EFFECTS OF SEDUCTIVE DETAILS ON READING COMPREHENSION IN A SECOND LANGUAGE

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EFFECTS OF SEDUCTIVE DETAILS ON READING COMPREHENSION IN A SECOND LANGUAGE

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Effects of Seductive Details on Reading Comprehension in a Second Language

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ABSTRACT

Effects of Seductive Details on Reading Comprehension in a Second Language

This thesis investigates the impact of seductive details on reading comprehension in a second language (L2). The study explores how different types of seductive details (totally unrelated versus moderately related) affect L2 reading comprehension and whether prior knowledge is linked to comprehension, particularly when exposed to texts with seductive details. The study involved 69 preparatory school students with A2 and B2 English proficiency levels. Three versions of the same reading material were presented to different groups: (a) no seductive details, (b) slightly irrelevant details, and (c) totally unrelated details. Participants completed a prior knowledge test about the text's topic before reading and a comprehension test after reading. The results revealed that seductive details did not significantly impact reading comprehension. However, a positive relationship was found between prior knowledge and reading comprehension when exposed to texts with seductive details. Higher prior knowledge was associated with better comprehension, regardless of language proficiency. These findings offer valuable insights for teaching L2 reading and developing L2 reading materials.

ÖZET

Metindeki İlgi Çekici Detayları İkinci Dilde Okumada Etkisi

Bu tezin amacı, ilgi çekici detayların ikinci bir dilde okuduğunu anlama üzerindeki etkilerini incelemektir. Çalışmadaki odak noktaları, ilgi çekici detayların türü ve okuyucu farklılıklarıdır. Araştırma soruları (a) ilgi çekici detay türünün (tamamen alakasız detaylar ve orta derecede alakalı ilgi çekici detaylar) ikinci dilde okuduğunu anlamayı etkileyip etkilemediğine ve (b) ikinci dilde okunanı anlamada ön bilginin etkili olup olmadığına, etkiliyse de hem yüksek hem de düşük dil yeterliğine sahip gruplarda geçerli olup olmadığına odaklanmıştır. Bu sebeple, araştırmaya hem A2 hem de B2 seviyesindeki öğrencilerin bulunduğu 69 hazırlık okulu öğrencisi katıldı. Aynı okuma materyali, üç farklı katılımcı grubuna üç farklı versiyonda sunuldu. Bu versiyonlar, ilgi çekici detayların varlığı ve türü açısından farklılık gösterdi. A2 ve B2 sınıfları, metnin üç versiyonundan birine rastgele atandı. Katılımcılara metni okumadan önce ve okuduktan sonra ön bilgi ve anlama testi uygulandı. Bulgulara göre, ilgi çekici detayların okuduğunu anlama üzerinde anlamlı bir etkisi olmamıştır. Konu hakkında ön bilgisi yüksek olan katılımcılar, anlama testinde daha iyi performans gösterdi ve bu durumun hem yüksek hem de düşük dil seviyesine sahip iki grup için de geçerli olduğu saptandı. Bu çalışmanın sonuçlarının, sınıfta ikinci dilde okuma öğretimi ve ikinci dilde okuma materyalleri oluşturma açısından yarar sağlaması beklenmektedir.

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CHAPTER 1

INTRODUCTION

1.1 Theoretical background

Reading is a fundamental skill that plays a crucial role in the acquisition of knowledge and development of cognitive abilities. It involves the interpretation of written language, which is a complex cognitive process that requires the coordination of various cognitive processes such as attention, perception, memory, and language comprehension. Reading is an important activity that is essential for success in education, professional and personal life.

Reading is a dynamic process that involves active interaction between the reader, the text, and the context in which it is presented. The reading process can be described as a series of stages that include pre-reading, reading, and post-reading activities. The pre-reading stage involves activities such as previewing, predicting, and activating prior knowledge. Previewing involves scanning the text to get an overall idea of what it is about, while predicting involves making assumptions about the content based on the title, headings, and other contextual clues. Activating prior knowledge involves recalling relevant information related to the topic being read.

The reading stage involves the actual decoding of the text, which requires the reader to recognize and comprehend the meaning of individual words, phrases, and sentences. This stage also involves the integration of new information with prior knowledge to construct meaning. Effective reading requires the use of various reading strategies such as skimming, scanning, and close reading.

Skimming involves quickly scanning the text to get a general idea of the content, while scanning involves searching for specific information. Close reading involves reading the text carefully to understand the meaning and analyze the author's message.

The reading process can be further broken down into two main types: bottom-up processing and top-down processing. Bottom-up processing involves starting with the individual letters and sounds of a text and gradually building up to higher-level meaning. This approach is often used when reading unfamiliar or complex texts that require careful decoding and attention to detail. In contrast, top-down processing involves starting with the reader's prior knowledge and expectations and using this information to guide comprehension of the text. This approach is often used when reading familiar texts or when the reader has a strong background knowledge of the subject matter.

1.2 Motivation for the study

The motivation for researching interesting details in reading stems from a desire to better understand the process of reading and the impact it has on our cognitive abilities. Reading is a fundamental skill that allows us to access and process information, and through examining the finer details of this process, we can gain insights into how we learn and retain information. Additionally, looking into the nuances of reading can uncover new techniques for improving our reading abilities, as well as inspire a greater appreciation for the written word. Ultimately, researching seductive details in reading can lead to a deeper understanding of the human mind and its capacity for learning and growth.

1.3 Significance of the study

This study focuses on seductive details in L2 reading comprehension. Seductive details are defined as elements that are interesting but not related to the main topic (Garner, Gillingham, & White, 2008). The existing body of research on seductive details in reading has produced mixed results. Most empirical research demonstrates that including such details in educational materials hinders rather than promotes learning. Seductive details have been found to tempt students to process irrelevant information at the expense of useful information. Therefore, it is argued that these very attractive but irrelevant information in the text would harm the recall of more important information in the text. Garner et al. (1989) provided a number of reasonable explanations for the hampering effects of seductive details on text recall even for skilled readers with quite short and well-organized texts. One such hypothesis was that encountering extraneous facts interrupted the readers' building of a cogent text basis (Kintsch & van Dijk, 1978). On the other hand, several studies have showed evidence in favor of seductive details. One of the advantages of seductive details is that they help learners to motivate themselves so that they draw their attention on the subject through enjoyment. Another positive influence of seductive details is that learning is activated through universal interest in the subject matter, which aids persistence and better performance in learning (Schnotz et al., 2009; Magner, Schwonke, Aleven, Popescu, & Renkl, 2014). The majority of studies conducted on seductive details so far has used expository texts as the primary experimental material. Researchers have examined a variety of subjects, such as the formation of lightning (Harp & Mayer, 1998; Lehman, Schraw, McCrudden, & Hartley, 2007); Peshkam, Mensink, Putnam, & Rapp, 2011), the causes of ice ages

(Sanchez & Wiley, 2006) and the transmission of cold viruses to humans (Mayer, Griffith, Jurkowitz, & Rothman, 2008).

Most of our knowledge on the effects of seductive details in reading comes from L1 research. Given the scarcity of research in the L2, the present study aims to touch upon several gaps in reading research. First, readers encounter detailed written information in many ways in their daily lives. This leads to the need to closer investigation of seductive details and its implications for reading processes. Second, individual differences L2 proficiency and prior knowledge are crucial elements that affect reading comprehension in a second language. Investigating reader characteristics within an expository text with and without seductive details would provide a valuable insight on reading processes, and second language teaching.

The arrangement of the upcoming chapters is as follows: Chapter 2 will clarify the notion of seductive details, their role in reading with regards to reading in both first and second language along with expository texts, prior knowledge and L2 proficiency as the review of literature. The methodology and design of the present study will be explained in Chapter 3. The findings of the research will be presented in Chapter 4, and Chapter 5 will explore and discuss upon these results as well as concluding with implications for teaching, limitations and future recommendations.

CHAPTER 2

REVIEW OF THE LITERATURE

2.1 Seductive details

Garner et al. (1989) define seductive details as “propositions presenting interesting, but unimportant information”. Textbooks may sometimes include attractive and fascinating elements (such as entertaining trivia, stories, or jokes) that have nothing to do with grasping the primary subject. They enhance the image of a page, pique readers' interest, or boost motivation by presenting stimulating information (Lenzner, Schnotz, & Müller, 2013). These favorable impacts on an emotive and motivating level make them preferred for reading (Magner, Schwonke, Aleven, Popescu, & Renkl, 2014; Wang & Adesope, 2016). An example of a text with seductive details can be found in Song (2003). This text is from a paragraph introducing the scientist Linus Pauling who talks about the benefits of Vitamin C. The seductive details version of the text has the following sentence: “In his junior year of college, Pauling became an instructor of the quantitative analysis course he had just taken as a sophomore and met his future wife when she was a student in his quantitative analysis class.” Another seductive detail but this time more relevant to the text includes the following sentence: “At last he was awarded two separate unshared Nobel Prizes, one for Chemistry in 1954 and one for Peace in 1962.” In addition to being in the form of a text, seductive details come in various forms, including illustrations added to multimedia messages, spoken form during lectures, video clips, and sounds and background music in multimedia messages.

