



THE IMPACT OF COHERENCE RELATIONS ON TEXT COMPREHENSION OF TURKISH EFL READERS

(BAĞDAŞIKLIK İLİŞKİLERİNİN YABANCI DİL ÖĞRENEREN TÜRK OKUYUCULARIN
İNGİLİZCE METİNLERİ ANLAMA YETENEĞİNE ETKİSİ)

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ABSTRACT

For readers to successfully comprehend a text, they must be able to establish a coherent representation of its meaning and the construction of such coherent text representation assumes the existence of an ability to recognize coherence relations that bind discourse units together. These relations can be implicit or relatively explicit, marked by a variety of linguistic devices such as logical connectives and signaling phrases. The present study aims to find out to what extent L2 readers are able to benefit from such coherence relations: Are discourse or coherence relations salient or accessible enough for readers to facilitate comprehension? Do the readers recognize implicitly signaled or un-signaled relations during the process of online comprehension? Can the readers transfer their knowledge of local coherence to global coherence at the macro level of discourse? Through a mixed method research design, both quantitative and qualitative data were obtained through reading comprehension and discourse coherence tasks administered to 26 EFL freshman students enrolled at an English teacher education program. The relevant examples from a single test are discussed in relation to the recognition of coherence relations in text both at the local and global level. Thus, the difficulties students encounter in making sense of the text by the use of coherence relations are analyzed. The results suggest that coherence relations, in the absence of explicit marking, are not easily accessible to L2 readers. Particularly, the less skilled L2 readers experience problems in recognizing un-signaled relations unless they are aided by background knowledge, or previous content schemata. It seems that it is rather difficult to transfer knowledge of coherence relations at the local level to larger discourse level involving the whole text.

Keywords: Coherence relations, Rhetorical structure theory, reading comprehension, EFL reading skills

ÖZET

Okuyucuların bir metni tamamen anlayıp kavrayabilmeleri için, zihinlerinde metne dair tutarlı ve bağdaşık bir anlam şeması oluşturmaları gerekir ve bunu yapabilmek için de okuyucuların metindeki her bir söylem alt birimini birbirine bağlayan bağdaşıklık ilişkilerini farkedip görebilmeleri gereklidir. Bu ilişkiler bazen örtülü bazen de bir dizi bağlaç veya ipucu tamlamalar yoluyla nispeten daha açık biçimde işaretlenmiş olabilir. Bu çalışmanın amacı, yabancı dil okurlarının bu bağdaşıklık ilişkilerinden okuma ve anlama esnasında ne kadar faydalanabildiklerini ortaya koymaktır. Acaba bağdaşıklık ilişkileri okuyucuların anlama sürecini kolaylaştıracak kadar ulaşılabilir ve kolay bulunabilir unsurlar mıdır? Okuyucular okuma anında örtülü ve açıkça işaretlenmiş bağdaşıklık ilişkilerini farkedebilmekte midirler? Okuyucular mikro düzeydeki bağdaşıklık ilişkilerini makro düzeye aktarma yeteneğine sahip midirler? Karışık araştırma deseni çerçevesinde, okuma ve söylem bağdaşıklığı görevleri aracılığıyla İngilizce öğretmenliği programına kayıtlı 26 birinci sınıf öğrencisinden veri toplanmıştır. Burada sadece bir metine dayalı okuma sorularından seçilen bazı örnekler mikro ve makro metin düzeyinde bağdaşıklık ilişkilerinin tespit edilebilirliği bakımından irdelenmiştir. Böylelikle, okuyucuların bağdaşıklık ilişkilerinden faydalanarak metni anlamaya çalışmaları esnasında tecrübe ettikleri zorluklar incelenmiştir. Çalışmanın sonuçlarına göre, bağdaşıklık ilişkileri açık bir biçimde işaretlenmemişse, okuyucuların bu ilişkileri

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tespit etmesi pek kolay olmamıştır. Özellikle de okuma becerileri nispeten daha zayıf olan okuyucular açıkça işaret edilmeyen ilişkileri -konuya dair arka plan bilgisi ve zihinsel şablonları olmadığı sürece- tespit edememişlerdir. Öyle görünüyor ki lokal düzeydeki bağdaşıklık ilişkilerinden edinilen bilgiyi makro metin düzeyine aktarabilmek oldukça zordur.

Anahtar kelimeler: bağdaşıklık ilişkileri, Retorik Yapı Kuramı, okuma-anlama, yabancı dil olarak İngilizce okuma becerileri

INTRODUCTION

Text is not an amalgamation of randomly ordered sentences. It is usually organized in such a way that message transmission is almost guaranteed or at least facilitated. To form a mental coherent text representation, the reader has to understand the specific and intricate ways coherence relations among discourse units in text are signaled both explicitly and implicitly. Comprehending a text necessitates the development of coherent cognitive representations of semantic relationships in the texts. These mental representations of textual meaning are constructed through interaction of various types of knowledge that the reader has about the world, text structure and the language itself. According to van Dijk & Kintsch, as cited in Vasiljevic, 2013, the construction of mental representations during reading requires from the reader “the ability to relate and integrate information from different segments of the text”. Relations that hold together different segments of the discourse are referred to as coherence relations. They can be either implicit or explicit. While marking of coherence relations is not restricted to discourse markers, they are by far the most frequently studied discourse signaling tools.

Schiffrin (1987) describes the study of discourse markers as being “part of the more general analysis of discourse coherence”: how speakers of a language together integrate forms, meaning, and actions to create meaning out of what is said (p. 49). Achieving coherence in a text can be possible by different means. The relations that bind together various segments of the discourse—called coherence relations- can partially account for the coherence of a text in the eyes of readers or listeners. To be more specific, the identification of coherence relations by the speakers and readers enables them to build a coherent picture of meaning on a text and have a good comprehension of the details in the text. Discourse markers aid the human mind in the recognition of these relations.

