones who arrive

    e early at the airport and the ones who arrive late and end up disturbing the take off
2. What kind of person is the author?
    He was one of those who gets to the airport early
3. What are the main advantages late-airport people have over early-airport people?
    They can get their luggage first because they do the check in late
4. In the first paragraph, why does the author consider the world to be 'unjust'?
    Because the ones who are on time and do everything as it was supposed to be prized by getting the luggage first or choosing their seats at the airplane
5. According to the text, how would a late-airport person react in case they missed a flight?
    In fact, they don't react. They don't care, they can get the next flight in an hour or so
6. Why does the author think that there is a conspiracy against early-airport people?
    Because he can never get to choose his seat. He gets early to the airport and get inside the airplane early, but in the end he is always on somebody's else seat (that was previously reserved by the person)
7. How did the author explain his lateness when a passenger confronted him with the following statement: *"You should get to the airport earlier..."*? Was his answer precise? Please justify your answer.
    Well, no. I think he must had seen himself in that person that was saying the statement above, and didn't want to go over this discussion.
8. How come the author arrived late in the plane? Wasn't he an early-airport person? Explain the reason for his arriving late.
    He didn't arrive late, he was early there for his flight, but the attendant offered him another flight that was about to leave the airport, and he accepted it, then, all of a sudden he was late. But at first he was not late at all.

Appendix J

ANSWERS FOR COMPREHENSION QUESTIONS FROM RATER 2

1. What kind of people does the text talk about in relation to arriving at the airport to catch a plane?

   The ones who arrive early at the airport and the ones who arrive late and end up disturbing the take off

2. What kind of person is the author?

   He was one of those who gets to the airport early

3. What are the main advantages late-airport people have over early-airport people?

   They can get their luggage first because they do the check in late

4. In the first paragraph, why does the author consider the world to be 'unjust'?

   Because the ones who are on time and do everything as it was supposed to be prized by getting the luggage first or choosing their seats at the airplane

5. According to the text, how would a late-airport person react in case they missed a flight?

   In fact, they don't react. They don't care, they can get the next flight in an hour or so

6. Why does the author think that there is a conspiracy against early-airport people?

   Because he can never get to choose his seat. He gets early to the airport and get inside the airplane early, but in the end he is always on somebody's else seat (that was previously reserved by the person)

7. How did the author explain his lateness when a passenger confronted him with the following statement: *"You should get to the airport earlier..."*? Was his answer precise? Please justify your answer.

   Well, no. I think he must had seen himself in that person that was saying the statement above, and didn't want to go over this discussion.

8. How come the author arrived late in the plane? Wasn't he an early-airport person? Explain the reason for his arriving late.

   He didn't arrive late, he was early there for his flight, but the attendant offered him another flight that was about to leave the airport, and he accepted it, then, all of a sudden he was late. But at first he was not late at all.

Appendix K

ANSWERS FOR COMPREHENSION QUESTIONS FROM THE RESEARCHER

1. What kind of people does the text talk about in relation to arriving at the airport to catch a plane?
   The text talks about early-airport people and late-airport people.
2. What kind of person is the author?
   The author used to be/was an early-airport person, but (it seems that) he became a late-airport person.
3. What are the main advantages late-airport people have over early-airport people?
   The late-airport people are relaxed/do not suffer emotionally; they do not suffer from health problems due to their arriving at the airport, while the early-airport people suffer physically and psychologically.
4. In the first paragraph, why does the author consider the world to be 'unjust'?
   Because early-airport people should get rewards, but instead they get punished, that is to say, they suffer physically and emotionally whereas late-airport people are relaxed about flying.
5. According to the text, how would a late-airport person react in case they missed a flight?
   According to the information in the text, the late-airport person would not worry about it, saying that it was God's wish.
6. Why does the author think that there is a conspiracy against early-airport people?
   Because early-airport people make an effort about arriving early to get the seat they want, and they still don't get it because the seat was booked in advance by someone else.
7. How did the author explain his lateness when a passenger confronted him with the following statement: *"You should get to the airport earlier..."*? Was his answer precise? Please justify your answer.
   He did not have the courage to explain what happened exactly, that is, he arrived early for his 9:15 flight and he was so early that the check-in assistant offered in a seat in an earlier flight:

the 7:15 flight and he accepted it. Instead of explaining that he just said that he was there early, but then he wasn't early anymore. This is why his answer was not precise, because he did not explain the reasons for his lateness.

8. How come the author arrived late at the airport? Wasn't he an early-airport person? Explain the reason for his arriving late.

He was an early-airport person. He was in fact late boarding the plane because he arrived early for his 9:15 flight and he was so early that the check-in assistant offered in a seat in an earlier flight: the 7:15 flight and he accepted it. He was late by accident.

Appendix L

Text NC Version (Pilot Study)
Name: _____Timing: _____ minutes

Instruction: You are going to read a text and summarize it in English. After that you will answer comprehension questions.
Reminder: You won't have access to the text during the summary task.

Getting to the airport

After years of study, I have determined there are only two types of people in this world: those who get to the airport early and those who walk in the plane as it is about to take off.

With any justice in this world, the early-airport people would get rewards for doing the right thing. And the late-airport people would be punished. There is no justice in this world. The early-airport people get ulcers, heart attacks and are anxious. The late-airport people do not show any sign of concern when they are flying.

I once found myself in an airport bar with a man on the same flight as me. Our flight had been called three times, he insisted we stay for another round.

"We miss this one, there's always another plane in an hour," he said, signaling for two more drinks.