When reviewed, the existing body of research on seductive details in reading has produced mixed results. Most empirical research demonstrates that including such details in educational materials hinders rather than promotes learning. According to studies (Harp & Mayer, 1998; Park, Korbach, & Brünken, 2015), seductive details have been found to tempt students to process irrelevant information from the details at the expense of useful information. Seductive details effect, therefore, is reasoned as that these very attractive but irrelevant information in the text would harm the recall of more important information in the text. The cognitive theory of multimedia learning (CTML) provides the first theoretical explanation for the seductive detail effect, which suggests that the limited capacity of working memory can be easily overloaded by extraneous material. This overload can hinder the learner's ability to engage in cognitive processes that are crucial for understanding essential material, according to Mayer (2005). Mayer, Griffith, Jurkowitz, and Rothman (2008) similarly propose that high-interest details demand more cognitive processing capacity than low-interest ones, leaving less capacity for making sense of essential material (Rey, 2012). Another theory regarding the explanation of seductive details effect comes from Harp and Meyer (1998). According to the distraction hypothesis put forth by them, seductive details undermine learning outcomes by drawing the learner's attention away from crucial information. The distraction hypothesis posits that seductive details may have a negative impact on learning results only for students who have poor working memory and have trouble focusing on important material (Sanchez & Wiley, 2006).

The notion of perceptual load is proposed by Lavie (1995) to provide an explanation for the seductive details effect. The load on the human perceptual system is referred to as perceptual load. According to Lavie (1995), irrelevant

stimuli are automatically given preference over relevant stimuli when there is spare perceptual capacity available under a low perceptual load scenario. This interpretation runs counter to the CTML-posited moderating effect of the element interaction.

Literature regarding the seductive details effect have produced mixed results on whether they harm or aid reading comprehension. For the first time, Wade and Adams (1990) conducted research that specifically controlled for seductive and non-seductive elements. In Experiment 1, participants read a biography of Horatio Nelson and assessed the interest and significance of each line. Wade and Adams utilized these ratings to categorize text portions into four groups that are mutually exclusive: major ideas, factual facts, seductive details, and dull trivia (i.e., uninteresting and unimportant information). In Experiment 2, participants read the material and then completed a free recall. Main concepts were remembered much better than seductive details, which were remembered superior to factual facts and dull trivia. They came to the conclusion that the interest and significance of a text segment have a role in how well it is remembered.

Another study, conducted by Wade, Schraw, Buxton & Hayes (1993) asked college students to read a 2100-word version of Wade & Adams' (1990) Horatio Nelson biography in order to investigate seductive details in more depth. In a pilot research, text portions were categorized into Wade & Adams' four categories after being judged for interest and relevance. The first experiment involved reading the identical paragraph aloud from computers while reading times were recorded. Following this, the students engaged in a free recall exercise. Reading seductive details took a lot longer than reading the major themes, but they were also easier to remember. Even while major concepts were remembered relatively well, it is

surprising that reading durations for main ideas were faster than other portions. Wade et al. concluded that readers used various processing techniques for various text portions. Rather than reading the material sentence by phrase on a computer, participants in the second experiment read the text as a traditional text. The readers were individually interviewed for their reading processing techniques. The results of Experiment 2's recall tests confirmed those of Experiment 1's. Participants in Experiment 1 actually spent more time reading seductive details than major ideas, despite the fact that those in Experiment 2 claimed to spend less time reading seductive details than important ideas. Seductive details interfered with text processing because readers were unaware of how long they had spent reading them.

Garner and Gillingham (1989) created a three-paragraph explanatory text presenting variations among insects to test seductive details effect. Each paragraph began with a statement describing its primary concept and included a detail (such as click beetles flipping) that had been judged as intriguing but unrelated to the paragraph's main argument (such as insects' living patterns). Two different experiments recruited graduate students and seventh grade young readers respectively. Experiment 1 asked graduate students to read the texts with or without seductive details. Following reading, participants were tasked with remembering just the most crucial details (macropropositions), rating how intriguing the book was, listing the most fascinating material, and correctly describing significant distinctions between the insects mentioned in the text (micropropositions). In Study 2, the experimental text was changed so that each paragraph's main idea was either indicated redundantly or not at all. For the young seventh grade readers, regardless of whether they read the signaled or unsignaled text version, those who were given the text containing seductive details performed noticeably worse on recalling both

the main ideas and the salient details than did those who read the text without those irrelevant but extremely interesting sentences. They provided a number of reasonable explanations in an effort to comprehend the ability of seductive details to interfere with recall for even skilled readers, despite the fact that texts were quite short and well organized. One such hypothesis for the capable readers in Study 1 was that the encountering of the extraneous facts interrupted the readers' building of a cogent text basis (Kintsch & van Dijk, 1978).

Schraw (1998) offered more proof that seductive elements influence text processing but do not always obstruct recall. The findings of two experiments in Schraw (1998) are relevant to this. In Experiment 2, reading time for each line was monitored while participants read the same seductively detailed Nelson biographical material aloud on computers. The fact that certain seductive details took longer to read than the major themes demonstrated that readers were attentive to shifts in the text's relevance and level of interest. Participants in Experiment 3 either read the text with or without the text's seductive features. The ability to recall the core concepts was unaffected by the presence or lack of seductive details. As a result, contrary to Garner, Gillingham, and White's (1989) findings, there was no evidence of weakening effects for seductive details in a study that controlled for seductive and non-seductive versions of the same text. However, Harp & Mayer (1997, 1998) discovered that seductive details hindered understanding of a technical, scientific literature describing the lightning process. Harp & Mayer (1997) looked at how recall and problem-solving were affected by seductive text excerpts and graphics. In Experiment 1, readers who encountered seductive text passages, seductive pictures, or both performed worse on a problem-solving assignment and remembered fewer key points. Interest ratings were unaffected by the inclusion of seductive parts. In

Experiment 2, researchers contrasted assessments of emotional interest (i.e., "How enjoyable is the material?") and cognitive interest (i.e., "How much does this material help you comprehend the process of lightning?"), a distinction based on Kintsch's work (1980). Harp and Mayer (1998) evaluated three explanations for the seductive detail effect in a follow-up study. According to the distraction hypothesis, seductive details impair comprehension by detracting attention from the major concepts (Hidi, 2001). According to the disruption hypothesis, seductive details impair comprehension by obstructing the text's cause-and-effect logic. According to the diversion hypothesis, seductive details impair comprehension by causing readers to build a cohesive mental image around them rather than around the passage's primary themes. Four experiments were carried out by Harp & Mayer (1998) to investigate these ideas. They looked at how to emphasize key text information (by using bold and italicized text), give readers clear learning objectives, organize signaling of key sections (by using preview sentences and numbering the steps leading to the formation of lightning), and change the order in which seductive details appear. They concluded that all of the experiments supported the diversion hypothesis, which postulates that seductive details hindered learning because they activated unsuitable schemata that led readers to focus on the seductive details rather than the main ideas when forming a mental text representation.

According to the studies mentioned above, seductive features influence text processing in a harming way. Readers spend more time reading seductive details than other types of text segments, and seductive details were more likely to be remembered than other text segments (Schraw, 1998; Wade & Adams, 1990; Wade et al., 1993). Seductive features may have no impact on fact memory or conceptual understanding (Harp & Mayer, 1997, 1998), or they may interfere with memory for

facts and conceptual understanding (Garner et al., 1989). (Garner & Gillingham, 1989; Schraw, 1998).

To investigate the impact of seductive details on reading duration, schematic activation, and schema creation, three modified hypotheses that resemble those put out by Harp & Mayer (1998) were put out (Lehman, Schraw, McCrudden, & Hartley, 2007). The new hypotheses were created in order to define the elements that influence online processing, particularly attention, text coherence, and schematic activation. According to the reduced attention hypothesis (which is comparable to Harp and Mayer's distraction hypotheses), readers process seductive details rather than the main text when reading. According to this perspective, seductive details cause readers to focus on these details rather than the base text phrases. All of these findings suggest that seductive details cause readers to scan base text sentences more quickly while paying closer attention to encoding seductive details. According to the coherence break theory (also known as Harp and Mayer's disruption hypothesis), seductive features weaken text coherence and cause problems with the development of a cohesive mental picture. On this theory, readers waste more time trying to connect seductive details to the text's causal flow of events. The flow of the causal sequence is disrupted in this attempt to restore coherence, which lessens readers' ability to grasp the original text as a whole. This claim would be confirmed if reading speed slows down while moving from seductive detail sentences back to base text sentences and if seductive details limit the depth of understanding of base text information. A less cohesive mental representation would indicate a reduced grasp of the material. Readers aiming to fix coherence gaps would be expected to read more slowly when moving between basic text sentences and seductive detail

sentences. Readers who try to make connections between material that is not causally connected need more processing time (Keenan, Baillet, & Brown, 1984).

The inappropriate schema theory claims that the seductive details, rather than the main text, form the basis of the reader's mental representation of the text (akin to Harp and Mayer's distraction hypothesis). According to this perspective, readers construct a schema about the seductive details rather than the text's major concepts. If people who read the seductive details text remembered the seductive detail concept units more frequently than the base text information and if deeper knowledge of the text was diminished, this hypothesis would be consistent with the results. Therefore, seductive features may hinder learning in addition to exhausting the working memory because they divert attention, disturb coherence, or interfere with schema. Participants may be able to process both the pertinent learning content and the seductive details in an extraneously low loading instructional design (such as an audiovisual learning material), but in an extraneously high loading instructional design (such as a visual-only learning material), processing additional information reduces learning performance (Park et al., 2011). However, it is still unclear how precisely seductive details affect information processing and learning in extra-heavy learning environments like those seen in classrooms at schools and colleges (e.g., text books, handbooks, hypertexts including pictorial information). (Park & Korbach & Brünken, 2015).