Rhetorical Structure Theory (RST) is about how words and sentences combine to create text and in fact is a descriptive linguistic approach to a series of issues in the organization of discourse. It was originally designed, in the 1980’s, as a means to attribute structure to a text.(Man and Thompson, 1988). According to Mann et al. (1992) and Matthiessen and Thompson (1988), the theory initially had few claims about how written text functions, and how it involves words, phrases, grammatical structure, or other linguistic units. RST studies textual organization by means of relations that function as a glue between parts of a text. It accounts for coherence by

proposing a hierarchical and connected structure of texts, in which every segment of a text has a role to play, with respect to the other parts in the text. Mann and Thompson (1987) believe that a theory of text organization must somehow provide an explanation not only for the kinds of parts or constituents in a text, the arrangements of the parts, and the way they are connected to create a whole text, but should also offer a natural descriptive account of any particular text.

The idea of achieving coherence through relations in text is widely accepted, and the relations have also been called, in the literature, *coherence relations*, *discourse relations* or *conjunctive relations* by different authors. There is a less known and still vague phenomenon that has become apparent in the use of RST. It is the “recognizable presence of relations that are, seemingly, not signalled in any explicit way”. Taboada and Mann (2006) state that:

Relations can be signalled by cue phrases (discourse markers or discourse particles), mood, tense and aspect, or structural characteristics, such as adjacency pairs in conversation. Cue phrases have been the main object of study in the area of relation signaling. They have received different names: coherence markers, cue phrases, discourse connectives, or discourse markers.

An important question one may pose at this point is why we need to, or should, have a theory such as RST. There could be several answers offered in different fields, but in the linguistic side of the theory, first of all, RST proposes a different view of text organization than most linguistic theories from a linguistic point of view, and a more complete one than most theories of discourse. From the perspective of the constructivist views on education and interactive views of reading, readers attempt to achieve local and global coherence when they comprehend text. Coherence can sometimes also be achieved by explicit features of the text such as anaphoric references, conjunctions, transitional words and phrases, rhetorical predicates, and also some other signaling devices. However, it is also not uncommon to witness cases where the coherence relations are inferentially created. Skilled readers are able to discern the physically invisible coherence relations that tie together the text constituents. However, it is crucial to state here that “there is no guarantee that coherent text representations are constructed because the process is contingent on the reader's judgment that the author intended to construct a coherent message” (Ted Sanders, Joost Schilperoord, Wilbert Spooren, 2001). All these claims may turn out to be incorrect if the text is so disconnected or loosely joined and not reader-friendly that the reader gives up trying to construct a coherent and meaningful message in his/her head. However, a great majority of authentic texts indicate some signs of coherence and almost all readers do make the effort to come up with a coherent construction and mental representation.

A. Graesser, P. Wiemer-Hastings, and K. Wiemer-Hastings (2001) state that discourse relations have been a focus of study in the areas of text linguistics and discourse processes. Many researchers attempted to produce different taxonomies of

coherence relations that, they claimed, could explain the structure and processing texts, oral and written (Sanders, Spooren, and Nordman, 1992; Sanders 1997, Halliday and Hasan 1976; Mann and Thompson, 1986). Most of these studies focused on identifying a relationship between the coherence relations present in the text and the discourse markers used to signal them linguistically, most of the time inter-clausal or inter-sentential connectives. It seems that a relatively fewer number of coherence relations appear to underlie the connectives that explicitly occur in texts. Some connectives signal ‘temporality’ (e.g., when, while, after, during, and, next), some signal ‘causality’ (since, as, so), some of them ‘intentionality’ (in order to, so as to), and ‘opposition or contrast’ (although, however, nevertheless), and also ‘logical implication’ (therefore, hence), and so on.

A text is claimed to be coherent to the extent that the ideas, events and other phenomena in the text can be linked to each other semantically and conceptually. In simple terms, a text is coherent if the reader is able to proceed easily from one sentence to the next and perceive it as an integrated whole, rather than a series of disconnected or irrelevant sentences. When a reader is able to create a link in his/her mind, more technically the working memory, between incoming sentence and the previous sentence or phrases or some other content-based information, we can say that there is local coherence. Global coherence, however, can be achieved when what a person reads makes sense in relation to the larger context, that is the macrostructure of the text, the overall message, or the general impression the readers gets from the text, which is no longer in the readers’ working memory.

Psycholinguistic research to date in discourse text comprehension suggests that readers seek for coherence at both micro and macro levels (Albrecht and O’Brien 1993; Myers, O’Brien, Albrecht, & Mason, 1994; Singer, Graesser, and Trabasso 1994; van den Broek and Lorch 1993, cited in Graesser et al, 2001). However, there is also controversy about the consistency of the results achieved at the macro, or namely, the global level of coherence. It is generally known that achieving text coherence can sometimes be supported in the presence of explicit connectives that point at how textual segments should be linked together (Britton and Gulgoz 1991; Millis and Just 1994). On the other hand, it is also possible that readers may not always need the presence of textual cues which explicitly signal coherence relations to establish conceptual coherence since these cohesive links may sometimes be filled in through inferences by the reader. As long as the readers have enough world knowledge and content schemata about the topic of the text, they are not quite dependent on the cues and thus require fewer of the explicit signals.

Only a few studies focusing on discourse relations have taken into consideration all the possible signals and as a result, the impression created is that signaling is low or not frequent. In line with this claim, research studies dealing only with coherence relations usually indicate that more than half of the relations are unsignaled ones. The statistics on the official RST website (Mann & Taboada, 2007), which is actually a

very rich database consisting of 187 units, claim that approximately 72% of the relations are un signaled, or at least not signaled explicitly (by a discourse marker). Another possibility might be the case that, as suggested by Taboada (2009), readers' expectations about how texts (also conversations) develop and flow may provide enough information to interpret higher-level relations at the global level. For example, a reader may easily identify and designate the last few sentences of a text as a summary of the whole text since he or she has been familiar with the traditional overall structure of texts, and certainly has the knowledge that a conclusion or summary typically appears at the end. The proposal made by Taboada (2009) goes even a bit further and claims that:

It may be the case that all relations are indeed signaled, that is, that they are all explicit. The challenge lies in finding what the particular signal is in each case. If people truly interpret different types of relations with relative ease they must be using signals to guide that interpretation. This leads to two different problems: Establishing that relations are cognitively represented in the minds of hearers and readers; and, if indeed relations are cognitively plausible, discovering the cues used to interpret them.