"To Recife, Brazil?" I said. "There isn't another flight for a week."

"I have a theory", he said. "You miss your flight - God didn't want you to go."

This is clearly a guy who is never going to get an ulcer. Early-airport people suffer another abuse. They are called exactly what they are: cowards. I know.

I was an early-airport person for years. My luggage will get on the plane first, I told myself. It will. Which makes it the last luggage they take off the plane when you land. You know who really gets his luggage first? The late-airport person, who walks into the airport three minutes before the plane takes off. The pilot is practically in the air when these people are still paying off the taxi. Then they make a big fuss at the gate in order to get their luggage be the first off the plane, it is probably sitting on top of our luggage, crushing our shirts.

I told my old coward self that I get there real, real early, I will get the best seat. Well, just try to show up early and get the best seat. Well, just try to show up early and get the seat you want. Go ahead and try. No matter how early I showed up, I was always told that someone called two or three years ahead of me and asked for that seat. I figured it was a conspiracy. I figured there was someone in America who called every airline every day and said: "Is that coward Simon flying somewhere today?" Is he? Give me his seat."

The ultimate embarrassment of the early-airport person happened to me a few years ago. I was flying from London – Heathrow to JFK-New York. When I got to the ticket counter, the person there said: "Sir, you have a seat on the 9:15 a.m. flight to New York, is that right?"

"Yes," I said.

"Well, it's only 7 a.m., and the 7:05 a.m. flight has not left yet. You hurry, you can make it."

I was too embarrassed to say that I arrived at airports early - I wouldn't have to hurry. I ran down the corridor to the plane. I climbed on board, out of breath, red-faced, and tripped over a woman's legs to get to the last unoccupied seat. The woman I stepped over was no coward. She had the courage to complain.

"You should get to the airport earlier!" she snapped at me.

"I was here early," I said weakly. "Somehow I wasn't anymore."

After a lifetime of arguing over – Do I really have to pack 24 hours in advance and set the alarm clock four hours ahead? I have learned one fact about early-airport people and the late-airport people: they always marry each other.

Adapted from: Genuine Articles: Authentic reading texts for intermediate students of American English. (Walter, 1986).

Appendix M

<u>Modern British Families</u>[14]

Father leaves for work in the morning after breakfast. The two children take the bus to school, and mother stays at home cooking and cleaning until father and the kids return home in the evening. This is the traditional picture of a happy family living in Britain. But is it true today? The answer is - no! The past 20 years have seen enormous changes in the lives and structures of families in Britain, and the traditional model is no longer true in many cases.

The biggest change has been caused by divorce. As many as 2 out of 3 marriages now end in divorce, leading to a situation where many children live with one parent and only see the other at weekends or holidays.

There has also been a huge rise in the number of mothers who work. The large rise in divorces has meant many women need to work to support themselves and their children. Even when there is no divorce, many families need both parents to work in order to survive. This has caused an increase in childcare facilities, though they are very expensive and can be difficult to find in many areas. In addition, women are no longer happy to stay at home raising children, and many have careers earning as much as or even more than men, the traditional breadwinners.

There has also been a sharp increase in the number of single mothers, particularly among teenagers. Many of their children grow up never knowing their fathers, and some people feel the lack of a male role model has a damaging effect on their lives.

However, these changes have not had a totally negative effect. For women, it is now much easier to have a career and good salary. Although it is difficult to be a working mother, it has become normal and it's no longer seen as a bad thing for the children. As for children themselves, some argue that modern children grow up to be more independent and mature than in the past. From an early age they have to go to childminders or nurseries, and so they are used to dealing with strangers and mixing with other children.

So while the traditional model of a family may no longer be true in modern Britain, the modern family continues to raise happy, successful children.

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[14] Source:
http://www.bbc.co.uk/worldservice/learningenglish/newsenglish/britain/070601_family.

Appendix N

Model of Analysis for the Comprehension Questions

1. What kind of people does the text talk about in relation to arriving at the airport to catch a plane?

The people who arrive early at the airport AND those who arrive late.

2. What kind of person is the author?

The author was an early-airport person, but he changed.

3. What are the main advantages late-airport people have over early-airport people?

The late-airport people are not physically or emotionally XX, in other words, they do not suffer anxiety-related sickness and get their luggage first.

4. In the first paragraph, why does the author consider the world to be 'unjust'?

Because early-airport people should get rewards, like getting their luggage first or getting the best seat; instead, they suffer.

5. According to the text, how would a late-airport person react in case they missed a flight?

They would probably shrug; in fact the late-airport person would not care about it.

6. Why does the author think that there is a conspiracy against early-airport people?

Because early-airport people make an effort about arriving early and do not get the seat they want because somebody else had booked that seat in advance.

7. How did the author explain his lateness when a passenger confronted him with the following statement: *"You should get to the airport earlier..."*? Was his answer precise[15]? Please justify your answer.

No, he just said that he was early and then he wasn't. His answer was not precise, because he did not explain the reasons for his lateness.

8. How come the author arrived late at the [16]airport? Wasn't he an early-airport person? Explain the reason for his arriving late.

He was not late. He was in early for his 9:15 flight and he was so early that the check-in assistant offered in a seat in an earlier flight: the 7:15 flight and he accepted it. All of a sudden he was late.

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[15] This question demands the establishment of a causal relation and judgement; also it seems to tend to 'invite' elaborations.

[16] In hindsight the researcher realized that question should have read '…late boarding the plane…', but the question was still kept because from the answers from both raters as well as from the participants, the wording of the question did not seem to compromise the raters or the participants' ability to answer it