For the seductive-details effect, the diversion, disturbance, or distraction of the pertinent learning process, Harp and Mayer (1998) offer three explanations. The first premise of the diversion hypothesis is that seductive details lead improper schemata to be organized by integrating the newly learned information with the activated past knowledge. Some research manipulated the presentation sequence of

seductive features so that they were given at the start, middle, or finish of the learning material in order to examine the impact of schema interference (Harp & Mayer, 1998).

Eitel, Bender, & Renkl (2018) looked into whether seductive details only hinder learning when students incorrectly believe they are relevant information. Participants read texts without seductive details (control condition) or with seductive details, in the latter case with or without being informed of the irrelevance of the seductive details. Only participants who were unaware of the futility of seductive details demonstrated lower learning results than those in the control condition, thereby indicating an effect of seductive details. Unawareness of the futility of seductive details on learning outcomes was negatively mediated by extraneous cognitive load, but not by perceived time pressure. All things considered, the findings imply that the seductive details effect has a boundary condition that is the perceived relevance of the seductive details (Eitel, Bender, & Renkl, 2018).

A recent study conducted by Mensink (2021) provides a thorough investigation of the function of emotions in learning from two different kinds of science books: texts with seductive details and texts that just address their specific scientific subject. In accordance with other studies, participants assessed the scientific material as more significant but less fascinating than the texts' seductive elements, and they retained less scientific information from those texts. Recall for these texts was greater for the seductive details than the science information, indicating that the seductive details may have interfered with the science content's ability to be retained in memory.

Only a small number of studies on L2 reading comprehension have looked at the impact of seductive details under the umbrella of interest on reading

performance, which is one of the main reasons why it will be looked into it in the present thesis. When reviewed the relevant literature, LeLoup (1993) looked at the link between the degree of readers' interest in the passage's content and their reading comprehension level for American secondary students learning Spanish as a foreign language According to the findings, L2 readers understood texts substantially more when they were very interested in the themes than when they were not. By asking students in an ESL program at a big university to rate their interest in 10 different topics and to respond to prior knowledge questionnaires on each of these topics, Carrell and Wise (1998) investigated the relationship between prior knowledge and topic interest in L2 reading comprehension. These responses were used to define a set of four topics for each student that fell at the intersection of areas of high and low interest as well as areas of high and low prior knowledge. After reading literature on these four themes, students had to reply to comprehension questions. Results showed a strong interaction between previous knowledge and subject interest such that, as long as students were highly interested in the issue, there was no difference in scores on topics for which students had low or high prior knowledge. Prior knowledge did, however, make a difference for the low interest themes, with the high prior knowledge text being significantly easier to understand than the low prior knowledge material. In general, these students did better when they read the text's unelaborated (baseline) version as opposed to its seductive detail version or intriguing elaboration version. For the measure of common ideas and primary ideas recalled, the performance of the students reading the baseline text was consistently greater than that of the students reading the seductive details text. Evidently, seductive details had a significant negative impact on L2 readers' ability to recall textual ideas.

Song (2003) investigated seductive details effect in the context of L2 English-L1 Korean. 118 college students from Korea who were studying English as a foreign language took part in the study. Before reading and memorizing concepts from an expository text about Linus Pauling and Vitamin C, they finished a reading proficiency test and a test of prior knowledge. Results show that seductive details interfered with EFL readers' ability to recall common and core themes, supporting earlier study that showed this interference effect. Results, however, also showed that as compared to the baseline text, interesting elaborations which were intended to be more meaningful and relevant in the text did not significantly improve EFL readers' understanding.

While most of the studies discuss seductive details in a harming way, there are a few studies that view them beneficial for reading. These beneficial aspects of seductive details are covered under the umbrella of interest and motivation. Schnotz, Fries, & Horz (2009) claim that seductive details might boost both general interest in the course material and learner activation. Learning is activated through universal interest in the subject matter, which aids persistence and better performance in learning. (Magner, Schwonke, Aleven, Popescu, & Renkl, 2014) Song (2003) also highlights the advantageous effects of seductive details on learning by motivating students to pay closer attention to the subject and by changing affect through enjoyment of the subject.

2.2 Comprehension of expository texts

Text genre can be defined as the type of written or spoken discourse which also affects reading goals. Expository genre refers to a type of writing that is used to explain or inform readers about a particular topic or subject. As noted by Nagy and

Townsend (2012), expository texts are characterized by a "focus on information, logical organization, and the use of technical vocabulary or jargon" (p. 144). They are typically written in a formal style and aim to present information in a clear and objective manner.

Expository writing is commonly used in academic settings, particularly in fields such as science, technology, engineering, and mathematics (STEM). The majority of study on seductive details conducted so far has used expository texts as the primary experimental material. In these expository texts, researchers have examined a variety of subjects, such as the formation of lightning (Harp & Mayer, 1998; Lehman et al., 2007; Peshkam, Mensink, Putnam, & Rapp, 2011), the causes of ice ages (Sanchez & Wiley, 2006), the transmission of cold viruses to humans (Mayer, Griffith, Jurkowitz, & Rothman, 2008).

From a psycholinguistic perspective, expository writing can be seen as a type of discourse that involves the cognitive processes of language comprehension, memory, and attention. As noted by Van Dijk and Kintsch (1983), expository texts are structured in a way that allows readers to construct a mental representation of the information presented. The comprehension also involves the activation of prior knowledge and the integration of new information into existing knowledge structures. According to Kintsch and Van Dijk (1978), readers form a "mental model" of the text that represents the relationships between the various concepts presented. This mental model is continually updated as the reader processes new information and serves as a guide for understanding the overall meaning of the text. In addition to comprehension, the processing of expository texts also involves memory and attention. Research has shown that readers are more likely to remember information that is presented in a clear and organized manner (Bransford & Johnson,

1972), and that attentional processes play a crucial role in the comprehension and retention of expository texts (Just & Carpenter, 1980).

Psycholinguistic research on expository writing has also examined the role of linguistic features, such as vocabulary and syntax, in comprehension and memory. Studies have shown that the use of technical vocabulary and complex sentence structures can make expository texts more challenging to understand, particularly for readers with lower levels of education or expertise in the topic (Graesser & Singer & Trabasso, 1994; McNamara & Kintsch & Songer & Kintsch, 1996). However, research has also shown that the appropriate use of linguistic features can aid in comprehension and memory. For example, the use of headings, summaries, and other organizational cues can help readers to identify the main ideas and structure of the text, which in turn can facilitate comprehension and recall (Mayer, 2001). In addition to linguistic features, psycholinguistic research on expository writing has also examined the role of reader characteristics and individual differences in processing. For example, studies have shown that prior knowledge, working memory capacity, and reading proficiency can all impact the comprehension and memory of expository texts (Cain & Oakhill & Barnes & Bryant, 2001; Kendeou & White & Van Den Broek, 2008).

One study (Kintsch, 1998) investigated how readers comprehend expository texts by proposing the construction-integration model. According to this model, readers first construct a local representation of the text's meaning and then integrate it with their prior knowledge to form a global representation of the text's meaning. This model suggests that text comprehension involves both bottom-up and top-down processing, as readers use both the text itself and their prior knowledge to make sense of the text. This model posits that readers first construct a local representation

of the text's meaning (e.g., identifying important concepts and relationships within the text) and then integrate it with their prior knowledge to form a global representation of the text's meaning. This model suggests that text comprehension involves both bottom-up and top-down processing, as readers use both the text itself and their prior knowledge to make sense of the text.

Situation Model Theory posits that readers construct a mental representation of the situation described in the text, which includes not only the explicit information but also the inferences and assumptions that the text implies (Zwaan & Radvansky, 1998). According to this theory, readers use their background knowledge to fill in the gaps and make sense of the text, and the more coherent the text, the easier it is to construct a situation model.

Coherence Theory of Discourse proposes that text comprehension depends on the degree to which a text is coherent and consistent with the reader's expectations (Graesser & Nakamura, 1982). According to this theory, readers actively seek to create a coherent mental representation of the text by identifying relationships between ideas, resolving inconsistencies, and filling in missing information. Structure Building Framework proposes that readers construct a mental representation of the text's structure (e.g., the hierarchy of ideas) as they read and that this structure guides their comprehension of the text (Rapp & Van Den Broek, 2005). According to this theory, readers use the text's structure to organize information and make predictions about the direction of the text's argument.

Overall, expository writing can be seen as a complex cognitive process that involves the integration of language comprehension, memory, and attention. Through a psycholinguistic perspective, researchers can gain insights into how

readers understand and remember expository texts, and how this information can be used to improve the effectiveness of written communication and learning.

2.3 Reading in a second language

Reading in a second language (L2) is a complex cognitive process that involves the integration of multiple skills and knowledge sources. It is an essential skill for language learners to develop as it allows them to access a wealth of information in the L2 and to communicate effectively in various academic and professional contexts. In this section, a brief overview of L2 reading research will be provided including its cognitive and linguistic dimensions.

One of the primary challenges of L2 reading is that it requires learners to integrate their existing L1 knowledge with new L2 knowledge. This integration process is often complicated by differences in linguistic structures, vocabulary, and cultural norms between the two languages (Bernhardt, 2010). As a result, L2 readers often rely on various cognitive strategies, such as skimming, scanning, and predicting, to facilitate their comprehension of the text (Grabe, 2009).