Previous Studies

Following the introduction of rhetorical relations or coherence relations by Mann and Thompson (1988) and also influenced by even previous work by Hassan and Halliday (1976), there have been numerous studies into the role of coherence relations in text comprehension, some of which dealt with certain conjunctions or discourse markers specifically via some linguistic tasks on manipulated texts, but no single study investigated the readers' comprehension problems posed by the mis- or non-interpretation of coherence relations in authentic texts. Recent studies have aimed to account for the coherence relations in text through "recall information" or "manipulated text" methods. Most research studies usually looked at how readers perceive the logical relations between ideas at the intra- or inter-sentential levels. However, the current study looks at also how readers make use of coherence relations in authentic texts, which requires processing of coherence relations at the discourse level: at both macro and micro levels of discourse. To mention a few of the earlier leading studies in this area will point out to what has already been found out about the role of coherence in L2 reading comprehension.

Geva (1992) aimed to discover whether and at what level of L2 proficiency the meaning of conjunctions is comprehended by the adult literate L2 learners. University level L2 learners of English were asked to perform a number of tasks in which their comprehension of coherence relations and the discourse markers used to signal them were tested intrasententially, intersententially and at paragraph level. Her results revealed that the ability to realize the nature of coherence relations within local contexts is a necessary but not sufficient component of text comprehension. She concluded that, with increased proficiency, L2 readers could improve their ability to utilize and infer coherence relations in more extended discourse.

In another study, by Sanders and Noordman (2000), researchers studied the cognitive nature of these relations. In an experiment where reading, verification, and free recall tasks were used, two important aspects of the structure of expository texts were examined: first, the type of coherence relation between parts of a text (problem–solution vs. list) and second, how these relations were marked by the use of signaling phrases (implicit vs. explicit). They found out that both variables influenced text processing: “Problem solution relations lead to faster processing, better verification, and superior recall. Explicit marking of the relations resulted in faster processing but did not affect recall (p. 37).” They concluded that the processing of a text segment is dependent on the relation it has with the preceding text segments. The linguistic marker has an influence during online processing, but this influence fades over time. This was in contrast with the effect of the coherence relation, which was also present in the recall.

Degand and Sanders (2002) claim that there is no agreement on the exact role of explicit discourse markers on text comprehension; they state that three different findings are presented in the relevant literature: markers having a facilitating effect, an interfering effect or no effect at all. The first goal of their (2002) article was “to clarify this problem of contradicting results by limiting the scope of the study to causal relations, and to one specific text type: expository texts”. Furthermore, in their study, they tried to control the naturalness of the experimental texts: readers were not required to have specific background knowledge to comprehend the texts and the experimental method included questions with open-ended answers. Their second goal was to explore “to what extent a supposed effect of linguistic marking depends on readers’ proficiency in a first or second language”. The experiment required reading of short expository texts in two languages, Dutch and French, which both functioned as L1 and L2. Their results showed that readers could take advantage of the presence of causal relational markers both in L1 and in L2.

Vasiljevic (2013) reports the following on the contradictory nature of findings in the related studies:

While contradictory findings raise questions about the extent to which explicitness of linguistic markers can be expected to facilitate post-reading recall of the propositions in the text, there seems to be sufficient experimental support for the positive effect that logical connectors have on real-time text processing and construction of meaning. Several conditions, however, must be fulfilled for this effect to take place. According to Goldman and Murray (1992), in order to take advantage of the linguistic markers in the text, readers must lack the requisite linguistic knowledge and content schema to infer implicit coherence relations. High-skilled readers with sufficient background knowledge, good understanding of the text structure, and a high level of language proficiency are able to construct coherent mental representations of the texts, even when logical relationships are not explicitly signaled. Secondly, readers must be familiar with the general functions of discourse markers. Thirdly, they must be able to instantiate those functions in the specific text in which the signal words occur. In addition to these conditions, Jung (2003) also observed that discourse cues are more likely to facilitate comprehension of expository texts than narrative texts, as they tend to incorporate more complex semantic relationships that go beyond the simple episodic sequences.

The present study aims to relate the findings of previous studies on coherence relations and discourse processes to the field of foreign language reading and shed some light on whether the recognition of such relations help L2 readers better comprehend a text and offer deeper insights into the coherence-based text-comprehension problems readers face during the reading process. The research questions the study tries to answer are the following:

1. Are discourse or coherence relations salient or accessible enough for L2 readers to facilitate comprehension?
2. Do the readers recognize implicitly signaled or un-signaled relations during the process of online comprehension?
3. Can the readers transfer their knowledge of local coherence to global coherence at the macro level of discourse?

METHODOLOGY

This section briefly explains the procedures followed during the study.

Participants

The participants in this study were chosen through convenience sampling among the students attending the Foreign Language Education Department at the Middle East Technical University. The students were registered for the course titled “Freshman Reading Skills 2” and 26 of these students volunteered to take part in the study. Their level of English was at an advanced level and all of them had already passed the university’s English proficiency exam (METU EPE). Previously, they had already taken another reading skills course, which introduced them the main skills and strategies necessary for reading both academic and non-academic authentic texts.

Materials

The materials used in the study consist of a series of reading comprehension examinations based on authentic texts taken from original sources, especially international news magazines such as the “Time” and Newsweek” magazines. To be able to give the reader a clearer understanding of the context in which each text segment is embedded, the examples discussed here are taken from only one of the texts because of the space limitations. The selected examination is based on a text that has a rather general topic and it does not require specific schemata or heavy background knowledge. It is titled as “Healthy, Wealthy and Unhappy: Why is it that economic success does not necessarily bring personal contentment?”(See appendix B)

The examinations were prepared by a joint-committee of experienced reading instructors in the department and the items related to discourse competence or more specifically, the recognition of coherence relations, were previously identified by this joint committee. The researcher’s job was to specifically look at these predetermined

questions of discourse or coherence relations in the test and see how well the students achieved on these coherence-related items. The examination can be seen in Appendix B and the text can be seen in Appendix A. The descriptive statistics for the reading test can be seen in Appendix C. The average percentage of correct answers in the test was 62 percent.