In addition to these cognitive strategies, L2 reading also involves the use of linguistic knowledge, including knowledge of grammar, vocabulary, and discourse structures. For example, learners with a strong L2 vocabulary are better able to understand the meaning of the text and to infer new words from context (Nation, 2013). Similarly, knowledge of discourse structures, such as the organization of paragraphs and the use of cohesive devices, can help learners to identify key ideas and to connect them across the text (Koda, 2005).

2.4 Prior knowledge in reading

Prior knowledge in reading refers to the existing knowledge and understanding that a reader possesses before engaging with a text. Bransford and Johnson (1972) emphasized that readers rely on their prior knowledge to construct mental models, which act as cognitive frameworks aiding text comprehension.

According to their perspective, contextual prerequisites rooted in prior knowledge are essential for comprehension and recall, emphasizing the need to activate relevant prior knowledge to understand and retain new information. Building on this foundation, Anderson and Pearson (1984) introduced a schema-theoretic view of reading comprehension, proposing that readers use their prior knowledge to activate relevant schemas or mental frameworks that guide comprehension. They argued that comprehension is a dynamic interplay between bottom-up processing of text and top-down processing of prior knowledge. Kintsch (1988) contributed to this discourse with a construction-integration model, emphasizing the role of prior knowledge in constructing mental representations of text. He posited that readers utilize their prior knowledge to integrate information from a text into a coherent mental representation, a process influenced by the reader's goals and expectations. Expanding on this, Baars, Van Gog, de Bruin, and Paas (2018) found that prior knowledge can alleviate cognitive load and disorientation during learning, revealing its practical importance. They also noted the impact of concept map structures on the effectiveness of prior knowledge in learning outcomes. Kendeou, Smith, and O'Brien (2019) highlighted the dynamic nature of mental models during reading, emphasizing the role of prior knowledge in updating and revising these models. Their research indicated that readers with higher levels of prior knowledge exhibit greater efficiency in adapting their mental models

to new information. Shifting focus to scientific texts, Golding and Lippa (2020) explored how prior knowledge influences the construction of mental models during comprehension. Their findings illuminated how prior knowledge affects the integration of new information and the coherence of mental models, ultimately contributing to improved comprehension.

Finally, tying this back to the context of seductive details, researchers like Canham and Hegarty (2010) have explored how domain expertise interacts with prior knowledge in influencing information selection during reading. Their findings underscore the role of prior knowledge in not only mitigating cognitive load but also moderating the seductive-details effect, thereby impacting perceptual and cognitive processing during comprehension.

Building upon the previous research, this thesis aims to fill significant gaps in the field of reading research within second language (L2) contexts. Given the previous knowledge derived primarily from research conducted in L1, this study seeks to investigate the impact of seductive details on the reading process in L2. Furthermore, it explores the influence of individual differences, including L2 proficiency and prior knowledge, on reading comprehension in texts with and without seductive details. The overarching goal is to provide a comprehensive understanding of how seductive details affect reading processes and, ultimately, contribute valuable insights to the field of second language teaching and learning.

CHAPTER 3

METHODOLOGY

3.1 Introduction

The purpose of this study is to examine the effects of seductive details on reading comprehension in a second language. It was investigated in relation to comprehension of an expository reading text and reader differences (prior knowledge and proficiency level). This is a between-groups experimental study where equal number of irrelevant and moderately relevant seductive details were incorporated into an expository text to form the treatment conditions along with a fully expository baseline text with no seductive details as the control condition.

In the first part of the study, the participants took a reading comprehension test in which the reading material varied in terms of the type of seductive detail (totally unrelated vs moderately related). Before reading the text, the participants took a short prior knowledge test about the topic of the reading text in order to assess their background knowledge. After reading the text, they were asked to answer comprehension questions. The study was approved by INAREK/SBB Ethics Sub-Committee at Boğaziçi University.

3.2 Research questions and hypotheses

The following research questions were investigated in the present research study:

i. Does the type of seductive detail (totally unrelated seductive details vs moderately related seductive details) affect L2 reading comprehension?

ii. Is there a relationship between prior knowledge and reading comprehension when learners are exposed to a text with seductive details? If yes, is this relationship similar across different proficiency groups?

Based on the Distraction Hypothesis by Harp & Meyer (1998), it was expected that seductive details would impair comprehension and that the harmful effect of totally irrelevant seductive details would be greater on reading comprehension compared to moderately irrelevant seductive details (Hypothesis 1). It is possible that seductive details may have a varying impact on reading comprehension depending on learners' proficiency level and prior knowledge. For example, learners with higher proficiency level and prior knowledge about the topic may have better cognitive control and strategic reading skills, allowing them to manage potential distractions more effectively. Thus, based on the existing models of L2 reading (e.g., Bernhardt, 2005) and available empirical evidence (Koda, 2005), it was predicted that prior knowledge would be significantly related to comprehension when learners are exposed to texts with seductive details and this relationship would apply to both lower- and higher-proficiency learners (Hypothesis 2).

3.3 Participants

Participants were 69 voluntary students from İstanbul 29 Mayıs University English Preparatory Programme. They were selected using the purposeful sampling method (Creswell, 2014) based on the criteria of having English as a second language and Turkish as native language. Two proficiency groups as pre-intermediate and advanced level students were selected from A2 (n = 35) and B2 (n = 34) level classes. The rationale behind including both A2 and B2 level students in the study was to capture a range of proficiency levels and examine the potential impact of L2

proficiency on reading comprehension in the context of seductive details. Age range was 18 to 43 with a mean of 20. All the participants were native speakers of Turkish. Only three of the participants stated that they spent a long period (at least a total of six months) in English speaking countries. Their known additional languages other than English were mostly stated as German, French, Kurdish, and Arabic. No incentives were offered to study participants, so participation in the study was entirely voluntary.

3.4 Procedure

For the first part of the data collection, Google Forms were utilized as an online collection tool which included the consent form, background questionnaire, (Appendix F), prior knowledge test, reading text, and comprehension questions. There were A2 and B2 classes that participated in the study. The links for the Google Forms were sent to the instructors of each class. The participants completed the task during their own class time with their instructors guiding them. The class duration was 35 minutes. The consent form explained the details of the study for the participants and all participants agreed to participate in the study. In the background form, they filled out background questionnaire including information such as their age, gender, department and language learning history.

In the second step, before reading the main text, they were asked to complete a prior knowledge test on the text's topic, which was music and its effects on the human body. Then, the participants were randomly assigned to one of the three conditions of the text: baseline control condition with text that contained no seductive details (Appendix A), experimental condition I with text that contained totally unrelated seductive details (Appendix B), and experimental condition II with

text that contained moderately related seductive details (Appendix C) (Table 1). The participants in all conditions read and answered the comprehension questions. The same reading material was presented in three different versions for three different groups of participants which included both A2 and B2 level students. These versions differed slightly in terms of the existence and type of the seductive details.

Table 1. The number of participants across the treatment conditions

	Proficiency level		
	A2	B2	Total
Condition 1 (baseline text, no seductive details)	9	10	19
Condition 2 (moderately related seductive details)	13	13	26
Condition 3 (totally unrelated seductive details)	13	11	24
Total	35	34	69

3.5 Instruments

A proficiency test, prior knowledge test, comprehension test and three different versions of the same text were used as the main reading material. The text was about music and how it affected mood.

3.5.1 Treatment

The same expository text was given to participants in a way that differed slightly from one another in three different conditions in terms of the presence and degree of seductive details (Table 2). Condition 1 (Appendix A), contained the text in its original form and had no seductive details.

Condition 2 (Appendix B) contained seductive details that are moderately related to the main topic of the text. Moderately related details refer to pieces of information within a text that have some degree of relevance or connection to the

main topic being discussed but are not directly or closely linked. These details may provide additional context, background information, or seductive details that are somewhat related to the main ideas but do not contribute significantly to the central message or core argument of the text. Moderately related details can be seen as a middle ground between relevant or supporting details and completely unrelated or seductive details. While relevant details directly support the main ideas and are crucial for understanding the text's main points, moderately related details offer some level of relevance but may not be essential for comprehending the main ideas or following the author's intended message. The purpose was to examine how readers process and evaluate these moderately related details, and then gaining insights into the cognitive processes involved in distinguishing between relevant information and less central, but still somewhat connected, details.

Condition 3 (Appendix C) contained totally unrelated details that refer to intriguing pieces of information within a text that may capture readers' attention due to their engaging or interesting nature. These unrelated details also included narrative parts, that can be defined as an informative text merged with story-based parts. These details, while fascinating, do not have a direct connection or relevance to the main ideas, topic, or overall message being conveyed in the text. Although totally unrelated details may pique readers' curiosity and add an element of interest to the text, they do not contribute significantly to the core argument, central themes, or main concepts being discussed. These details provide a diversion from the primary content and may be seen as seductive in nature.

Table 2. Treatment Used in the Study

	Condition 1	Condition 2	Condition 3
Genre	Expository	Expository	Expository
Word Count	656	668	856
Type of the seductive detail	No seductive details	Moderately related seductive details	Totally unrelated and narrative seductive details

3.5.2 Comprehension test

The primary objective of the test was to assess the participants' understanding of main ideas, supporting details, and seductive details within the given texts (Appendix E). The test was constructed in the multiple-choice format, consisting of 32 carefully crafted questions. Each question carried a value of 1 point, resulting in a total possible score of 32. The test items were aligned with the reading material and learning objectives of the study.

In order to enhance the validity and appropriateness of the test items, the expertise of practitioners in the English Language Teaching field was utilized. These practitioners were two middle school English teachers who provided feedback during the test development process. Their feedback was on whether comprehension questions really measured the comprehension of texts with seductive details in Condition 2 and 3. Recognizing the significance of addressing this aspect of comprehension, the test items were designed to challenge participants' ability to identify and differentiate between relevant and seductive details. This aimed to assess their critical reading skills and ability to discern key information from extraneous or misleading content.

The multiple-choice format allowed for the inclusion of distractors that resembled seductive details. Distractors are alternative options in multiple-choice questions that may appear plausible but are intentionally incorrect. In this case, the distractors were designed to mimic seductive details, enticing participants who may not carefully analyze the passage to choose incorrect options. By presenting these seductive details as plausible choices, the test effectively challenged participants to differentiate between relevant and irrelevant information.

The reliability of the comprehension test was assessed through Cronbach's alpha coefficient, which was .885 indicating a good level of internal consistency. This suggests that the items in the test measure the same underlying construct reliably. The test comprised of 32 items, and the high Cronbach's alpha coefficient for Condition 1 (.833), Condition 2 (.924) and Condition 3 (.885) demonstrates that the test items collectively exhibit strong reliability. These results provide confidence in the consistency and dependability of the test scores, supporting its suitability for assessing comprehension abilities in the target population.

3.5.3 Proficiency test

The students who participated in the study were given the proficiency test at the beginning of the academic year to be placed into appropriate levels. They took the test in face-to-face sessions at İstanbul 29 Mayıs University School of Foreign Languages. At the start of the academic year, they were assigned to various proficiency levels, and when the data was gathered, they were English learners at the A2 and B2 level classes. The test comprises four sections: Listening, Reading, Writing, and Speaking. The first section of the test is the Listening section, which aims to evaluate the test-taker's listening comprehension skills. It lasts

approximately 15-20 minutes and accounts for 25% of the total test score. The section includes two recordings, each lasting 3-5 minutes. To ensure comprehension, the recordings are played twice, allowing the test-taker to listen carefully and answer 6-8 questions for each recording. The Reading section is designed to assess the test-taker's reading comprehension and critical thinking abilities. This section lasts around 35-40 minutes and contributes 35% to the overall test score. It consists of three texts of varying lengths, covering diverse topics. The question types within this section include multiple choice, sentence completion, true/false, inference, main idea/headings, reference, and guessing the meaning of words. These question types aim to measure the test-taker's ability to comprehend written material and apply various reading strategies. The proficiency level of the participants was determined based on an institutional proficiency test that was administered in face-to-face sessions at the beginning of the academic year. The test comprises four sections: Listening, Reading, Writing, and Speaking. The first section of the test is the Listening section, which aims to evaluate the test-taker's listening comprehension skills. It lasts approximately 15-20 minutes and accounts for 25% of the total test score. The section includes two recordings, each lasting 3-5 minutes. To ensure comprehension, the recordings are played twice, allowing the test-taker to listen carefully and answer 6-8 questions for each recording. The Use of English section is an essential part of the test, lasting approximately 10-15 minutes and comprising 15% of the total score. This section focuses on inferencing skills and evaluates the test-taker's understanding of grammar, vocabulary, and contextual usage. It consists of 10 questions that require the test-taker to deduce meaning from provided information and demonstrate proficiency in the use of English language structures.

In the writing section, test-takers are required to demonstrate their ability to express themselves effectively in written English. This section accounts for 25% of the total test score and has a time limit of 75 minutes. Test-takers are expected to write an essay or a composition consisting of approximately 300-350 words. The prompts provided for this section cover a wide range of topics, including but not limited to Psychology, Education, Sociology/Society, Communication, Family, Culture, Art, Crime, Marketing, Business, Environment, Linguistics, Health, Media, Sports, Travel, and Technology. The topics are carefully selected to represent various aspects of life and to encourage test-takers to provide thoughtful and well-developed responses. Test-takers are expected to demonstrate their ability to organize their thoughts coherently, present a clear argument or viewpoint, provide supporting evidence or examples, and showcase their language proficiency, including vocabulary range, grammatical accuracy, and overall writing fluency. The essays or compositions are evaluated based on the test-takers' ability to effectively communicate their ideas, use appropriate language structures and conventions, and maintain a logical and cohesive flow of information.

3.5.4 Prior knowledge test

To assess participants' prior knowledge levels, a test of prior knowledge was administered before the participants read the text (Appendix D). The test consisted of ten questions, and the scores were calculated by summing the total number of correct answers. This scoring method provided a measure of participants' existing knowledge related to the topic of the text. The maximum possible score on the test was 10.

3.6 Data analysis

In the data analysis phase of the study, several key aspects were examined to explore the relationship between reading comprehension, prior knowledge and proficiency. Firstly, each participant's comprehension score was coded as true or false and calculated out of a total of 32 points, representing the number of questions in the comprehension test. This coding allowed for a quantitative representation of each participant's performance on the test.

The participants' proficiency levels were classified into two categories: A2 and B2 levels. These proficiency levels were assigned based on the outcomes of the proficiency exam they had previously taken at the university, and the classes they were placed at the time of data collection. This categorization provided valuable information about the participants' language proficiency backgrounds and allowed for an exploration of the potential impact of proficiency on reading comprehension. To assess participants' prior knowledge levels, a test of prior knowledge was administered before the participants read the text. The test consisted of ten questions, and the scores were calculated by summing the total number of correct answers. This scoring method provided a measure of participants' existing knowledge related to the topic or content of the text.

For the data analysis, normality assumption was checked for the data. Due to the non-normal distribution of the data, a Kruskall-Wallis test was conducted to compare median comprehension scores across the three groups. For the relationship between prior knowledge and comprehension of texts with seductive details, a Spearman rank-order correlation was conducted and was examined across proficiency levels.

CHAPTER 4

RESULTS

4.1 Introduction

The independent variables examined in this study are prior knowledge, proficiency level, and seductive details. Descriptive statistics for the variables are provided in Table 3.

Table 3. Descriptive Statistics of the Variables Used in the Study

	N	Min	Max	Mean	SD	Max. possible score
Prior knowledge	69	1	9	5.8	1.7	10
Proficiency level	69	1	70	19.6	14.7	80
Comprehension	69	2	31	26.4	7.8	32

4.2 Effect of seductive details on reading comprehension

The purpose of this study was to investigate the effect of seductive details on reading comprehension in a second language. A sample of participants with A2 and B2 proficiency levels were randomly assigned to read one of three texts that varied in the degree of detail: no details, moderately related details, and totally unrelated details. The descriptive statistics in Table 4 indicate that the group which was exposed to the text with no details had the highest comprehension score. The other two groups exposed to the text with seductive details had similar means but lower than the first group. The distribution of scores in each group was examined before

conducting inferential statistics. The normality tests, skewness and kurtosis statistics, and normality plots revealed that the distributions deviated from normality. Therefore, a nonparametric test was justified and Kruskal-Wallis test on the median comprehension scores across the groups was conducted. The results indicated that seductive details had no significant effect on reading comprehension ($p > .05$). Thus, the first hypothesis that predicted hampering effect of seductive details on reading comprehension was not confirmed.

Table 4: Descriptive statistics of the treatment for each condition

Condition	N	Mean	SD	Median
No details	19	22,44	8.19	26
Moderately related details	26	18,80	8.71	22
Totally unrelated details	24	18.54	6.61	20
Total	69	18.39	8.10	

4.3 Relationship between prior knowledge and comprehension in reading a text with seductive details

In order to determine whether prior knowledge was significantly related to reading comprehension with a text containing seductive details, a Spearman rank-order correlation was performed. The results indicated that there was a positive significant relationship between the two variables ($r = .477$). Thus, prior knowledge and reading comprehension had 22,75 % shared variance. The same analysis was conducted separately for lower-proficiency ($r = .482$, N = 29) and higher-proficiency ($r = .517$, N = 40) groups, revealing that the shared variance between prior knowledge and reading comprehension was 23,23 % for the former and 26,72

% for the latter group. These results confirmed our second hypothesis predicting between prior knowledge would facilitate comprehension when learners are exposed to a text with seductive details.

CHAPTER 5

DISCUSSION & CONCLUSION

5.1 Introduction

The purpose of this study was to examine the effects of seductive details on L2 reading comprehension. It was investigated in relation to comprehension of an expository reading text and reader differences (prior knowledge and proficiency level). A between-groups design was utilized in which different versions of the same text in three conditions were used. The results showed no significant seductive details effect on reading comprehension. Also, prior knowledge was found to be significantly related to comprehension when learners are exposed to texts with seductive details and this relationship applied to both lower- and higher-proficiency learners. In this chapter, the possible reasons for the results mentioned in the previous section will be explained by referring to relevant literature.

5.2 The effect of seductive details on L2 reading comprehension

The first research question was concerned with the effect of seductive details on L2 reading comprehension. Based on prior research, the first hypothesis predicted that seductive details could potentially distract readers and negatively impact their comprehension. However, in the present study, the existence of seductive details did not harm reading comprehension. Contrary to the initial expectations and previous research, neither the condition with totally unrelated seductive details nor the

condition with moderately related seductive details resulted in significantly lower comprehension compared to the control condition without seductive details. This finding is contrary to much of the previous research (Wade et al., 1990; Lehman et al., 2007) and the distraction hypothesis put forth by Harp & Meyer (1998), positing that seductive details distracts readers, resulting in lower scores on recall tests. The non-significant effects of seductive details on reading comprehension raise intriguing questions about the role of attentional capture and cognitive load in L2 reading. It is possible that other factors, such as the overall readability of the text, individual differences in reading strategies, or the presence of compensatory mechanisms, played a more prominent role in determining comprehension outcomes.