Since readers are expected to establish coherence by relating the different information units in the text, a great number of questions aimed at discovering how well the students synthesize information from different segments of the text. In other words, the questions were not at the factual knowledge level but rather required the integration of a number of ideas via the help of discourse markers, background knowledge, coherence relations as well as syntactic and lexical cues.

Data Analysis

Qualitative data derived from the analysis of the test results is used to diagnose which items on the tests were more difficult for students. The marking of the papers was first done by the researcher himself. Later, two other faculty members separately marked exams using the same answer key. In all of the six reading comprehension tests, inter-rater reliability was above 0,85. In other words, they all agreed at large that students' answers were correct or incorrect. In the next step, the researcher and the two other faculty members studied all the items which got a mean score that is below the average score for each test, and usually it was the halfway between the lowest score and the highest score, which is varied between 0,45 and 0,70 depending on a specific test. Here, the items that were labeled difficult according to above mentioned criteria are highlighted, as can be seen in Appendix C. Then, for each question, the researcher explored the problems that the readers encountered in dealing with the specific question and the corresponding text segment. Thus, he was able to identify how good they were at recognizing the coherence relations and using them to reach the correct answers, which basically required readers to connect different discourse segments in the text.

RESULTS

It is more convenient to reveal the results under two main categories. The first one covers the coherence problems experienced at the sentence level, either intra- or inter-sentential, which is more local. The second category deals with problems experienced at the whole text or discourse level, which is more global.

A- Difficulties with the reading skills that require the use (recognition) of coherence relations at the sentence level

Here I discuss the main problems readers encountered in the interpretation of micro and macro level discourse relations during online comprehension. First I provide a list of coherence-based reading skills that proved difficult for the L2 readers at the

sentence level and then I continue with sample coherence-related problems at larger discourse level.

1- Recognizing intra-sentential relations

Being able to understand the relations among the units of meaning or clauses within a sentence is a vital reading skill that directly aids text comprehension. The reader has to be aware of lexical phrases, adverbs, discourse markers and other grammatical features that affect meaning within a single sentence. In some cases, where such sentences are the key elements of text carrying the main idea, incapacity to get the correct message from such a sentence may result in incomprehension on a larger scale unless the reader monitors his/her comprehension in a timely manner. Recognizing the meaning relations in a sentence may also help the reader identify the meaning of unknown lexical phrases or idiomatic expressions as can be seen in the following example.

T1Q6: Explain the words “empirical” and “impressionistic” in your own words.

This question is also partially dependent on the ability of the student to see intra-sentential relations. The first sentence of the third paragraph in the text says:

For those who prefer empirical to impressionistic evidence, there are opinion polls. I recall that back in the '80s, a survey asked Western Europeans the mother of all questions: Are you happy? The Germans, the richest, were the most miserable. The Irish and Portuguese, the poorest, turned out to be the most contented. ...

Here the reader is expected to link empirical evidence to opinion polls; and do the same for impressionistic evidence and personal observations, which have already been mentioned in the previous paragraph. However, this question got one of the lowest mean scores on the test: Around 40 percent of the students could not infer the meanings of empirical and impressionistic, and mostly they confused the two even if they were able to give an answer. The readers obviously could not attend to the syntactic cues available in the linguistic structure of the sentence. If someone prefers X to Y, then X is more valuable or favorable than Y. So, put it into the context of the text: if, for a reader, empirical information is more favorable than impressionistic information, then he has to listen to what opinion polls, which provide statistical or scientific, thus empirical, information, have to offer. However, the readers could not see the semantic relations in the sentence.

2- Identifying inter-sentential relations and lexical cohesion

This skill is one of the crucial skills that are needed in foreign language reading. It helps the readers easily see the cohesion between ideas. Without mastering this skill,

making sense of what we read would be very hard. However, many students have difficulty in developing this skill as can be seen in the following examples from the test. The test and the accompanying text are provided in the Appendix, to which you can refer for expanded context of the questions.

Q6: Which sentence helps us guess the meaning of “affluent” and “impoverished”?

To be able to answer this question, the readers have to pay attention to the first sentence of the second paragraph in the text. It says:

...Any seasoned traveler can attest to the fact that wealth and happiness do not usually cohabit. Visit Europe and be mystified by the unsmiling faces and furrowed brows in the most affluent countries. Visit Africa and marvel at the laughter and general merriment, even in the most impoverished ones....

In this context, African countries are meant to be happy although they are impoverished whereas European countries are still seeking happiness although they are affluent. If the students can make the connection between the first sentence of the paragraph and the following sentences, recognizing the concessive relations, they can easily answer this question. But in the exam, a number of students (39 %) were not able to understand the fact that impoverished means poor and affluent means rich in that context.

3- Deducing the meaning of sentences with the help of cohesive devices

This type of question requires the readers to arrive at the target meaning through understanding the function of cohesive devices, which shape the meanings of the sentences.

Q2- Paraphrase the sentence “they had sown the seeds of efficient agriculture”.

To be able understand this sentence, a reader first has to recognize the relation between this sentence and the previous sentences. There are a few key words or phrases which directly point at the right answer. One of them is the verb “to double” used for the crops and the other is the “fertilizer” used as a means of doubling the crop. So the idea of ‘sowing the seeds of efficient agriculture’ in fact corresponds to “doubling the crop the peasants produced through fertilizers”. However, a great many students were unable to indicate this relationship between efficient agriculture and using fertilizers to double the crop. Here, although the relationship is more or less a claim-argument relation, readers were not able to recognize it due to the lack of an explicit signaling.

Q3- How do we understand that “Alas” has a negative or a positive meaning?