One explanation for these results might be related to the nature of the seductive details used in the present study. The selection and manipulation of seductive details, although guided by prior literature and established criteria, may not have effectively captured the intended variation in cognitive load or attentional diversion. It is possible that the seductive details used in this study were not salient enough to cause a noticeable interference with comprehension or that participants were able to effectively regulate their attention and focus on the main content of the reading material.

It is also important to highlight that previous literature regarding the effect of seductive details utilized recall tasks rather than recognition tasks (e.g., Garner et al., 1998; Harp & Mayer, 1998; Schraw, 1998). Recall tasks require learners to remember and retrieve information from memory, while recognition tasks assess their ability to identify or recognize information previously encountered during the reading process. Both tasks play an important role in evaluating different aspects of

L2 reading comprehension. Since the present study made use of a recognition task as a measure of comprehension, this may be a possible reason why seductive details effect was not encountered. A recall task may place greater demands on participants' working memory and cognitive resources, potentially revealing differences in their processing of seductive details.

Another issue that can be discussed for the non-significant result and related to the measurement task for comprehension is the format of the test: multiple choice. It should be noted that learners view responding to multiple-choice questions as a problem-solving task rather than a comprehension task and that they select a variety of unconditional and conditional response strategies to deliberately select choices. They combine a variety of mental resources interactively when determining an appropriate choice. Therefore, while multiple-choice questions can be useful in assessing certain aspects of comprehension, such as lower-level skills like vocabulary and sentence-level understanding, they may not fully capture the higher-level skills involved in comprehending a text, such as making inferences, drawing conclusions, and evaluating arguments (Rupp, Ferne, & Choi, 2006). The comprehension test utilized in this study includes questions that assess main ideas in the text as well as supporting details. It also consists of questions that require drawing inferences, which are higher level processes. So, it is important to use multiple-choice questions in conjunction with other types of assessment tasks that can more fully capture the range of skills involved in comprehension.

These unexpected findings highlight the complexity of the relationship between seductive details and comprehension, emphasizing the need for further research in this area. Understanding the specific conditions under which seductive details may affect comprehension is crucial for the development of effective reading

instruction strategies and the creation of L2 reading materials that optimize comprehension outcomes.

5.3 The relationship between prior knowledge and comprehension when L2 learners are exposed to texts with seductive details

The results point to a positive relationship between prior knowledge and comprehension when learners are exposed to texts containing seductive details. This relationship holds true for both lower- and higher-proficiency learners, which has significant implications for understanding the role of prior knowledge in the context of reading comprehension. This suggests that regardless of whether learners were at the A2 or B2 level, their pre-existing knowledge played a vital role in their ability to comprehend texts with seductive details. This result aligns with previous research that emphasize the importance of prior knowledge in comprehension processes (Anderson & Pearson, 1984).

The results of the study provide strong evidence to support the notion that prior knowledge plays a crucial role in reading comprehension when learners are exposed to texts with seductive details. The participants who had more prior knowledge about the reading topic performed better in reading comprehension questions about the text, which supports the previous findings regarding readers with prior knowledge are more likely to comprehend a text than readers without relevant prior knowledge (Bransford & Johnson, 1972; Anderson & Pearson, 1984). It would be worth mentioning the construction-integration model of comprehension proposed by Kintsch and van Dijk (1978) which suggests that readers use their prior knowledge to create a mental representation of the text. They argue that readers with more relevant prior knowledge are better able to construct an accurate mental

representation of the text, leading to better comprehension. Therefore, teachers and educators should consider the role of prior knowledge when designing reading materials and assessments, and help students activate and build their prior knowledge as a part of the reading process. The positive correlation between prior knowledge and reading comprehension performance suggests that individuals with a solid foundation of knowledge in a particular domain are better equipped to understand and interpret new information. This is consistent with the schema theory (Nassaji, 2007) positing that readers actively integrate new information into their existing knowledge structures. By drawing on their prior knowledge, individuals can make connections, fill in gaps, and make predictions, ultimately enhancing their comprehension of the text. As such, participants with greater prior knowledge demonstrated an increased ability to apply their knowledge effectively during the reading task.

5.4 Implications for teaching

Based on the findings of the study, several practical recommendations can be made for educators and curriculum developers to enhance reading comprehension in L2 learners. These recommendations are focused on designing L2 reading materials and implementing effective teaching strategies.

Although the findings of the present study indicated that seductive details did not harm reading comprehension, it would be recommended to minimize the inclusion of irrelevant or moderately related details that may distract learners from the main ideas of the text. By streamlining the content and reducing extraneous information, learners can focus on the essential information for comprehension. Well-structured texts with clear organization and coherent flow aid reading

comprehension. Educators and curriculum developers can emphasize the importance of organizing information through headings, subheadings, or other visual cues. This helps learners navigate the text more efficiently and facilitates the identification of main ideas and supporting details.

Prior knowledge plays a significant role in reading comprehension. Educators should encourage learners to activate their existing knowledge related to the topic before reading. This can be done through pre-reading activities, such as brainstorming, concept mapping, or discussions, which help learners make connections between their prior knowledge and the content of the text. Activating prior knowledge creates a foundation for understanding and facilitates comprehension. Appropriate support and scaffolding can be provided during reading activities. This can include pre-teaching key vocabulary, providing explicit instruction on reading strategies, or offering guiding questions to direct learners' attention to important information. Scaffolding helps learners develop effective reading strategies and promotes comprehension by focusing on relevant information within the text.

5.5 Limitations

The features of the comprehension test used in this study can be improved in terms of item difficulty since most of the participants scored higher than the average. In addition to this, a recall test can be also added as another measure of comprehension. The present study was conducted during the online education period in Turkish universities. Therefore, the data were collected online. Thus, comparing the results of the current study with those studies conducted in lab or classroom settings should be done with caution.

The sample size is another limitation. It is possible that the study failed to demonstrate the effect of seductive details on L2 reading comprehension due to lack of statistical power. Additionally, specific characteristics of the participants may limit our ability to fully assess the generalizability of the findings. As a result, caution should be exercised when generalizing the results beyond the specific context of this study.

A major limitation of this study is the absence of a pilot study prior to the main research on the effects of seductive details on reading comprehension in a second language. A pilot study would have provided valuable insights into potential challenges, refined the research design, and ensured the robustness of the methodology. Future research should consider conducting a pilot study to enhance the overall validity of the research findings.

5.6 Recommendations for future research

For future research recommendations, one possible area for enriching the research is through the integration of eye-tracking or neuroimaging methods. By incorporating these techniques, it is possible to look into online processing of seductive details in terms of their different types. Thus, a more comprehensive understanding of how seductive details influence attentional processes and cognitive load can be achieved.

Eye-tracking technology can provide valuable insights into participants' visual attention patterns while reading texts with seductive details. By tracking eye movements, researchers can precisely examine which textual elements participants focus on, how long their gaze remains on each element, and the sequence of their visual fixations. This detailed analysis would enable a deeper exploration of the

impact of seductive details on readers' attention allocation and potential disruptions to information processing.

Furthermore, the inclusion of neuroimaging methods such as functional magnetic resonance imaging (fMRI) or electroencephalography (EEG) can offer insights into the underlying neural mechanisms associated with seductive details and reading comprehension. These techniques can provide real-time information about brain activation patterns and neural connectivity, allowing researchers to investigate the cognitive processes involved in the integration of seductive details into the comprehension process. Neuroimaging data could help elucidate the neural correlates of attention, cognitive load, and the interaction between seductive details and readers' language proficiency or prior knowledge. This enriched approach would provide valuable insights into the underlying cognitive and neural mechanisms, contributing to the advancement of theoretical frameworks and instructional practices in second language reading comprehension.

APPENDIX A

TEXT FOR CONDITION 1: NO SEDUCTIVE DETAILS

HOW MUSIC AFFECTS OUR MOOD

Music has been shown to have numerous effects on the brain and body, making it a valuable therapeutic tool for improving mental and physical well-being. Research has shown that music can have a wide range of effects on the brain and body, and can be used as a therapeutic tool to improve mental and physical well-being. One of the most well known effects of music is its ability to influence mood. Different types of music can evoke different emotions and moods, from sadness and melancholy to happiness and excitement. This is because music activates areas of the brain that are involved in emotion processing, such as the amygdala and the prefrontal cortex. The tempo, melody, and lyrics of a piece of music can all contribute to its emotional impact. For example, slow and calming music has been found to have a relaxing effect on the body and mind, and can be used to reduce stress and anxiety. On the other hand, fast and upbeat music can increase feelings of energy and excitement, and can be used to boost mood and motivation. Music can also have physiological effects on the body, such as lowering heart rate and blood pressure, and reducing levels of the stress hormone cortisol. This is because listening to music can activate the parasympathetic nervous system, which is responsible for the body's "rest and digest" response.