Another example is the use of “alas” as a discourse marker connecting two consecutive statements. The previous sentences in the paragraph clearly indicate that peasants are expected to produce more crops in the following years after the introduction of the fertilizers. But the sentence after the word “alas” is in sharp opposition to the preceding statement. So, it must be similar to concessive conjunctions such as however or but. Nevertheless, one third of the students failed to recognize the function of the cohesive device “alas”. This shows that it is not so easy to recognize the relationship if the discourse marker is not of any help, especially when the semantic meaning of the conjunction is unknown to the reader.

4- Recognizing pronoun references and reference phrases

This skill is a very traditional but indispensable one in reading comprehension. Without knowing what/who the pronouns or lexical phrases are referring to, it is extremely difficult to understand the messages. The example below shows how this skill is in making sense out of texts as well as how challenging it might be as opposed to the common belief that finding referrals is an easy task.

Q9: What does “this strange phenomenon” refer to?

In the third paragraph of the text, it is claimed that:

...It is not a new insight that the relationship between material and emotional welfare seems to be an inverse one. When the carpenter of Galilee declared that man does not live by bread alone, he reminded all those who see man as Homo Oeconomicus of their materialist blinkers. What is the explanation for this strange phenomenon? Maybe it has to do with the cerebral and the visceral. Mankind has known for a long time that too much self-scrutiny is not conducive to happiness. ...

In other words, rich countries are not the happy ones. This is also the main idea of the whole paragraph, which makes it more salient for effective readers. But, since students are used to looking for proper names or single words while dealing with referring terms, it was not so easy for them to find out what the phrase “this strange phenomenon” referred to. Most of the answers were at an acceptable level, but still 41 percent was unable to find the right answer. This clearly indicates that students failed to see the link between the phrase “strange phenomenon” and the claim that “the relationship between material and emotional welfare is an inverse one”.

B- Problems of coherence relations at discourse level

The rest of this section deals with problems of coherence relations at a larger discourse level. Dealing with the coherence relations at the whole-text level requires

the readers to digest all the semantic propositions in the text and create a complicated full representation of the text recognizing all the implicit and explicit coherence relations spread among sentences and paragraphs. The results as discussed below suggest that recognizing coherence relations in a single paragraph is not full guarantee that this knowledge will smoothly integrate with the sum of all the other segments or paragraphs of a text. The following items indicate the readers' problems with coherence relations at the larger discourse level.

1- Following the line of reasoning of the writer

To be able to correctly interpret the messages coded by the writer on the page; it is essential that a reader get into the perspective of the author and follow his reasoning. The capacity to understand the writer's perspective may also help the reader guess the meanings of unknown vocabulary using the data available in the context. The following example from the test is a vivid example of how failure to follow the reasoning of the writer results in miscomprehension.

T1Q17A: Paraphrase the sentence “Man doesn't live by bread alone” in your own words.

The last sentence of third paragraph in the text states that:

...When the carpenter of Galilee declared that man does not live by bread alone, he reminded all those who see man as Homo oeconomicus of their materialist blinkers....

If you closely follow the writer's reasoning in the previous sentences, you could easily interpret the meaning of this sentence as “Materialistic well-being is not enough for man to be happy or survive.” However, almost 45 % of the students got the message wrong since they failed to follow the reasoning developed in the previous lines of the same paragraph. Some of them said it meant “...just bread is not enough for man, he needs more money, cars and houses, etc”, which is totally the opposite of what is implied in the paragraph, also in direct opposition to the overall theme of the text. In other words, the students failed to see the claim-proof relation between this sentence and the previous one, which is the claim. This example clearly points out to the fact that being able to interpret coherence relations at the sentence level does not necessarily transfer to the discourse level.

2- Recognizing the Overall Message of the Text

It is very common for authors to discuss a range of ideas, either with a agreeing or disagreeing view, and finally reflect the dominance of one side over the other, or their equal stance to all the mentioned ideas. However, finding out the general overall message that a text reflects is not an easy task for less skilled readers: they might get

stuck with the minor details and may not see the whole picture or put the small segments together to create a whole coherent view of the text. This is in fact something that even RST has not dealt with in great detail. The following examples are of this nature.

T1Q18: State whether the following statement is True or False.

“According to the text, intellectual minds search for the ways to happiness.”

Throughout the text, it is emphasized that too much self-scrutiny is not conducive to happiness and that, for intellectuals, the pursuit of happiness is something unbecoming of cultured people. In spite of this emphasis, some students still were not able to grasp the overall message of the text; and 33 % of them gave the wrong answer to this question. What the readers are supposed to do to reach the right answer is to think holistically by putting together all the topic sentences of the relevant paragraphs and make a synthesis of them.

3- Putting Together Smaller Pieces of Information Spread Over Text to Make Inferences:

This skill requires the readers to identify the specific clues from different sections of a text and make inferences based on them to reach a conclusion not openly stated. They have to first digest the relevant pieces of information, make it their own and express it showing their full comprehension of the text. The following questions exemplify such abilities.

**T1Q10: Provide a synonym from the text for each of the following words:
(p.4-L.2) 1-visceral: 2-cerebral:**

This question requires the readers to put together pieces of information available in different paragraphs and deduce the meaning of the unfamiliar words. There are some other similar concepts in the other paragraphs that will aid the reader to arrive at the meaning of these two concepts. The only thing they have to do is to pay more attention to the discourse clues and choices of lexical cohesion to see the relationship between these concepts. The text also provides some example behaviors of both visceral and cerebral, which eases the job of the reader. Words like “intellectual”, “elite”, “sophisticated”, “shallow”, “deep thinker”, “malcontents” and “cultured” occur throughout the text. The readers’ job is to figure out which words describe cerebral and which others refer to visceral, which is a matter of identifying the function of referring terms. However, this task was not so easy for them, and only 15 percent of the students, who were high achievers in the overall test, could see the relationship.

T1Q17B: Paraphrase the sentence “Too much self-scrutiny is not conducive to happiness.” in your own words.