Music has been used for centuries as a form of therapy, and its positive effects on mental and physical health have been widely documented. Studies have shown that listening to music can help alleviate symptoms of depression and

anxiety, reduce pain and inflammation, and improve cognitive function in people with conditions such as dementia and stroke. Music therapy is a specialized field that uses music to address a wide range of health issues. It has been found to be effective in treating conditions such as autism, schizophrenia, and substance abuse, as well as providing emotional support for people dealing with chronic illness and end-of life care. Research has also shown that playing an instrument can have positive effects on brain development and cognitive function, particularly in children. Learning to play an instrument can improve memory, attention, and spatial reasoning skills, and may even enhance language development.

The type of music you listen to can have different effects on mood. For example, research has shown that upbeat music with a fast tempo can increase feelings of happiness and energy, while slower, more relaxing music can promote feelings of calm and relaxation.

The effects of music on mood can be even more pronounced when combined with other relaxation techniques, such as deep breathing or meditation. This is because these techniques work together to promote a state of deep relaxation and reduce feelings of stress and anxiety.

Research has also found that playing music can have positive effects on mood and well-being. Playing an instrument or singing can increase feelings of happiness and self-esteem, and can provide a sense of accomplishment and mastery. Listening to music during exercise can increase motivation and performance. In terms of mental health, music therapy has been used as a complementary treatment for individuals with depression, anxiety, and schizophrenia. It can help individuals express themselves, reduce stress and anxiety, and improve mood. On the other hand, in terms of physical health, listening to music

can have a direct effect on heart rate, breathing rate, and blood pressure. Slow and calming music can decrease heart and breathing rates, while fast-paced music can increase heart rate and motivation during exercise.

The positive effects of music on mood are not limited to listening or playing music alone. Group music therapy has been found to be effective in treating a variety of mental health conditions, including depression, anxiety, and post-traumatic stress disorder. This is because music therapy can promote social connection and provide a safe and supportive environment for emotional expression and exploration. In addition to its therapeutic uses, music also has many cultural and historical significance. For example, certain styles of music, such as jazz or hip hop, are closely associated with particular cultural movements and social groups. Overall, music is a powerful tool for influencing our emotions and moods, and can have a range of positive effects on mental and physical well-being. Whether we're listening to our favorite songs to boost our mood, or using music therapy to address specific needs, music has the ability to enhance our lives in countless ways.

APPENDIX B

TEXT FOR CONDITION 2: MODERATELY RELATED SEDUCTIVE DETAILS

HOW MUSIC AFFECTS OUR MOOD

Music has been shown to have numerous effects on the brain and body, making it a valuable therapeutic tool for improving mental and physical well-being. One of the most well-known effects of music is its ability to influence mood, as different types of music can evoke various emotions and moods. The tempo, melody, and lyrics of a piece of music all contribute to its emotional impact, as music activates areas of the brain involved in emotion processing.

Scientific research has shown that music can have a wide range of effects on the brain and body, and can be used as a therapeutic tool to improve mental and physical well-being. One of the most well-known effects of music is its ability to influence mood. Different types of music can evoke different emotions and moods, from sadness and melancholy to happiness and excitement. This is because music activates areas of the brain that are involved in emotion processing, such as the amygdala and the prefrontal cortex. The tempo, melody, and lyrics of a piece of music can all contribute to its emotional impact. For example, slow and calming music has been found to have a relaxing effect on the body and mind, and can be used to reduce stress and anxiety. On the other hand, fast and upbeat music can increase feelings of energy and excitement, and can be used to boost mood and motivation.

Music can also have physiological effects on the body, such as lowering heart rate and blood pressure, and reducing levels of the stress hormone cortisol. This is because listening to music can activate the parasympathetic nervous system, which is responsible for the body's "rest and digest" response.

The type of music you listen to can have different effects on mood. For example, research has shown that upbeat music with a fast tempo can increase feelings of happiness and energy, while slower, more relaxing music can promote feelings of calm and relaxation. The effects of music on mood can be even more pronounced when combined with other relaxation techniques, such as deep breathing or meditation. This is because these techniques work together to promote a state of deep relaxation and reduce feelings of stress and anxiety.

Research has also found that playing music can have positive effects on mood and well-being. Playing an instrument or singing can increase feelings of happiness and self-esteem, and can provide a sense of accomplishment and mastery. Listening to music during exercise can increase motivation and performance. In terms of mental health, music therapy has been used as a complementary treatment for individuals with depression, anxiety, and schizophrenia. It can help individuals express themselves, reduce stress and anxiety, and improve mood. On the other hand, in terms of physical health, listening to music can have a direct effect on heart rate, breathing rate, and blood pressure. Slow and calming music can decrease heart and breathing rates, while fast-paced music can increase heart rate and motivation during exercise.

The effects of music on mood can be even more pronounced when combined with other relaxation techniques, such as deep breathing or meditation. This is

because these techniques work together to promote a state of deep relaxation and reduce feelings of stress and anxiety. The positive effects of music on mood are not limited to listening or playing music alone. Group music therapy has been found to be effective in treating a variety of mental health conditions, including depression, anxiety, and post-traumatic stress disorder. This is because music therapy can promote social connection and provide a safe and supportive environment for emotional expression and exploration. In addition to its therapeutic uses, music also has many cultural and historical significance. For example, certain styles of music, such as jazz or hip hop, are closely associated with particular cultural movements and social groups.

Overall, music is a powerful tool for influencing our emotions and moods, and can have a range of positive effects on mental and physical well-being. Whether we're listening to our favorite songs to boost our mood, or using music therapy to address specific needs, music has the ability to enhance our lives in countless ways.

APPENDIX C

TEXT FOR CONDITION 3: TOTALLY UNRELATED SEDUCTIVE DETAILS

HOW MUSIC AFFECTS OUR MOOD

It was a beautiful summer day and Emily was feeling down. She had been going through a tough time lately and was finding it hard to shake off her negative thoughts and feelings. As she sat on her porch, staring out at the trees swaying in the breeze, she heard the faint strains of music coming from the park nearby. Curious, Emily decided to investigate. As she got closer to the park, the music grew louder and she realized that there was a small concert going on. A local band was playing a mix of upbeat and mellow songs, and the crowd was swaying and dancing along. At first, Emily was hesitant to join in. She didn't feel like dancing and didn't think the music could possibly lift her mood. But as she stood on the edge of the crowd, watching the musicians pour their hearts out into their instruments and the people around her losing themselves in the music, something shifted inside her.

Emily's experience is not unique - scientific research has shown that music can have a wide range of effects on the brain and body, and can be used as a therapeutic tool to improve mental and physical well-being. One of the most well-known effects of music is its ability to influence mood. Different types of music can evoke different emotions and moods, from sadness and melancholy to happiness and excitement. This is because music activates areas of the brain that are involved in emotion processing, such as the amygdala and the prefrontal cortex. The tempo, melody, and lyrics of a piece of music can all contribute to its emotional impact. For example, slow and calming music has been found to have a relaxing effect on the body and mind, and can be used to reduce stress and anxiety. On the

other hand, fast and upbeat music can increase feelings of energy and excitement and can be used to boost mood and motivation.

Music can also have physiological effects on the body, such as lowering heart rate and blood pressure, and reducing levels of the stress hormone cortisol. This is because listening to music can activate the parasympathetic nervous system, which is responsible for the body's "rest and digest" response. Did you know that the word "music" comes from the Greek word "mousike," which means "art of the Muses"? The Muses were the nine goddesses of the arts in Greek mythology, and music was one of their domains.

The type of music you listen to can have different effects on mood. For example, research has shown that upbeat music with a fast tempo can increase feelings of happiness and energy, while slower, more relaxing music can promote feelings of calm and relaxation. In ancient China, music was believed to have the power to cure illness and promote well-being. It was often used as a form of therapy, and specific types of music were prescribed for different ailments.

The effects of music on mood can be even more pronounced when combined with other relaxation techniques, such as deep breathing or meditation. This is because these techniques work together to promote a state of deep relaxation and reduce feelings of stress and anxiety. Research has also found that playing music can have positive effects on mood and well-being. Playing an instrument or singing can increase feelings of happiness and self-esteem, and can provide a sense of accomplishment and mastery. Listening to music during exercise can increase motivation and performance. In terms of mental health, music therapy has been used as a complementary treatment for individuals with depression, anxiety, and

schizophrenia. It can help individuals express themselves, reduce stress and anxiety, and improve mood. On the other hand, in terms of physical health, listening to music can have a direct effect on heart rate, breathing rate, and blood pressure. Slow and calming music can decrease heart and breathing rates, while fast-paced music can increase heart rate and motivation during exercise.

In the 1980s, researchers discovered that playing classical music to plants could help them grow faster and healthier. The phenomenon was dubbed the "Mozart effect" and led to a craze for playing classical music to infants and young children in the hopes of improving their cognitive abilities.

The positive effects of music on mood are not limited to listening or playing music alone. Group music therapy has been found to be effective in treating a variety of mental health conditions, including depression, anxiety, and post-traumatic stress disorder. This is because music therapy can promote social connection and provide a safe and supportive environment for emotional expression and exploration. In addition to its therapeutic uses, music also has many cultural and historical significance. For example, certain styles of music, such as jazz or hip hop, are closely associated with particular cultural movements and social groups.

Overall, music is a powerful tool for influencing our emotions and moods, and can have a range of positive effects on mental and physical well-being. Whether we're listening to our favorite songs to boost our mood, or using music therapy to address specific needs, music has the ability to enhance our lives in countless ways. For Emily, the music had a powerful effect on her mood. Without realizing it, she found herself tapping her foot to the beat and swaying along with the rhythm. As the band played on, she felt a sense of release and liberation wash over her.