This sentence is the topic sentence of the fourth paragraph, which states the main idea. To be able to paraphrase this sentence, assuming that they may not know “scrutiny” and “conducive”, they have to understand the main idea conveyed in the whole paragraph. In other words, they have to see the elaboration relation between this topic sentence and the rest of the paragraph. However, if they cannot realize that this sentence is not the topic sentence, they will have less chance of providing a satisfying paraphrase. That was the case: 50 percent failed in this question. Another example below illustrates the same problem.

Consider the sentence “A happy intellectual is an oxymoron.”(P.4- L.12) Explain what you understand from the word “oxymoron”, an epistemological term. What might it mean?

The fourth paragraph of the text emphasizes that too much self-scrutiny is not conducive to happiness, and thus intellectual people who reflect on things deeply can never reach happiness. So, being unhappy is a sign of an intellectual and sophisticated mind as reinforced by the fifth paragraph, too. After reading these paragraphs and taking the whole text into consideration, the reader is expected to conclude that being both happy and intellectual simultaneously is a paradox. Because, according to the text, you can be either of them at a time. So, answers like “two contradictory ideas” or “paradox” would be acceptable. Although any logical account showing what was wrong with the phrase “a happy intellectual” was accepted correct, 85 percent of the readers failed in this question. This shows that summary relation if expressed via different lexical items, or without familiar lexical phrases, is difficult to recognize for the readers.

Q15-What is the white man’s logic to reach happiness?

This question also requires the readers to link all the paragraphs, lexical phrases and referring terms together to be able to reach the correct answer since the answer does not lie in a single sentence or paragraph but spread over the whole text. Readers are expected compare different stories of the rich businessmen and the poor Mexican villagers mentioned at different sections of the text. As a consequence, this question demands the recognition of a set of complicated coherence relations. So it was a challenging question, which was correctly answered by only 20 percent of the students.

DISCUSSION & CONCLUSION

The first research question to which the study looked for answers was “Are discourse or coherence relations salient or accessible enough for L2 readers to facilitate

comprehension?” Considering the examples discussed in the previous section, unless the relations are explicitly marked with some discourse markers such as conjunctions, it is difficult for readers to infer the semantic relationship. For instance, in the case of the word “alas”, it was rather difficult for students to figure out the meaning of this word, indicating that they were not able to recognize the coherence relation between these two consecutive sentences. This becomes even more difficult when readers’ background knowledge of the topic is limited. In cases where the readers are able to infer the coherence relations, it is still challenging for them to integrate this knowledge with the rest of the text. So, coherence relations do not necessarily get recognized when readers are not provided with explicit signals.

The second research question asks whether the readers recognize implicitly signaled or un-signaled relations during the process of online comprehension or not. As the examples from the test show, un-signaled coherence relations do not help readers unless the readers have specific content schemata. When more skilled readers are confronted with an un-signaled coherence relation, they might be able to use their general understanding of the more global text meaning and thus deduce the semantic role of implicit coherence relations.

As an answer to the third question, “Can the readers transfer their knowledge of local coherence to global coherence at the macro level of discourse?”, raised at the beginning of the study, the results clearly indicate that creating a mentally coherent representation of the whole text is considerably more demanding than identifying a coherence relation between two adjacent sentences or clauses in a single paragraph. In other words, creating a mental picture or a cognitive and coherent outline of a text whose paragraphs are connected through a higher-level discourse structure is more demanding than labeling the type of relations between sentences. Consequently, transferring of sentence-level comprehension of rhetorical relations to a text-level can be possible only through extensive reading experience, rich schemata and high language proficiency.

The research study by Geva (1992) provided results which clearly point at the importance of knowledge of discourse rules and the pedagogical implications of such knowledge. Geva proposed a “developmental pyramid” which indicates the relationship between competence in L2 and learners’ ability to understand and employ conjunctions and other connectives during comprehension of expository texts. At the bottom of the pyramid, learners with basic intra-sentential knowledge of conjunctions are located and as the pyramid narrows in the upward direction, learners’ knowledge of conjunctions at the inter-sentential level, as signals of coherence relations, can be observed to increase. As the pyramid gets even narrower towards its top, learners are able to recognize coherence relations at all levels of discourse, from intra-sentential to global text structure. Hence, they can comprehend logical relations throughout the text. Geva concluded that, “the adult L2 learner gains more proficiency and automaticity in processing various components of L2, the ability to deal with larger chunks of text and

with the logical meaning of conjunctions connecting such chunks develops” (p. 744). Thus, explicit instruction of connectives link different textual segments and their various functions may assist language learners to improve their discourse skills in order to employ this knowledge to remedy comprehension problems. Similarly, other research in second language reading suggests that as the adult L2 reader gains more proficiency and automaticity in processing various components of the second language in general, and in reading in particular, the ability to deal with larger chunks of text and with the logical meaning of coherence relations and conjunctions gradually develops.

To sum up, the results of the study suggest that it may be easier to handle intra-sentential cohesion than inter-sentential and inter-paragraph cohesion. What this implies is that the process of reading comprehension involves relating new or incoming information to already existing information stored in memory. If L2 readers allocate most of their resources to processing basic functions such as decoding lexical access and syntactic information, readers may not have sufficient cognitive resources for storage and for higher level text processing such as elaboration of text information into prepositional macrostructures and the derivation of a topic or theme. That is why readers who can identify intra-sentential coherence relations cannot transfer it to deal with global coherence based on larger text chunks.

Yet, another important finding in this study is that the results seem to support the idea that coherence relations are an enduring and “unanalyzable” part of the cognitive representation itself, whereas linguistic markers, like connectives and similar signaling phrases, are merely denotations of these relations that lead the reader in selecting the right coherence relation. This conclusion is in line with a perspective on coherence where linguistic markers, as part of the surface code, “guide” the reader toward a coherent text representation (Gernsbacher & Givón, 1995; Graesser et al., 1997; Noordman & Vonk, 1997, cited in Degand and Sanders, 2002). Especially in the case of L2 readers who are deprived of rich L2 written input, learning English in non-natural settings through grammar-focused instruction, explicit signaling of coherence relations facilitates their comprehension of text. Otherwise, they are overwhelmed by the cognitive load of interpreting coherence relations, especially at the larger discourse level.

Implications

An emphasis on the regular testing of the comprehension of coherence relations is expected to create a positive backwash effect on students, as suggested by Hughes (1989), who claims that testing and evaluation practices have a strong effect on both teaching and learning, which can be either useful or harmful. Teachers should, therefore, develop activities, exercises and tests that emphasize the skills that they require their students to improve, so that the students will be able to create a concrete link between what they are studying and what they are tested on. To put it simply, tests should not be seen only as an assessment tool, but at the same time as a learning

opportunity. Given on a regular basis, “pop quizzes” on comprehension of coherence relation, either through grammatical or lexical clues, can help teachers evaluate their students’ progress and ultimately adjust instruction to match students’ needs. Through such practices aiming to develop learners’ awareness of coherence relations in text, students are more likely to give more importance to the structural features of the text, which in turn should end up with higher sensitivity to the links between the various segments of discourse, assist them recognize the important role that grammatical and lexical cohesive links play in text coherence, and deepen their knowledge of the function of the individual cue words. In short, explicit focus on discourse markers with regular assessment could help students become both more strategic readers and more autonomous learners.

As a final pedagogical implication, the results suggest that L2 readers need to be provided with ample opportunities to read authentic, connected discourse, to consider the nature of linguistic markers which signal inter-paragraph text relations, and to infer those relations that are not explicitly marked in the text.

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APPENDIX A

E S S A Y

Gerd Behrens

Healthy, Wealthy and Unhappy

Why is it that economic success does not necessarily bring personal contentment?

SOME YEARS AGO, THE STORY GOES, A LARGE CORPORATION gave African peasants fertilizer so that their crop would double. And indeed it did. The businessmen thought they had sown the seeds of efficient agriculture. Alas, when the next season came the peasants didn't plant anything. "Why don't you plant?" the businessmen asked. The peasants thought this question somewhat silly. "Our last harvest was double," they replied. "We have enough to feed our families till next year." Whether a rural legend or not, the story illustrates the different answers people give to the question, How much does man need? One says, "Enough to subsist." Another may say, "As much as possible." The latter certainly creates more wealth. But does he also create more happiness?

Any seasoned traveler can attest to the fact that wealth and happiness do not usually cohabit. Visit Europe and be mystified by the unsmiling faces and furrowed brows in the most affluent countries. Visit Africa and marvel at the laughter and general merriment, even in the most impoverished ones.

For those who prefer empirical to impressionistic evidence, there are opinion polls. I recall that back in the '80s, a survey asked Western Europeans the mother of all questions: Are you happy? The Germans, the richest, were the most miserable. The Irish and Portuguese, the poorest, turned out to be the most contented. In 1993, a global survey by the Angus Reid Group constructed a Hope Index, asking people how optimistic they felt about the future. Pessimism reigned supreme in Europe, particularly in the countries along the Rhine. In Germany (per capita GDP \$28,000) only 18% of the respondents were upbeat about the future, and in France (\$26,000) it was 17%. By comparison, South Africa (\$3,500) and Brazil (\$4,400) scored 42% and 64% on the Hope Index. It is not a new insight that the relationship between material and emotional welfare seems to be an inverse one. When the carpenter of Galilee declared that man does not live by bread alone, he reminded all those who see man as *Homo oeconomicus* of their materialist blinkers.

What is the explanation for this strange phenomenon? Maybe it has to do with the cerebral and the visceral. Mankind has known for a long time that too much self-scrutiny is not conducive to happiness. "Ask yourself whether you are happy, and you cease to be so," John Stuart Mill wrote more than 100 years ago. To intellectuals, the pursuit of happiness is something un-

becoming of cultured people. It is appropriate, the élite might argue, only to the shallow and unsophisticated. How many novels or movies about happy people win critical acclaim? Anguish and discontent are taken as the mark of a deep thinker, a well-rehearsed frown as his badge. *Pace* Epicurus, a happy intellectual is an oxymoron.

To the cerebral, it is not so much that ignorance is bliss, but that bliss is ignorance. Suffering is often seen as a precondition not only for great insights, but for any meaningful existence. I suffer, therefore I am. Marcel Proust, one of the great malcontents of all times, held that the only possible paradise is the one we've lost. And if there are no obvious problems one can always

invent some. Thinking up problems serves as a makework scheme for the problem-solving classes.

The realization that wealth breeds unhappiness calls for a new yardstick to measure human development. The current scale, the United Nations Human Development Index, classifies countries according to per capita income, literacy rate and life expectancy. These criteria, unsurprisingly, were drawn up by people with high per capita income, high literacy rates and high life expectancy. On this index a nation with a large proportion of short-lived illiterate subsistence farmers scores

virtually zero. A nation of neurotics with two Ph.D.s each who will live to 90

gets full marks. The Bakutu, a tribe living in the Congo region of Central Africa, have always considered the white man's logic a bit batty. They call him *lolema djola feke*, "the bat that flies intensely but knows not where to."

According to the parable of the businessman and the fisherman, some Mexicans agree with the Bakutu. On holiday in a fishing village, an American businessman watches a local fisherman haul in a rather small catch. "Why don't you stay out at sea longer and bring in more fish?" the visitor inquires. "I like to spend my time playing with my children, taking a siesta with my wife, playing the guitar with my friends," the Mexican answers. The American is not impressed. "If you worked harder you could buy a second fishing boat, then a whole fleet. You could head up a large corporation, move to New York and list it on Wall Street. Eventually you could sell your stock and become very rich." "And then, señor?" the fisherman asks. "Then comes the best part", the businessman replies. "You retire. You move to a Mexican fishing village. You take a siesta with your wife and play with your children ..."



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APPENDIX B

FLE 126 (04) READING SKILLS 2 QUIZ #1

PART 1

•Read the questions carefully and use only the space provided to write your answers. Write legibly and check your grammar.