APPENDIX D

PRIOR KNOWLEDGE TEST

1. Which areas of the brain are involved in emotion processing?

a) The amygdala and the prefrontal cortex

b) The cerebellum and the hippocampus

c) The occipital lobe and the parietal lobe

d) The temporal lobe and the frontal lobe

2. What physiological effects can listening to music have on the body?

a) Lowering heart rate and blood pressure

b) Reducing levels of the stress hormone cortisol

c) Activating the parasympathetic nervous system

d) All of the above

3. Where does the word "music" come from?

a) Latin word "musica"

b) Greek word "mousike"

c) French word "musique"

d) Italian word "musica"

4. Which type of music can promote feelings of calm and relaxation?

a) Upbeat music with a fast tempo

b) Slow and calming music

c) Music with lyrics

d) None of the above

5. What was the "Mozart effect"?

a) Playing classical music to plants to help them grow faster and healthier

b) Playing classical music to infants and young children to improve their cognitive abilities

c) Playing classical music to animals to calm them down

d) None of the above

6. What is group music therapy?

a) Listening to music alone to improve mood

b) Playing an instrument or singing to increase feelings of happiness

c) Using music as a therapeutic tool to treat mental health conditions

d) None of the above

7. What is one of the positive effects of playing an instrument or singing?

a) Increase in feelings of happiness and self-esteem

b) Reduction of heart rate and blood pressure

c) Activation of the sympathetic nervous system

d) None of the above

8. What is one of the cultural significance of music?

a) Certain styles of music are closely associated with particular cultural movements and social groups

b) Playing music can help plants grow faster and healthier

c) Listening to music can activate the parasympathetic nervous system

d) None of the above

9. What is the "rest and digest" response?

a) A response to stress that activates the sympathetic nervous system

b) A response to relaxation that activates the parasympathetic nervous system

c) A response to sleep that activates the hypothalamus

d) A response to hunger that activates the pituitary gland

10. What is one of the mental health conditions that group music therapy can treat?

a) Diabetes

b) Depression

c) Asthma

d) Arthritis

APPENDIX E

TEST OF COMPREHENSION

1. How was Emily feeling at the beginning of the story?

a) Happy

b) Angry

c) Sad

d) Excited

e) The text does not include such information.

2. What did Emily hear as she sat on her porch?

a) Dogs barking

b) Children playing

c) Music from a park

d) Cars honking

e) The text does not include such information.

3. What was happening at the park that Emily visited?

a) A political rally

b) A farmers' market

c) A small concert

d) A car show

e) The text does not include such information.

4. Why was Emily hesitant to join in?

a) She was too tired

b) She didn't feel like dancing

c) She was worried about her safety

d) She didn't like the music

e) The text does not include such information.

5. What happened to Emily as she watched the crowd and the musicians?

a) She fell asleep

b) She became angry

c) She felt a shift inside her

d) She left the park

e) The text does not include such information.

6. What is one effect of music on the brain and body?

a) It makes you hungry

b) It improves eyesight

c) It reduces stress and anxiety

d) It makes you taller

e) The text does not include such information.

7. What areas of the brain are involved in emotion processing?

a) The liver and pancreas

b) The kidneys and bladder

c) The amygdala and prefrontal cortex

d) The lungs and heart

e) The text does not include such information.

8. How can the tempo, melody, and lyrics of a piece of music contribute to its emotional impact?

a) They can't, music is just noise

b) They can evoke different emotions and moods

c) They can make you feel sleepy

d) They can make you angry

e) The text does not include such information.

9. What are some physiological effects of listening to music?

a) Lowering heart rate and blood pressure

b) Increasing stress hormone cortisol

c) Causing muscle tension and pain

d) Increasing blood sugar levels

e) The text does not include such information.

10. What is the parasympathetic nervous system responsible for?

a) The body's "rest and digest" response

b) The fight or flight response

c) The stress response

d) The immune response

e) The text does not include such information.

11. What were the Muses in Greek mythology?

a) The nine goddesses of the arts

b) The nine goddesses of love

c) The nine goddesses of war

d) The nine goddesses of agriculture

e) The text does not include such information.

12. What is one effect of fast and upbeat music?

a) It can increase feelings of happiness and energy

b) It can promote feelings of calm and relaxation

c) It can cause depression

d) It can make you sleepy

e) The text does not include such information.

13. What did ancient Chinese believe about music?

a) It had the power to cure illness and promote well-being

b) It was just noise

c) It had no effect on health

d) It could cause illness

e) The text does not include such information.

14. How can music therapy be effective in treating mental health conditions?

a) It can promote social connection and emotional expression

b) It can cause more stress and anxiety

c) It can make people feel more isolated

d) It has no effect on mental health

e) The text does not include such information.

15. What is the Mozart effect?

a) Playing classical music to plants to help them grow faster and healthier

b) Playing classical music to infants and young children to improve their cognitive abilities

c) Playing classical music to animals to make them smarter

d) Playing classical music to athletes to improve their performance

e) The text does not include such information.

16. What is one positive effect of playing an instrument or singing?

a) It can increase feelings of happiness and self-esteem

b) It can make people feel sad and depressed

c) It can cause physical pain

d) It can make people feel isolated

e) The text does not include such information.

17. What is the significance of the Greek word "mousike"?

a) It means "art of the Muses"

b) It refers to the goddesses of the arts

c) It is a type of musical instrument

d) It is a type of art

e) The text does not include such information.

18. How can music be used in combination with relaxation techniques?

a) to promote a state of deep relaxation

b) to increase heart rate and blood pressure

c) to activate the sympathetic nervous system

d) to reduce feelings of stress and anxiety

e) The text does not include such information.

19. What are some positive effects of playing music?

a) It can increase feelings of happiness and self-esteem

b) It can reduce stress and anxiety

c) It can improve cognitive abilities

d) It can cure physical ailments and illnesses

e) The text does not include such information.

20. What is group music therapy used for?

a) to promote social connection and emotional expression

b) to cure physical illnesses

c) to increase heart rate and blood pressure

d) to improve communication skills and social interaction

e) The text does not include such information.

21. What is the cultural significance of certain styles of music?

a) They are not closely associated with any cultural movements or social groups

b) They are associated with certain foods

c) They are associated with particular cultural movements and social groups

d) They are only used for entertainment purposes

e) The text does not include such information.

22. What is the origin of the word "music"?

a) Latin

b) Greek

c) French

d) German

e) The text does not include such information.

23. What part of the brain is involved in emotion processing when listening to music?

a) Hippocampus

b) Amygdala

c) Thalamus

d) Cerebellum

e) The text does not include such information.

24.Which of the following is NOT a physiological effect of listening to music?

a) Increased heart rate

b) Reduced levels of the stress hormone cortisol

c) Lowered blood pressure

d) Activation of the parasympathetic nervous system

e) The text does not include such information.

25. Which type of music has been found to promote feelings of relaxation?

a) Fast and upbeat music

b) Heavy metal music

c) Slow and calming music

d) Classical music

e) The text does not include such information.

26. What is the main theme of the text?

a) The history of music therapy

b) The physiological and emotional effects of music

c) The cultural significance of music

d) The text does not include such information.

27. What is the purpose of the reference to the Greek Muses?

a) To explain the origin of the word "music"

b) To illustrate the power of music in ancient times

c) To describe the influence of music on mythology

d) To highlight the role of music in artistic expression

e) The text does not include such information.

28. Why can music be used as a therapeutic tool?

a) Because it can evoke different emotions and moods

b) Because it can lower heart rate and blood pressure

c) Because it can activate the parasympathetic nervous system

d) All of the above

e) The text does not include such information.

29. How does fast and upbeat music affect mood?

a) It can increase feelings of happiness and energy

b) It can reduce stress and anxiety

c) It can promote feelings of calm and relaxation

d) It has no effect on mood

e) The text does not include such information.

30. How might listening to calming music before bed help individuals with sleep quality?

a) It can improve sleep quality by promoting relaxation and reducing stress

b) It can worsen sleep quality by stimulating the brain and keeping individuals awake

c) It has no effect on sleep quality

d) None of the above

e) The text does not include such information.

31. How might listening to calming music before bed help individuals with sleep quality?

a) It can improve sleep quality by promoting relaxation and reducing stress

b) It can worsen sleep quality by stimulating the brain and keeping individuals awake

c) It has no effect on sleep quality

d) None of the above

e) The text does not include such information.

32. How might listening to calming music before bed help individuals with sleep quality?

a) It can improve sleep quality by promoting relaxation and reducing stress

b) It can worsen sleep quality by stimulating the brain and keeping individuals awake

c) It has no effect on sleep quality

d) None of the above

e) The text does not include such information.

APPENDIX F

BACKGROUND QUESTIONNAIRE

Please provide the following information by writing your response in the space or ticking

( ) in the box.

1. Age:

.....

2. Gender: (a) male (b) female (c) other

3. Major: ……....

4. Known languages other than English: ……..

5. Do you have vision or hearing problems? If yes, please specify.

……..

6. Overseas experience: Have you spent a long period (at least a total of six months) in

English speaking countries? Yes ( ) / No ( )

7. Have you taken any standardized language proficiency test (e.g. TOEFL, IELTS)? Please indicate the name of the test and the score you received.

……....

THANK YOU FOR YOUR TIME AND CONTRIBUTION

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