A- Answer the following questions by referring to the text provided. (each 0,5 pts.)

1-a)Paraphrase the subtitle in very simple language (everyday language) .

b)Paraphrase the sentence “they had sown the seeds of efficient agriculture”.

2-Find a word in the first paragraph which comprises (includes) all of the following concepts: “peasant, fertilizer, crop, sow, harvest”

3-How do we understand that “Alas” has a negative or a positive meaning? (p.1-L.4)

4-Which phrase or word gives clue as to the meaning of “subsist”? Explain.(p.1-L.11)

5-Which sentence helps us guess the meaning of “affluent” and “impoverished”?How? (p.2-L.6 & 9)

6-Explain the words “empirical” and “impressionistic” in your own words. (p.3-L.1 & 2)

7-Which words or sentence(s) help us guess the meaning of “upbeat”?Explain. (p.3-L.14)

8-a)The second paragraph provides empirical evidence for the fact that money and happiness have an inverse relationship. True - False

b)What is the main idea of the third paragraph?

9-What does “this strange phenomenon” (p.4- L. 1) refer to?

10-Provide a synonym from the text for each of the following words: (p.4-L.2)

1-visceral:

2-cerebral:

11-Explain what you understand from the word (an epistemological term) “oxymoron”. What might it mean? Consider the sentence “A happy intellectual is an oxymoron.”(p.4-L.12)

12-Which word(s) give(s) information about the meaning of “yardstick”?Explain.

13-Which sentence states the main idea of the fourth paragraph? (p.6-L.2)

14-Which word can replace “subsistence”? (p.6-L.13). Explain.

15-What is the white man’s logic to reach happiness?

16-In the first paragraph, why does the author give the example of African peasants? What does he try to achieve?

17- a) Paraphrase the sentence “Man doesn’t live by bread alone.” in your own words.

b) Paraphrase the sentence “Too much self-scrutiny is not conducive to happiness.” in your own words.

18- According to the text, intellectual minds search for the ways to happiness. True - False

19-Americans fall into the group of viscerals whereas Mexicans fall into the group of cerebrals.

True - False

20-What is the attitude of the writer towards the topic? What message does he try to give the readers?

B- Find words in the text for each of the following words or definitions. Then write them next to each word/definition. Words are in the mixed order.(They are not chronologically listed as they occur in the text.) (0,25 pts. each)

- 1- Amusement, joyfulness -n.
- 2- Characteristic, sign, hallmark -n.
- 3- Criterion, measure -n.
- 4-Affirm, verify -v.
- 5-Occur, live, exist together -v.
- 6- Villager -n.....
- 7-Based on words and feelings, not factual info or numerical data- adj.
- 8- A group of ships -n.
- 9-Eye-glasses for a horse -n.
- 10- Harvest -n.
- 11-Produce, result in -v.
- 12- Survive -v.
- 13- Experienced, hardened -adj.....
- 14-Moral tale, anecdote, story -n.
- 15-Short sleep, snooze -n.
- 16- Uneducated, ignorant -adj.
- 17- Raise -v.
- 18- Be amazed/surprised -v.
- 19- Pleased, satisfied -adj.
- 20- Crazy, eccentric -adj.



APPENDIX C

DESCRIPTIVE STATISTICS FOR TEST 1						
		Mean	Std Dev	Cases		
1.	T1Q1A	,6138	,4852	26,0		
2.	T1Q1B	,5769	,5038	26,0		
3.	T1Q2	,6138	,4852	26,0		
4.	T1Q3	,8462	,3679	26,0		
5.	T1Q4	,8846	,3258	26,0		
6.	T1Q6	,6138	,4852	26,0		
7.	T1Q7	1,0000	2,0976	26,0		
8.	T1Q8A	,7308	,4523	26,0		
9.	T1Q8B	,6923	,4707	26,0		
10.	T1Q9	,5992	,4297	26,0		
11.	T1Q10	,1538	,3679	26,0		
12.	T1Q11	,1923	,4019	26,0		
13.	T1Q12	,9231	,2717	26,0		
14.	T1Q13	,6154	,4961	26,0		
15.	T1Q14	,1923	,4019	26,0		
16.	T1Q15	,6154	,4961	26,0		
17.	T1Q16	,3462	,4852	26,0		
18.	T1Q17A	,5769	,5038	26,0		
19.	T1Q17B	,5000	,5099	26,0		
20.	T1Q18	,9231	,2717	26,0		
21.	T1Q19	,5769	,5038	26,0		
22.	T1Q20	,8077	,4019	26,0		
23.	T1Q21	,5000	,5099	26,0		
VOCABULARY						
24.	T1Q22	,3846	,4961	26,0		
25.	T1Q23	,8077	,4019	26,0		
26.	T1Q24	,6538	,4852	26,0		
27.	T1Q25	,8462	,3679	26,0		
28.	T1Q27	,7308	,4523	26,0		
29.	T1Q28	,8846	,3258	26,0		
30.	T1Q29	,6923	,4707	26,0		
31.	T1Q30	,9231	,2717	26,0		
32.	T1Q31	,7308	,4523	26,0		
33.	T1Q33	,5000	,5099	26,0		
34.	T1Q34	,7308	,4523	26,0		
35.	T1Q35	,7308	,4523	26,0		
36.	T1Q36	,8462	,3679	26,0		
37.	T1Q37	,3846	,4961	26,0		
38.	T1Q38	,6538	,4852	26,0		
39.	T1Q39	,9231	,2717	26,0		
40.	T1Q40	,5000	,5099	26,0		
41.	T1Q5	1,0000	,0000	26,0		
42.	T1Q26	1,0000	,0000	26,0		
43.	T1Q32	1,0000	,0000	26,0		
T1Q26, T1Q5, T1Q32 has zero variance						
Statistics for		Mean	Variance	Std Dev	N of Variables	
Scale		26,3077	28,3815	5,3274	40	
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	,6277	,1538	1,0000	,8462	6,5000	,0449